



NASA SP-7039(16)  
Section 2  
Indexes

**NASA**  
**PATENT**  
**ABSTRACTS**  
**BIBLIOGRAPHY**

**A CONTINUING BIBLIOGRAPHY**

**Section 2 • Indexes**

**JANUARY 1980**

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**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION**

## ACCESSION NUMBER RANGES

<i>Bibliography Number</i>	<i>STAR Accession Numbers</i>
NASA SP-7039(04)	N69-20701–N73-33931
NASA SP-7039(12)	N74-10001–N77-34042
NASA SP-7039(13)	N78-10001–N78-22018
NASA SP-7039(14)	N78-22019–N78-34034
NASA SP-7039(15)	N79-10001–N79-21993
NASA SP-7039(16)	N79-21994–N79-34158

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**NASA**

**PATENT  
ABSTRACTS  
BIBLIOGRAPHY**

**A CONTINUING BIBLIOGRAPHY**

**Section 2 • Indexes**

Indexes for the annotated references to NASA-owned inventions covered by U.S. patents and applications for patent that were announced in *Scientific and Technical Aerospace Reports (STAR)* between May 1969 and December 1979. This issue supersedes all previous Index Sections.



*Scientific and Technical Information Branch*

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION**

JANUARY 1980

*Washington, D.C.*

This Supplement is available from the National Technical Information Service (NTIS), Springfield Virginia, at the price \$12.50 domestic; \$25.50 foreign.

# INTRODUCTION

Several thousand inventions result each year from the aeronautical and space research supported by the National Aeronautics and Space Administration. The inventions having important use in government programs or significant commercial potential are usually patented by NASA. These inventions cover practically all fields of technology and include many that have useful and valuable commercial application.

NASA inventions best serve the interests of the United States when their benefits are available to the public. In many instances, the granting of nonexclusive or exclusive licenses for the practice of these inventions may assist in the accomplishment of this objective. This bibliography is published as a service to companies, firms, and individuals seeking new, licensable products for the commercial market.

The *NASA Patent Abstracts Bibliography (NASA PAB)* is a semiannual NASA publication containing comprehensive abstracts and indexes of NASA-owned inventions covered by U.S. patents and applications for patent. The citations included in *NASA PAB* were originally published in NASA's *Scientific and Technical Aerospace Reports (STAR)* and cover *STAR* announcements made since May 1969.

For the convenience of the user, each issue of *NASA PAB* has a separately bound Abstract Section (Section 1) and Index Section (Section 2). Although each Abstract Section covers only the indicated six-month period, the Index Section is cumulative covering all NASA-owned inventions announced in *STAR* since 1969. Thus a complete set of *NASA PAB* would consist of the Abstract Sections of Issue 04 (January 1974) and Issue 12 (January 1978) and the Abstract Section for all subsequent issues and the Index Section for the most recent issue.

The 138 citations published in this issue of the Abstract Section cover the period July 1979 through December 1979. The Index Section contains references to the 3709 citations covering the period May 1969 through December 1979.

## ABSTRACT SECTION (SECTION 1)

This *PAB* issue incorporates the 1975 *STAR* category revisions which include 10 major subdivisions divided into 74 specific categories and one general category/division. (See Table of Contents for the scope note of each category under which are grouped appropriate NASA inventions.) This new scheme was devised in lieu of the 34 category divisions which were utilized in *PAB* supplements (01) through (06) covering *STAR* abstracts from May 1969 through January 1974. Each entry in the Abstract Section consists of a *STAR* citation accompanied by an abstract and a key illustration taken from the patent or application for patent drawing. Entries are arranged in subject category in order of the ascending NASA Accession Number originally assigned in *STAR* to the invention. The range of NASA Accession Numbers within each issue is printed on the inside front cover.

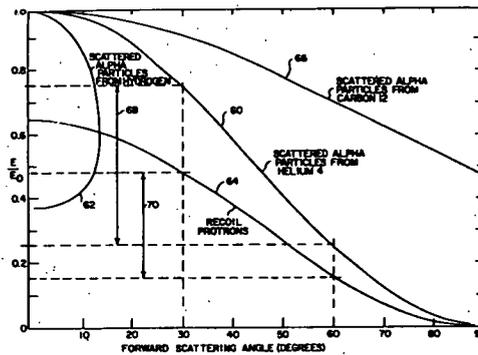
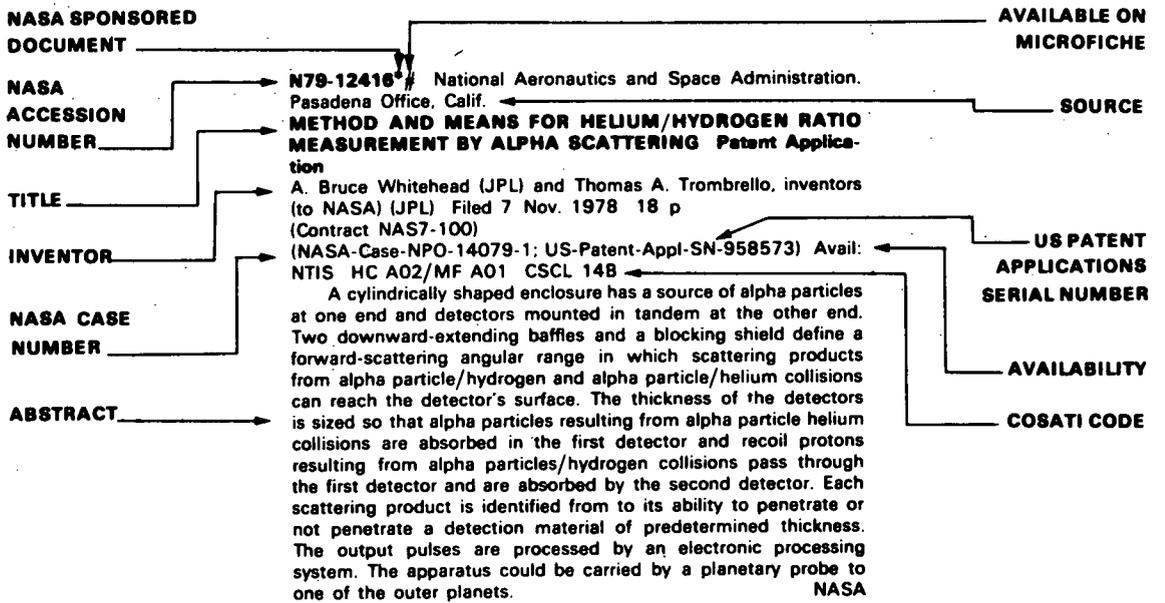
*Abstract Citation Data Elements:* Each of the abstract citations has several data elements useful for identification and indexing purposes, as follows:

NASA Accession Number  
NASA Case Number  
Inventor's Name

Title of Invention  
 U.S. Patent Application Serial Number  
 U.S. Patent Number (for issued patents only)  
 U.S. Patent Office Classification Number(s)  
 (for issued patents only)

These data elements in the citation of the abstract as depicted in the Typical Citation and Abstract reproduced below and are also used in the several indexes.

## TYPICAL CITATION AND ABSTRACT



KEY ILLUSTRATION

## INDEX SECTION (SECTION 2)

The Index Section is divided into five indexes which are cross-indexed and are useful in locating a single invention or groups of inventions.

Each of the five indexes utilizes basic data elements: (1) Subject Category Number, (2) NASA Accession Number, and (3) NASA Case Number, in addition to other specific index terms.

**Subject Index:** Lists all inventions according to appropriate alphabetized technical term and indicates the related NASA Case Number, the Subject Category Number, and the NASA Accession Number.

**Inventor Index:** Lists all inventions according to alphabetized names of inventors and indicates the related NASA Case Number, the Subject Category Number, and the NASA Accession Number.

**Source Index:** Lists all inventions according to alphabetized source of invention (i.e., name of contractor or government installation where invention was made) and indicates the related NASA Case Number, the Subject Category Number, and the NASA Accession Number.

**Number Index:** Lists inventions in order of ascending (1) NASA Case Number, (2) U.S. Patent Application Serial Number, (3) U.S. Patent Classification Number, and (4) U.S. Patent Number and indicates the related Subject Category Number and the NASA Accession Number.

**Accession Number Index:** Lists all inventions in order of ascending NASA Accession Number and indicates the related Subject Category Number, the NASA Case Number, the U.S. Patent Application Serial Number, the U.S. Patent Classification Number, and the U.S. Patent Number.

## HOW TO USE THIS PUBLICATION TO IDENTIFY NASA INVENTIONS

To identify one or more NASA inventions within a specific technical field or subject, several techniques are possible when using the flexibility incorporated into the *NASA PAB*.

(1) *Using Subject Category:* To identify all NASA inventions in any one of the subject categories in this issue of *NASA PAB*, select the desired Subject Category in the Abstract Section (Section 1) and find the inventions abstracted thereunder.

(2) *Using Subject Index:* To identify all NASA inventions listed under a desired technical subject index term, (A) turn to the cumulative Subject Index in the Index Section and find the invention(s) listed under the desired technical subject term. (B) Note the indicated Accession Number and the Subject Category Number. (C) Using the indicated Accession Number, turn to the inside front cover of the Index Section to determine which issue of the Abstract Section includes the Accession Number desired. (D) To find the abstract of the particular invention in the issue of the Abstract Section selected, (i) use the Subject Category Number to locate the Subject Category and (ii) use the Accession Number to locate the desired invention within the Subject Category listing.

(3) *Using Patent Classification Index:* To identify all inventions covered by issued NASA patents (does not include applications for patent) within a desired Patent Classification, (A) turn to the Patent Classification Number in the Number Index of Section 2 and find the associated inventions(s), and (B) follow the instructions outlined in (2)(B), and (D) above.

### **PUBLIC AVAILABILITY OF COPIES OF PATENTS AND PATENT APPLICATIONS**

Copies of U.S. patents may be purchased directly from the U.S. Patent and Trademark Office, Washington, D.C. 20231, for fifty cents a copy. When ordering patents, the U.S. Patent Number should be used, and payment must be remitted in advance, preferably by money order or check payable to the Commissioner of Patents and Trademarks. Prepaid purchase coupons for ordering are also available from the Patent and Trademark Office.

NASA *patent application specifications* are sold in paper copy by the National Technical Information Service at price code A02 (\$5.00 domestic; \$10.00 foreign). Microfiche are sold at price code A01 (\$3.50 domestic; \$5.25 foreign). The US-Patent-Appl-SN-number should be used in ordering either paper copy or microfiche from NTIS.

### **LICENSES FOR COMMERCIAL USE: INQUIRIES AND APPLICATIONS FOR LICENSE**

NASA inventions, abstracted in *NASA PAB*, are available for nonexclusive or exclusive licensing in accordance with the NASA Patent Licensing Regulations. It is significant that all licenses for NASA inventions shall be by express written instruments and that no license will be granted or implied in a NASA invention except as provided in the NASA Patent Licensing Regulations.

Inquiries concerning the NASA Patent Licensing Program or the availability of licenses for the commercial use of NASA-owned inventions covered by U.S. patents or pending applications for patent should be forwarded to the NASA Patent Counsel of the NASA installation having cognizance of the specific invention, or the Assistant General Counsel for Patent Matters, Code GP-4, National Aeronautics and Space Administration, Washington, D.C. 20546. Inquiries should refer to the NASA Case Number, the Title of the Invention, and the U.S. Patent Number or the U.S. Application Serial Number assigned to the invention as shown in *NASA PAB*.

The NASA Patent Counsel having cognizance of the invention is determined by the first three letters or prefix of the NASA Case Number assigned to the invention. The addresses of NASA Patent Counsels are listed alongside the NASA Case Number prefix letters in the following table. Formal application of license must be submitted on the NASA Form, Application for NASA Patent License, which is available upon request from any NASA Patent Counsel.

**NASA Case  
Number  
Prefix Letters**

**Address of Cognizant  
NASA Patent Counsel**

ARC-xxxxx  
XAR-xxxxx

Ames Research Center  
Mail Code: 200-11A  
Moffett Field, California 94035  
Telephone: (415)965-5104

ERC-xxxxx  
XER-xxxxx  
HQN-xxxxx  
XHQ-xxxxx

NASA Headquarters  
Mail Code: GP-4  
Washington, D.C. 20546  
Telephone: (202)755-3954

GSC-xxxxx  
XGS-xxxxx

Goddard Space Flight Center  
Mail Code: 204  
Greenbelt, Maryland 20771  
Telephone: (301)344-7351

KSC-xxxxx  
XKS-xxxxx

John F. Kennedy Space Center  
Mail Code: AA-PAT  
Kennedy Space Center, Florida 32899  
Telephone: (305)867-2544

LAR-xxxxx  
XLA-xxxxx

Langley Research Center  
Mail Code: 456  
Hampton, Virginia 23365  
Telephone: (804)827-3725

LEW-xxxxx  
XLE-xxxxx

Lewis Research Center  
Mail Code: 500-311  
21000 Brookpark Road  
Cleveland, Ohio 44135  
Telephone: (216)433-6346

MSC-xxxxx  
XMS-xxxxx

Lyndon B. Johnson Space Center  
Mail Code: AM  
Houston, Texas 77058  
Telephone: (713)483-4871

MFS-xxxxx  
XMF-xxxxx

George C. Marshall Space Flight  
Center  
Mail Code: CC01  
Huntsville, Alabama 35812  
Telephone: (205)453-0020

NPO-xxxxx  
XNP-xxxxx  
FRC-xxxxx  
XFR-xxxxx  
WOO-xxxxx

NASA Resident Legal Office  
Mail Code: 180-601  
4800 Oak Grove Drive  
Pasadena, California 91103  
Telephone: (213)354-2700

# PATENT LICENSING REGULATIONS

## Title 14—AERONAUTICS AND SPACE

### Chapter V—National Aeronautics and Space Administration

#### PART 1245—PATENTS

##### Subpart 2—Patent Licensing Regulations

1. Subpart 2 is revised in its entirety as follows:

Sec.	
1245.200	Scope of subpart.
1245.201	Definitions.
1245.202	Basic considerations.
1245.203	Licenses for practical application of inventions.
1245.204	Other licenses.
1245.205	Publication of NASA inventions available for license.
1245.206	Application for nonexclusive license.
1245.207	Application for exclusive license.
1245.208	Processing applications for license.
1245.209	Royalties and fees.
1245.210	Reports.
1245.211	Revocation of licenses.
1245.212	Appeals.
1245.213	Litigation.
1245.214	Address of communications.

**AUTHORITY:** The provisions of this Subpart 2 issued under 42 U.S.C. 2457, 2473(b)(3).

#### § 1245.200 Scope of subpart.

This Subpart 2 prescribes the terms, conditions, and procedures for licensing inventions covered by U.S. patents and patent applications for which the Administrator of the National Aeronautics and Space Administration holds title on behalf of the United States.

#### § 1245.201 Definitions.

For the purpose of this subpart, the following definitions apply:

(a) "Invention" means an invention covered by a U.S. patent or patent application for which the Administrator of NASA holds title on behalf of the United States and which is designated by the Administration as appropriate for the grant of license(s) in accordance with this subpart.

(b) "To practice an invention" means to make or have made, use or have used, sell or have sold, or otherwise dispose of according to law any machine, article of manufacture or composition of matter physically embodying the invention, or to use or have used the process or method comprising the invention.

(c) "Practical application" means the manufacture in the case of a composition of matter or product, the use in the case of a process, or the operation in the case of a machine, under such conditions as to establish that the invention is being utilized and that its benefits are reasonably accessible to the public.

(d) "Special invention" means any invention designated by the NASA Assistant General Counsel for Patent Matters to be subject to short-form licensing procedures. An invention may be designated as a special invention when a determination is made that:

(1) Practical application has occurred and is likely to continue for the life of

the patent and for which an exclusive license is not in force, or

(2) The public interest would be served by the expeditious granting of a nonexclusive license for practice of the invention by the public.

(e) The "Administrator" means the Administrator of the National Aeronautics and Space Administration, or his designee.

(f) "Government" means the Government of the United States of America.

(g) The "Inventions and Contributions Board" means the NASA Inventions and Contributions Board established by the Administrator of NASA within the Administration in accordance with section 305 of the National Aeronautics and Space Act of 1958 as amended (42 U.S.C. 2457).

#### § 1245.202 Basic considerations.

(a) Much of the new technology resulting from NASA sponsored research and development in aeronautical and space activities has application in other fields. NASA has special authority and responsibility under the National Aeronautics and Space Act of 1958, as amended (42 U.S.C. 2451), to provide for the widest practical dissemination and utilization of this new technology. In addition, NASA has been given unique requirements to protect the inventions resulting from NASA activities and to promulgate licensing regulations to encourage commercial use of these inventions.

(b) NASA-owned inventions will best serve the interests of the United States when they are brought to practical application in the shortest time possible. Although NASA encourages the non-exclusive licensing of its inventions to promote competition and achieve their widest possible utilization, the commercial development of certain inventions calls for a substantial capital investment which private manufacturers may be unwilling to risk under a nonexclusive license. It is the policy of NASA to seek exclusive licensees when such licenses will provide the necessary incentive to the licensee to achieve early practical application of the invention.

(c) The Administrator, in determining whether to grant an exclusive license, will evaluate all relevant information submitted by applicants and all other persons and will consider the necessity for further technical and market development of the invention, the capabilities of prospective licensees, their proposed plans to undertake the required investment and development, the impact on competitors, and the benefits of the license to the Government and to the public. Preference for exclusive license shall be given to U.S. citizens or companies who intend to manufacture or use, in the case of a process, the invention in the United States of America, its territories and possessions. Consideration may also be given to assisting small businesses and minority business enterprises, as well as economically depressed, low income and labor surplus areas.

(d) All licenses for inventions shall

be by express written instruments. No license shall be granted either expressly or by implication, for a NASA invention except as provided for in §§ 1245.203 and 1245.204 and in any existing or future treaty or agreement between the United States and any foreign government.

(e) Licenses for inventions covered by NASA-owned foreign patents and patent applications shall be granted in accordance with the NASA Foreign Patent Licensing Regulations (§ 1245.4).

#### § 1245.203 Licenses for practical application of inventions.

(a) *General.* As an incentive to encourage practical application of inventions, licenses will be granted to responsible applicants according to the circumstances and conditions set forth in this section.

(b) *Nonexclusive licenses.* (1) Each invention will be made available to responsible applicants for nonexclusive, revocable licensing in accordance with § 1245.206, consistent with the provisions of any existing exclusive license.

(2) The duration of the license shall be for a period as specified in the license.

(3) The license shall require the licensee to achieve the practical application of the invention and to then practice the invention for the duration of the license.

(4) The license may be granted for all or less than all fields of use of the invention and throughout the United States of America, its territories and possessions, Puerto Rico, and the District of Columbia, or in any lesser geographic portion thereof.

(5) The license shall extend to the subsidiaries and affiliates of the licensee and shall be nonassignable without approval of the Administrator, NASA, except to the successor of that part of the licensee's business to which the invention pertains.

(c) *Short-form nonexclusive licenses.* A nonexclusive, revocable license for a special invention, as defined in § 1245.201 (d), shall be granted upon written request, to any applicant by the Patent Counsel of the NASA Installation having cognizance of the invention.

(d) *Exclusive licenses.* (1) A limited exclusive license may be granted on an invention available for such licensing provided that:

(i) The Administrator has determined that: (a) The invention has not been brought to practical application by a nonexclusive licensee in the fields of use or in the geographical locations covered by the application for the exclusive license, (b) practical application of the invention in the fields of use or geographical locations covered by the application for the exclusive license is not likely to be achieved expeditiously by the further funding of the invention by the Government or under a nonexclusive license requested by any applicant pursuant to these regulations, and (c) the exclusive license will provide the necessary incentive to the licensee to achieve the practical application of the invention; and

(ii) Either a notice pursuant to

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§ 1245.205 listing the invention as available for licensing has been published in the FEDERAL REGISTER for at least 9 months; or a patent covering the invention has been issued for at least 6 months. However, a limited exclusive license may be granted prior to the periods specified above if the Administrator determines that the public interest will best be served by the earlier grant of an exclusive license.

(2) The license may be granted for all or less than all fields of use of the invention, and throughout the United States of America, its territories and possessions, Puerto Rico, and the District of Columbia, or in any lesser geographic portion thereof.

(3) The exclusive period of the license shall be negotiated, but shall be for less than the terminal portion of the patent, and shall be related to the period necessary to provide a reasonable incentive to invest the necessary risk capital.

(4) The license shall require the licensee to practice the invention within a period specified in the license and then to achieve practical application of the invention.

(5) The license shall require the licensee to expend a specified minimum sum of money and/or to take other specified actions, within indicated period(s) after the effective date of the license, in an effort to achieve practical application of the invention.

(6) The license shall be subject to at least an irrevocable royalty-free right of the Government of the United States to practice and have practiced the invention throughout the world by or on behalf of the Government of the United States and on behalf of any foreign government pursuant to any existing or future treaty or agreement with the United States.

(7) The license may reserve to the Administrator, NASA, under the following circumstances, the right to require the granting of a sublicense to responsible applicant(s) on terms that are considered reasonable by the Administrator, taking into consideration the current royalty rates under similar patents and other pertinent facts: (i) To the extent that the invention is required for public use by Government regulation, or (ii) as may be necessary to fulfill health or safety needs, or (iii) for other purposes stipulated in the license.

(8) The license shall be nontransferable except to the successor of that part of the licensee's business to which the invention pertains.

(9) Subject to the approval of the Administrator, the licensee may grant sublicenses under the license. Each sublicense granted by an exclusive licensee shall make reference to and shall provide that the sublicense is subject to the terms of the exclusive license including the rights retained by the Government under the exclusive license. A copy of each sublicense shall be furnished to the Administrator.

(10) The license may be subject to such other reservations as may be in the public interest.

### § 1245.204 Other licenses.

(a) *License to contractor.* There is

hereby granted to the contractor reporting an invention made in the performance of work under a contract of NASA in the manner specified in section 305(a) (1) or (2) of the National Aeronautics and Space Act of 1958 as amended (42 U.S.C. 2457(a) (1) or (2)), a revocable, nonexclusive, royalty-free license for the practice of such invention, together with the right to grant sublicenses of the same scope to the extent the contractor was legally obligated to do so at the time the contract was awarded. Such license and right is nontransferable except to the successor of that part of the contractor's business to which the invention pertains.

(b) *Miscellaneous licenses.* Subject to any outstanding licenses, nothing in this subpart 2 shall preclude the Administrator from granting other licenses for inventions, when he determines that do so would provide for an equitable distribution of rights. The following exemplify circumstances wherein such licenses may be granted:

(1) In consideration of the settlement of an interference;

(2) In consideration of a release of a claim of infringement; or

(3) In exchange for or as part of the consideration for a license under adversely held patent(s).

### § 1245.205 Publication of NASA inventions available for license.

(a) A notice will be periodically published in the FEDERAL REGISTER listing inventions available for licensing. Abstracts of the inventions will also be published in the NASA Scientific and Technical Aerospace Reports (STAR) and other NASA publications.

(b) Copies of pending patent applications for inventions abstracted in STAR may be purchased from the National Technical Information Service, Springfield, Va. 22151.

### § 1245.206 Application for nonexclusive license.

(a) *Submission of application.* An application for nonexclusive license under § 1245.203(b) or a short-form nonexclusive license for special inventions under § 1245.203(c) shall be addressed to the NASA Patent Counsel of the NASA installation having cognizance over the NASA invention for which a license is desired or to the NASA Assistant General Counsel for Patent Matters.

(b) *Contents of an application for nonexclusive license.* An application for nonexclusive license under § 1245.203(b) shall include:

(1) Identification of invention for which license is desired, including the NASA patent case number, patent application serial number of patent number, title and date, if known;

(2) Name and address of the person, company or organization applying for license and whether the applicant is a U.S. citizen or a U.S. corporation;

(3) Name and address of representative of applicant to whom correspondence should be sent;

(4) Nature and type of applicant's business;

(5) Number of employees;

(6) Purpose for which license is desired;

(7) A statement that contains the applicant's best knowledge of the extent to which the invention is being practiced by private industry and the Government;

(8) A description of applicant's capability and plan to undertake the development and marketing required to achieve the practical application of the invention, including the geographical location where the applicant plans to manufacture or use, in the case of a process, the invention; and

(9) A statement indicating the minimum term of years the applicant desires to be licensed.

(c) *Contents of an application for a short-form nonexclusive license.* An application for a short-form nonexclusive license under § 1245.203(c) for a special invention shall include:

(1) Identification of invention for which license is desired, including the NASA patent case number, patent application serial number or patent number, title and date, if known;

(2) Name and address of company or organization applying for license; and

(3) Name and address of representative of applicant to whom correspondence should be sent.

### § 1245.207 Application for exclusive license.

(a) *Submission of application.* An application for exclusive license under § 1245.203(d) may be submitted to NASA at any time. An application for exclusive license shall be addressed to the NASA Assistant General Counsel for Patent Matters.

(b) *Contents of an application for exclusive license.* In addition to the requirements set forth in § 1245.206(b), the application for an exclusive license shall include:

(1) Applicant's status, if any, in any one or more of the following categories:

(i) Small business firm;

(ii) Minority business enterprise;

(iii) Location in a surplus labor area;

(iv) Location in a low-income urban area; and

(v) Location in an area designed by the Government as economically depressed.

(2) A statement indicating the time, expenditure, and other acts which the applicant considers necessary to achieve practical application of the invention, and the applicant's offer to invest that sum and to perform such acts if the license is granted;

(3) A statement whether the applicant would be willing to accept a license for all or less than all fields of use of the invention throughout the United States of America, its territories and possessions, Puerto Rico, and the District of Columbia, or in any lesser geographic portion thereof.

(4) A statement indicating the amount of royalty fees or other consideration, if any, the applicant would be willing to pay the Government for the exclusive license; and

(5) Any other facts which the applicant believes to show it to be in the interests of the United States of America for the Administrator to grant an exclusive license rather than a nonexclusive li-

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cense and that such an exclusive license should be granted to the applicant.

### § 1245.208 Processing applications for license.

(a) *Initial review.* Applications for nonexclusive and exclusive licenses under §§ 1245.206 and 1245.207 will be reviewed by the Patent Counsel of the NASA installation having cognizance for the invention and the NASA Assistant General Counsel for Patent Matters, to determine the conformity and appropriateness of the application for license and the availability of the specific invention for the license requested. The Assistant General Counsel for Patent Matters will forward all applications for license conforming to §§ 1245.206(b) and 1245.207(b) to the NASA Inventions and Contributions Board when the invention is available for consideration of the requested license. Prior to forwarding applications for exclusive licenses to the Inventions and Contributions Board, notice in writing will be given to each nonexclusive licensee for the specific invention advising of the receipt of the application for the exclusive license and providing each nonexclusive licensee with a 30-day period for submitting either evidence that practical application of the invention has occurred or is about to occur or, an application for an exclusive license for the invention.

(b) *Recommendations of Inventions and Contributions Board.* The Inventions and Contributions Board shall, in accordance with the basic considerations set forth in §§ 1245.202 and 1245.203, evaluate all applications for license forwarded by the Assistant General Counsel for Patent Matters. Based upon the facts presented to the Inventions and Contributions Board in the application and any other facts in its possession, the Inventions and Contributions Board shall recommend to the Administrator: (1) Whether a nonexclusive or exclusive license should be granted, (2) the identity of the licensee, and (3) any special terms or conditions of the license.

(c) *Determination of Administrator and grant of nonexclusive licenses.* The Administrator shall review the recommendations of the Inventions and Contributions Board and shall determine whether to grant the nonexclusive license as recommended by the Board. If the Administrator determines to grant the license, the license will be granted upon the negotiation of the appropriate terms and conditions of the Office of General Counsel.

(d) *Determination of Administrator and grant of exclusive licenses—(1) Notice.* If the Administrator determines that the best interest of the United States will be served by the granting of an exclusive license in accordance with the basic considerations set forth in §§ 1245.202 and 1245.203, a notice shall be published in the FEDERAL REGISTER announcing the intent to grant the exclusive license, the identification of the invention, special terms or conditions of the proposed license, and a statement that NASA will grant the exclusive license unless within 30 days of the publication of such notice the Inventions and Contributions Board receives in writing

any of the following together with supporting documentation:

(i) A statement from any person setting forth reasons why it would not be in the best interest of the United States to grant the proposed exclusive license; or

(ii) An application for a nonexclusive license under such invention, in accordance with § 1245.206(b), in which applicant states that he has already brought or is likely to bring the invention to practical application within a reasonable period.

The Inventions and Contributions Board shall, upon receipt of a written request within the 30 days' notice period, grant an extension of 30 days for the submission of the documents designated above.

(2) *Recommendation of Inventions and Contributions Board.* Upon the expiration of the period required by subparagraph (1) of this paragraph, the Board shall review all written responses to the notice and shall then recommend to the Administrator whether to grant the exclusive license as the Board initially recommended or whether a different form of license, if any, should instead be granted.

(3) *Grant of exclusive licenses.* The Administrator shall review the Board's recommendation and shall determine if the interest of the United States would best be served by the grant of an exclusive license as recommended by the Board. If the Administrator determines to grant the exclusive license, the license will be granted upon the negotiation of the appropriate terms and conditions by the Office of General Counsel.

### § 1245.209 Royalties and fees.

(a) Normally, a nonexclusive license for the practical application of an invention granted to a U.S. citizen or company will not require the payment of royalties; however, NASA may require other consideration.

(b) An exclusive license for an invention may require the payment of royalties, fees or other consideration when the licensing circumstances and the basic considerations in § 1245.202, considered together, indicate that it is in the public interest to do so.

### § 1245.210 Reports.

A license shall require the licensee to submit periodic reports of his efforts to work the invention. The reports shall contain information within his knowledge, or which he may acquire under normal business practice, pertaining to the commercial use that is being made of the invention and such other information which the Administrator may determine pertinent to the licensing program and which is specified in the license.

### § 1245.211 Revocation of licenses.

(a) Any license granted pursuant to § 1245.203 may be revoked, either in part or in its entirety, by the Administrator if in his opinion the licensee at any time shall fail to use adequate efforts to bring to or achieve practical application of the invention in accordance with the terms of the license, or if the licensee at any

time shall default in making any report required by the license, or shall make any false report, or shall commit any breach of any covenant or agreement therein contained, and shall fail to remedy any such default, false report, or breach within 30 days after written notice, or if the patent is deemed unenforceable either by the Attorney General or a final decision of a U.S. court.

(b) Any license granted pursuant to § 1245.204(a) may be revoked, either in part or in its entirety, by the Administrator if in his opinion such revocation is necessary to achieve the earliest practical application of the invention pursuant to an application for exclusive license submitted in accordance with § 1245.207, or the licensee at any time shall breach any covenant or agreement contained in the license, and shall fail to remedy any such breach within 30 days after written notice thereof.

(c) Before revoking any license granted pursuant to this Subpart 2 for any cause, there will be furnished to the licensee a written notice of intention to revoke the license, and the licensee will be allowed 30 days after such notice in which to appeal and request a hearing before the Inventions and Contributions Board on the question of revocation. After a hearing, the Inventions and Contributions Board shall transmit to the Administrator the record of proceedings, its findings of fact, and its recommendation whether the license should be revoked either in part or in its entirety. The Administrator shall review the recommendation of the Board and determine whether to revoke the license in part or in its entirety. Revocation of a license shall include revocation of all sublicenses which have been granted.

### § 1245.212 Appeals.

Any person desiring to file an appeal pursuant to § 1245.211(c) shall address the appeal to Chairman, Inventions and Contributions Board. Any person filing an appeal shall be afforded an opportunity to be heard before the Inventions and Contributions Board, and to offer evidence in support of his appeal. The procedures to be followed in any such matter shall be determined by the Administrator. The Board shall make findings of fact and recommendations with respect to disposition of the appeal. The decision on the appeal shall be made by the Administrator, and such decision shall be final and conclusive, except on questions of law, unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

### § 1245.213 Litigation.

An exclusive licensee shall be granted the right to sue at his own expense any party who infringes the rights set forth in his license and covered by the licensed patent. The licensee may join the Government, upon consent of the Attorney General, as a party complainant in such suit, but without expense to the Government and the licensee shall pay costs and any final judgment or decree that may be rendered against the Govern-

## PATENT LICENSING REGULATIONS

ment in such suit. The Government shall also have an absolute right to intervene in any such suit at its own expense. The licensee shall be obligated to promptly furnish to the Government, upon request, copies of all pleadings and other papers filed in any such suit and of evidence adduced in proceedings relating to the licensed patent including, but not limited to, negotiations for settlement and agreements settling claims by a licensee based on the licensed patent, and all other books, documents, papers, and

records pertaining to such suit. If, as a result of any such litigation, the patent shall be declared invalid, the licensee shall have the right to surrender his license and be relieved from any further obligation thereunder.

### § 1245.214 Address of communications.

(a) Communications to the Assistant General Counsel for Patent Matters in accordance with §§ 1245.206 and 1245.207 and requests for information concerning licenses for NASA inventions should be

addressed to the Assistant General Counsel for Patent Matters, Code GP, National Aeronautics and Space Administration, Washington, D.C. 20546.

(b) Communications to the Inventions and Contributions Board in accordance with §§ 1245.208, 1245.211, and 1245.212 should be addressed to Chairman, Inventions and Contributions Board, National Aeronautics and Space Administration, Washington, D.C. 20546.

*Effective date.* The regulations set forth in this subpart 2 are effective April 1, 1972.

JAMES C. FLETCHER,  
Administrator.

## FOREIGN PATENT LICENSING REGULATIONS

Selected NASA inventions are also available for licensing in countries other than the United States in accordance with the NASA Foreign Patent Licensing Regulation (14 C.F.R. 1245.4), a copy of which is available from any NASA Patent Counsel. For abstracts of NASA-owned inventions available for licensing in countries other than the United States, see NASA SP-7038, "Significant NASA Inventions Available for Licensing in Countries Other Than the United States." A copy of this NASA publication is available from NASA Headquarters, Code GP-4, Washington, D.C., 20546.

# Subject Categories

(1969 - 1973)

## 01 Aerodynamics

Includes aerodynamics of bodies, combinations, internal flow in ducts and turbomachinery; wings, rotors, and control surfaces. For applications see: 02 Aircraft and 32 Space Vehicles. For related information see also: 12 Fluid Mechanics; and 33 Thermodynamics and Combustion.

## 02 Aircraft

Includes fixed-wing airplanes, helicopters, gliders, balloons, ornithopters, etc.; and specific types of complete aircraft (e.g., ground effect machines, STOL, and VTOL); flight tests; operating problems (e.g., sonic boom); safety and safety devices; economics; and stability and control. For basic research see: 01 Aerodynamics. For related information see also: 31 Space Vehicles; and 32 Structural Mechanics.

## 03 Auxiliary Systems

Includes fuel cells, energy conversion cells, and solar cells; auxiliary gas turbines; hydraulic, pneumatic and electrical systems; actuators; and inverters. For related information see also: 09 Electronic Equipment; 22 Nuclear Engineering; and 28 Propulsion Systems.

## 04 Biosciences

Includes aerospace medicine, exobiology, radiation effects on biological systems; physiological and psychological factors. For related information see also: 05 Biotechnology.

## 05 Biotechnology

Includes life support systems, human engineering; protective clothing and equipment; crew training and evaluation, and piloting. For related information see also: 04 Biosciences

## 06 Chemistry

Includes chemical analysis and identification (e.g., spectroscopy). For applications see: 17 Materials, Metallic; 18 Materials, Nonmetallic; and 27 Propellants.

## 07 Communications

Includes communications equipment and techniques; noise; radio and communications blackout; modulation telemetry; tracking radar and optical observation; and wave propagation. For basic research see: 23 Physics, General; and 21 Navigation.

## 08 Computers

Includes computer operation and programming; and data processing. For applications, see specific categories. For related information see also: 19 Mathematics.

## 09 Electronic Equipment

Includes electronic test equipment and maintainability; component parts, e.g., electron tubes, tunnel diodes, transistors, integrated circuitry; microminiaturization. For basic research see: 10 Electronics. For related information see also: 07 Communications and 21 Navigation.

## 10 Electronics

Includes circuit theory; and feedback and control theory. For applications see: 09 Electronic Equipment. For related information see specific Physics categories.

## 11 Facilities, Research and Support

Includes airports; lunar and planetary bases including associated vehicles; ground support systems; related logistics; simulators; test facilities (e.g., rocket engine test stands, shock tubes, and wind tunnels); test ranges; and tracking stations.

## 12 Fluid Mechanics

Includes boundary-layer flow; compressible flow; gas dynamics; hydrodynamics; and turbulence. For related information see also: 01 Aerodynamics; and 33 Thermodynamics and Combustion.

## 13 Geophysics

Includes aeronomy; upper and lower atmosphere studies; oceanography; cartography; and geodesy. For related information see also: 20 Meteorology; 29 Space Radiation; and 30 Space Sciences.

## 14 Instrumentation and Photography

Includes design, installation, and testing of instrumentation systems; gyroscopes; measuring instruments and gages; recorders, transducers; aerial photography; and telescopes and cameras.

## 15 Machine Elements and Processes

Includes bearings, seals, pumps, and other mechanical equipment; lubrication, friction, and wear; manufacturing processes and quality control; reliability; drafting; and materials fabrication, handling, and inspection.

## 16 Masers

Includes applications of masers and lasers. For basic research see: 26 Physics, Solid-State.

## 17 Materials, Metallic

Includes cermets; corrosion; physical and mechanical properties of materials; metallurgy; and applications as structural materials. For basic research see: 06 Chemistry. For related information see also: 18 Materials, Nonmetallic; and 32 Structural Mechanics.

## **18 Materials, Nonmetallic**

Includes corrosion; physical and mechanical properties of materials (e.g., plastics); and elastomers, hydraulic fluids, etc. For basic research see: 06 Chemistry. For related information see also: 17 Materials, Metallic; 27 Propellants; and 32 Structural Mechanics.

## **19 Mathematics**

Includes calculation methods and theory; and numerical analysis. For applications see specific categories. For related information see also: 08 Computers.

## **20 Meteorology**

Includes climatology; weather forecasting; and visibility studies. For related information see also: 13 Geophysics; and 30 Space Sciences.

## **21 Navigation**

Includes guidance; autopilots; star and planet tracking; inertial platforms; and air traffic control. For related information see also: 07 Communications.

## **22 Nuclear Engineering**

Includes nuclear reactors and nuclear heat sources used for propulsion and auxiliary power. For basic research see: 24 Physics, Atomic, Molecular, and Nuclear. For related information see also: 03 Auxiliary Systems; and 28 Propulsion Systems.

## **23 Physics, General**

Includes acoustics, cryogenics, mechanics, and optics. For astrophysics see: 30 Space Sciences. For geophysics and related information see also: 13 Geophysics, 20 Meteorology, and 29 Space Radiation.

## **24 Physics, Atomic, Molecular, and Nuclear**

Includes atomic, molecular and nuclear physics. For applications see: 22 Nuclear Engineering. For related information see also: 29 Space Radiation.

## **25 Physics, Plasma**

Includes magnetohydrodynamics. For applications see: 28 Propulsion Systems.

## **26 Physics, Solid-State**

Includes semiconductor theory; and superconductivity. For applications see: 16 Masers. For related information see also: 10 Electronics.

## **27 Propellants**

Includes fuels; igniters; and oxidizers. For basic re-

search see: 06 Chemistry; and 33 Thermodynamics and Combustion. For related information see also: 28 Propulsion Systems.

## **28 Propulsion Systems**

Includes air breathing, electric, liquid, solid, and magnetohydrodynamic propulsion. For nuclear propulsion see: 22 Nuclear Engineering. For basic research see: 23 Physics, General; and 33 Thermodynamics and Combustion. For applications see: 31 Space Vehicles. For related information see also: 27 Propellants.

## **29 Space Radiation**

Includes cosmic radiation; solar flares; solar radiation; and Van Allen radiation belts. For related information see also: 13 Geophysics, and 24 Physics, Atomic, Molecular, and Nuclear.

## **30 Space Sciences**

Includes astronomy and astrophysics; cosmology; lunar and planetary flight and exploration; and theoretical analysis of orbits and trajectories. For related information see also: 11 Facilities, Research and Support; and 31 Space Vehicles.

## **31 Space Vehicles**

Includes launch vehicles; manned space capsules; clustered and multistage rockets; satellites; sounding rockets and probes; and operating problems. For basic research see: 30 Space Sciences. For related information see also: 28 Propulsion Systems; and 32 Structural Mechanics.

## **32 Structural Mechanics**

Includes structural element design and weight analysis; fatigue; thermal stress; impact phenomena; vibration; flutter; inflatable structures; and structural tests. For related information see also: 17 Materials, Metallic; and 18 Materials, Nonmetallic.

## **33 Thermodynamics and Combustion**

Includes ablation, cooling, heating, heat transfer, thermal balance, and other thermal effects; and combustion theory. For related information see also: 12 Fluid Mechanics; and 27 Propellants.

## **34 General**

Includes information of a broad nature related to industrial applications and technology, and to basic research; defense aspects; information retrieval; management; law and related legal matters; and legislative hearings and documents.

# TABLE OF CONTENTS

## Section 1 • Abstracts

Subject Categories (1974 - )

### AERONAUTICS

Includes aeronautics (general); aerodynamics; air transportation and safety; aircraft communications and navigation; aircraft design, testing and performance; aircraft instrumentation; aircraft propulsion and power; aircraft stability and control; and research and support facilities (air).

For related information see also *Astronautics*.

#### 01 AERONAUTICS (GENERAL)

#### 02 AERODYNAMICS

Includes aerodynamics of bodies, combinations, wings, rotors, and control surfaces; and internal flow in ducts and turbomachinery.

For related information see also *34 Fluid Mechanics and Heat Transfer*.

#### 03 AIR TRANSPORTATION AND SAFETY

Includes passenger and cargo air transport operations; and aircraft accidents.

For related information see also *16 Space Transportation* and *85 Urban Technology and Transportation*.

#### 04 AIRCRAFT COMMUNICATIONS AND NAVIGATION

Includes digital and voice communication with aircraft; air navigation systems (satellite and ground based); and air traffic control.

For related information see also *17 Spacecraft Communications, Command and Tracking* and *32 Communications*.

#### 05 AIRCRAFT DESIGN, TESTING AND PERFORMANCE

Includes aircraft simulation technology.

For related information see also *18 Spacecraft Design, Testing and Performance* and *39 Structural Mechanics*.

#### 06 AIRCRAFT INSTRUMENTATION

Includes cockpit and cabin display devices; and flight instruments.

For related information see also *19 Spacecraft Instrumentation* and *35 Instrumentation and Photography*.

#### 07 AIRCRAFT PROPULSION AND POWER

Includes prime propulsion systems and systems components, e.g., gas turbine engines and compressors; and on-board auxiliary power plants for aircraft.

For related information see also *20 Spacecraft Propulsion and Power*, *28 Propellants and Fuels*, and *44 Energy Production and Conversion*.

#### 08 AIRCRAFT STABILITY AND CONTROL

Includes aircraft handling qualities; piloting; flight controls; and autopilots.

### 09 RESEARCH AND SUPPORT FACILITIES (AIR)

Includes airports, hangars and runways; aircraft repair and overhaul facilities; wind tunnels; shock tube facilities; and engine test blocks.

For related information see also *14 Ground Support Systems and Facilities (Space)*.

### ASTRONAUTICS

Includes astronautics (general); astrodynamics; ground support systems and facilities (space); launch vehicles and space vehicles; space transportation; spacecraft communications, command and tracking; spacecraft design, testing and performance; spacecraft instrumentation; and spacecraft propulsion and power.

For related information see also *Aeronautics*.

#### 12 ASTRONAUTICS (GENERAL)

For extraterrestrial exploration see *91 Lunar and Planetary Exploration*.

#### 13 ASTRODYNAMICS

Includes powered and free-flight trajectories; and orbit and launching dynamics.

#### 14 GROUND SUPPORT SYSTEMS AND FACILITIES (SPACE)

Includes launch complexes, research and production facilities; ground support equipment, e.g., mobile transporters; and simulators.

For related information see also *09 Research and Support Facilities (Air)*.

#### 15 LAUNCH VEHICLES AND SPACE VEHICLES

Includes boosters; manned orbital laboratories; reusable vehicles; and space stations.

#### 16 SPACE TRANSPORTATION

Includes passenger and cargo space transportation, e.g., shuttle operations; and rescue techniques.

For related information see also *03 Air Transportation and Safety* and *85 Urban Technology and Transportation*.

#### 17 SPACECRAFT COMMUNICATIONS, COMMAND AND TRACKING

Includes telemetry; space communications networks; astronavigation; and radio blackout.

For related information see also *04 Aircraft Communications and Navigation* and *32 Communications*.

#### 18 SPACECRAFT DESIGN, TESTING AND PERFORMANCE

Includes spacecraft thermal and environmental control; and attitude control.

For life support systems see *54 Man/System Technology and Life Support*. For related information see also *05 Aircraft Design, Testing and Performance* and *39 Structural Mechanics*.

## **19 SPACECRAFT INSTRUMENTATION**

For related information see also *06 Aircraft Instrumentation* and *35 Instrumentation and Photography*.

## **20 SPACECRAFT PROPULSION AND POWER**

Includes main propulsion systems and components, e.g., rocket engines; and spacecraft auxiliary power sources.

For related information see also *07 Aircraft Propulsion and Power*, *28 Propellants and Fuels*, and *44 Energy Production and Conversion*.

## **CHEMISTRY AND MATERIALS**

Includes chemistry and materials (general); composite materials; inorganic and physical chemistry; metallic materials; nonmetallic materials; and propellants and fuels.

### **23 CHEMISTRY AND MATERIALS (GENERAL)**

Includes biochemistry and organic chemistry.

### **24 COMPOSITE MATERIALS**

Includes laminates.

### **25 INORGANIC AND PHYSICAL CHEMISTRY**

Includes chemical analysis, e.g., chromatography; combustion theory; electrochemistry; and photochemistry.

For related information see also *77 Thermodynamics and Statistical Physics*.

### **26 METALLIC MATERIALS**

Includes physical, chemical, and mechanical properties of metals, e.g., corrosion; and metallurgy.

### **27 NONMETALLIC MATERIALS**

Includes physical, chemical, and mechanical properties of plastics, elastomers, lubricants, polymers, textiles, adhesives, and ceramic materials.

### **28 PROPELLANTS AND FUELS**

Includes rocket propellants, igniters, and oxidizers; storage and handling; and aircraft fuels.

For related information see also *07 Aircraft Propulsion and Power*, *20 Spacecraft Propulsion and Power*, and *44 Energy Production and Conversion*.

## **ENGINEERING**

Includes engineering (general); communications; electronics and electrical engineering; fluid mechanics and heat transfer; instrumentation and photography; lasers and masers; mechanical engineering; quality assurance and reliability; and structural mechanics.

For related information see also *Physics*.

### **31 ENGINEERING (GENERAL)**

Includes vacuum technology; control engineering; display engineering; and cryogenics.

## **32 COMMUNICATIONS**

Includes land and global communications; communications theory; and optical communications.

For related information see also *04 Aircraft Communications and Navigation* and *17 Spacecraft Communications, Command and Tracking*.

## **33 ELECTRONICS AND ELECTRICAL ENGINEERING**

Includes test equipment and maintainability; components, e.g., tunnel diodes and transistors; microminiaturization; and integrated circuitry.

For related information see also *60 Computer Operations and Hardware* and *76 Solid-State Physics*.

## **34 FLUID MECHANICS AND HEAT TRANSFER**

Includes boundary layers; hydrodynamics; fluidics; mass transfer; and ablation cooling.

For related information see also *02 Aerodynamics* and *77 Thermodynamics and Statistical Physics*.

## **35 INSTRUMENTATION AND PHOTOGRAPHY**

Includes remote sensors; measuring instruments and gages; detectors; cameras and photographic supplies; and holography.

For aerial photography see *43 Earth Resources*. For related information see also *06 Aircraft Instrumentation* and *19 Spacecraft Instrumentation*.

## **36 LASERS AND MASERS**

Includes parametric amplifiers.

## **37 MECHANICAL ENGINEERING**

Includes auxiliary systems (non-power); machine elements and processes; and mechanical equipment.

## **38 QUALITY ASSURANCE AND RELIABILITY**

Includes product sampling procedures and techniques; and quality control.

## **39 STRUCTURAL MECHANICS**

Includes structural element design and weight analysis; fatigue; and thermal stress.

For applications see *05 Aircraft Design, Testing and Performance* and *18 Spacecraft Design, Testing and Performance*.

## **GEOSCIENCES**

Includes geosciences (general); earth resources; energy production and conversion; environment pollution; geophysics; meteorology and climatology; and oceanography.

For related information see also *Space Sciences*.

## **42 GEOSCIENCES (GENERAL)**

#### **43 EARTH RESOURCES**

Includes remote sensing of earth resources by aircraft and spacecraft; photogrammetry; and aerial photography.

For instrumentation see *35 Instrumentation and Photography*.

#### **44 ENERGY PRODUCTION AND CONVERSION**

Includes specific energy conversion systems, e.g., fuel cells and batteries; global sources of energy; fossil fuels; geophysical conversion; hydroelectric power; and wind power.

For related information see also *07 Aircraft Propulsion and Power*, *20 Spacecraft Propulsion and Power*, *28 Propellants and Fuels*, and *85 Urban Technology and Transportation*.

#### **45 ENVIRONMENT POLLUTION**

Includes air, noise, thermal and water pollution; environment monitoring; and contamination control.

#### **46 GEOPHYSICS**

Includes aeronomy; upper and lower atmosphere studies; ionospheric and magnetospheric physics; and geomagnetism.

For space radiation see *93 Space Radiation*.

#### **47 METEOROLOGY AND CLIMATOLOGY**

Includes weather forecasting and modification.

#### **48 OCEANOGRAPHY**

Includes biological, dynamic and physical oceanography; and marine resources.

### **LIFE SCIENCES**

Includes life sciences (general); aerospace medicine; behavioral sciences; man/system technology and life support; and planetary biology.

#### **51 LIFE SCIENCES (GENERAL)**

Includes genetics.

#### **52 AEROSPACE MEDICINE**

Includes physiological factors; biological effects of radiation; and weightlessness.

#### **53 BEHAVIORAL SCIENCES**

Includes psychological factors; individual and group behavior; crew training and evaluation; and psychiatric research.

#### **54 MAN/SYSTEM TECHNOLOGY AND LIFE SUPPORT**

Includes human engineering; biotechnology; and space suits and protective clothing.

#### **55 PLANETARY BIOLOGY**

Includes exobiology; and extraterrestrial life.

### **MATHEMATICAL AND COMPUTER SCIENCES**

Includes mathematical and computer sciences (general); computer operations and hardware; computer programming and software; computer systems; cybernetics; numerical analysis; statistics and probability; systems analysis; and theoretical mathematics.

#### **59 MATHEMATICAL AND COMPUTER SCIENCES (GENERAL)**

#### **60 COMPUTER OPERATIONS AND HARDWARE**

Includes computer graphics and data processing. For components see *33 Electronics and Electrical Engineering*.

#### **61 COMPUTER PROGRAMMING AND SOFTWARE**

Includes computer programs, routines, and algorithms.

#### **62 COMPUTER SYSTEMS**

Includes computer networks.

#### **63 CYBERNETICS**

Includes feedback and control theory. For related information see also *54 Man/System Technology and Life Support*.

#### **64 NUMERICAL ANALYSIS**

Includes iteration, difference equations, and numerical approximation.

#### **65 STATISTICS AND PROBABILITY**

Includes data sampling and smoothing; Monte Carlo method; and stochastic processes.

#### **66 SYSTEMS ANALYSIS**

Includes mathematical modeling; network analysis; and operations research.

#### **67 THEORETICAL MATHEMATICS**

Includes topology and number theory.

### **PHYSICS**

Includes physics (general); acoustics; atomic and molecular physics; nuclear and high-energy physics; optics; plasma physics; solid-state physics; and thermodynamics and statistical physics.

For related information see also *Engineering*.

#### **70 PHYSICS (GENERAL)**

For geophysics see *46 Geophysics*. For astrophysics see *90 Astrophysics*. For solar physics see *92 Solar Physics*.

**71 ACOUSTICS**

Includes sound generation, transmission, and attenuation.

For noise pollution see *45 Environment Pollution*.

**72 ATOMIC AND MOLECULAR PHYSICS**

Includes atomic structure and molecular spectra.

**73 NUCLEAR AND HIGH-ENERGY PHYSICS**

Includes elementary and nuclear particles; and reactor theory.

For space radiation see *93 Space Radiation*.

**74 OPTICS**

Includes light phenomena.

**75 PLASMA PHYSICS**

Includes magnetohydrodynamics and plasma fusion.

For ionospheric plasmas see *46 Geophysics*. For space plasmas see *90 Astrophysics*.

**76 SOLID-STATE PHYSICS**

Includes superconductivity.

For related information see also *33 Electronics and Electrical Engineering* and *36 Lasers and Masers*.

**77 THERMODYNAMICS AND STATISTICAL PHYSICS**

Includes quantum mechanics; and Bose and Fermi statistics.

For related information see also *25 Inorganic and Physical Chemistry* and *34 Fluid Mechanics and Heat Transfer*.

**SOCIAL SCIENCES**

Includes social sciences (general); administration and management; documentation and information science; economics and cost analysis; law and political science; and urban technology and transportation.

**80 SOCIAL SCIENCES (GENERAL)**

Includes educational matters.

**81 ADMINISTRATION AND MANAGEMENT**

Includes management planning and research.

**82 DOCUMENTATION AND INFORMATION SCIENCE**

Includes information storage and retrieval technology; micrography; and library science.

For computer documentation see *61 Computer Programming and Software*.

**83 ECONOMICS AND COST ANALYSIS**

Includes cost effectiveness studies.

**84 LAW AND POLITICAL SCIENCE**

Includes space law; international law; international cooperation; and patent policy.

**85 URBAN TECHNOLOGY AND TRANSPORTATION**

Includes applications of space technology to urban problems; technology transfer; technology assessment; and surface and mass transportation.

For related information see *03 Air Transportation and Safety*, *16 Space Transportation*, and *44 Energy Production and Conversion*.

**SPACE SCIENCES**

Includes space sciences (general); astronomy; astrophysics; lunar and planetary exploration; solar physics; and space radiation.

For related information see also *Geosciences*.

**88 SPACE SCIENCES (GENERAL)****89 ASTRONOMY**

Includes radio and gamma-ray astronomy; celestial mechanics; and astrometry.

**90 ASTROPHYSICS**

Includes cosmology; and interstellar and interplanetary gases and dust.

**91 LUNAR AND PLANETARY EXPLORATION**

Includes planetology; and manned and unmanned flights.

For spacecraft design see *18 Spacecraft Design, Testing and Performance*. For space stations see *15 Launch Vehicles and Space Vehicles*.

**92 SOLAR PHYSICS**

Includes solar activity, solar flares, solar radiation and sunspots.

**93 SPACE RADIATION**

Includes cosmic radiation; and inner and outer earth's radiation belts.

For biological effects of radiation see *52 Aerospace Medicine*. For theory see *73 Nuclear and High-Energy Physics*.

**GENERAL****99 GENERAL**

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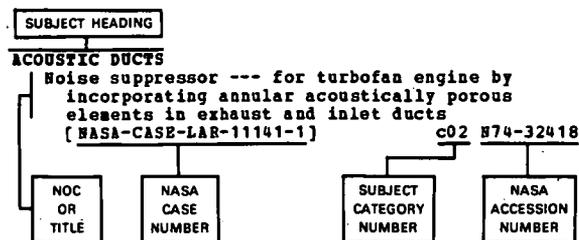
# Subject Index

## NASA PATENT ABSTRACTS BIBLIOGRAPHY

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### Section 2

#### Typical Subject Index Listing



The subject heading is the key to the subject content of the document. A brief description of the document, e.g., title, title plus a title extension, or Notation of Content (NOC), is included for each subject entry to indicate the subject heading context; these descriptions are arranged under each subject heading in ascending accession number order. The NASA Case Number serves as the prime access number to the patent documents. The Subject Category Number indicates the category in Section 1 (Abstracts) in which the patent citation and abstract are located. The NASA accession number denotes the number by which the citation is identified within the subject category.

## A

### ABLATION

- Transpirationally cooled heat ablation system for interplanetary spacecraft reentry shielding. [NASA-CASE-XMS-02677] c31 N70-42075
- Hypersonic test facility for studying ablation in models under high pressure and high temperature. [NASA-CASE-XLA-00378] c11 N71-15925
- Design of hypersonic test facility for ablation tests and performance tests of vehicles under conditions of high temperature and pressure. [NASA-CASE-XLA-05378] c11 N71-21475
- Ablation sensor for measuring char layer recession rate using electric wires. [NASA-CASE-XLA-01794] c33 N71-21586
- Ablation sensor for measuring surface ablation rate of material on vehicles entering earths atmosphere on entry into planetary atmospheres. [NASA-CASE-XLA-01791] c14 N71-22991
- Ablative system with liquid carrying ablative material bodies and forming self-replacing ablative surface. [NASA-CASE-LEW-10359] c33 N72-25911
- Cork-resin ablative insulation for complex surfaces and method for applying the same. [NASA-CASE-MFS-23626-1] c24 N78-32190
- ABLATIVE MATERIALS**
- Filling honeycomb matrix with deaerated paste filler. [NASA-CASE-XMS-01108] c15 N69-24322
- Sensor device with switches for measuring surface recession of charring and noncharring ablators. [NASA-CASE-XLA-01781] c14 N69-39975
- Vacuum method for molding thermosetting compounds used as ablative materials. [NASA-CASE-XLA-01091] c15 N71-10672
- Ablative resins used for retarding regression in ablative material. [NASA-CASE-XLE-05913] c33 N71-14032
- Design, development, and characteristics of ablation structures. [NASA-CASE-XMS-01816] c33 N71-15623
- Method and apparatus for fabrication of heat insulating and ablative reentry structure. [NASA-CASE-XMS-02009] c33 N71-20834
- Production and application of sprayable fiber reinforced ablation material. [NASA-CASE-XLA-04251] c18 N71-26100
- Ablative heat shield for protection from aerodynamic heating of reentry spacecraft

- [NASA-CASE-MSC-12143-1] c33 N72-17947
- Ablative system with liquid carrying ablative material bodies and forming self-replacing ablative surface. [NASA-CASE-LEW-10359] c33 N72-25911
- Carrier liquid system containing bodies of ablative material. [NASA-CASE-LEW-10359-2] c33 N73-25952
- Ablation article and surface for analyzing flow transition on ablative surface. [NASA-CASE-LAR-10439-1] c33 N73-27796
- Dual measurement ablation sensor. [NASA-CASE-LAR-10105-1] c34 N74-15652
- Sprayable low density ablator and application process. [NASA-CASE-MFS-23506-1] c24 N78-24290
- Intumescent-ablator coatings using endothermic fillers. [NASA-CASE-ARC-11043-1] c24 N78-27180
- ABORT APPARATUS**
- Coupling device for linear shaped charge for space vehicle abort system. [NASA-CASE-XLA-00189] c33 N70-36846
- ABRASION RESISTANCE**
- Zinc dust formulation for abrasion resistant steel coatings. [NASA-CASE-GSC-10361-1] c18 N72-23581
- Improved nozzle for use with abrasive and/or corrosive materials. [NASA-CASE-WPO-13823-1] c37 N77-17466
- Abrasion resistant coatings for plastic surfaces. [NASA-CASE-ARC-10915-3] c24 N77-24200
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses. [NASA-CASE-ARC-11039-1] c74 N78-32854
- ABSORBENTS**
- Absorbent apparatus for separating gas from liquid-gas stream used in environmental control under zero gravity conditions. [NASA-CASE-XMS-01492] c05 N70-41297
- Fluid flow control valve for regulating fluids in molecular quantities. [NASA-CASE-XLE-00703] c15 N71-15967
- Noncontaminating swab with absorbent end covered with netted envelope to prevent egress of absorbent material. [NASA-CASE-MFS-18100] c15 N72-11390
- Protein sterilization of firefly luciferase without denaturation. [NASA-CASE-GSC-10225-1] c06 N73-27086
- Oil and fat absorbing polymers. [NASA-CASE-WPO-11609-2] c27 N77-31308
- Sweat collection capsule. [NASA-CASE-ARC-11031-1] c54 N78-22720
- ABSORBERS (MATERIALS)**
- Broadband chokes and absorbers to reduce spurious radiation patterns of antenna array caused by support structures. [NASA-CASE-XMS-05303] c07 N69-27462
- Analytical photoionization mass spectrometer with argon gas filter between light source and monochromator. [NASA-CASE-LAR-10180-1] c06 N71-13461
- Development of filter system for control of outgas contamination in vacuum conditions using absorbent beds of molecular sieve zeolite, silica gel, and charcoal. [NASA-CASE-MFS-14711] c15 N71-26185
- Development and characteristics of calorimeter with integral heat sink for maintenance of constant temperature. [NASA-CASE-IHF-04208] c33 N71-29051

SUBJECT

**ABSORPTION**

Aldehyde-containing urea-absorbing polysaccharides  
 [NASA-CASE-NPO-13620-1] c27 N77-30236

**ABSORPTION**  
 Differential optoacoustic absorption detector  
 [NASA-CASE-NPO-13759-1] c74 N78-17867

**ABSORPTION CROSS SECTIONS**  
 Radiation source and detection system for  
 measuring amount of liquid inside tanks  
 independently of liquid configuration  
 [NASA-CASE-MSC-12280] c27 N71-16348

**ABSORPTIVITY**  
 Detector absorptivity measuring method and  
 apparatus  
 [NASA-CASE-LAR-10907-1] c35 N76-29551

**AC GENERATORS**  
 Alternating current signal generator providing  
 plurality of amplitude modulated output signals  
 [NASA-CASE-XNP-05612] c09 N69-21468

Improved alternator with windings of  
 superconducting materials acting as permanent  
 magnet  
 [NASA-CASE-XLE-02824] c03 N69-39890

Superconducting alternator design with cryogenic  
 fluid for cooling windings below critical  
 temperature  
 [NASA-CASE-XLE-02823] c09 N71-23443

Solar cell system having alternating current  
 output  
 [NASA-CASE-LEW-12806-1] c44 N78-25553

**ACCELERATION**  
 Single grid accelerator system for electron  
 bombardment type ion thruster  
 [NASA-CASE-XLE-10453-2] c28 N73-27699

**ACCELERATION (PHYSICS)**  
 Centrifuge mounted motion simulator with  
 elevator mechanism  
 [NASA-CASE-XAC-00399] c11 N70-34815

Gravity device for accurate and rapid indication  
 of relative gravity conditions aboard  
 accelerating carrier  
 [NASA-CASE-XMF-00424] c11 N70-38196

Development of method for producing artificial  
 gravity in manned spacecraft  
 [NASA-CASE-XNP-02595] c31 N71-21881

Vibration control of flexible bodies in steady  
 accelerating environment  
 [NASA-CASE-LAR-10106-1] c15 N71-27169

G-load measuring and indicator apparatus --- for  
 aircraft  
 [NASA-CASE-ARC-10806] c06 N74-27872

Apparatus for applying simulator g-forces to an  
 arm of an aircraft simulator pilot  
 [NASA-CASE-LAR-10550-1] c09 N74-30597

G-load measuring and indicator apparatus  
 [NASA-CASE-ARC-10806-1] c35 N75-29381

Helmet weight simulator  
 [NASA-CASE-LAR-12320-1] c54 N79-25761

**ACCELERATION PROTECTION**  
 Astronaut restraint suit for high acceleration  
 protection  
 [NASA-CASE-XAC-00405] c05 N70-41819

Conditioning suit for normal function of  
 astronaut cardiovascular system in gravity  
 environment  
 [NASA-CASE-XLA-02898] c05 N71-20268

**ACCELERATION STRESSES (PHYSIOLOGY)**  
 Development of method for producing artificial  
 gravity in manned spacecraft  
 [NASA-CASE-XNP-02595] c31 N71-21881

**ACCELERATION TOLERANCE**  
 Electronic detection system for peak  
 acceleration limits in vibrational testing of  
 spacecraft components  
 [NASA-CASE-NPO-10556] c14 N71-27185

**ACCELERATORS**  
 Annular arc accelerator shock tube  
 [NASA-CASE-NPO-13528-1] c09 N77-10071

Spring operated accelerator and constant force  
 spring mechanism therefor  
 [NASA-CASE-ARC-10898-1] c35 N77-18417

**ACCELEROMETERS**  
 Superconductive accelerometer employing variable  
 force principle to determine acceleration of  
 bodies  
 [NASA-CASE-XMF-01099] c14 N71-15969

Describing device for velocity control of  
 electromechanical drive mechanism of scanning  
 mirror of interferometer  
 [NASA-CASE-XGS-03532] c14 N71-17627

**SUBJECT INDEX**

Omnidirectional liquid filled accelerometer  
 design with liquid and housing temperature  
 compensation  
 [NASA-CASE-HQN-10780] c14 N71-30265

Development of combined velocimeter and  
 accelerometer based on color changes in liquid  
 crystalline material subjected to shear stresses  
 [NASA-CASE-ERC-10292] c14 N72-25410

Temperature compensated digital inertial sensor  
 --- circuit for maintaining inertial element  
 of gyroscope or accelerometer at constant  
 position  
 [NASA-CASE-NPO-13044-1] c35 N74-15094

Accelerometer telemetry system  
 [NASA-CASE-ARC-10849-1] c17 N76-29347

Detection of the transitional layer between  
 laminar and turbulent flow areas on a wing  
 surface --- using an accelerometer to measure  
 noise levels during wind tunnel tests  
 [NASA-CASE-LAR-12261-1] c02 N79-16805

**ACCEPTABILITY**  
 Cross correlation anomaly detection system  
 [NASA-CASE-NPO-13283] c38 N78-17395

**ACCEPTOR MATERIALS**  
 III-V photocathode with nitrogen doping for  
 increased quantum efficiency  
 [NASA-CASE-NPO-12134-1] c33 N76-31409

**ACCUMULATORS**  
 Direct radiation cooling of linear beam  
 collector tubes  
 [NASA-CASE-XNP-09227] c15 N69-24319

Regenerative cooling system for small rocket  
 engine having restart capability and using  
 noncryogenic hypergolic propellants  
 [NASA-CASE-XLE-00685] c28 N70-41992

Small plasma probe using tungsten wire collector  
 in tubular shield  
 [NASA-CASE-XLE-02578] c25 N71-20747

Electrostatic charged particle collector  
 containing stacked electrodes for microwave tube  
 [NASA-CASE-LEW-11192-1] c09 N73-13208

Accumulator  
 [NASA-CASE-MPS-19287-1] c34 N77-30399

Method for fabricating solar cells having  
 integrated collector grits  
 [NASA-CASE-LEW-12819-2] c44 N79-18444

Multistage depressed collector for dual node  
 operation --- for travelling wave tubes  
 [NASA-CASE-LEW-13282-1] c33 N79-32463

**ACETALS**  
 Synthesis of schiff bases for heat shields by  
 acetal amine reactions  
 [NASA-CASE-XMF-08652] c06 N71-11243

**ACETATES**  
 Thermoplastic rubber comprising ethylene-vinyl  
 acetate copolymer, asphalt and fluxing oil  
 [NASA-CASE-NPO-08835-1] c27 N78-33228

**ACETIC ACID**  
 Indomethacin-antihistamine combination for  
 gastric ulceration control  
 [NASA-CASE-ARC-11118-2] c52 N79-14755

**ACETYLENE**  
 Preparation of dicyanoacetylene and vinylidene  
 copolymers using organic compounds  
 [NASA-CASE-XNP-03250] c06 N71-23500

**ACOUSTIC ATTENUATION**  
 Ultrasonic calibration device --- for producing  
 changes in acoustic attenuation and phase  
 velocity  
 [NASA-CASE-LAR-11435-1] c35 N76-15432

**ACOUSTIC DUCTS**  
 Noise suppressor --- for turbofan engine by  
 incorporating annular acoustically porous  
 elements in exhaust and inlet ducts  
 [NASA-CASE-LAR-11141-1] c07 N74-32418

**ACOUSTIC IMPEDANCE**  
 Method and transducer device for detecting  
 presence of hydrogen gas  
 [NASA-CASE-XMF-03873] c06 N69-39733

**ACOUSTIC MEASUREMENTS**  
 Instrumentation for measuring aircraft noise and  
 sonic boom  
 [NASA-CASE-LAR-11476-1] c07 N76-27232

Differential sound level meter  
 [NASA-CASE-LAR-12106-1] c71 N78-14867

Pseudo continuous wave instrument --- ultrasonics  
 [NASA-CASE-LAR-12260-1] c35 N79-10390

**ACOUSTIC PROPAGATION**  
 Material suspension within an acoustically

- excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c12 N75-24774  
Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c71 N79-23753
- ACOUSTIC PROPERTIES**  
Development of wind tunnel microphone structure to minimize effects of vibrations and eliminate unwanted signals in microphone output  
[NASA-CASE-XNP-00250] c11 N71-28779  
Acoustical transducer calibrating system including differential pressure activating device  
[NASA-CASE-FRC-10060-1] c14 N73-27379  
Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c35 N79-10390
- ACOUSTICAL HOLOGRAPHY**  
Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c38 N78-32447
- ACOUSTO-OPTICS**  
Acoustic vibration test apparatus for wiring harnesses  
[NASA-CASE-MSC-15158-1] c14 N72-17325  
Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c35 N77-14411  
Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c74 N78-17867  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c25 N79-10169
- ACRYLATES**  
Ablative resins used for retarding regression in ablative material  
[NASA-CASE-XLE-05913] c33 N71-14032
- ACRYLIC RESINS**  
Abrasion resistant coatings for plastic surfaces  
[NASA-CASE-ARC-10915-3] c24 N77-24200
- ACTIVATION ENERGY**  
Heat activated emf cells with aluminum anode  
[NASA-CASE-LEW-11359] c03 N71-28579  
Heat activated cell with aluminum anode  
[NASA-CASE-LEW-11359-2] c03 N72-20034
- ACTUATOR DISKS**  
Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MFS-21136-1] c35 N74-18323
- ACTUATORS**  
Electromechanical actuator and its use in rocket thrust control valve  
[NASA-CASE-XNP-05975] c15 N69-23185  
Power controlled bimetallic electromechanical actuator for accurate, timely, and reliable response to remote control signal  
[NASA-CASE-XNP-09776] c09 N69-39929  
Patent data on gas actuated bolt disconnect assembly  
[NASA-CASE-XLA-00326] c03 N70-34667  
Hermetically sealed explosive release mechanism for actuator device  
[NASA-CASE-XGS-00824] c15 N71-16078  
Burst diaphragm flow initiator for installation in short duration wind tunnels  
[NASA-CASE-MFS-12915] c11 N71-17600  
Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
[NASA-CASE-XMS-07487] c15 N71-23255  
Mechanical actuator wherein linear motion changes to rotational motion  
[NASA-CASE-XGS-04548] c15 N71-24045  
Hydraulic actuator design for space deployment of heat radiators  
[NASA-CASE-MSC-11817-1] c15 N71-26611  
Electromechanical control actuator system using double differential screws  
[NASA-CASE-ERC-10022] c15 N71-26635  
System to control speed of hydraulically movable members by limiting energy applied to actuators with hydraulic servo loop  
[NASA-CASE-ARC-10131-1] c15 N71-27754  
Zero power telemetry actuated switch for biomedical equipment  
[NASA-CASE-ARC-10105] c09 N72-17153  
Mechanically operated hand which can depress trigger using touch control device  
[NASA-CASE-MFS-20413] c15 N72-21463
- Hermetically sealed elbow actuator for use in severe environments  
[NASA-CASE-MFS-14710] c09 N72-22195  
Characteristics of lightweight actuator for imparting linear motion using elongated output shaft  
[NASA-CASE-NPO-11222] c15 N72-25456  
Rotary actuator for use in environments with no rolling and sliding friction  
[NASA-CASE-NPO-10244] c15 N72-26371  
Gas-operated actuator with cyclic motion of expansion chamber  
[NASA-CASE-NPO-11340] c15 N72-33477  
Redundant hydraulic control system for actuators with three main valve combination  
[NASA-CASE-MFS-20944] c15 N73-13466  
Actuator operated by electrolytic drive gas generator and evacuator  
[NASA-CASE-NPO-11369] c15 N73-13467  
Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c37 N74-18127  
Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c37 N74-21060  
Miniature hydraulic actuator --- for control surfaces on airfoils  
[NASA-CASE-LAR-11522-1] c34 N74-34881  
Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c07 N77-14025  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c52 N77-14735  
Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c37 N77-19458  
A pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c20 N78-31162  
Actuator mechanism  
[NASA-CASE-GSC-11883-2] c37 N78-31426  
A phase-angle controller for stirling engines  
[NASA-CASE-NPO-14388-1] c37 N79-17217
- ADAPTERS**  
Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XMF-03844-1] c14 N71-26474
- ADAPTIVE CONTROL**  
Self testing and repairing computer comprising control and diagnostic unit and rollback points for error correction  
[NASA-CASE-NPO-10567] c08 N71-24633  
Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136  
Versatile ergometer with work load control  
[NASA-CASE-MFS-21109-1] c05 N73-27941  
Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c62 N74-14920  
Adaptive polarization separation experiments  
[NASA-CASE-LAR-12196-1] c32 N79-18154
- ADAPTIVE FILTERS**  
Adaptive notch filter, using modulation techniques for reversed phase noise signal  
[NASA-CASE-XMF-01892] c10 N71-22986
- ADDING CIRCUITS**  
Circuit diagram and operation of full binary adder  
[NASA-CASE-IGS-00689] c08 N70-34787  
Error correction circuitry for binary signal channels  
[NASA-CASE-XNP-03263] c09 N71-18843
- ADDITIVES**  
Ammonium perchlorate composite propellant with organic Cu/II/ chelate catalytic additive  
[NASA-CASE-LAR-10173-1] c27 N71-14090  
Copper doped polycrystalline silicon  
[NASA-CASE-NPO-14670-1] c44 N79-25512
- ADENOSINE TRIPHOSPHATE**  
Use of enzyme hexokinase and glucose to reduce inherent light levels of ATP in luciferase compositions  
[NASA-CASE-IGS-05533] c04 N69-27487  
Detection instrument for light emitted from ATP biochemical reaction  
[NASA-CASE-IGS-05534] c23 N71-16355  
Describing method for lyophilization of luciferase containing mixtures for use in life detection reactions  
[NASA-CASE-IGS-05532] c06 N71-17705  
Automatic device for assaying urine on bacterial adenosine triphosphate content

- [NASA-CASE-GSC-11169-2] c05 N73-32011  
Application of luciferase assay for ATP to antimicrobial drug susceptibility [NASA-CASE-GSC-12039-1] c51 N77-22794
- ADHESION**  
Tool for mounting and removing studs with adhesive coated head portion [NASA-CASE-MFS-20299] c15 N72-11392
- ADHESION TESTS**  
Apparatus for determining quality of bond between high density material and low density material [NASA-CASE-MFS-13686] c15 N71-18132
- ADHESIVE BONDING**  
Fabrication of solar cell banks for attaching solar cells to base members or substrates [NASA-CASE-XMP-00826] c03 N71-20895  
Method for honeycomb panel bonding by thermosetting film adhesive with electrical heat means [NASA-CASE-XMP-01402] c18 N71-21651  
Etching aluminum alloys with aqueous solution containing sulfuric acid, hydrofluoric acid, and an alkali metal dichromate for adhesive bonding [NASA-CASE-XMP-02303] c17 N71-23828  
Adhesive spray process for attaching biomedical skin electrodes [NASA-CASE-XFP-07658-1] c05 N71-26293  
Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide [NASA-CASE-GSC-11577-1] c37 N75-15992  
Thermal insulation attaching means [NASA-CASE-HSC-12619-1] c39 N75-21671  
Weld-bonded titanium structures [NASA-CASE-LAR-11549-1] c37 N77-11397  
Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement [NASA-CASE-NPO-13764-1] c27 N78-17215  
Thermal barrier coating system [NASA-CASE-LEW-12554-1] c34 N78-18355  
Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles [NASA-CASE-MSC-12619-2] c27 N79-12221  
Surface finishing --- adhesive bonding of plastic film to metal airfoil surfaces [NASA-CASE-MSC-12631-3] c26 N79-21183
- ADHESIVES**  
Polyimide adhesives [NASA-CASE-LAR-11397-1] c27 N75-29263  
Polyimide adhesives [NASA-CASE-LAR-12181-1] c27 N78-17205
- ADJUSTING**  
Centering device with ultrafine adjustment for use with roundness measuring apparatus [NASA-CASE-XMP-00480] c14 N70-39898  
Slotted fine-adjustment support for optical devices [NASA-CASE-MFS-20249] c15 N72-11386  
Adjustable support device with jacket screw for altering distance between base and supported member [NASA-CASE-NPO-10721] c15 N72-27484  
Clock setter [NASA-CASE-LAR-11458-1] c35 N76-16392
- AERODYNAMIC BRAKES**  
Bluff-shaped annular configuration for supersonic decelerator for reentry vehicles [NASA-CASE-XLE-00222] c02 N70-37939  
Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators [NASA-CASE-LAR-10776-1] c02 N74-10034
- AERODYNAMIC CHARACTERISTICS**  
Variable aspect ratio and variable sweep delta wing planforms for supersonic aircraft [NASA-CASE-XLA-00221] c02 N70-33266  
Designing spacecraft for flight into space, atmospheric reentry, and landing at selected sites [NASA-CASE-XAC-02058] c02 N71-16087  
Spacecraft configurations and aerodynamic characteristics of space shuttle systems with two reusable stages [NASA-CASE-MSC-12433] c31 N73-14854  
Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil [NASA-CASE-LAR-10585-1] c02 N76-22154
- AERODYNAMIC CONFIGURATIONS**  
Supersonic aircraft configuration providing for variable aspect ratio and variable sweep wings [NASA-CASE-XLA-00166] c02 N70-34178  
Aerodynamic configuration for aircraft capable of high speed flight and low drag for low speed takeoff or landing upon presently existing airfields [NASA-CASE-XLA-00806] c02 N70-34858  
Manned space capsule configuration for orbital flight and atmospheric reentry [NASA-CASE-XLA-00149] c31 N70-37938  
Aerodynamic configuration of reentry vehicle heat shield to provide longitudinal and directional stability at hypersonic velocities [NASA-CASE-XMS-04142] c31 N70-41631  
Development and characteristics of translating horizontal tail assembly for supersonic aircraft [NASA-CASE-XLA-08801-1] c02 N71-11043  
Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings [NASA-CASE-XLA-03691] c31 N71-15674  
Afterburner-equipped jet engine nacelle with slotted configuration afterbody [NASA-CASE-XLA-10450] c28 N71-21493  
Variable geometry rotor system for direct control over wake vortex [NASA-CASE-LAR-10557] c02 N72-11018  
Development of auxiliary lifting system to provide ferry capability for entry vehicles [NASA-CASE-LAR-10574-1] c11 N73-13257  
Multistage aerospace craft --- perspective drawings of conceptual design [NASA-CASE-XMP-02263] c05 N74-10907  
Supersonic fan blading --- noise reduction in turbofan engines [NASA-CASE-LEW-11402-1] c07 N74-28226  
Aircraft design concept [NASA-CASE-LAR-11852-1] c05 N77-15027  
Free wing assembly for an aircraft [NASA-CASE-FRC-10092-1] c05 N79-12061
- AERODYNAMIC HEATING**  
Development of thermal insulation system for wing and control surfaces of hypersonic aircraft and reentry vehicles [NASA-CASE-XLA-00892] c33 N71-17697  
Heat flux sensor adapted for mounting on aircraft or spacecraft to measure aerodynamic heat flux inflow to aircraft skin [NASA-CASE-XPR-03802] c33 N71-23085  
Ablative heat shield for protection from aerodynamic heating of reentry spacecraft [NASA-CASE-MSC-12143-1] c33 N72-17947
- AERODYNAMIC LOADS**  
Directed fluid stream for propeller blade loading control [NASA-CASE-XAC-00139] c02 N70-34856
- AERODYNAMIC NOISE**  
Apparatus for reducing aerodynamic noise in a wind tunnel [NASA-CASE-MFS-23099-1] c09 N76-23273
- AERODYNAMIC STABILITY**  
Aerodynamically stable meteorological balloon using surface roughness effect [NASA-CASE-XMP-04163] c02 N71-23007  
Pressure sensor network for measuring liquid dynamic response in flight including fuel tank acceleration, liquid slosh amplitude, and fuel depth monitoring [NASA-CASE-XLA-05541] c12 N71-26387  
Spacecraft design with single point aerodynamic and hydrodynamic stability for emergency transport of men from space station to splashdown [NASA-CASE-MSC-13281] c31 N72-18859  
High lift aircraft --- with improved stability, control, performance, and noise characteristics [NASA-CASE-LAR-11252-1] c05 N75-25914  
Hingeless helicopter rotor with improved stability [NASA-CASE-ARC-10807-1] c05 N77-17029  
An annular wing [NASA-CASE-FRC-11007-2] c02 N79-24959
- AERONAUTICAL ENGINEERING**  
Differential pressure cell insensitive to changes in ambient temperature and extreme overload [NASA-CASE-XAC-00042] c14 N70-34816

## AEROSOLS

- Liquid aerosol dispenser with explosively driven piston to compress light gas to extremely high pressure  
[NASA-CASE-MFS-20829] c12 N72-21310
- Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509
- Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c25 N78-15210

## AEROSPACE ENGINEERING

- Modifying existing solar cells for temperature control  
[NASA-CASE-NPO-10109] c03 N71-11049
- Metallic film diffusion for boundary lubrication in aerospace engineering  
[NASA-CASE-XLE-10337] c15 N71-24046
- Soldering device particularly suited to making high quality wiring joints for aerospace engineering utilizing capillary attraction to regulate flow of solder  
[NASA-CASE-XLA-08911] c15 N71-27214

## AEROSPACE ENVIRONMENTS

- High voltage insulators for direct current in acceleration system of electrostatic thruster  
[NASA-CASE-XLE-01902] c28 N71-10574
- Metallic film diffusion into metal or ceramic surfaces for boundary lubrication in aerospace environments  
[NASA-CASE-XLE-01765] c18 N71-10772
- Preparation of inorganic solid film lubricants with long wear life and stability in aerospace environments  
[NASA-CASE-XMP-03988] c15 N71-21403
- Momentum-velocity analyzer for measuring minute space particles  
[NASA-CASE-XMS-04201] c14 N71-22990
- Metal alloy bearing materials for space applications  
[NASA-CASE-XLE-05033] c15 N71-23810
- Method and apparatus for adjusting thermal conductance in electronic components for space use  
[NASA-CASE-XNP-05524] c33 N71-24876
- Space environment simulator for testing spacecraft components under aerospace conditions  
[NASA-CASE-NPO-10141] c11 N71-24964
- High dc switch for causing abrupt, cyclic, decreases of current to operate under zero or varying gravity conditions  
[NASA-CASE-LEW-10155-1] c09 N71-29035
- Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804
- Wobble gear drive mechanism --- for aerospace environments  
[NASA-CASE-WOO-00625] c37 N78-17385
- Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c75 N78-27913
- Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c12 N79-26075

## AEROSPACE MEDICINE

- Piston device for producing known constant positive pressure within lungs by using thoracic muscles  
[NASA-CASE-XMS-01615] c05 N70-41329
- Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721

## AEROSPACE VEHICLES

- Aerospace configuration with low and high aspect ratio variability for high and low speed flight  
[NASA-CASE-XLA-00142] c02 N70-33286
- Landing pad assembly for aerospace vehicles  
[NASA-CASE-XMP-02853] c31 N70-36654
- Aerospace vehicle with variable planform for hypersonic and subsonic flight  
[NASA-CASE-XLA-00805] c31 N70-38010
- Development of resilient fastener for attaching skin of aerospace vehicles to permit movement of skin relative to framework  
[NASA-CASE-XLA-01027] c31 N71-24035
- Chemical spot tests for identification of titanium and titanium alloys used in aerospace vehicles  
[NASA-CASE-LAR-10539-1] c17 N73-12547

## AEROSPACEPLANES

- Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-XMP-02263] c05 N74-10907

## AFTERBODIES

- Afterburner-equipped jet engine nacelle with slotted configuration afterbody  
[NASA-CASE-XLA-10450] c28 N71-21493

## AFTERBURNING

- Exhaust nozzle with afterburning for generating thrust  
[NASA-CASE-XLA-00154] c28 N70-33374

## AGING (MATERIALS)

- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c26 N75-29236

## AGRICULTURE

- Solar-powered pump  
[NASA-CASE-NPO-13567-1] c44 N76-29701

## AILERONS

- Device for controlling rotary potentiometer mounted on aircraft steering wheel or aileron control  
[NASA-CASE-XAC-10019] c15 N71-23809

## AIR

- Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080
- Superconducting magnetic field trapping device for producing magnetic field in air  
[NASA-CASE-XMP-01185] c26 N73-28710

## AIR BREATHING ENGINES

- Small air breathing launch vehicle  
[NASA-CASE-LAR-12250-1] c15 N78-25120

## AIR CONDITIONING EQUIPMENT

- Portable apparatus producing high velocity annular air column surrounding low velocity, filtered, superclean air central core for industrial clean room environmental control  
[NASA-CASE-XMP-03212] c15 N71-22721
- Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c31 N74-27902
- Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c54 N79-19688

## AIR COOLING

- Modification and improvement of turbine blades for maximum cooling efficiency  
[NASA-CASE-XLE-00092] c15 N70-33264

## AIR FILTERS

- Development of filter apparatus for gas separation and characteristics of filter cell support frame for improved operation  
[NASA-CASE-MSC-12297] c14 N72-23457

## AIR FLOW

- Wind tunnel air flow modulating device and apparatus for selectively generating wave motion in wind tunnel airstream  
[NASA-CASE-XLA-00112] c11 N70-33287
- Photographing surface flow patterns on wind tunnel test models  
[NASA-CASE-XLA-01353] c14 N70-41366
- Method for maintaining good performance in gas turbine during air flow distortion  
[NASA-CASE-LEW-10286-1] c28 N71-28915
- Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c12 N73-28144
- Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c31 N74-27902
- Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c20 N76-14190
- Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c37 N76-18456
- Smoke generator  
[NASA-CASE-ARC-10905-1] c37 N77-13418
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089

## AIR INTAKES

- Aeroflexible wing structure with air scoop for inflating stiffeners with ram air  
[NASA-CASE-XLA-06095] c01 N69-39981

## AIR LOCKS

Reversed cowl flap inlet thrust augmentor ---  
with adjustable airfoil  
[NASA-CASE-ARC-10754-1] c07 N75-24736  
Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 N79-24976

**AIR LOCKS**  
Spacecraft air lock system to provide ingress  
and egress of astronaut without subjecting  
vehicular environment to vacuum of space  
[NASA-CASE-XLA-02050] c31 N71-22968  
System for removing and repairing spacecraft  
control thrusters by use of portable air locks  
[NASA-CASE-MFS-20325] c28 N71-27095  
Airlock for waste transferal from pressurized  
enclosure aboard space vehicle to waste  
receiver at negative pressure  
[NASA-CASE-MFS-20922] c31 N72-20840  
Airlock  
[NASA-CASE-MFS-20922-1] c18 N74-22136  
Apparatus for inserting and removing specimens  
from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c31 N74-27900

**AIR POLLUTION**  
Analytical photoionization mass spectrometer  
with argon gas filter between light source and  
monochrometer  
[NASA-CASE-LAR-10180-1] c06 N71-13461  
Contamination free separation nut eliminating  
combustion products from ambient surroundings  
generated by squib firing  
[NASA-CASE-XGS-01971] c15 N71-15922  
Monitoring atmospheric pollutants with a  
heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c35 N74-11284  
Fluorescence detector for monitoring atmospheric  
pollutants  
[NASA-CASE-NPO-13231-1] c45 N75-27585  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c45 N76-17656  
Indicator providing continuous indication of the  
presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c45 N76-21742  
Method for detecting pollutants --- through  
chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c45 N76-31714  
Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c37 N77-31497  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c44 N78-31527

**AIR PURIFICATION**  
Developing high pressure gas purification and  
filtration system for use in test operations  
of space vehicles  
[NASA-CASE-MFS-12806] c14 N71-17588  
Portable apparatus producing high velocity  
annular air column surrounding low velocity,  
filtered, superclean air central core for  
industrial clean room environmental control  
[NASA-CASE-XMP-03212] c15 N71-22721

**AIR SAMPLING**  
Pressure probe for sensing ambient static air  
pressures  
[NASA-CASE-XLA-00481] c14 N70-36824  
Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c35 N76-18401

**AIR TRAFFIC CONTROL**  
Traffic control system for supersonic transports  
using synchronous satellite for data relay  
between vehicles and ground station  
[NASA-CASE-GSC-10087-1] c02 N71-19287  
Satellite aided aircraft collision avoidance  
system effective for large number of aircraft  
[NASA-CASE-ERC-10090] c21 N71-24948  
System and method for position locating for air  
traffic control involving supersonic transports  
[NASA-CASE-GSC-10087-3] c07 N72-12080

**AIRBORNE EQUIPMENT**  
Inflatable radar reflector unit - lightweight,  
highly reflective to electromagnetic  
radiation, and adaptable for erection and  
deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063

**AIRBORNE/SPACEBORNE COMPUTERS**  
Logic circuit to ripple add and subtract binary  
counters for spaceborne computers  
[NASA-CASE-XGS-04766] c08 N71-18602  
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[NASA-CASE-NPO-13139-1] c60 N76-21914

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**AIRCRAFT**  
Pilot warning indicator system of intruder  
aircraft  
[NASA-CASE-ERC-10226-1] c14 N73-16483  
Thin conformal antenna array for microwave power  
conversions  
[NASA-CASE-NPO-13886-1] c32 N78-24391

**AIRCRAFT ACCIDENTS**  
Satellite aided aircraft collision avoidance  
system effective for large number of aircraft  
[NASA-CASE-ERC-10090] c21 N71-24948  
Battery powered aircraft crash locator transmitter  
[NASA-CASE-MFS-16609] c14 N72-21431

**AIRCRAFT APPROACH SPACING**  
Economical satellite aided vehicle avoidance  
system for preventing midair collisions  
[NASA-CASE-ERC-10419] c21 N72-21631

**AIRCRAFT COMPARTMENTS**  
Aircraft design concept  
[NASA-CASE-LAR-11852-1] c05 N77-15027  
Low density bismaleimide-carbon microballoon  
composites --- aircraft and submarine  
compartment safety  
[NASA-CASE-ARC-11040-2] c24 N78-27184

**AIRCRAFT CONFIGURATIONS**  
Variable sweep wing configuration for supersonic  
aircraft  
[NASA-CASE-XLA-00230] c02 N70-33255  
Television simulation for aircraft and space  
flight  
[NASA-CASE-XFR-03107] c09 N71-19449  
Design of dual fuselage aircraft with pivoting  
wing and horizontal stabilizer to permit  
yawing of wing in flight for high speed  
operation  
[NASA-CASE-ARC-10470-1] c02 N73-26005  
Development of aircraft configuration for  
reduction of jet aircraft noise by exhausting  
engine gases over upper surface of wing  
[NASA-CASE-LAR-11087-1] c02 N73-26008  
Variable dihedral shuttle orbiter  
[NASA-CASE-LAR-10706-2] c05 N77-31132

**AIRCRAFT CONSTRUCTION MATERIALS**  
Ceramic fiber insulating material and method of  
producing same --- aircraft construction  
materials  
[NASA-CASE-MSC-14795-2] c24 N78-25138

**AIRCRAFT CONTROL**  
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system for flexible wings  
[NASA-CASE-XLA-06958] c02 N71-11038  
Development of attitude control system for  
vertical takeoff aircraft using reaction  
nozzles displaced from various axes of aircraft  
[NASA-CASE-XAC-08972] c02 N71-20570  
Device for controlling rotary potentiometer  
mounted on aircraft steering wheel or aileron  
control  
[NASA-CASE-XAC-10019] c15 N71-23809  
Direct lift control system having flaps with  
slots adjacent to their leading edge and  
particularly adapted for lightweight aircraft  
[NASA-CASE-LAP-10249-1] c02 N71-26110  
Supersonic or hypersonic vehicle control system  
comprising elevons with hinge line sweep and  
free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088  
Development of aircraft control system with high  
performance electrically controlled and  
mechanically operated hydraulic valves for  
precise flight operation  
[NASA-CASE-XAC-00048] c02 N71-29128  
Development of thrust control system for  
application to control of aircraft and  
spacecraft  
[NASA-CASE-MSC-13397-1] c21 N72-25595  
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[NASA-CASE-ERC-10439] c02 N73-19004  
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[NASA-CASE-ERC-10350] c14 N73-20474  
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control flutter over large range of  
oscillatory frequencies using stability  
augmentation techniques  
[NASA-CASE-LAR-10682-1] c02 N73-26004  
Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c05 N75-12930

- High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASP-LAR-11252-1] c05 N75-25914
- Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c08 N79-23097
- AIRCRAFT DESIGN**
- Design of supersonic aircraft with novel fixed, swept wing planform  
[NASA-CASE-XLA-04451] c02 N71-12243
- Design of dual fuselage aircraft with pivoting wing and horizontal stabilizer to permit yawing of wing in flight for high speed operation  
[NASA-CASE-ARC-10470-1] c02 N73-26005
- Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-XMP-02263] c05 N74-10907
- High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c05 N75-25914
- Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c05 N76-29217
- Aircraft design concept  
[NASA-CASE-LAR-11852-1] c05 N77-15027
- Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c05 N78-32086
- Helicopter rotor airfoil  
[NASA-CASE-LAR-12396-1] c02 N79-24958
- AIRCRAFT DETECTION**
- Surface based altitude measuring system for accurately measuring altitude of airborne vehicle  
[NASA-CASE-ERC-10412-1] c09 N73-12211
- Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c35 N79-18296
- AIRCRAFT ENGINES**
- Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c07 N74-32418
- Auxiliary power system for activity cooled aircraft  
[NASA-CASE-LAR-11626-1] c34 N77-12332
- Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c07 N77-28118
- A portable device particularly suited for use in starting air-start units for aircraft  
[NASA-CASE-PRC-10113-1] c09 N78-19166
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N79-23971
- AIRCRAFT EQUIPMENT**
- Battery powered aircraft crash locator transmitter  
[NASA-CASE-MPS-16609] c14 N72-21431
- Development of radiometric sensor to warn aircraft pilots of region of clear air turbulence along flight path  
[NASA-CASE-ERC-10081] c14 N72-28437
- Air speed and altitude probe  
[NASA-CASE-PRC-11009-1] c06 N78-25088
- A system for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-PRC-11005-1] c06 N79-24988
- AIRCRAFT FUEL SYSTEMS**
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467
- AIRCRAFT GUIDANCE**
- Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-PRC-10049-1] c04 N74-13420
- AIRCRAFT HAZARDS**
- Deflector for preventing objects from entering nacelle inlets of jet aircraft  
[NASA-CASE-XLE-00388] c28 N70-34788
- AIRCRAFT HYDRAULIC SYSTEMS**
- Variable-orifice hydraulic mechanism for aircraft gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c28 N73-19793
- AIRCRAFT INSTRUMENTS**
- Aircraft instrument for indicating malfunctions during takeoff  
[NASA-CASE-XLA-00100] c14 N70-36807
- Pressure probe for sensing ambient static air pressures  
[NASA-CASE-XLA-00481] c14 N70-36824
- Aircraft indicator for pilot control of takeoff roll, climbout path and verticle flight path in poor visibility conditions  
[NASA-CASE-XLA-00487] c14 N70-40157
- Optical projector system for establishing optimum arrangement of instrument displays in aircraft, spacecraft, other vehicles, and industrial instrument consoles  
[NASA-CASE-XNP-03853] c23 N71-21882
- Combined optical attitude and altitude indicating instrument for use in aircraft or spacecraft  
[NASA-CASE-XLA-01907] c14 N71-23268
- Aircraft horizon and vertical indicator  
[NASA-CASE-ERC-10392] c21 N73-14692
- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c35 N75-29381
- Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c04 N76-20114
- Turbulence intensity indicator  
[NASA-CASE-LAR-11833-1] c06 N76-31229
- Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c03 N76-32140
- AIRCRAFT LANDING**
- Aerodynamic configuration for aircraft capable of high speed flight and low drag for low speed takeoff or landing upon presently existing airfields  
[NASA-CASE-XLA-00806] c02 N70-34858
- Magnetic method for detection of aircraft position relative to runway  
[NASA-CASE-ARC-10179-1] c21 N72-22619
- Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c05 N75-12930
- Vehicle simulator binocular multiplanar visual display system  
[NASA-CASE-ARC-10808-1] c09 N76-24280
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083
- AIRCRAFT LAUNCHING DEVICES**
- Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c09 N77-19076
- AIRCRAFT MANEUVERS**
- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c35 N75-29381
- AIRCRAFT MODELS**
- Free flight suspension system for use with aircraft models in wind tunnel tests  
[NASA-CASE-XLA-00939] c11 N71-15926
- Variable geometry wind tunnel for testing aircraft models at subsonic speeds  
[NASA-CASE-XLA-07430] c11 N72-22246
- Deploy/release system --- model aircraft flight control  
[NASA-CASE-LAR-11575-1] c02 N76-16014
- AIRCRAFT NOISE**
- Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c07 N76-27232
- AIRCRAFT PERFORMANCE**
- Development of auxiliary lifting system to provide ferry capability for entry vehicles  
[NASA-CASE-LAR-10574-1] c11 N73-13257
- AIRCRAFT PILOTS**
- Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c09 N74-30597
- AIRCRAFT SAFETY**
- Aircraft instrument for indicating malfunctions during takeoff  
[NASA-CASE-XLA-00100] c14 N70-36807
- Development and operating principles of collision warning system for aircraft accident prevention  
[NASA-CASE-HQN-10703] c21 N73-13643
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421
- AIRCRAFT STABILITY**
- Mechanical stabilization system for VTOL aircraft  
[NASA-CASE-XLA-06339] c02 N71-13422
- Development of aerodynamic control system to control flutter over large range of oscillatory frequencies using stability augmentation techniques  
[NASA-CASE-LAR-10682-1] c02 N73-26004

- A velocity vector control system augmented with direct lift control --- stability augmentation using manual control  
[NASA-CASE-LAR-12268-1] c08 N79-20136
- AIRCRAFT STRUCTURES**
- Fatigue testing device applying random discrete load levels to test specimen and applicable to aircraft structures  
[NASA-CASE-XLA-02131] c32 N70-42003
- Heat flux sensor adapted for mounting on aircraft or spacecraft to measure aerodynamic heat flux inflow to aircraft skin  
[NASA-CASE-XPR-03802] c33 N71-23085
- Three-axis adjustable loading structure  
[NASA-CASE-PRC-10051-1] c35 N74-13129
- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230
- Fingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c02 N77-10001
- New perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups --- sealers for aircraft structures  
[NASA-CASE-ARC-11241-1] c27 N79-24153
- AIRCRAFT WAKES**
- Vortex attenuation method --- for multi-engine aircraft  
[NASA-CASE-LAR-12034-1] c02 N77-22045
- An improved system for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-PRC-11024-1] c02 N79-17797
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- Smokestack-mounted airfoil  
[NASA-CASE-LAR-11669-1] c45 N79-10570
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- Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-00755] c01 N71-13410
- Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-05828] c01 N71-13411
- Miniature hydraulic actuator --- for control surfaces on airfoils  
[NASA-CASE-LAR-11522-1] c34 N74-34881
- Wind tunnel  
[NASA-CASE-LAR-10135-1] c09 N79-21083
- Surface finishing --- adhesive bonding of plastic film to metal airfoil surfaces  
[NASA-CASE-MSC-12631-3] c26 N79-21183
- An annular wing  
[NASA-CASE-PRC-11007-2] c02 N79-24959
- AIRFRAMES**
- Design of dual fuselage aircraft with pivoting wing and horizontal stabilizer to permit yawing of wing in flight for high speed operation  
[NASA-CASE-ARC-10470-1] c02 N73-26005
- A cooling system for an aircraft having a cruise range from Mach 2 to Mach 8  
[NASA-CASE-LAR-12406-1] c05 N79-24980
- AIRSPEED**
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[NASA-CASE-XLA-00806] c02 N70-34858
- Air speed and attitude probe  
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- Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c35 N79-18296
- ALCOHOLS**
- New trifunctional alcohol derived from trimer acid and novel method of preparation  
[NASA-CASE-NPO-10714] c06 N69-31244
- Cooling and radiation protection of ruby lasers using copper sulfate solution in alcohol  
[NASA-CASE-MPS-20180] c16 N72-12440
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- Direct synthesis of polymeric schiff bases from two amines and two aldehydes  
[NASA-CASE-XMP-08655] c06 N71-11239
- Synthesis of azine polymers for heat shields by azine-aromatic aldehyde reaction  
[NASA-CASE-XMP-08656] c06 N71-11242
- Synthesis of aromatic diamines and dialdehyde polymers using Schiff base  
[NASA-CASE-XMP-03074] c06 N71-24740
- Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c27 N78-17214
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[NASA-CASE-XMP-00480] c14 N70-39898
- Portable device for aligning surfaces of two adjacent wall or sheet sections for joining at point of junction  
[NASA-CASE-XMP-01452] c15 N70-41371
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[NASA-CASE-XNP-02029] c14 N70-41955
- Electrical and electromechanical trigonometric computation assembly and space vehicle guidance system for aligning perpendicular axes of two sets of three-axes coordinate references  
[NASA-CASE-XMP-00684] c21 N71-21688
- Description of device for aligning stacked sheets of paper for repetitive cutting  
[NASA-CASE-XMS-04178] c15 N71-22798
- Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125
- Measuring roll alignment of test body with respect to reference body  
[NASA-CASE-GSC-10514-1] c14 N72-20379
- Apparatus for aligning shadow shields and cryogenic storage tanks in outer space with the sun  
[NASA-CASE-KSC-10622-1] c31 N72-21893
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[NASA-CASE-ARC-10444-1] c16 N73-33397
- Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c18 N76-14186
- Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276
- Optical alignment device  
[NASA-CASE-ARC-10932-1] c74 N76-22993
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[NASA-CASE-MPS-15218-1] c37 N77-19457
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[NASA-CASE-LAR-11370-1] c35 N78-32399
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[NASA-CASE-LEW-12649-1] c44 N78-25530
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[NASA-CASE-LEW-13101-1] c25 N79-14173
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[NASA-CASE-LEW-13135-1] c25 N79-14174
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[NASA-CASE-ARC-10992-1] c26 N78-32229
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[NASA-CASE-MFS-10507] c06 N73-30101
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[NASA-CASE-ARC-11257-1] c04 N79-33177
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[NASA-CASE-XNP-03063] c17 N71-23365
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[NASA-CASE-XLE-05033] c15 N71-23810
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[NASA-CASE-XLA-06199] c15 N71-24875
- Adjustable rigid mount for trihedral mirror formed of alloy with small coefficient of thermal expansion supporting screws and spring-biased plates  
[NASA-CASE-XNP-08907] c23 N71-29123
- Two-step diffusion welding process of unrecrystallized alloys  
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 Dynamic precession damping of spin-stabilized  
 vehicles by using rate gyroscope and angular  
 accelerometer  
 [NASA-CASE-XLA-01989] c21 N70-34295  
 Attitude stabilizer for nonguided missile or  
 vehicle with respect to trajectory  
 [NASA-CASE-ARC-10134] c30 N72-17873
- AUDIO EQUIPMENT**  
 Audio equipment for removing impulse noise from  
 audio signals  
 [NASA-CASE-NPO-11631] c10 N73-12244
- AUDIO FREQUENCIES**  
 High efficiency transformerless amplitude  
 modulator coupled to RF power amplifier  
 [NASA-CASE-GSC-10668-1] c07 N71-28430  
 Audio frequency analysis circuit for  
 determining, displaying, and recording  
 frequency of sweeping audio frequency signal  
 [NASA-CASE-NPO-11147] c14 N72-27408
- AUDITORY DEFECTS**  
 Hearing aid malfunction detection system  
 [NASA-CASE-MS-14916-1] c33 N78-10375
- AUDITORY PERCEPTION**  
 Auditory display for the blind  
 [NASA-CASE-HQN-10832-1] c71 N74-21014
- AUDITORY SIGNALS**  
 Audio signal processing system for noise surge  
 elimination at low amplitude audio input  
 [NASA-CASE-MS-12223-1] c07 N71-26181  
 Audio equipment for removing impulse noise from  
 audio signals  
 [NASA-CASE-NPO-11631] c10 N73-12244
- AUDITORY STIMULI**  
 Auditory display for the blind  
 [NASA-CASE-HQN-10832-1] c71 N74-21014
- AUSTENITIC STAINLESS STEELS**  
 Intermetallic chromium containing nickel  
 aluminate for high temperature corrosion  
 protection of stainless steels  
 [NASA-CASE-LEW-11267-1] c17 N73-32414  
 Device for measuring the ferrite content in an  
 austenitic stainless-steel weld  
 [NASA-CASE-MPS-22907-1] c26 N76-18257
- AUTOCLAVES**  
 A system for sterilizing objects --- such as  
 water systems on the space shuttle using  
 ethylene oxide  
 [NASA-CASE-KSC-11085-1] c54 N79-33848
- AUTOCORRELATION**  
 Linear three-tap feedback shift register  
 [NASA-CASE-NPO-10351] c08 N71-12503  
 Circuitry for developing autocorrelation  
 function continuously within signal receiving  
 period  
 [NASA-CASE-XNP-00746] c07 N71-21476
- AUTOMATIC CONTROL**  
 Automatic control of voltage supply to direct  
 current motor  
 [NASA-CASE-XMS-04215-1] c09 N69-39987  
 Electro-optical/computer system for aligning  
 large structural members and maintaining  
 correct position  
 [NASA-CASE-XNP-02029] c14 N70-41955  
 Pulsed energy power system for application of  
 combustible gases to turbine controlling ac  
 voltage generator  
 [NASA-CASE-MS-13112] c03 N71-11057  
 Automatic balancing device for use on  
 frictionless supported attitude-controlled  
 test platforms  
 [NASA-CASE-LAR-10774] c10 N71-13545  
 Computer controlled apparatus for maintaining  
 welding torch angle and velocity during seam  
 tracking  
 [NASA-CASE-XMP-03287] c15 N71-15607

- Fluid leakage detection system with automatic monitoring capability  
[NASA-CASE-LAR-10323-1] c12 N71-17573
- Light sensitive control system for automatically opening and closing dome of solar optical telescope  
[NASA-CASE-MSC-10966] c14 N71-19568
- Welding torch with automatic speed controller using speed sensing wheel and closed servo system  
[NASA-CASE-XMP-01730] c15 N71-23050
- Microwave waveguide switch with rotor position control  
[NASA-CASE-XNP-06507] c09 N71-23548
- Automatically reciprocating, high pressure pump for use in spacecraft cryogenic propellants  
[NASA-CASE-XNP-04731] c15 N71-24042
- Automatic controlled thermal fatigue testing apparatus  
[NASA-CASE-XLA-02059] c33 N71-24276
- Automatically charging battery of electric storage cells  
[NASA-CASE-XNP-04758] c03 N71-24605
- Electric motor control system with pulse width modulation for providing automatic null seeking servo  
[NASA-CASE-XMP-05195] c10 N71-24861
- Indexing mechanism for cathode array substitution in electron beam tube  
[NASA-CASE-NPO-10625] c09 N71-26182
- Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244
- Automated fluid chemical analyzer for microchemical analysis of small quantities of liquids by use of selected reagents and analyzer units  
[NASA-CASE-XNP-09451] c06 N71-26754
- Automatic control device for regulating inlet water temperature of liquid cooled spacesuit  
[NASA-CASE-MSC-13917-1] c05 N72-15098
- Optimal control system for automatic speed regulation of electric driven motor vehicle  
[NASA-CASE-NPO-11210] c11 N72-20244
- Plotter device for automatically drawing equipotential lines on sheet of resistance paper  
[NASA-CASE-NPO-11134] c09 N72-21246
- Automatic shunting of ion thruster magnetic field when thruster is not operating  
[NASA-CASE-LEW-10835-1] c28 N72-22771
- Automatic temperature control for liquid cooled space suit  
[NASA-CASE-ARC-10599-1] c05 N73-26071
- Speed control system for dc motor equipped with brushless Hall effect device  
[NASA-CASE-MFS-20207-1] c09 N73-32107
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c52 N74-22771
- Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c09 N75-12968
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014
- Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c66 N76-19888
- Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c38 N78-17396
- Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c35 N78-19466
- A method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c76 N78-24952
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529
- A solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-3] c44 N78-25560
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c33 N79-24257
- AUTOMATIC CONTROL VALVES**
- Ambient atmospheric pressure sensing device for determining altitude of flight vehicles  
[NASA-CASE-XLA-00128] c15 N70-37925
- Describing metal valve pintle with encapsulated elastomeric body  
[NASA-CASE-MSC-12116-1] c15 N71-17648
- Semitoroidal diaphragm cavitating flow control valve  
[NASA-CASE-XNP-09704] c12 N71-18615
- Reliability of automatic refilling valving device for cryogenic liquid systems  
[NASA-CASE-NPO-11177] c15 N72-17453
- Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c37 N75-15050
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c54 N78-14784
- AUTOMATIC FREQUENCY CONTROL**
- System for phase locking onto carrier frequency signal located within receiver bandpass  
[NASA-CASE-IGS-04994] c09 N69-21543
- Audio signal processing system for noise surge elimination at low amplitude audio input  
[NASA-CASE-MSC-12223-1] c07 N71-26181
- Automatic frequency control device for providing frequency reference for voltage controlled oscillator  
[NASA-CASE-KSC-10393] c09 N72-21247
- Self-tuning electronic filter for maintaining constant bandwidth and center frequency gain  
[NASA-CASE-ARC-10264-1] c09 N73-20231
- AUTOMATIC GAIN CONTROL**
- Automatic gain control amplifier system  
[NASA-CASE-XMS-05307] c09 N69-24330
- Automatic measuring and recording of gain and zero drift characteristics of electronic amplifier  
[NASA-CASE-XMS-05562-1] c09 N69-39986
- Self-tuning electronic filter for maintaining constant bandwidth and center frequency gain  
[NASA-CASE-ARC-10264-1] c09 N73-20231
- Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c33 N79-22373
- AUTOMATIC TEST EQUIPMENT**
- Automated visual sensitivity tester for determining visual field sensitivity and blind spot size  
[NASA-CASE-ARC-10329-1] c05 N73-26072
- Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c35 N75-27330
- Visual examination apparatus  
[US-PATENT-RE-28,921] c52 N76-30793
- Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c52 N79-12694
- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c35 N79-27479
- AUTOMATION**
- Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c37 N77-22480
- Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c37 N78-32434
- AUTOMOBILE ENGINES**
- Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c37 N78-24545
- AUTOMOBILE FUELS**
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c44 N76-29700
- AUXILIARY POWER SOURCES**
- Auxiliary power system for activity cooled aircraft  
[NASA-CASE-LAR-11626-1] c34 N77-12332
- Independent power generator  
[NASA-CASE-LAR-11208-1] c44 N78-32539
- AXES (REFERENCE LINES)**
- Test fixture for measuring moment of inertia of irregularly shaped body with multiple axes  
[NASA-CASE-XGS-01023] c14 N71-22992
- Mechanism for restraining universal joints to prevent separation while allowing bending, angulation, and lateral offset in any position about axis  
[NASA-CASE-XNP-02278] c15 N71-28951
- AXES OF ROTATION**
- Unitary three-axis controller for flight vehicles within or outside atmosphere  
[NASA-CASE-XPR-00181] c21 N70-33279
- Proportional controller for regulating aircraft or spacecraft motion about three axes  
[NASA-CASE-XAC-03392] c03 N70-41954
- Electrical and electromechanical trigonometric computation assembly and space vehicle guidance system for aligning perpendicular axes of two sets of three-axes coordinate references

[NASA-CASE-XMP-00684] c21 N71-21688  
 Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
 [NASA-CASE-XMS-07487] c15 N71-23255

**AXIAL COMPRESSION LOADS**  
 Development and characteristics of device for indicating and recording magnitude of force applied in axial direction  
 [NASA-CASE-MSC-15626-1] c14 N72-25411

**AXIAL FLOW TURBINES**  
 Multistage multiple reentry axial flow reaction turbine with reverse flow reentry ducting  
 [NASA-CASE-XLE-00170] c15 N70-36412  
 Multistage, multiple reentry, single rotor, axial flow turbine  
 [NASA-CASE-XLE-00085] c28 N70-39895  
 Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
 [NASA-CASE-NPO-14130-1] c34 N79-20335

**AXIAL LOADS**  
 Ball locking device which releases in response to small forces when subjected to high axial loads  
 [NASA-CASE-XMP-01371] c15 N70-41829  
 Method for measuring biaxial stress in a body subjected to stress inducing loads  
 [NASA-CASE-MPS-23299-1] c39 N77-28511

**AXIAL STRESS**  
 Axially and radially controllable magnetic bearing  
 [NASA-CASE-GSC-11551-1] c37 N76-18459  
 Method for measuring biaxial stress in a body subjected to stress inducing loads  
 [NASA-CASE-MPS-23299-1] c39 N77-28511

**AZIMUTH**  
 Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
 [NASA-CASE-MPS-14017] c14 N71-26627  
 Long range laser traversing system  
 [NASA-CASE-GSC-11262-1] c36 N74-21091  
 Magnetic heading reference  
 [NASA-CASE-LAR-11387-2] c04 N77-19056

**AZINES**  
 Synthesis of azine polymers for heat shields by azine-aromatic aldehyde reaction  
 [NASA-CASE-XMP-08656] c06 N71-11242  
 Ultraviolet and thermally stable polymer compositions  
 [NASA-CASE-ARC-10592-1] c27 N74-21156  
 Ultraviolet and thermally stable polymer compositions  
 [NASA-CASE-ARC-10592-2] c27 N76-32315  
 Process for the preparation of new elastomeric polytriazines  
 [NASA-CASE-ARC-11248-1] c27 N79-22301  
 New perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups --- sealers for aircraft structures  
 [NASA-CASE-ARC-11241-1] c27 N79-24153  
 Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
 [NASA-CASE-LEW-12053-2] c27 N79-28307

**AZO COMPOUNDS**  
 Molding process for imidazopyrrolone polymers  
 [NASA-CASE-LAR-10547-1] c31 N74-13177

**B**

**BACKUPS**  
 Flexible backup bar for welding awkwardly shaped structures  
 [NASA-CASE-XMP-00722] c15 N70-40204  
 Reliable electrical element heater using plural wire system and backup power sources  
 [NASA-CASE-MPS-21462-1] c33 N74-14935

**BACTERIA**  
 Decontamination of petroleum products with honey  
 [NASA-CASE-XNP-03835] c06 N71-23499  
 Portable tester for monitoring bacterial contamination by adenosine triphosphate light reaction  
 [NASA-CASE-GSC-10879-1] c14 N72-25413  
 Enzymatic luminescent bioassay method for determining bacterial levels in urine  
 [NASA-CASE-GSC-11092-2] c04 N73-27052  
 Lyophilized spore dispenser  
 [NASA-CASE-LAR-10544-1] c37 N74-13178  
 Method of detecting and counting bacteria  
 [NASA-CASE-GSC-11917-2] c51 N76-29891  
 Method and apparatus for eliminating luminol interference material  
 [NASA-CASE-MSC-16260-1] c51 N78-18674  
 Rapid, quantitative determination of bacteria in water  
 [NASA-CASE-GSC-12158-1] c51 N78-22585  
 Method and apparatus for continuous measurement of bacterial content of aqueous samples  
 [NASA-CASE-MSC-16779-1] c51 N78-22586  
 Determination of antimicrobial susceptibilities on infected urines without isolation  
 [NASA-CASE-GSC-12046-1] c52 N79-14750

**BACTERIOLOGY**  
 Detection of bacteria in biological fluids and foods  
 [NASA-CASE-GSC-11533-1] c14 N73-13435  
 Application of luciferase assay for ATP to antimicrobial drug susceptibility  
 [NASA-CASE-GSC-12039-1] c51 N77-22794  
 Automated single-slide staining device  
 [NASA-CASE-LAR-11649-1] c51 N77-27677

**BAFFLES**  
 Light radiation direction indicator with baffle of two parallel grids  
 [NASA-CASE-XNP-03930] c14 N69-24331  
 Light baffle with oblate hemispheroid surface and shading flange  
 [NASA-CASE-NPO-10337] c14 N71-15604  
 Flexible ring slosh damping baffle for spacecraft fuel tank  
 [NASA-CASE-LAR-10317-1] c32 N71-16103  
 Submerged fuel tank baffles to prevent sloshing in liquid propellant rocket flight  
 [NASA-CASE-XLA-04605] c32 N71-16106  
 Floating baffle for tank drain  
 [NASA-CASE-KSC-10639] c15 N73-26472  
 System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
 [NASA-CASE-MPS-23513-1] c74 N79-11865

**BAGS**  
 Pecal waste disposal container  
 [NASA-CASE-XMS-06761] c05 N69-23192  
 Gas diffusion liquid storage bag and method of use for storing blood  
 [NASA-CASE-NPO-13930-1] c52 N79-14749

**BAKING**  
 Bakeable McLeod gauge  
 [NASA-CASE-XGS-01293-1] c35 N79-33450

**BALANCE**  
 Thermoprotective device for balances  
 [NASA-CASE-XAC-00648] c14 N70-40400  
 Device for monitoring a change in mass in varying gravimetric environments  
 [NASA-CASE-MPS-21556-1] c35 N74-26945

**BALANCING**  
 Automatic balancing device for use on frictionless supported attitude-controlled test platforms  
 [NASA-CASE-LAR-10774] c10 N71-13545  
 Force balanced throttle valve for fuel control in rocket engines  
 [NASA-CASE-NPO-10808] c15 N71-27432  
 Static force balancing system attached to lifting body  
 [NASA-CASE-LAR-10348-1] c11 N73-12264

**BALL BEARINGS**  
 Combination guide and rotary bearing for freely

moving shaft  
 [NASA-CASE-XLA-00013] c15 N71-29136  
 Method for reducing mass of ball bearings for  
 long life operation at high speed  
 [NASA-CASE-LEW-10856-1] c15 N72-22490  
 Low mass rolling element bearing assembly  
 [NASA-CASE-LEW-11087-1] c15 N73-30458  
 Hollow rolling element bearings  
 [NASA-CASE-LEW-11087-3] c37 N74-21064  
 Drilled ball bearing with a one piece  
 anti-tipping cage assembly  
 [NASA-CASE-LEW-11925-1] c37 N75-31446  
 Spherical bearing --- to reduce vibration effects  
 [NASA-CASE-MFS-23447-1] c37 N79-11404  
**BALLAST (MASS)**  
 Inflatable stabilizing system for use on life  
 raft to reduce rocking and preclude capsizing  
 [NASA-CASE-MSC-12393-1] c02 N73-26006  
**BALLASTS (IMPEDANCES)**  
 Apparatus for ballasting high frequency  
 transistors  
 [NASA-CASE-XGS-05003] c09 N69-24318  
**BALLISTICS**  
 Fiber modified polyurethane foam for ballistic  
 protection  
 [NASA-CASE-ARC-10714-1] c27 N76-15310  
**BALLOON SOUNDING**  
 Apparatus for controlling the temperature of  
 balloon-borne equipment  
 [NASA-CASE-GSC-11620-1] c34 N74-23039  
**BALLOONS**  
 Development and characteristics of hot air  
 balloon deceleration and recovery system  
 [NASA-CASE-XLA-06824-2] c02 N71-11037  
 Inflation system for balloon type satellites  
 [NASA-CASE-XGS-03351] c31 N71-16081  
 System for controlling torque buildup in  
 suspension of gondola connected to balloon by  
 parachute shroud lines  
 [NASA-CASE-GSC-11077-1] c02 N73-13008  
**BALLS**  
 Two axis flight controller with potentiometer  
 control shafts directly coupled to rotatable  
 ball members  
 [NASA-CASE-XPR-04104] c03 N70-42073  
 A quartz ball valve  
 [NASA-CASE-NPO-14473-1] c37 N79-10427  
**BANDPASS FILTERS**  
 Helical coaxial resonator RF filter  
 [NASA-CASE-XGS-02816] c07 N69-24323  
 Phase locked demodulator with bandwidth  
 switching amplifier circuit  
 [NASA-CASE-XNP-01107] c10 N71-28859  
 Signal to noise ratio determination circuit  
 using bandpass limiter  
 [NASA-CASE-GSC-11239-1] c10 N73-25241  
 Selective bandpass resonators using bandstop  
 resonator pairs for microwave frequency  
 operation  
 [NASA-CASE-GSC-10990-1] c09 N73-26195  
 Dichroic plate --- as bandpass filters  
 [NASA-CASE-NPO-13506-1] c35 N76-15435  
 Notch filter  
 [NASA-CASE-MFS-23303-1] c32 N77-18307  
 Adaptive polarization separation experiments  
 [NASA-CASE-LAR-12196-1] c32 N79-18154  
**BANDWIDTH**  
 Improvements in receiver of narrow bandwidth  
 television system  
 [NASA-CASE-XMS-06740-1] c07 N71-26579  
 Self-tuning electronic filter for maintaining  
 constant bandwidth and center frequency gain  
 [NASA-CASE-ARC-10264-1] c09 N73-20231  
 Turnstile and flared cone UHF antenna  
 [NASA-CASE-LAR-10970-1] c33 N76-14372  
 Independent gain and bandwidth control of a  
 traveling wave maser  
 [NASA-CASE-NPO-13801-1] c36 N78-18410  
 A method of growing a ribbon crystal  
 particularly suited for facilitating automated  
 control of ribbon width  
 [NASA-CASE-NPO-14295-1] c76 N78-24952  
 Dual band combiner for horn antenna  
 [NASA-CASE-NPO-14519-1] c32 N79-17068  
 Inductorless narrow-band filter/amplifier  
 [NASA-CASE-GSC-12410-1] c33 N79-24260  
**BARIUM**  
 Chemical system for releasing barium to create  
 ion clouds in upper atmosphere and  
 interplanetary space  
 [NASA-CASE-LAR-10670-1] c06 N73-30097  
**BARIUM COMPOUNDS**  
 Improved cathode containing barium carbonate  
 block and heated tungsten screen for electron  
 bombardment ion thruster  
 [NASA-CASE-XLE-07087] c06 N69-39889  
**BARIUM FLUORIDES**  
 Production of barium fluoride-calcium fluoride  
 composite lubricant for bearings or seals  
 [NASA-CASE-XLE-08511-2] c18 N71-16105  
**BARIUM ION CLOUDS**  
 Rocket having barium release system to create  
 ion clouds in the upper atmosphere  
 [NASA-CASE-LAR-10670-2] c15 N74-27360  
**BARIUM TITANATES**  
 Memory device employing semiconductor and  
 ferroelectric properties of single crystal  
 barium titanate  
 [NASA-CASE-ERC-10307] c08 N72-21198  
**BAROMETERS**  
 Oceanic wave measurement system  
 [NASA-CASE-MFS-23862-1] c48 N79-10689  
**BARRIERS**  
 Short range laser obstacle detector --- for  
 surface vehicles using laser diode array  
 [NASA-CASE-NPO-11856-1] c36 N74-15145  
**BASES (CHEMICAL)**  
 Low concentration alkaline solution treatment of  
 aluminum with metal phosphate surface coatings  
 to improve chemical bonding and reduce coating  
 weight  
 [NASA-CASE-XLA-01995] c18 N71-23047  
**BATTERY CHARGERS**  
 Battery charging system with cell to cell  
 voltage balance  
 [NASA-CASE-XGS-05432] c03 N71-19438  
 Alkaline-type coulometer cell for primary charge  
 control in secondary battery recharge circuits  
 [NASA-CASE-XGS-05434] c03 N71-20491  
 Development and characteristics of battery  
 charging circuits with coulometer for control  
 of available current  
 [NASA-CASE-GSC-10487-1] c03 N71-24719  
 Method and apparatus for conditioning of  
 nickel-cadmium batteries  
 [NASA-CASE-MFS-23270-1] c44 N78-25531  
**BAYARD-ALPERT IONIZATION GAGES**  
 Describing hot filament type Bayard-Alpert  
 ionization gage with ion collector buried or  
 removed from grid structure  
 [NASA-CASE-XLA-07424] c14 N71-18482  
**BEADS**  
 Potary bead dropper and selector for testing  
 micrometeorite transducers  
 [NASA-CASE-IGS-03304] c09 N71-22988  
**BEAM LEADS**  
 Integrated circuit package with lead structure  
 and method of preparing the same  
 [NASA-CASE-MFS-21374-1] c33 N74-12951  
**BEAM SPLITTERS**  
 Optical range finder using reflective first  
 surfaces mirror and transmitting beam splitter  
 [NASA-CASE-MSC-12105-1] c14 N72-21409  
 Laser extensometer  
 [NASA-CASE-MFS-19259-1] c36 N78-14380  
 Over-under double-pass interferometer  
 [NASA-CASE-NPO-13999-1] c35 N78-18395  
 Method of forming a sharp edge on an optical  
 device --- beam splitters for Solar Maximum  
 Missions spectropolarimeter  
 [NASA-CASE-GSC-12348-1] c74 N78-29902  
 Method and apparatus for splitting a beam of  
 energy --- optical communication  
 [NASA-CASE-GSC-12083-1] c73 N78-32848  
 Direction sensitive laser velocimeter ---  
 determining the direction of particle motion  
 using a helium-neon laser  
 [NASA-CASE-LAR-12177-1] c36 N79-28532  
**BEAM SWITCHING**  
 Using electron beam switching for brushless  
 motor commutation  
 [NASA-CASE-IGS-01451] c09 N71-10677  
 Antenna array at focal plane of reflector with  
 coupling network for beam switching  
 [NASA-CASE-GSC-10220-1] c07 N71-27233  
 Dish antenna having switchable beamwidth ---  
 with truncated concave ellipsoid subreflector  
 [NASA-CASE-GSC-11760-1] c33 N75-19516

- Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c32 N76-15329
- Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472
- BEAM WAVEGUIDES**
- Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HQN-10541-2] c15 N71-27135
- Optical communication system with gas filled waveguide for laser beam transmission  
[NASA-CASE-HQN-10541-4] c16 N71-27183
- Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125
- BEAMS (RADIATION)**
- Method and means for recording and reconstructing holograms without use of reference beam  
[NASA-CASE-ERC-10020] c16 N71-26154
- Method and system for transmitting and distributing optical frequency radiation  
[NASA-CASE-HQN-10541-3] c23 N72-23695
- BEAMS (SUPPORTS)**
- Foldable beam  
[NASA-CASE-LAR-12077-1] c39 N79-25425
- BEARING (DIRECTION)**
- Light radiation direction indicator with baffle of two parallel grids  
[NASA-CASE-XNP-03930] c14 N69-24331
- Solar radiation direction detector and device for compensating degradation of photocells  
[NASA-CASE-XLA-00183] c14 N70-40239
- Nichelson interferometer with photodetector for optical direction sensing  
[NASA-CASE-NPO-10320] c14 N71-17655
- Omnidirectional liquid filled accelerometer design with liquid and housing temperature compensation  
[NASA-CASE-HQN-10780] c14 N71-30265
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c04 N77-19056
- BEARINGS**
- Metal alloy bearing materials for space applications  
[NASA-CASE-XLE-05033] c15 N71-23810
- Low friction bearing and lock mechanism for two-axis gimbal carrying satellite payload  
[NASA-CASE-GSC-10556-1] c31 N71-26537
- Measuring device for bearing preload using spring washers  
[NASA-CASE-MFS-20434] c11 N72-25288
- Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c37 N75-18574
- Magnetic bearing system  
[NASA-CASE-GSC-11978-1] c37 N77-17464
- Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c37 N77-28486
- Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c37 N77-32500
- Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c37 N77-32501
- An improved suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c37 N79-12446
- BEDS (PROCESS ENGINEERING)**
- Catalyst bed element removing tool  
[NASA-CASE-XPR-00811] c15 N70-36901
- BEER LAW**
- Multichannel photoionization chamber for measuring absorption, photoionization yield, and coefficients of gases  
[NASA-CASE-ERC-10044-1] c14 N71-27090
- BEES**
- Decontamination of petroleum products with honey  
[NASA-CASE-XNP-03835] c06 N71-23499
- BELLOWS**
- Compact bellows spirometer for high speed and high altitude space travel  
[NASA-CASE-XAR-01547] c05 N69-21473
- Electrical connection for printed circuits on common board, using bellows principle in rivet  
[NASA-CASE-XNP-05082] c15 N70-41960
- Flexible bellows joint shielding sleeve for propellant transfer pipelines  
[NASA-CASE-XNP-01855] c15 N71-28937
- Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c37 N75-19686
- BELTS**
- Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c31 N74-32917
- BENDING**
- Method and apparatus for bowing of instrument panels to improve radio frequency shielded enclosure  
[NASA-CASE-XMP-09422] c07 N71-19436
- Development of systems for automatically and continually suppressing or attenuating bending motion in elastic bodies  
[NASA-CASE-XAC-05632] c32 N71-23971
- Elbow forming in jacketed pipes while maintaining separation between core shape and jacket pipes  
[NASA-CASE-XNP-10475] c15 N71-24679
- Device for bending metal ribbon or wire  
[NASA-CASE-XLA-05966] c15 N72-12408
- BENDING DIAGRAMS**
- Charged particle analyzer with periodically varying voltage applied across electrostatic deflection members  
[NASA-CASE-XAC-05506-1] c24 N71-16095
- BENDING FATIGUE**
- Apparatus for testing metallic and nonmetallic beams or rods by bending at high temperatures in vacuum or inert atmosphere  
[NASA-CASE-XLE-01300] c15 N70-41993
- Cryostat for flexure fatigue testing of composite materials  
[NASA-CASE-XMP-02964] c14 N71-17659
- BENDING MOMENTS**
- Launch pad missile release system with bending moment change rate reduction in thrust distribution structure at liftoff  
[NASA-CASE-XMP-03198] c30 N70-40353
- BENDING VIBRATION**
- Mercury filled pendulum damper for controlling bending vibration induced by wind effects  
[NASA-CASE-LAR-10274-1] c14 N71-17626
- BENZENE**
- Para-benzoquinone dioxime and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials  
[NASA-CASE-ARC-10304-1] c18 N73-26572
- BERYLLIUM ALLOYS**
- Development of fluoride coating to prevent oxidation of beryllium surfaces at elevated temperatures  
[NASA-CASE-LEW-10327] c17 N71-33408
- BERYLLIUM HYDRIDES**
- Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c28 N79-14228
- BERYLLIUM OXIDES**
- High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c33 N76-15373
- BIMETALS**
- Nonmagnetic thermal motor for magnetometer movement  
[NASA-CASE-XAR-03786] c09 N69-21313
- Design and development of linear actuator based on bimetallic spring expansion  
[NASA-CASE-NPO-10637] c15 N72-12409
- Application of spiral, bimetallic strip to create circular motion on mechanical shaft by changing strip temperature  
[NASA-CASE-NPO-11283] c09 N72-25260
- Development of thermal compensating structure which maintains uniform length with changes in temperature  
[NASA-CASE-MFS-20433] c15 N72-28496
- Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c35 N74-15126
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c35 N77-32454
- BINARY CODES**
- Time division relay synchronizer with master sync pulse for activating binary counter to produce signal identifying time slot for station  
[NASA-CASE-GSC-10373-1] c07 N71-19773
- Logic circuit for generating multibit binary code word in parallel

- [NASA-CASE-XNP-04623] c10 N71-26103  
Design and development of encoder/decoder system to generate binary code which is function of outputs of plurality of bistable elements  
[NASA-CASE-NPO-10342] c10 N71-33407  
Binary coded sequential acquisition ranging system for distance measurements  
[NASA-CASE-NPO-11194] c08 N72-25209  
Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c60 N76-23850  
Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289  
Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c32 N77-30308  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c60 N78-17691  
Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c33 N79-11313
- BINARY DATA**  
Nondestructive interrogating and state changing circuit for binary magnetic storage elements  
[NASA-CASE-XGS-00174] c08 N70-34743  
Logic circuit to ripple add and subtract binary counters for spaceborne computers  
[NASA-CASE-XGS-04766] c08 N71-18602  
Describing circuit for obtaining sum of squares of numbers  
[NASA-CASE-XGS-04765] c08 N71-18693  
Digital synchronizer for extracting binary data in receiver of PSK/PCM communication system  
[NASA-CASE-NPO-10851] c07 N71-24613  
Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c32 N74-26654  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c32 N75-24981  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c60 N78-17691
- BINARY DIGITS**  
Logarithmic converter for compressing 19-digit binary input number to 8-digit output  
[NASA-CASE-XLA-00471] c08 N70-34778  
Circuit diagram and operation of full binary adder  
[NASA-CASE-XGS-00689] c08 N70-34787  
Binary number sorter for arranging numbers in order of magnitude  
[NASA-CASE-NPO-10112] c08 N71-12502  
Binary sequence detector with few memory elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505  
Cathode ray tube system for displaying ones and zeros in binary wave train  
[NASA-CASE-XGS-04987] c08 N71-20571  
Characteristics of comparator circuits for comparison of binary numbers in information processing system  
[NASA-CASE-XNP-04819] c08 N71-23295  
Digital converter for scaling binary number to binary coded decimal number of higher multiple  
[NASA-CASE-KSC-10595] c08 N73-12176  
Family of m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c10 N73-20254  
Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c60 N76-23850
- BINARY FLUIDS**  
Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c35 N75-30503
- BINARY TO DECIMAL CONVERTERS**  
Binary to binary-coded decimal converter using single set of logic circuits notwithstanding number of shift register decades  
[NASA-CASE-XNP-00432] c08 N70-35423  
Design and operation of high speed binary to decimal conversion system  
[NASA-CASE-XGS-01230] c08 N71-19544  
Binary to decimal decoder logic circuit design with feedback control and display device  
[NASA-CASE-XRS-06167] c08 N71-24890  
High speed direct binary to binary coded decimal converter for use in PCM telemetry systems  
[NASA-CASE-KSC-10326] c08 N72-21197  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c60 N78-17691
- BINDERS (MATERIALS)**  
Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
[NASA-CASE-XMS-00259] c18 N70-36400  
Brazing alloy binder  
[NASA-CASE-XNP-05868] c26 N75-27125  
Recovery of aluminum and binder from composite propellants  
[NASA-CASE-NPO-14110-1] c28 N79-10225  
Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c24 N79-31347
- BINOCULARS**  
Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c74 N77-20882
- BIOASSAY**  
Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons  
[NASA-CASE-XGS-01231] c14 N70-41676  
Bioassay of flavin coenzymes  
[NASA-CASE-GSC-10565-1] c06 N72-25149  
Enzymatic luminescent bioassay method for determining bacterial levels in urine  
[NASA-CASE-GSC-11092-2] c04 N73-27052  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c25 N75-14844  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123  
Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c51 N76-29891  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c51 N78-18674  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c52 N79-12694  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c52 N79-14750
- BIODYNAMICS**  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772
- BIOELECTRIC POTENTIAL**  
Electrochemically reversible silver-silver chloride electrode for detecting bioelectric potential differences generated by human muscles and organs  
[NASA-CASE-XMS-02872] c05 N69-21925  
Manufacturing process for making perspiration resistant-stress resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120  
Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769
- BIOELECTRICITY**  
Development and characteristics of electrodes in which poisoning by organic molecules is prevented by ion selective electrolytic deposition of hydrophilic protein colloid  
[NASA-CASE-XMS-04213-1] c09 N71-26002
- BIOENGINEERING**  
Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c33 N74-21851  
Actuator device for artificial leg  
[NASA-CASE-MPS-23225-1] c52 N77-14735  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c52 N77-14738  
High temperature resistant cermets and ceramic compositions  
[NASA-CASE-NPO-13690-3] c27 N78-25219  
Prosthetic urinary sphincter  
[NASA-CASE-MPS-23717-1] c52 N79-14756  
Improved subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N79-15576  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772
- BIOINSTRUMENTATION**  
Temperature compensated solid state differential amplifier with application in bioinstrumentation circuits  
[NASA-CASE-IAC-00435] c09 N70-35440  
Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193  
Characteristics of pressed disc electrode for biological measurements

- [NASA-CASE-XMS-04212-1] c05 N71-12346  
Development of apparatus and method for quantitatively measuring brain activity as automatic indication of sleep state and level of consciousness
- [NASA-CASE-MSC-13282-1] c05 N71-24729  
Development and characteristics of electrodes in which poisoning by organic molecules is prevented by ion selective electrolytic deposition of hydrophilic protein colloid
- [NASA-CASE-XMS-04213-1] c09 N71-26002  
Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves
- [NASA-CASE-ARC-10597-1] c52 N74-20726  
Subminiature insertable force transducer --- including a strain gage to measure forces in muscles
- [NASA-CASE-NPO-13423-1] c33 N75-31329  
A logic-controlled occlusive cuff system
- [NASA-CASE-MSC-14836-1] c52 N76-27839  
Catheter tip force transducer for cardiovascular research
- [NASA-CASE-NPO-13643-1] c52 N76-29896  
Biomedical ultrasonoscope
- [NASA-CASE-ARC-10994-1] c52 N76-33835  
Thermistor holder for skin temperature measurements
- [NASA-CASE-ARC-10855-1] c52 N77-10780  
Induction powered biological radiosonde --- for measuring intracranial pressure
- [NASA-CASE-ARC-11120-1] c52 N77-23743  
Magnetic electrical connectors for biomedical percutaneous implants
- [NASA-CASE-MSC-11030-1] c52 N77-25772  
Corneal seal device
- [NASA-CASE-LEW-12258-1] c52 N77-28716  
Snap-in compressible biomedical electrode
- [NASA-CASE-MSC-14623-1] c52 N77-28717  
Method and apparatus for continuous measurement of bacterial content of aqueous samples
- [NASA-CASE-MSC-16779-1] c51 N78-22586  
Method and automated apparatus for detecting coliform organisms
- [NASA-CASE-MSC-16777-1] c51 N78-22588  
Water quality monitoring system
- [NASA-CASE-MSC-16778-1] c51 N78-22589  
A signal attenuator --- pulse rate sensor circuits
- [NASA-CASE-FRC-11012-1] c33 N78-28339  
Subcutaneous channeling probe
- [NASA-CASE-ARC-11091-1] c52 N79-11684  
Miniature implantable ultrasonic echosonometer
- [NASA-CASE-ARC-11035-1] c52 N79-18580
- BIOLUMINESCENCE**
- Detection instrument for light emitted from ATP biochemical reaction
- [NASA-CASE-XGS-05534] c23 N71-16355  
Describing method for lyophilization of luciferase containing mixtures for use in life detection reactions
- [NASA-CASE-XGS-05532] c06 N71-17705  
Application of luciferase assay for ATP to antimicrobial drug susceptibility
- [NASA-CASE-GSC-12039-1] c51 N77-22794  
Rapid, quantitative determination of bacteria in water
- [NASA-CASE-GSC-12158-1] c51 N78-22585
- BIOMEDICAL DATA**
- Silicon radiation detecting probe design for in vivo biomedical use
- [NASA-CASE-XMS-01177] c05 N71-19440  
Biomedical ultrasonoscope
- [NASA-CASE-ARC-10994-2] c52 N79-26771
- BIOMETRICS**
- Characteristics of pressed disc electrode for biological measurements
- [NASA-CASE-XMS-04212-1] c05 N71-12346  
Compressible electrolyte saturated sponge electrode for biomedical applications
- [NASA-CASE-MSC-13648] c05 N72-27103  
Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves
- [NASA-CASE-ARC-10597-1] c52 N74-20726  
Arterial pulse wave pressure transducer
- [NASA-CASE-GSC-11531-1] c52 N74-27566  
Biomedical ultrasonoscope
- [NASA-CASE-ARC-10994-1] c52 N76-33835
- Miniature implantable ultrasonic echosonometer
- [NASA-CASE-ARC-11035-1] c52 N79-18580  
Biomedical ultrasonoscope
- [NASA-CASE-ARC-10994-2] c52 N79-26771
- BIOTELEMETRY**
- Biotelemetry apparatus with dual voltage generators for implanting in animals
- [NASA-CASE-XAC-05706] c05 N71-12342  
Miniature multichannel biotelemetry system
- [NASA-CASE-NPO-13065-1] c52 N74-26625  
Medical subject monitoring systems --- multichannel monitoring systems
- [NASA-CASE-MSC-14180-1] c52 N76-14757  
Accelerometer telemetry system
- [NASA-CASE-ARC-10849-1] c17 N76-29347  
Miniature ingestible telemeter devices to measure deep-body temperature
- [NASA-CASE-ARC-10583-1] c52 N76-29894
- BIPOLAR TRANSISTORS**
- Voltage regulator for battery power source --- using a bipolar transistor
- [NASA-CASE-FRC-10116-1] c33 N79-23345
- BIREFRINGENCE**
- Automatic polarimeter capable of measuring transient birefringence changes in electro-optic materials.
- [NASA-CASE-XNP-08883] c23 N71-16101
- BISHUTH**
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching
- [NASA-CASE-NPO-11336-1] c76 N79-16678
- BISMUTH COMPOUNDS**
- Hall effect magnetometer
- [NASA-CASE-LEW-11632-2] c35 N75-13213
- BISTABLE CIRCUITS**
- Bistable multivibrator circuits operating at high speed and low power dissipation
- [NASA-CASE-XGS-00823] c10 N71-15910
- BIT SYNCHRONIZATION**
- Telemetry data unit to form multibit words for use between demodulator and computer
- [NASA-CASE-XNP-09225] c09 N69-24333  
Bit synchronization system using digital data transition tracking phased locked loop
- [NASA-CASE-NPO-10844] c07 N72-20140  
Bit synchronization of PCM communications signal, without separate synchronization channel by digital correlation
- [NASA-CASE-NPO-11302-1] c07 N73-13149  
Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal
- [NASA-CASE-NPO-11302-2] c32 N74-10132
- BITERNARY CODE**
- Encoders designed to generate comma free biorthogonal Reed-Muller type code comprising conversion of 64 6-bit words into 64 32-bit data for communication purposes
- [NASA-CASE-NPO-10595] c10 N71-25917
- BITS**
- Logic circuit for generating multibit binary code word in parallel
- [NASA-CASE-XNP-04623] c10 N71-26103  
MOD 2 sequential function generator for multibit sequence, with two-bit shift register for each pair of bits
- [NASA-CASE-NPO-10636] c08 N72-25210  
Bit error rate measurement above and below bit rate tracking threshold
- [NASA-CASE-MSC-12743-1] c32 N79-10263
- BLACK BODY RADIATION**
- Development of black-body source calibration furnace
- [NASA-CASE-XLE-01399] c33 N71-15625  
Black body cavity radiometer with thermal resistance wire bridge circuit
- [NASA-CASE-XNP-08961] c14 N71-24809  
Black body radiometer design with temperature sensing and cavity heat source cone winding
- [NASA-CASE-XNP-09701] c14 N71-26475  
Black body radiometer having isothermally surrounded cavity for ultraviolet, visible, and infrared radiation
- [NASA-CASE-NPO-10810] c14 N71-27323
- BLADDER**
- Prosthetic urinary sphincter
- [NASA-CASE-MFS-23717-1] c52 N79-14756

Spine immobilization method and apparatus ---  
rigid bladder  
[NASA-CASE-ARC-11167-1] c52 N79-30921

**BLADE TIPS**  
Modification and improvement of turbine blades  
for maximum cooling efficiency  
[NASA-CASE-XLE-00092] c15 N70-33264

**BLADES**  
Impact absorbing blade mounts for variable pitch  
blades  
[NASA-CASE-LEW-12313-1] c37 N78-10468

**BLADES (CUTTERS)**  
Piston in bore cutter for severing parachute  
control lines and sealing cable hole to  
prevent water leakage into load  
[NASA-CASE-XMS-04072] c15 N70-42017

Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c52 N78-14773

**BLAST LOADS**  
Development of apparatus for detonating  
explosive devices in order to determine forces  
generated and detonation propagation rate  
[NASA-CASE-LAR-10800-1] c33 N72-27959

**BLOCKS**  
Rotary target V-block --- aligning wind tunnel  
apparatus for optical measurement  
[NASA-CASE-LAR-12007-2] c74 N79-25876

**BLOOD**  
Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c52 N75-15270

Gas diffusion liquid storage bag and method of  
use for storing blood  
[NASA-CASE-NPO-13930-1] c52 N79-14749

**BLOOD FLOW**  
A logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c52 N76-27839

**BLOOD PRESSURE**  
Blood pressure measuring system for separately  
recording dc and ac pressure signals of  
Korotkoff sounds  
[NASA-CASE-XMS-06061] c05 N71-23317

Apparatus and method for processing Korotkov  
sounds --- for blood pressure measurement  
[NASA-CASE-MSC-13999-1] c52 N74-26626

Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566

Circuit for detecting initial systole and  
diastolic notch --- for monitoring arterial  
pressure  
[NASA-CASE-LEW-11581-1] c54 N75-13531

**BLUFF BODIES**  
Bluff-shaped annular configuration for  
supersonic decelerator for reentry vehicles  
[NASA-CASE-XLE-00222] c02 N70-37939

**BLUNT BODIES**  
Wind tunnel method for simulating flow fields  
around blunt vehicles entering planetary  
atmospheres without involving high temperatures  
[NASA-CASE-LAR-11138] c12 N71-20436

**BODIES OF REVOLUTION**  
Conforming polisher for aspheric surfaces of  
revolution with inflatable tube  
[NASA-CASE-XGS-02884] c15 N71-22705

Test fixture for measuring moment of inertia of  
irregularly shaped body with multiple axes  
[NASA-CASE-XGS-01023] c14 N71-22992

**BODY FLUIDS**  
Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c52 N74-22771

Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c51 N76-29891

**BODY KINEMATICS**  
Space suit with improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c05 N72-22092

Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551

**BODY MEASUREMENT (BIOLOGY)**  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c52 N76-33835

Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580

**BODY TEMPERATURE**  
Thermoregulating with cooling flow pipe network  
for humans  
[NASA-CASE-XMS-10269] c05 N71-24147

Miniature ingestible telemeter devices to  
measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c52 N76-29894

**BODY VOLUME (BIOLOGY)**  
Whole body measurement systems --- for  
weightlessness simulation  
[NASA-CASE-MSC-13972-1] c52 N70-10975

**BODY-WING CONFIGURATIONS**  
Free wing assembly for an aircraft  
[NASA-CASE-PRC-10092-1] c05 N79-12061

**BOILERS**  
Vapor generating boiler system for turbine motor  
[NASA-CASE-XLE-00785] c33 N71-16104

Shell-side liquid metal boiler employing tube  
and shell heat exchanger  
[NASA-CASE-NPO-10831] c33 N72-20915

**BOLOMETERS**  
High impedance alternating current sensing  
transformer device between two bolometers for  
measuring insertion loss of test component  
[NASA-CASE-XNP-01193] c10 N71-16057

Thin film capacitive bolometer and capacitance  
temperature interchange sensor  
[NASA-CASE-NPO-10607] c09 N71-27232

Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c35 N79-33449

**BOLTS**  
Patent data on gas actuated bolt disconnect  
assembly  
[NASA-CASE-XLA-00326] c03 N70-34667

Bolt-latch mechanism for releasing despin  
weights from space vehicle  
[NASA-CASE-XLA-00679] c15 N70-38601

Gage for quality control of sealing surfaces of  
threaded boss  
[NASA-CASE-XNF-04966] c14 N71-17658

Split nut and bolt separation device  
[NASA-CASE-XNP-06914] c15 N71-21489

Device for securing together structural members  
with axially stretched bolt and nut  
[NASA-CASE-GSC-11149-1] c15 N73-30457

**BONDING**  
Silver chloride use in technique for fusion  
bonding of graphite to silver, glass,  
ceramics, and certain other metals  
[NASA-CASE-XGS-00963] c15 N69-39735

Bonded joint and method --- for reducing peak  
shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c37 N74-23064

Bonding method in the manufacture of continuous  
regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260

Strain arrestor plate for fused silica tile ---  
bonding of thermal insulation to metallic  
plates or structural parts  
[NASA-CASE-HSC-14182-1] c27 N76-14264

Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431

Bonding of sapphire to sapphire by eutectic  
mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c24 N79-25143

**BONES**  
Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c35 N75-12271

Method and system for in vivo measurement of  
bone tissue using a two level energy source  
[NASA-CASE-HSC-14276-1] c52 N77-14737

Method of adhering bone to a rigid substrate  
using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c27 N78-17215

**BOOMS (EQUIPMENT)**  
Unfolding boom assembly with knuckle joints for  
positioning equipment for spacecraft  
[NASA-CASE-XGS-00938] c32 N70-41367

Collapsible antenna boom and coaxial  
transmission line having inflatable inner tube  
[NASA-CASE-MFS-20068] c07 N71-27191

Extendable, self-deploying boom apparatus  
[NASA-CASE-GSC-10566-1] c15 N72-18477

Design and characteristics of mechanically  
extended and telescoping boom on crane assembly  
[NASA-CASE-NPO-11118] c03 N72-25021

**BOOSTER RECOVERY**  
Techniques for recovery of multistage rocket  
vehicles by providing lifting surfaces on  
individual sections  
[NASA-CASE-IMP-00389] c31 N70-34176

Recoverable, reusable single stage booster  
capable of injecting large payloads into  
circular earth orbit  
[NASA-CASE-XMF-01973] c31 N70-41588

## BOOSTER ROCKET ENGINES

- Segmented back-up bar for butt welding large tubular structures such as rocket booster bodies or tanks  
[NASA-CASE-XMP-00640] c15 N70-39924
- Recoverable, reusable single stage booster capable of injecting large payloads into circular earth orbit  
[NASA-CASE-XMP-01973] c31 N70-41588
- BOOTS (FOOTWEAR)**  
Walking boot assembly  
[NASA-CASE-ARC-11101-1] c54 N78-17675
- BORIDES**  
Cesium thermionic converters having improved electrodes  
[NASA-CASE-LEW-12038-3] c44 N78-25555
- BORING MACHINES**  
Automatic controlled drive mechanism for portable boring bar  
[NASA-CASE-XLA-03661] c15 N71-33518
- BORON**  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c76 N74-20329
- BORON CARBIDES**  
Catalyst for increased growth of boron carbide crystal whiskers  
[NASA-CASE-XHQ-03903] c15 N69-21922
- BORON FLUORIDES**  
Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233
- BORON NITRIDES**  
Heat treat fixture  
[NASA-CASE-LAR-11821-1] c26 N79-25197
- BOUNDARY LAYER CONTROL**  
Double hinged flap for boundary layer control over trailing edges of wings  
[NASA-CASE-XLA-01290] c02 N70-42016
- BOUNDARY LAYER SEPARATION**  
Tertiary flow injection system for thrust vectoring of propulsive nozzle flow  
[NASA-CASE-MFS-20831] c28 N71-29153
- Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c20 N76-14190
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 N79-24976
- BOUNDARY LAYER TRANSITION**  
Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure noise levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c02 N79-16805
- BOUNDARY LAYERS**  
Flow meter for measuring stagnation pressure in boundary layer around high speed flight vehicle  
[NASA-CASE-XPR-02007] c12 N71-24692
- Development of thermocouple instrument for measuring temperature of wall heated by flowing fluid without disturbing boundary layer  
[NASA-CASE-XLE-05230] c14 N72-27410
- BOXES (CONTAINERS)**  
Sealed storage container for channel carriers with mounted miniature electronic components  
[NASA-CASE-MFS-20075] c09 N71-26133
- BRAKES (FOR ARRESTING MOTION)**  
Energy dissipating shock absorbing system for land payload recovery or vehicle braking  
[NASA-CASE-XLA-00754] c15 N70-34850
- Automatic braking device for rapidly transferring humans or materials from elevated location  
[NASA-CASE-XKS-07814] c15 N71-27067
- Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c37 N74-26976
- Reel safety brake  
[NASA-CASE-GSC-11960-1] c37 N77-14479
- Motion restraining device  
[NASA-CASE-NPO-13619-1] c37 N78-16369
- BRAKING**  
Direct current electromotive system for regenerative braking of electric motor  
[NASA-CASE-XMP-01096] c10 N71-16030
- Linear magnetic braking system with nonuniformly wrapped primary coil producing constant braking force on secondary coil  
[NASA-CASE-XLE-05079] c15 N71-17652
- Anemometer with braking mechanism to prevent rotation of wind driven elements  
[NASA-CASE-XMP-05224] c14 N71-23726
- BRAZING**  
Anti-wettable materials brazing processes using titanium and zirconium for surface pretreatment  
[NASA-CASE-XMS-03537] c15 N69-21471
- Application techniques for protecting materials during salt bath brazing  
[NASA-CASE-XLE-00046] c15 N70-33311
- Joining aluminum to stainless steel by bonding aluminum coatings onto titanium coated stainless steel and brazing aluminum to aluminum/titanium coated steel  
[NASA-CASE-MFS-07369] c15 N71-20443
- Brazing alloy adapted for brazing corrosion resistant steel to refractory metals, also for brazing refractory metals to other refractory metals  
[NASA-CASE-XNP-03063] c17 N71-23365
- Electric resistance spot welding and brazing for producing metal bonds with superior mechanical and structural characteristics  
[NASA-CASE-LAR-11072-1] c15 N73-20535
- Brazing alloy binder  
[NASA-CASE-XMP-05868] c26 N75-27125
- Brazing alloy composition  
[NASA-CASE-XMP-06053] c26 N75-27126
- Brazing alloy  
[NASA-CASE-XNP-03878] c26 N75-27127
- Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MS-C-14435-1] c37 N76-18455
- BREATHING APPARATUS**  
Three-port transfer valve with one port open continuously suitable for manned space flight  
[NASA-CASE-XAC-01158] c15 N71-23051
- Self-contained breathing apparatus  
[NASA-CASE-MS-C-14733-1] c54 N76-24900
- BRICKS**  
Development of construction block in form of container folded from flat sheet and filled with solid material for architectural purposes  
[NASA-CASE-MS-C-12233-2] c32 N73-13921
- BRIGHTNESS**  
Modulating and controlling intensity of light beam from high temperature source by servocontrolled rotating cylinders  
[NASA-CASE-XMS-04300] c09 N71-19479
- BRIGHTNESS DISCRIMINATION**  
Video signal processing system for sampling video brightness levels  
[NASA-CASE-NPO-10140] c07 N71-24742
- Automated visual sensitivity tester for determining visual field sensitivity and blind spot size  
[NASA-CASE-ARC-10329-1] c05 N73-26072
- Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c74 N79-12890
- BRITTLENESS**  
Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c46 N74-23068
- Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c46 N74-23069
- BROADBAND**  
Broadband chokes and absorbers to reduce spurious radiation patterns of antenna array caused by support structures  
[NASA-CASE-XMS-05303] c07 N69-27462
- Flexible monopole antenna with broad bandwidth and low voltage standing wave ratio  
[NASA-CASE-MS-C-12101] c09 N71-18720
- Broadband frequency discriminator with resistive captive inductive networks  
[NASA-CASE-NPO-10096] c07 N71-24583
- Broadband microwave waveguide window to compensate dielectric material filling  
[NASA-CASE-XNP-08880] c09 N71-24808
- Comb type traveling wave maser amplifier for improved high gain broadband output  
[NASA-CASE-NPO-10548] c16 N71-24831
- Wideband voltage controlled oscillator with high phase stability  
[NASA-CASE-XLA-03893] c10 N71-27271

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## CALCIUM PHOSPHATES

Multimode antenna feed system for microwave and broadband communication  
[NASA-CASE-GSC-11046-1] c07 N73-28013

Multifrequency broadband horn antenna  
[NASA-CASE-NPO-14588-1] c32 N79-17067

**BROADBAND AMPLIFIERS**  
Solid state broadband stable power amplifier  
[NASA-CASE-XNP-10854] c10 N71-26331

Broadband distribution amplifier with complementary pair transistor output stages  
[NASA-CASE-NPO-10003] c10 N71-26415

**BROADCASTING**  
Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c32 N75-26194

**BROMINE**  
Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c44 N76-18641

**BRUSHES**  
Fabrication of sintered impurity semiconductor brushes for electrical energy transfer  
[NASA-CASE-XMP-01016] c26 N71-17818

**BRUSHES (ELECTRICAL CONTACTS)**  
Liquid metal slip ring  
[NASA-CASE-LEW-12277-2] c33 N78-25323

**BUCKLING**  
Miniature vibration isolator utilizing elastic tubing material  
[NASA-CASE-XLA-01019] c15 N70-40156

Test equipment to prevent buckling of small diameter specimens during compression tests  
[NASA-CASE-LAR-10440-1] c14 N73-32323

**BUFFER STORAGE**  
Data handling based on source significance, storage availability, and data received from source  
[NASA-CASE-XNP-04162-1] c08 N70-34675

Data acquisition and processing system with buffer storage and timing device for magnetic tape recording of PCM data and timing information  
[NASA-CASE-NPO-12107] c08 N71-27255

Digital to analog converter with parallel input/output memory device  
[NASA-CASE-KSC-10397] c08 N72-25206

Common data buffer system  
[NASA-CASE-KSC-11048-1] c60 N79-23674

**BUILDINGS**  
Apparatus and method of assembling building blocks by folding pre-cut flat sheets of material during on-site construction  
[NASA-CASE-MSC-12233-1] c15 N72-25454

**BULBS**  
External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c36 N79-14362

**BULKHEADS**  
Liquid propellant tank design with semitoroidal bulkhead  
[NASA-CASE-XMP-01899] c31 N70-41948

**BUOYANCY**  
Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063

High visibility air sea rescue panel  
[NASA-CASE-MSC-12564-2] c03 N78-25070

**BURNING RATE**  
Pressurized gas injection for burning rate control of solid propellants  
[NASA-CASE-XLE-03494] c27 N71-21819

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[NASA-CASE-XMS-09690] c33 N72-25913

Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c28 N78-31255

**BURNOUT**  
Spherical solid propellant rocket engine having abrupt burnout  
[NASA-CASE-XHQ-01897] c28 N70-35381

**BUS CONDUCTORS**  
Electrical short locator --- identifying shorts occurring while an electrical system is being wired  
[NASA-CASE-ARC-11116-1] c33 N79-31498

**BUTT JOINTS**  
Channel-type shell construction for rocket engines and related configurations  
[NASA-CASE-XLE-00144] c28 N70-34860

Segmented back-up bar for butt welding large tubular structures such as rocket booster bodies or tanks  
[NASA-CASE-XMP-00640] c15 N70-39924

Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c37 N75-27376

**BUTTERFLY VALVES**  
Flexible inflatable seal for butterfly valves  
[NASA-CASE-XLE-00101] c15 N70-33376

**BYPASSES**  
Low power drain transistor feedback circuit  
[NASA-CASE-XGS-04999] c09 N69-24317

Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c07 N69-24323

Current regulating voltage divider design with load current shunting  
[NASA-CASE-MPS-20935] c09 N71-34212

Electrical interconnection of unilluminated solar cells in solar battery array  
[NASA-CASE-GSC-10344-1] c03 N72-27053

Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c33 N78-17296

**C**

**CABLE FORCE RECORDERS**  
Design and characteristics of device for showing amount of cable payed out from winch and load imposed  
[NASA-CASE-MSC-12052-1] c15 N71-24599

**CABLES**  
Cable guide and restraint device for reefing tubes in uniform manner  
[NASA-CASE-LAR-10129-1] c15 N73-25512

Deployable flexible tunnel  
[NASA-CASE-MPS-22636-1] c37 N76-22540

**CABLES (ROPES)**  
High voltage cable for use in high intensity ionizing radiation fields  
[NASA-CASE-XNP-00738] c09 N70-38201

Force separation rigid tethering device using cables  
[NASA-CASE-XLA-02332] c32 N71-17609

Support for flexible conductor cable between drawers or racks holding electronic equipment and cabinet assembly housing drawers or racks  
[NASA-CASE-XMP-07587] c15 N71-18701

Design and construction of satellite appendage tie-down cord  
[NASA-CASE-XGS-02554] c31 N71-21064

Quick attach mechanism for moving or stationary wires, ropes, or cables  
[NASA-CASE-XPR-05421] c15 N71-22994

Flexible cable that can be made rigid  
[NASA-CASE-MSC-13512-1] c15 N72-22485

Guide member for stabilizing cable of open shaft elevator  
[NASA-CASE-KSC-10513] c15 N72-25453

Reefing system  
[NASA-CASE-LAR-10129-2] c37 N74-20063

Emergency descent device  
[NASA-CASE-MPS-23074-1] c54 N77-21844

Belt for transmitting power from a driving member to a driven member  
[NASA-CASE-GSC-12289-1] c37 N78-32435

**CADMIUM SULFIDES**  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c35 N74-18088

A phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c71 N78-29871

**CALCIUM**  
Ultrasonic bone densitometer  
[NASA-CASE-MPS-20994-1] c35 N75-12271

**CALCIUM FLUORIDES**  
Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
[NASA-CASE-XMS-00259] c18 N70-36400

Production of barium fluoride-calcium fluoride composite lubricant for bearings or seals  
[NASA-CASE-XLE-08511-2] c18 N71-16105

**CALCIUM OXIDES**  
Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c25 N79-10162

**CALCIUM PHOSPHATES**  
Process for preparing calcium phosphate salts

- for tooth repair  
[NASA-CASE-ERC-10338] c04 N72-33072
- CALCULATORS**  
Sun angle calculator  
[NASA-CASE-MS-C-12617-1] c35 N76-29552
- CALIBRATING**  
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[NASA-CASE-XLA-00781] c09 N71-22999  
Combination pressure transducer-calibrator assembly for measuring fluid  
[NASA-CASE-XNP-01660] c14 N71-23036  
Control system for pressure balance device used in calibrating pressure gages  
[NASA-CASE-XMP-04134] c14 N71-23755  
Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
[NASA-CASE-XKS-10804] c05 N71-24606  
Calibrator for measuring and modulating or demodulating laser outputs  
[NASA-CASE-XLA-03410] c16 N71-25914  
Plastic sphere for radar tracking and calibration  
[NASA-CASE-XLA-11154] c07 N72-21117  
Calibration of vacuum gauges for measuring total and partial pressures in ultrahigh vacuum region  
[NASA-CASE-IGS-07752] c14 N73-30390  
System for calibrating pressure transducer  
[NASA-CASE-LAP-10910-1] c35 N74-13132  
In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c35 N74-15092  
Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MPS-21045-1] c35 N75-15932  
Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c35 N76-15432  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523  
Laser Doppler velocity simulator  
[NASA-CASE-LAR-12176-1] c36 N78-29435  
Electronically scanned pressure sensor module with in SITU calibration capability  
[NASA-CASE-LAR-12230-1] c35 N79-14347  
Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c35 N79-27479  
Calibrating pressure switch  
[NASA-CASE-XMP-04494-1] c33 N79-33392
- CALORIMETERS**  
Development and characteristics of calorimeter with integral heat sink for maintenance of constant temperature  
[NASA-CASE-XMP-04208] c33 N71-29051  
Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c34 N74-27859  
Containerless high temperature calorimeter apparatus  
[NASA-CASE-MPS-23923-1] c35 N79-29492
- CAMERA SHUTTERS**  
Electrically operated rotary shutter for television camera aboard spacecraft  
[NASA-CASE-XNP-00637] c14 N70-40273  
Magnetically opened diaphragm design with camera shutter and expansion tube applications  
[NASA-CASE-XLA-03660] c15 N71-21060  
Development and characteristics of cyclically operable, optical shutter for use as focal plane shutter for transmitting single radiation pulses  
[NASA-CASE-NPO-10758] c14 N73-14427  
Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c33 N74-20861
- CAMERAS**  
Mechanism for measuring nanosecond time differences between luminous events using streak camera  
[NASA-CASE-XLA-01987] c23 N71-23976  
Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XMP-03844-1] c14 N71-26474  
Longitudinal film gate and lock mechanism for securing film in motion picture cameras under vibration and high acceleration loads  
[NASA-CASE-LAR-10686] c14 N71-28935  
Design and characteristics of laser camera system with diffusion filter of small particles with average diameter larger than wavelength of laser light  
[NASA-CASE-NPO-10417] c16 N71-33410  
Optical scanner with linear housing and rotating camera  
[NASA-CASE-NPO-11002] c14 N72-22441  
Apparatus for on-film optical recording of camera lens aperture and focus setting  
[NASA-CASE-HSC-12363-1] c14 N73-26431  
Mechanical exposure interlock device for preventing film overexposure in oscilloscope camera  
[NASA-CASE-LAR-10319-1] c14 N73-32322  
Real time moving scene holographic camera system  
[NASA-CASE-MPS-21087-1] c35 N74-17153  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613  
Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MPS-22537-1] c35 N75-27328  
Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MPS-22517-1] c35 N76-18402  
Camera arrangement --- for satellite scanning of earth or sky  
[NASA-CASE-GSC-12032-2] c35 N76-19408
- CANS**  
Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c37 N77-27400  
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[NASA-CASE-LEW-13050-1] c07 N79-14095
- CANARD CONFIGURATIONS**  
Thrust and attitude control apparatus using jet nozzle in movable canard surface or fin configuration  
[NASA-CASE-XLE-03583] c31 N71-17629  
Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c05 N78-32086
- CANCER**  
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[NASA-CASE-GSC-12081-2] c52 N77-26796  
Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751
- CANOPIES**  
Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230
- CANS**  
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[NASA-CASE-XLA-01446] c15 N71-21528  
Extrusion can for extruding ceramics under heat and pressure  
[NASA-CASE-NPO-10812] c15 N73-13464
- CANTILEVER BEAMS**  
Pneumatic cantilever beams and platform for space erectable structure  
[NASA-CASE-XLA-01731] c32 N71-21045  
Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c37 N79-10418
- CANTILEVER MEMBERS**  
Deployable cantilever support for deploying solar cell arrays aboard spacecraft and reducing transient loading  
[NASA-CASE-NPO-10883] c31 N72-22874  
Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407
- CAPACITANCE**  
Capacitance measuring device for determining flare accuracy on tapered tubes  
[NASA-CASE-XKS-03495] c14 N69-39785  
Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790  
Thin film capacitive bolometer and capacitance temperature interchange sensor  
[NASA-CASE-NPO-10607] c09 N71-27232  
Capacitive tank gaging device for monitoring one constituent of two phase fluid by sensing dielectric constant

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## CARBON FIBERS

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[NASA-CASE-LAR-11170-1] c32 N74-12843  
Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c33 N74-32712  
Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c35 N77-32455  
Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c33 N79-21265
- CAPACITANCE SWITCHES**  
Electric discharge apparatus for electrohydraulic explosive forming  
[NASA-CASE-XMP-00375] c15 N70-34249  
Extra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit  
[NASA-CASE-XGS-00381] c09 N70-34819  
Feedback integrating circuit with grounded capacitor for signal processing  
[NASA-CASE-XAC-10607] c10 N71-23669
- CAPACITORS**  
Temperature sensitive capacitor device for detecting very low intensity infrared radiation  
[NASA-CASE-XNP-09750] c14 N69-39937  
Energy source with tantalum capacitors in parallel and miniature silver oxide button cells for initiating pyrotechnic devices on spacecraft and rocket vehicles  
[NASA-CASE-LAR-10367-1] c03 N70-26817  
Electrical power system for space flight vehicles operating over extended periods  
[NASA-CASE-XMP-00517] c03 N70-34157  
Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases  
[NASA-CASE-XLE-00143] c14 N70-36618  
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[NASA-CASE-XLE-01246] c14 N71-10797  
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[NASA-CASE-LEW-10364-1] c09 N71-13522  
Mechanism for measuring nanosecond time differences between luminous events using streak camera  
[NASA-CASE-XLA-01987] c23 N71-23976  
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[NASA-CASE-KSC-10162] c09 N72-11225  
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[NASA-CASE-ARC-10138-1] c14 N72-24477  
Material compositions and processes for developing dielectric thick films used in microcircuit capacitors  
[NASA-CASE-LAR-10294-1] c26 N72-28762  
Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
[NASA-CASE-ARC-10443-1] c14 N73-20477  
Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MSC-14339-1] c05 N75-24716  
High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c33 N76-15373  
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[NASA-CASE-GSC-12030-1] c44 N78-24608  
Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c33 N78-32341  
Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c33 N79-21265
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[NASA-CASE-XLE-03307] c33 N71-14035  
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[NASA-CASE-XNP-03972] c15 N71-23048  
Soldering device particularly suited to making high quality wiring joints for aerospace engineering utilizing capillary attraction to regulate flow of solder  
[NASA-CASE-XLA-08911] c15 N71-27214
- Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c37 N76-27568
- CAPILLARY TUBES**  
Tubular flow restrictor for gas flow control in pipeline  
[NASA-CASE-NPO-10117] c15 N71-15608  
Development of liquid separating system using capillary device connected to flexible bladder storage chamber  
[NASA-CASE-XMS-13052] c14 N71-20427  
Interrupter switching device utilizing electrodes and mercury filled capillary tubes in which current flow vaporizes mercury as circuit breaker  
[NASA-CASE-XNP-02251] c12 N71-20896  
Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c36 N76-18428
- CARBAZOLES**  
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[NASA-CASE-NPO-10373] c03 N71-18698
- CARBOHYDRATES**  
Decontamination of petroleum products with honey  
[NASA-CASE-XNP-03835] c06 N71-23499
- CARBON**  
Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c24 N78-27184  
Electrolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c25 N79-23167  
Improved synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c27 N79-30376
- CARBON ARCS**  
Water cooled contactors for holding rotating carbon arc anode  
[NASA-CASE-XMS-03700] c15 N69-24266
- CARBON COMPOUNDS**  
Vapor deposited laminated nitride-silicon coating for corrosion prevention of carbonaceous surfaces  
[NASA-CASE-XLA-00284] c15 N71-16075  
Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152
- CARBON DIOXIDE**  
Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015  
Fast response miniature carbon dioxide detector with no moving parts for measuring concentration in any atmosphere  
[NASA-CASE-MSC-13332-1] c14 N72-21408  
Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750
- CARBON DIOXIDE LASERS**  
Repetitively pulsed wavelength selective carbon dioxide laser  
[NASA-CASE-ERC-10178] c16 N71-24832  
Performance of ac power supply developed for CO2 laser system  
[NASA-CASE-GSC-11222-1] c16 N73-32391  
Stark-effect modulation of CO2 laser with RH2D  
[NASA-CASE-NPO-11945-1] c36 N76-18427
- CARBON DIOXIDE REMOVAL**  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813  
Regenerable device for scrubbing breathable air of CO2 and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c54 N77-32722
- CARBON FIBER REINFORCED PLASTICS**  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c24 N79-16915  
Curing agent for polyepoxides and epoxy resins and composites cured therewith  
[NASA-CASE-LEW-13226-1] c23 N79-31345
- CARBON FIBERS**  
Polyimide prepreg material having improved tack retention --- polyimide-graphite fiber composites  
[NASA-CASE-LEW-12933-1] c23 N79-24061

## CARBON MONOXIDE

Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MPS-22060-1] c35 N75-29380

## CARBONATES

Chemical and physical properties of synthetic polyurethane polymer prepared by reacting hydroxy carbonate with organic diisocyanate  
[NASA-CASE-MPS-10512] c06 N73-30099

## CARBOXYL COMPOUNDS

Coal desulfurization  
[NASA-CASE-NPO-14272-1] c25 N78-33164

## CARBOXYL GROUP

Carboxyl terminated polyester prepolymers and foams produced from prepolymers and materials  
[NASA-CASE-NPO-10596] c06 N71-25929

## CARBOXYLIC ACIDS

Stable polyimide synthesis from mixtures of monomeric diamines and polycarboxylic acid esters  
[NASA-CASE-LEW-11325-1] c06 N73-27980

Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature  
[NASA-CASE-MPS-21040-1] c06 N73-30098

## CARCINOGENS

Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons  
[NASA-CASE-XGS-01231] c14 N70-41676

## CARDIAC VENTRICLES

Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c52 N79-10724

## CARDIOGRAPHY

Digital cardiometer incorporating circuit for measuring heart rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XMS-02399] c05 N71-22896  
Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c54 N75-27760

## CARDIOLOGY

Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MPS-20418] c14 N73-24473  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c52 N76-29895

## CARDIOTACHOMETERS

Digital computing cardiometer  
[NASA-CASE-MPS-20284-1] c52 N74-12778

## CARDIOVASCULAR SYSTEM

Conditioning suit for normal function of astronaut cardiovascular system in gravity environment  
[NASA-CASE-XLA-02898] c05 N71-20268  
Ear oximeter for monitoring blood oxygenation and pressure, pulse rate, and pressure pulse curve, using dc and ac amplifiers  
[NASA-CASE-XAC-05422] c04 N71-23185  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c52 N76-29896

## CARRIER FREQUENCIES

Demodulator for simultaneous demodulation of two modulating ac signal carriers close in frequency  
[NASA-CASE-XMP-01160] c07 N71-11298  
Automatic carrier acquisition system for phase locked loop receiver  
[NASA-CASE-NPO-11628-1] c07 N73-30113  
Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c33 N74-17930  
Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c32 N74-20811

## CARRIER WAVES

Variable frequency subcarrier oscillator with temperature compensation  
[NASA-CASE-XNP-03916] c09 N71-28810  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c32 N75-24981

## CARRIERS

Sealed storage container for channel carriers with mounted miniature electronic components  
[NASA-CASE-MPS-20075] c09 N71-26133

Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MPS-21394-1] c34 N74-27744

## CARTESIAN COORDINATES

Design and development of random function tracer for obtaining coordinates of points on contour maps  
[NASA-CASE-XLA-01401] c15 N71-21179

## CARTRIDGES

Tape cartridge with high capacity storage of endless-loop magnetic tape  
[NASA-CASE-XGS-00769] c14 N70-41647  
Endless loop tape transport mechanism for driving and tensioning recording medium in magnetic tape recorder  
[NASA-CASE-XGS-01223] c07 N71-10609  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813

## CASCADE CONTROL

Reversible ring counter using cascaded single silicon controlled rectifier stages  
[NASA-CASE-XGS-01473] c09 N71-10673  
Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136  
Multiloop RC active filter network with low parameter sensitivity and low amplifier gain  
[NASA-CASE-ARC-10192] c09 N72-21245

## CASCADE FLOW

Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117

## CASE BONDED PROPELLANTS

Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179

## CASES (CONTAINERS)

Nonmagnetic hermetically sealed battery case made of epoxy resin and woven glass tape for use with electrochemical cells in spacecraft  
[NASA-CASE-XGS-00886] c03 N71-11053  
Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c73 N75-30876

## CASSEGRAIN ANTENNAS

Cassegrain antenna subreflector flange for suppressing ground noise and increasing antenna transmitting efficiency  
[NASA-CASE-XNP-00683] c09 N70-35425  
Design and operation of multi-feed cone Cassegrain antenna  
[NASA-CASE-NPO-10539] c07 N71-11285  
Synchronous detection system for detecting weak radio astronomical signals  
[NASA-CASE-XNP-09832] c30 N71-23723  
Dual frequency feed systems for Cassegrainian antennas  
[NASA-CASE-NPO-13091-1] c09 N73-12214  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c32 N74-11000

## CASTING

Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XNP-07659] c06 N71-22975

## CASTINGS

Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c37 N76-23570

## CATALYSIS

Unit for generating thrust from catalytic decomposition of hydrogen peroxide, for high altitude aircraft or spacecraft reaction control  
[NASA-CASE-XMS-00583] c28 N70-38504  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c25 N77-32255

## CATALYSTS

Catalyst for increased growth of boron carbide crystal whiskers  
[NASA-CASE-XHQ-03903] c15 N69-21922  
Catalyst bed element removing tool  
[NASA-CASE-IFR-00811] c15 N70-36901  
Catalyst bed ignition system for hydrazine propellants  
[NASA-CASE-XNP-00876] c28 N70-41311  
Development of device for detecting hydrogen in ambient environments  
[NASA-CASE-MPS-11537] c14 N71-20442

- Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813
- Process for removing sulfur dioxide from gas streams --- using iron as a catalyst  
[NASA-CASE-MS-C-16299-1] c45 N77-31668
- Catalysts for imide formation from aromatic isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c23 N78-22156
- CATHETERIZATION**
- Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597
- Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c52 N76-29896
- CATHODE RAY TUBES**
- Cathode ray oscilloscope for analyzing electrical waveforms representing amplitude distribution of time function  
[NASA-CASE-XNP-01383] c09 N71-10659
- Cathode ray tube system for displaying ones and zeros in binary wave train  
[NASA-CASE-IGS-04987] c08 N71-20571
- Indexing mechanism for cathode array substitution in electron beam tube  
[NASA-CASE-NPO-10625] c09 N71-26182
- Color television system utilizing single gun current sensitive color cathode ray tube  
[NASA-CASE-ERC-10098] c09 N71-28618
- Cathode ray tube with coating of phosphor and cobalt oxides  
[NASA-CASE-ERC-10468] c09 N72-20206
- Digital video system for displaying image and alphanumeric data on cathode ray tube  
[NASA-CASE-NPO-11342] c09 N72-25248
- Switching circuit for control of cathode ray tube beam with fast rise time for output signal  
[NASA-CASE-RSC-10647-1] c10 N72-31273
- Situational display system of cathode ray tubes to assist pilot in aircraft control  
[NASA-CASE-ERC-10350] c14 N73-20474
- Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c33 N75-27250
- CATHODES**
- Encapsulated heater forming hollow body for cathode used in ion thruster  
[NASA-CASE-LEW-10814-1] c28 N70-35422
- Electronic cathodes for use in electron bombardment ion thrusters  
[NASA-CASE-XLE-04501] c09 N71-23190
- Design and characteristics of heat activated electric cell with anode made from one or more alkali metals and cathode made from oxidizing material  
[NASA-CASE-LEW-11358] c03 N71-26084
- Characteristics of ion rocket engine with combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c28 N73-24783
- Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c44 N74-19693
- CATIONS**
- Water insoluble, cationic permselective membrane  
[NASA-CASE-NPO-11091] c18 N72-22567
- CAVITATION FLOW**
- Semitoroidal diaphragm cavitating flow control valve  
[NASA-CASE-XNP-09704] c12 N71-18615
- CAVITIES**
- Black body radiometer having isothermally surrounded cavity for ultraviolet, visible, and infrared radiation  
[NASA-CASE-NPO-10810] c14 N71-27323
- Method for coating through-holes in ceramic substrates used in fabricating miniaturized electronic circuits  
[NASA-CASE-XNP-05999] c15 N71-29032
- Soil burrowing mole apparatus  
[NASA-CASE-XNP-07169] c15 N73-32362
- Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276
- Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c37 N76-31524
- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c31 N79-11249
- Method and apparatus for producing concentric hollow spheres  
[NASA-CASE-NPO-14596-1] c31 N79-24197
- CAVITY RESONATORS**
- Helical coaxial resonator RF filter  
[NASA-CASE-IGS-02816] c07 N69-24323
- Semiconductor in resonant cavity for improving signal to noise ratio of communication receiver  
[NASA-CASE-MS-C-12259-1] c07 N70-12616
- Thermally sensitive tuning probe for nullifying detuning effects in microwave cavity resonator of amplifier  
[NASA-CASE-XNP-00449] c14 N70-35220
- Holder for high frequency crystal resonators  
[NASA-CASE-XNP-03637] c15 N71-21311
- Superconductive resonant cavity for improved signal to noise ratio in communication signal  
[NASA-CASE-MS-C-12259-2] c07 N72-33146
- Infrared tunable dye laser with nonlinear wavelength mixing crystal in optical cavity  
[NASA-CASE-ARC-10463-1] c09 N73-32111
- Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c36 N74-11313
- A laser apparatus  
[NASA-CASE-GSC-12237-1] c36 N78-10445
- CELESTIAL BODIES**
- Device for determining relative angular position of spacecraft and radiating celestial body  
[NASA-CASE-GSC-11444-1] c14 N73-28490
- Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MS-C-12593-1] c17 N76-21250
- CELESTIAL NAVIGATION**
- Development of star intensity measuring system which minimizes effects of outside interference  
[NASA-CASE-XNP-06510] c14 N71-23797
- CELL ANODES**
- Heat activated emf cells with aluminum anode  
[NASA-CASE-LEW-11359] c03 N71-28579
- Heat activated cell with aluminum anode  
[NASA-CASE-LEW-11359-2] c03 N72-20034
- Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c44 N77-14581
- CELL DIVISION**
- Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769
- CELLS**
- Separation cell with permeable membranes for fluid mixture component separation  
[NASA-CASE-XMS-02952] c18 N71-20742
- CELLS (BIOLOGY)**
- System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c51 N79-10694
- A method for separating biological cells  
[NASA-CASE-MFS-23883-1] c51 N79-21743
- CENTRAL PROCESSING UNITS**
- Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c60 N79-27864
- CENTRIFUGAL COMPRESSORS**
- Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-1] c37 N79-23431
- CENTRIFUGAL FORCE**
- Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c07 N78-25090
- CENTRIFUGES**
- Centrifuge mounted motion simulator with elevator mechanism  
[NASA-CASE-XAC-00399] c11 N70-34815
- Liquid-gaseous centrifugal separator for weightlessness environment  
[NASA-CASE-XLA-00415] c15 N71-16079
- Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c34 N74-30608
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c34 N75-26282
- CERAMIC BONDING**
- Plasma spraying gun for forming diffusion bonded metal or ceramic coatings on substrates  
[NASA-CASE-XLE-01604-2] c15 N71-15610
- Method of forming ceramic to metal seals impervious to gaseous and liquid mercury at high temperature  
[NASA-CASE-XNP-01263-2] c15 N71-26312

## CERAMIC COATINGS

Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
 [NASA-CASE-XLA-03105] c15 N69-27483

Unfired-ceramic, highly reflective composite insulation for large launch vehicles  
 [NASA-CASE-XMP-01030] c18 N70-41583

Unfired ceramic insulation for protection from radiant heating environments  
 [NASA-CASE-MPS-14253] c33 N71-24858

Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
 [NASA-CASE-LEW-10219-1] c18 N71-28729

Two-component ceramic coating for silica insulation  
 [NASA-CASE-MS-14270-1] c27 N76-22377

Three-component ceramic coating for silica insulation  
 [NASA-CASE-MS-14270-2] c27 N76-23426

Spray coating apparatus having a rotatable workpiece holder  
 [NASA-CASE-ARC-11110-1] c37 N78-32434

## CERAMIC NUCLEAR FUELS

Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
 [NASA-CASE-LEW-10219-1] c18 N71-28729

## CERAMICS

Transpiration cooled turbine blade made from metallic or ceramic wires  
 [NASA-CASE-XLE-00020] c15 N70-33226

Characteristics of foamed-in-place ceramic refractory insulating material and method of fabrication  
 [NASA-CASE-XGS-02435] c18 N71-22998

Process for fiberizing ceramic materials with high fusion temperatures and tensile strength  
 [NASA-CASE-XNP-00597] c18 N71-23088

Method for coating through-holes in ceramic substrates used in fabricating miniaturized electronic circuits  
 [NASA-CASE-XMF-05999] c15 N71-29032

Extrusion can for extruding ceramics under heat and pressure  
 [NASA-CASE-NPO-10812] c15 N73-13464

Thermal shock resistant hafnia ceramic materials  
 [NASA-CASE-LAR-10894-1] c18 N73-14584

Improved nozzle for use with abrasive and/or corrosive materials  
 [NASA-CASE-NPO-13823-1] c37 N77-17466

Thermal shock and erosion resistant tantalum carbide ceramic material  
 [NASA-CASE-LAR-11902-1] c27 N78-17206

High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
 [NASA-CASE-NPO-13690-1] c27 N78-19302

High temperature resistant cermet and ceramic compositions  
 [NASA-CASE-NPO-13690-3] c27 N78-25219

Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
 [NASA-CASE-MS-12619-2] c27 N79-12221

High temperature resistant cermet and ceramic compositions  
 [NASA-CASE-NPO-13690-2] c27 N79-14213

## CERMETS

Freeze casting of metal ceramic and refractory compound powders into plastic slips  
 [NASA-CASE-XLE-00106] c15 N71-16076

Cermet for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
 [NASA-CASE-LEW-10219-1] c18 N71-28729

Cermet composition and method of fabrication --- heat resistant alloys and powders  
 [NASA-CASE-NPO-13120-1] c27 N76-15311

High temperature oxidation resistant cermet compositions  
 [NASA-CASE-NPO-13666-1] c27 N77-13217

High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings

[NASA-CASE-NPO-13690-1] c27 N78-19302

High temperature resistant cermet and ceramic compositions  
 [NASA-CASE-NPO-13690-3] c27 N78-25219

High temperature resistant cermet and ceramic compositions  
 [NASA-CASE-NPO-13690-2] c27 N79-14213

## CESIUM

Heated tungsten filter for removing oxygen impurities from cesium  
 [NASA-CASE-XNP-04262-2] c17 N71-26773

Method of producing I-123 --- by bombardment of cesium causing spallation  
 [NASA-CASE-LEW-11390-2] c25 N76-27383

## CESIUM DIODES

Oxygen-doped tantalum emitter for thermionic devices such as cesium vapor diodes  
 [NASA-CASE-NPO-11138] c03 N70-34646

Thermionic cesium diode converter with cavity emitters  
 [NASA-CASE-NPO-10412] c09 N71-28421

## CESIUM ENGINES

Variable thrust ion engine using thermal decomposition of solid cesium compound to produce propulsive vapor  
 [NASA-CASE-XMF-00923] c28 N70-36802

Method for producing porous tungsten plates for ionizing cesium compounds for propulsion of ion engines  
 [NASA-CASE-XLE-00455] c28 N70-38197

## CESIUM VAPOR

Electric power generation system directory from laser power  
 [NASA-CASE-NPO-13308-1] c36 N75-30524

Cesium thermionic converters having improved electrodes  
 [NASA-CASE-LEW-12038-3] c44 N78-25555

## CHANNEL FLOW

Fabrication method for lightweight regeneratively cooled combustion chamber of channel construction  
 [NASA-CASE-XLE-00150] c28 N70-41818

Heated element sensor for fluid flow detection in thermal conductive conduit with adaptive means to determine flow rate and direction  
 [NASA-CASE-MS-12084-1] c12 N71-17569

## CHANNELS (DATA TRANSMISSION)

Error correction circuitry for binary signal channels  
 [NASA-CASE-XNP-03263] c09 N71-18843

Helical recorder for multiple channel recording  
 [NASA-CASE-GSC-10614-1] c09 N72-11224

Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
 [NASA-CASE-NPO-13321-1] c32 N75-26195

A high-speed data link for moderate distances and noisy environments  
 [NASA-CASE-NPO-14152-1] c32 N79-24212

Massively parallel processor computer  
 [NASA-CASE-GSC-12223-1] c60 N79-27864

## CHARACTER RECOGNITION

Automatic character skew and spacing checking network --- of digital tape drive systems  
 [NASA-CASE-GSC-11925-1] c33 N76-18353

## CHARGE COUPLED DEVICES

CCD correlated quadruple sampling processor  
 [NASA-CASE-NPO-14426-1] c33 N79-17134

Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
 [NASA-CASE-NPO-13691-1] c43 N79-17288

## CHARGE DISTRIBUTION

Operation of vidicon tube for scanning spatial charge density pattern  
 [NASA-CASE-XNP-06028] c09 N71-23189

Charge storage diode modulators and demodulators  
 [NASA-CASE-NPO-10189-1] c33 N77-21314

Charge injection method and apparatus of producing large area electrets  
 [NASA-CASE-MPS-23186-2] c24 N78-25137

## CHARGE EXCHANGE

Ion beam thruster shield  
 [NASA-CASE-LEW-12082-1] c20 N77-10148

## CHARGE TRANSFER

Electronic counter circuit utilizing magnetic core and low power consumption  
 [NASA-CASE-XNP-08836] c09 N71-12515

Pressure transducer --- using a monomeric charge transfer complex sensor

## SUBJECT INDEX

## CHEMICAL REACTIONS

[NASA-CASE-NPO-11150] c35 N78-17359

**CHARGE TRANSFER DEVICES**  
 Charge transfer reaction laser with preionization means  
 [NASA-CASE-NPO-13945-1] c36 N78-27402  
 Time delay and integration detectors using charge transfer devices  
 [NASA-CASE-GSC-12324-1] c33 N79-13262

**CHARGED PARTICLES**  
 Method of forming thin window drifted silicon charged particle detector  
 [NASA-CASE-XLE-00808] c24 N71-10560  
 Charged particle analyzer with periodically varying voltage applied across electrostatic deflection members  
 [NASA-CASE-XAC-05506-1] c24 N71-16095  
 Electrostatic charged particle collector containing stacked electrodes for microwave tube  
 [NASA-CASE-LEW-11192-1] c09 N73-13208  
 Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
 [NASA-CASE-GSC-11963-1] c33 N77-10429

**CHARGING**  
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 [NASA-CASE-GSC-11211-1] c03 N72-25020

**CHARRING**  
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 [NASA-CASE-XLA-01781] c14 N69-39975  
 Ablation sensor for measuring char layer recession rate using electric wires  
 [NASA-CASE-XLA-01794] c33 N71-21586

**CHASSIS**  
 Chassis unit insert tightening-extract device  
 [NASA-CASE-XMS-01077-1] c37 N79-33467

**CHECKOUT**  
 Digital computer system for automatic prelaunch checkout of spacecraft  
 [NASA-CASE-XKS-08012-2] c31 N71-15566  
 Rapid activation and checkout device for batteries  
 [NASA-CASE-MPS-22749-1] c48 N76-14601  
 Decommunator patchboard verifier  
 [NASA-CASE-RSC-11065-1] c60 N79-27865

**CHELATES**  
 Ammonium perchlorate composite propellant with organic Cu/II/ chelate catalytic additive  
 [NASA-CASE-LAR-10173-1] c27 N71-14090  
 Chelate-modified polymers for atmospheric gas chromatography  
 [NASA-CASE-ARC-11154-1] c27 N78-27275

**CHEMICAL ANALYSIS**  
 Analytical test apparatus and method for determining oxygen content in alkali liquid metal  
 [NASA-CASE-XLE-01997] c06 N71-23527  
 Automated fluid chemical analyzer for microchemical analysis of small quantities of liquids by use of selected reagents and analyzer units  
 [NASA-CASE-XNP-09451] c06 N71-26754  
 Method for determining presence and type of OH in MgO  
 [NASA-CASE-NPO-10774] c06 N72-17095  
 Development and characteristics of injection system for use with gas chromatograph  
 [NASA-CASE-ARC-10344-1] c14 N72-21433  
 Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
 [NASA-CASE-ARC-10443-1] c14 N73-20477  
 Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
 [NASA-CASE-ARC-10633-1] c25 N74-26947  
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 [NASA-CASE-NPO-12130-1] c25 N75-14844  
 Gas chromatograph injection system  
 [NASA-CASE-ARC-10344-2] c35 N75-26334  
 Water quality monitoring system  
 [NASA-CASE-MSC-16778-1] c51 N78-22589

**CHEMICAL AUXILIARY POWER UNITS**  
 Development and characteristics of ion-exchange membrane and electrode assembly for fuel cells or electrolysis cells  
 [NASA-CASE-XMS-02063] c03 N71-29044

**CHEMICAL BONDS**  
 Fluorine-containing polyformals  
 [NASA-CASE-XMF-06900-1] c27 N79-21191

**CHEMICAL COMPOSITION**  
 Pubber composition for expulsion bladders and diaphragms for use with hydrazine  
 [NASA-CASE-NPO-11433] c18 N71-31140  
 Phototropic composition of matter with sensitivity to ultraviolet light and usable for producing positive photographic images  
 [NASA-CASE-XGS-03736] c14 N72-22443  
 Frequency scanning particle size spectrometer  
 [NASA-CASE-NPO-13606-1] c35 N75-19627  
 Nitramine propellants --- gun propellant burning rate  
 [NASA-CASE-NPO-14103-1] c28 N78-31255

**CHEMICAL COMPOUNDS**  
 Ultraviolet chromatographic detector for quantitative and qualitative analysis of compounds  
 [NASA-CASE-HQN-10756-1] c14 N72-25428

**CHEMICAL ELEMENTS**  
 Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
 [NASA-CASE-LAR-10634-1] c37 N74-18123

**CHEMICAL ENGINEERING**  
 Process for the preparation of calcium superoxide  
 [NASA-CASE-ARC-11053-1] c25 N79-10162

**CHEMICAL EXPLOSIONS**  
 Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
 [NASA-CASE-XLE-03186-1] c09 N79-21084

**CHEMICAL MACHINING**  
 Reusable masking boot for chemical machining operations  
 [NASA-CASE-XNP-02092] c15 N70-42033

**CHEMICAL PROPERTIES**  
 Method for producing alternating ether-siloxane copolymers with stable properties when exposed to elevated temperatures and UV radiation  
 [NASA-CASE-XMF-02584] c06 N71-20905  
 Chemical and physical properties of synthetic polyurethane polymer prepared by reacting hydroxy carbonate with organic diisocyanate  
 [NASA-CASE-MFS-10512] c06 N73-30099  
 Chemical and elastic properties of fluorinated polyurethanes  
 [NASA-CASE-NPO-10767-1] c06 N73-33076  
 Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
 [NASA-CASE-MFS-22411-1] c37 N74-21058

**CHEMICAL REACTIONS**  
 Process for interfacial polymerization of pyromellitic dianhydride and tetraamino benzene  
 [NASA-CASE-XLA-03104] c06 N71-11235  
 Synthesis of polymeric schiff bases by schiff-base exchange reactions  
 [NASA-CASE-XMF-08651] c06 N71-11236  
 Preparation of ordered poly(arylenesiloxane)/polymers  
 [NASA-CASE-XMF-10753] c06 N71-11237  
 Synthesis and chemical properties of imidazopyrrolone/imide copolymers  
 [NASA-CASE-XLA-08802] c06 N71-11238  
 Composition and process for improving definition of resin masks used in chemical etching  
 [NASA-CASE-IGS-04993] c14 N71-17574  
 Preparation of inorganic solid film lubricants with long wear life and stability in aerospace environments  
 [NASA-CASE-XMF-03988] c15 N71-21403  
 Synthesis of high purity dianilinosilanes  
 [NASA-CASE-XMF-06409] c06 N71-23230  
 Synthesis of aromatic diamines and dialdehyde polymers using Schiff base  
 [NASA-CASE-XMF-03074] c06 N71-24740  
 Chemical synthesis of hydroxy terminated perfluoro ethers as intermediates for highly fluorinated polyurethane resins  
 [NASA-CASE-NPO-10768] c06 N71-27254  
 Chemical synthesis of thermally stable organometallic polymers with divalent metal ion and tetraphenylphosphonitrilic units  
 [NASA-CASE-HQN-10364] c06 N71-27363  
 Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
 [NASA-CASE-NPO-10070] c15 N71-27372  
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 [NASA-CASE-NPO-10701] c06 N71-28620

- Process for preparing high molecular weight polyaryloxysilanes from lower molecular weight forms  
[NASA-CASE-XMF-08674] c06 N71-28807
- Organometallic compounds of niobium and tantalum useful for film deposition  
[NASA-CASE-XNP-04023] c06 N71-28808
- Description of method for making homogeneous foamed materials in weightless environment using materials having different physical properties  
[NASA-CASE-XMF-09902] c15 N72-11387
- Method to produce high purity copper fluoride by heating copper hydroxyfluoride powder and subjecting to flowing fluorine gas  
[NASA-CASE-LEW-10794-1] c06 N72-17093
- Pumping and metering dual piston system and monitor for reaction chamber constituents  
[NASA-CASE-GSC-10218-1] c15 N72-21465
- Development of apparatus for producing metal powder particles of controlled size  
[NASA-CASE-XLE-06461-2] c17 N72-28535
- Chemical spot tests for identification of titanium and titanium alloys used in aerospace vehicles  
[NASA-CASE-LAR-10539-1] c17 N73-12547
- Self-cycling fluid heater for heating continuous fluid stream to ultrahigh temperatures to facilitate chemical reactions  
[NASA-CASE-MS-C-15567-1] c33 N73-16918
- Chemical process for production of polyisobutylene compounds and application as solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710
- Preparation of stable polyurethane polymer by reacting polymer with diisocyanate  
[NASA-CASE-MPS-10506] c06 N73-30100
- Preparation of polyurethane polymer by reacting hydroxy polyformal with organic diisocyanate  
[NASA-CASE-MPS-10509] c06 N73-30103
- Utilization of lithium p-lithiphenoxide to prepare star polymers  
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[NASA-CASE-ARC-10464-1] c27 N74-12812
- Intumescent composition, foamed product prepared therewith and process for making same  
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- Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c25 N75-26043
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[NASA-CASE-NPO-12061-1] c27 N76-16228
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c45 N76-31714
- Liquid reactant feeder for arc assisted metal reduction reactor  
[NASA-CASE-NPO-14382-1] c25 N78-22186
- Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c26 N78-32229
- Mixed diamines for lower melting addition polyimide preparation and utilization  
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[NASA-CASE-ARC-11243-1] c27 N79-30375
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[NASA-CASE-ARC-11244-1] c27 N79-30376
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[NASA-CASE-NPO-13650-1] c25 N79-28253
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[NASA-CASE-LAR-10539-1] c17 N73-12547
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- CHIPS (ELECTRONICS)**  
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[NASA-CASE-NPO-14435-1] c33 N79-18224
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[NASA-CASE-XLA-08913] c14 N71-28933
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[NASA-CASE-ARC-10180-1] c27 N74-12814
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Current dependent variable inductance for input filter chokes of ac or dc power supplies  
[NASA-CASE-ERC-10139] c09 N72-17154
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Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270
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Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c52 N75-15270
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Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c25 N74-26947
- CHROMIUM**  
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[NASA-CASE-LEW-12159-1] c44 N78-19599
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High speed photo-optical time recorder for indicating time at exposure of each frame of high speed movie camera film  
[NASA-CASE-KSC-10294] c14 N72-18411
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[NASA-CASE-XMF-01483] c14 N69-27431
- Electric connector for printed cable to printed cable or to printed board  
[NASA-CASE-XMF-00369] c09 N70-36494
- Electrical connection for printed circuits on common board, using bellows principle in rivet  
[NASA-CASE-XNP-05082] c15 N70-41960
- Electrical spot terminal assembly for printed circuit boards  
[NASA-CASE-NPO-10034] c15 N71-17685
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- Techniques for packaging and mounting printed circuit boards  
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[NASA-CASE-NPO-13157-1] c37 N74-32918
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Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material  
 [NASA-CASE-XKS-03381] c09 N71-22796

Electrical circuit selection device for simulating stage separation of flight vehicle.  
 [NASA-CASE-XKS-04631] c10 N71-23663

Electromagnetic braking arrangement for controlling rotor rotation in electric motor  
 [NASA-CASE-XNP-06936] c15 N71-24695

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**CIRCUIT DIAGRAMS**

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 [NASA-CASE-XNP-04183] c09 N69-24329

Impedance transformation device for signal mixing  
 [NASA-CASE-XGS-01110] c07 N69-24334

Design of transistorized ring counter circuit with special steering and triggering circuits  
 [NASA-CASE-XGS-03095] c09 N69-27463

Solid state switching circuit design to increase current capacity of low rated relay contacts  
 [NASA-CASE-XNP-09228] c09 N69-27500

Extra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit  
 [NASA-CASE-XGS-00381] c09 N70-34819

Frequency shift keyed demodulator - circuit diagrams  
 [NASA-CASE-XGS-02889] c07 N71-11282

Difference indicating circuit used in conjunction with device measuring gravitational fields  
 [NASA-CASE-XNP-08274] c10 N71-13537

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 [NASA-CASE-XNP-06937] c09 N71-19516

Control of fusion welding through use of thermocouple wire  
 [NASA-CASE-MFS-06074] c15 N71-20393

Circuitry for developing autocorrelation function continuously within signal receiving period  
 [NASA-CASE-XNP-00746] c07 N71-21476

Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material  
 [NASA-CASE-XKS-03381] c09 N71-22796

Design and development of buck-boost voltage regulator circuit with additive or subtractive alternating current impressed on variable direct current source voltage  
 [NASA-CASE-GSC-10735-1] c10 N71-26085

Design of active RC network capable of operating at high Q values with reduced sensitivity to gain amplification and number of passive components  
 [NASA-CASE-ARC-10042-2] c10 N72-11256

Precision surface cutter for screen circuit negatives and other microcircuits  
 [NASA-CASE-XLA-09843] c15 N72-27485

Self-regulating proportionally controlled heating apparatus and technique  
 [NASA-CASE-GSC-11752-1] c77 N75-20140

Symmetrical odd-modulus frequency divider  
 [NASA-CASE-NPO-13426-1] c33 N75-31330

Trielectrode capacitive pressure transducer  
 [NASA-CASE-ARC-10711-2] c33 N76-21390

Frequency discriminator and phase detector circuit  
 [NASA-CASE-NPO-11515-1] c33 N77-13315

**CIRCUIT PROTECTION**

Use of silicon controlled rectifier shorting circuit to protect thermoelectric generator source from thermal destruction  
 [NASA-CASE-XGS-04808] c03 N69-25146

Spark gap type protective circuit for fast sensing and removal of overvoltage conditions  
 [NASA-CASE-XAC-08981] c09 N69-39897

Development of in-line fuse device for protection of electric circuits from excessive currents and voltages  
 [NASA-CASE-MSC-12135-1] c09 N71-12526

Overcurrent protecting circuit for push-pull transistor amplifiers  
 [NASA-CASE-MSC-12033-1] c09 N71-13531

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 [NASA-CASE-INP-01599] c09 N71-20705

Power supply with overload protection for series stage transistor  
 [NASA-CASE-IMS-00913] c10 N71-23543

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 [NASA-CASE-IGS-03120] c15 N71-24047

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 [NASA-CASE-GSC-10114-1] c10 N71-27366

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 [NASA-CASE-GSC-10667-1] c10 N71-33129

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 [NASA-CASE-ERC-10075-2] c09 N72-22196

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 [NASA-CASE-LEW-10489-1] c15 N72-25447

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 [NASA-CASE-MSC-17832-1] c33 N74-14956

Overvoltage protection network  
 [NASA-CASE-ARC-10197-1] c33 N74-17929

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 [NASA-CASE-NPO-13253-1] c37 N75-18573

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 [NASA-CASE-XMS-02744] c33 N75-27249

Shielded conductor cable system  
 [NASA-CASE-MSC-12745-1] c33 N77-13338

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 [NASA-CASE-LEW-12039-1] c44 N78-14625

Improved base drive for paralleled inverter systems  
 [NASA-CASE-NPO-14163-1] c37 N78-22376

Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
 [NASA-CASE-NPO-14316-1] c33 N79-26312

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 [NASA-CASE-XMS-01244-1] c33 N79-33393

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 [NASA-CASE-KSC-11065-1] c60 N79-27865

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 [NASA-CASE-XLA-01288] c09 N69-21470

Nondestructive interrogating and state changing circuit for binary magnetic storage elements  
 [NASA-CASE-XGS-00174] c08 N70-34743

Electronic circuit system for controlling electric motor speed  
 [NASA-CASE-INP-01129] c09 N70-38712

Starting circuit design for initiating and maintaining arcs in vapor lamps  
 [NASA-CASE-XNP-01058] c09 N71-12540

Voltage drift compensation circuit for analog-to-digital converter  
 [NASA-CASE-XNP-04780] c08 N71-19687

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 [NASA-CASE-XLE-02008] c09 N71-21583

Negation of magnetic fields produced by thin waferlike circuit elements in space vehicles  
 [NASA-CASE-XGS-03390] c03 N71-23187

Circuits for controlling reversible dc motor  
 [NASA-CASE-XNP-07477] c09 N71-26092

Device for rapid adjustment and maintenance of temperature in electronic components  
 [NASA-CASE-XNP-02792] c14 N71-28958

Pulse generating circuit for operation at very high duty cycles and repetition rates  
 [NASA-CASE-XNP-00745] c10 N71-28960

Development of electric circuit for production of different pulse width signals  
 [NASA-CASE-XLA-07788] c09 N71-29139

Sensing circuit for instantaneous reaction to power overloads  
 [NASA-CASE-GSC-10667-1] c10 N71-33129

Pulsed excitation voltage circuit for strain gage bridge transducers

- [NASA-CASE-PRC-10036] c09 N72-22200  
Development of thermal to electric power conversion system using solid state switches of electrical currents to load for Seebeck effect compensation
- [NASA-CASE-NPO-11388] c03 N72-23048  
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- [NASA-CASE-ERC-10268] c09 N72-25252  
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- [NASA-CASE-NPO-11078] c09 N72-25262  
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- [NASA-CASE-XLA-09843] c15 N72-27485  
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- [NASA-CASE-GSC-10786-1] c10 N72-28241  
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- [NASA-CASE-GSC-11340-1] c10 N72-33230  
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- [NASA-CASE-NPO-10764-1] c14 N73-14428  
Electrodeless lamp circuit driven by induction
- [NASA-CASE-MPS-21214-1] c09 N73-30181  
Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure
- [NASA-CASE-LEW-11581-1] c54 N75-13531  
Peak holding circuit for extremely narrow pulses
- [NASA-CASE-MSC-14129-1] c33 N75-18479  
High voltage distributor
- [NASA-CASE-GSC-11849-1] c33 N76-16332  
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- [NASA-CASE-NPO-14162-1] c35 N78-22347  
A signal attenuator --- pulse rate sensor circuits
- [NASA-CASE-PRC-11012-1] c33 N78-28339  
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- [NASA-CASE-NPO-14536-1] c32 N79-14277  
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- [NASA-CASE-MSC-18035-1] c33 N79-23347  
Circuit for automatic load sharing in parallel converter modules
- [NASA-CASE-NPO-14056-1] c33 N79-24257
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[NASA-CASE-XNP-00462] c14 N70-34298
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[NASA-CASE-XMS-04300] c09 N71-19479
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[NASA-CASE-GSC-10021-1] c09 N71-24595  
Planar array circularly polarized antenna with wall slot excitation  
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[NASA-CASE-LAR-10782-1] c31 N74-14133
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[NASA-CASE-XNP-02140] c09 N71-23097  
Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c36 N78-22359
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[NASA-CASE-XGS-01784] c10 N71-20782
- CLAMPS**  
Portable device for aligning surfaces of two adjacent wall or sheet sections for joining at point of junction
- [NASA-CASE-XMF-01452] c15 N70-41371  
Hydraulic clamping of sheet stock specimens
- [NASA-CASE-XLA-05100] c15 N71-17696  
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- [NASA-CASE-XMS-02184] c15 N71-20813  
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[NASA-CASE-MPS-18100] c15 N72-11390
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[NASA-CASE-LAR-10590-1] c15 N70-26819  
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[NASA-CASE-GSC-12291-1] c31 N78-24386
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[NASA-CASE-LAR-11326-1] c35 N75-33368  
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[NASA-CASE-LEW-11390-3] c25 N76-29379  
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[NASA-CASE-XNP-06234] c10 N71-27137  
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**CLUTTER**

Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c32 N78-18266

**CMOS**

Complementary DMOS-V MOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321

**COAL**

Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c31 N78-24387

Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c35 N78-27385

Coal desulfurization  
[NASA-CASE-NPO-14272-1] c25 N78-33164

Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c37 N79-14388

Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443

Thickness measurement system  
[NASA-CASE-MFS-23721-1] c31 N79-28370

Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c43 N79-31706

**COAL LIQUEFACTION**

Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152

**COAL UTILIZATION**

Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c44 N78-31527

**COATING**

Solder coating process for printed copper circuit protection  
[NASA-CASE-XMP-01599] c09 N71-20705

High thermal emittance black surface coatings and process for applying to metal and metal alloy surfaces used in radiative cooling of spacecraft  
[NASA-CASE-XLA-06199] c15 N71-24875

Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c37 N78-13436

Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599

Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233

Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c74 N78-32854

Ion beam sputter deposition of fluoropolymers  
[NASA-CASE-LEW-13122-1] c27 N79-24154

**COATINGS**

Bonded solid lubricant coatings of calcium fluoride and binder for high temperature stability  
[NASA-CASE-XMS-00259] c18 N70-36400

Cathode ray tube with coating of phosphor and cobalt oxides  
[NASA-CASE-ERC-10468] c09 N72-20206

Durable antistatic coating for polyethylmethacrylate  
[NASA-CASE-NPO-13867-1] c27 N78-14164

Edge coating of flat wires  
[NASA-CASE-XMP-05757-1] c31 N79-21227

**COAXIAL CABLES**

Design and development of device for cooling inner conductor of coaxial cable  
[NASA-CASE-XNP-09775] c09 N71-20445

Design and development of electric connectors for rigid and semirigid coaxial cables  
[NASA-CASE-XNP-04732] c09 N71-20851

Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597

Collapsible antenna boom and coaxial transmission line having inflatable inner tube  
[NASA-CASE-MFS-20068] c07 N71-27191

Vibration isolation system, using coaxial helical compression springs  
[NASA-CASE-NPO-11012] c15 N72-11391

Development and characteristics of hermetically sealed coaxial package for containing microwave semiconductor components  
[NASA-CASE-GSC-10791-1] c15 N73-14469

System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c33 N74-17927

Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430

**COAXIAL PLASMA ACCELERATORS**

Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c75 N76-17951

**COBALT ALLOYS**

High strength, corrosion resistant cobalt-based alloys for aerospace structures  
[NASA-CASE-XLE-00726] c17 N71-15644

High temperature cobalt-base alloy resistant to corrosion by liquid metals and to sublimation in vacuum environment  
[NASA-CASE-XLE-02991] c17 N71-16025

High temperature ferromagnetic cobalt-base alloy for electrical power generating equipment  
[NASA-CASE-XLE-03629] c17 N71-23248

Cobalt-tungsten alloys with superior strength at elevated temperatures  
[NASA-CASE-LEW-10436-1] c17 N73-32415

**COBALT OXIDES**

Cathode ray tube with coating of phosphor and cobalt oxides  
[NASA-CASE-ERC-10468] c09 N72-20206

**COCKPIT SIMULATORS**

Controlled visibility device for simulating poor visibility conditions in training pilots in instrument landing and flight procedures  
[NASA-CASE-XPR-04147] c11 N71-10748

**CODERS**

Design and development of encoder/decoder system to generate binary code which is function of outputs of plurality of bistable elements  
[NASA-CASE-NPO-10342] c10 N71-33407

Biorthogonal encoder with modular design  
[NASA-CASE-NPO-10629] c08 N72-18184

Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c32 N74-32598

Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c62 N76-31946

Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c33 N77-31404

**CODING**

Description of error correcting methods for use with digital data computers and apparatus for encoding and decoding digital data  
[NASA-CASE-XMP-02748] c08 N71-22749

Apparatus and digital technique for coding rate data  
[NASA-CASE-LAR-10128-1] c08 N73-20217

- Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c60 N76-23850
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239
- COEFFICIENT OF FRICTION**
- Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c35 N76-31489
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382
- COENZYMES**
- Bioassay of flavin coenzymes  
[NASA-CASE-GSC-10565-1] c06 N72-25149
- COHERENT ELECTROMAGNETIC RADIATION**
- Design of folded traveling wave maser structure  
[NASA-CASE-XNP-05219] c16 N71-15550
- Development of focused image holography with extended sources  
[NASA-CASE-ERC-10019] c16 N71-15551
- COHERENT LIGHT**
- Hybrid holographic system using reference, transmitted, and reflected beams simultaneously  
[NASA-CASE-MFS-20074] c16 N71-15565
- Development of apparatus for amplitude modulation of diode laser by periodic discharge of direct current power supply  
[NASA-CASE-XMS-04269] c16 N71-22895
- Coherent light beam device and method for measuring gas density in vacuum chambers  
[NASA-CASE-XEP-11203] c14 N71-28994
- COHERENT RADIATION**
- Design and development of multichannel laser remote control system using modulated helium-neon laser as transmitter and light collector as receiving antenna  
[NASA-CASE-LAR-10311-1] c16 N73-16536
- Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c35 N74-11284
- Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c36 N74-20009
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 N74-27425
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c36 N76-29575
- COINCIDENCE CIRCUITS**
- Frequency measurement by coincidence detection, with standard frequency  
[NASA-CASE-MSC-14649-1] c33 N76-16331
- COLD CATHODES**
- Cold cathode discharge tube with pressurized gas cell for meteoroid detection in space  
[NASA-CASE-LAR-10483-1] c14 N73-32327
- COLD GAS**
- Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c09 N77-10071
- COLD WELDING**
- Method of cold welding using ion beam technology  
[NASA-CASE-LFW-12982-1] c37 N78-28459
- COLD WORKING**
- Cold metal hydroforming techniques using epoxy molds for counteracting creep or stretch  
[NASA-CASE-XLE-05641-1] c15 N71-26346
- COLLAPSE**
- Collapsible piston for hypervelocity gun  
[NASA-CASE-MSC-13789-1] c11 N73-32152
- COLLECTION**
- Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c35 N75-19611
- Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N78-27750
- Urine collection apparatus  
[NASA-CASE-MSC-18381-1] c52 N79-23657
- COLLIMATION**
- Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c36 N74-21091
- Optical alignment device  
[NASA-CASE-ARC-10932-1] c74 N76-22993
- Spatial filter for Q-switched lasers  
[NASA-CASE-LFW-12164-1] c36 N77-32478
- Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c35 N78-32399
- COLLIMATORS**
- X ray collimating structure for focusing radiation directly onto detector  
[NASA-CASE-XHQ-04106] c14 N70-40240
- Collimator for analyzing spatial location of near and distant sources of radiation  
[NASA-CASE-MFS-20546-2] c14 N73-30389
- Multiplate focusing collimator --- for scanning small near radiation sources  
[NASA-CASE-MFS-20932-1] c35 N75-19616
- Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c35 N78-32399
- COLLISION AVOIDANCE**
- Cooperative Doppler radar system for avoiding midair collisions  
[NASA-CASE-LAR-10403] c21 N71-11766
- Satellite aided aircraft collision avoidance system effective for large number of aircraft  
[NASA-CASE-ERC-10090] c21 N71-24948
- Vertically stacked collinear array of independently fed omnidirectional antennas for use in collision warning systems on commercial aircraft  
[NASA-CASE-LAR-10545-1] c09 N72-21244
- Economical satellite aided vehicle avoidance system for preventing midair collisions  
[NASA-CASE-ERC-10419] c21 N72-21631
- Development and operating principles of collision warning system for aircraft accident prevention  
[NASA-CASE-HQN-10703] c21 N73-13643
- Development and characteristics of electronic signalling system and data processing equipment for warning systems to avoid midair collisions between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641
- Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c03 N75-30132
- COLLOIDAL GENERATORS**
- Colloidal particle generator for electrostatic engine for propelling space vehicles  
[NASA-CASE-XLE-00817] c28 N70-33265
- COLLOIDAL PROPELLANTS**
- Colloidal particle generator for electrostatic engine for propelling space vehicles  
[NASA-CASE-XLE-00817] c28 N70-33265
- Low density and low viscosity magnetic propellant for use under zero gravity conditions  
[NASA-CASE-XLE-01512] c12 N70-40124
- Electrostatic microthrust propulsion system with annular slit colloid thruster  
[NASA-CASE-GSC-10709-1] c28 N71-25213
- COLLOIDS**
- The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13874
- COLOR**
- Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications  
[NASA-CASE-LAR-10953-1] c17 N73-27446
- COLOR PHOTOGRAPHY**
- Color photointerpretation of interference colors reflected from thin film oil-coated components in moving gases for gas flow visualization  
[NASA-CASE-XMP-01779] c12 N71-20815
- COLOR TELEVISION**
- Color television system utilizing single gun current sensitive color cathode ray tube  
[NASA-CASE-ERC-10098] c09 N71-23618
- Color television system for allowing monochrome television camera to produce color pictures  
[NASA-CASE-MSC-12146-1] c07 N72-17109
- Video tape recorder with scan conversion playback for color television signals  
[NASA-CASE-NPO-10166-1] c07 N73-22076
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c35 N76-16391
- System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c74 N77-18893
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083
- COLOR VISION**
- Color perception tester for testing color code perceptiveness of individuals  
[NASA-CASE-KSC-10278] c05 N72-16015
- COLUMNS (PROCESS ENGINEERING)**
- Micropacked column for rapid chromatographic analysis using low gas flow rates  
[NASA-CASE-XNP-04816] c06 N69-39936
- COLUMNS (SUPPORTS)**
- Lightweight structural columns --- for truss structures

- [NASA-CASE-LAR-12095-1] c39 N77-27432  
Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c37 N78-33446
- COMBINATORIAL ANALYSIS**  
Apparatus for computing square roots  
[NASA-CASE-XGS-04768] c08 N71-19437
- COMBUSTION**  
Device for detection of combustion light  
preceding gaseous explosions  
[NASA-CASE-LAR-10739-1] c14 N73-16484
- COMBUSTION CHAMBERS**  
Rocket chamber leak test fixture using tubular  
plug  
[NASA-CASE-IFR-09479] c14 N69-27503  
Propellant injectors for rocket combustion  
chambers  
[NASA-CASE-XLE-00103] c28 N70-33241  
Metal ribbon wrapped outer wall for  
regeneratively cooled combustion chamber  
[NASA-CASE-XLE-00164] c15 N70-36411  
Apparatus for cooling and injecting hypergolic  
propellants into combustion chamber of small  
rocket engine  
[NASA-CASE-XLE-00303] c15 N70-36535  
Ignition system for monopropellant combustion  
devices  
[NASA-CASE-XNP-00249] c28 N70-38249  
Fabrication method for lightweight  
regeneratively cooled combustion chamber of  
channel construction  
[NASA-CASE-XLE-00150] c28 N70-41818  
Rocket combustion chamber stability by  
controlling transverse instability during  
propellant combustion  
[NASA-CASE-XLE-04603] c33 N71-21507  
Regenerative cooling system for rocket  
combustion chamber using coolant tubes in  
convergent-divergent nozzle  
[NASA-CASE-XLE-04857] c28 N71-23968  
Rocket engine injector orifice to accommodate  
changes in density, velocity, and pressure,  
thereby maintaining constant mass flow rate of  
propellant into rocket combustion chamber  
[NASA-CASE-XLE-03157] c28 N71-24736  
Coaxial injector for mixing liquid propellants  
within combustion chambers  
[NASA-CASE-NPO-11095] c15 N72-25455  
Swirl can, full-annulus combustion chambers for  
high performance gas turbine engines  
[NASA-CASE-LEW-11326-1] c23 N73-30665  
Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c20 N74-32919  
Controlled separation combustor --- airflow  
distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c20 N76-14190  
Reduction of nitric oxide emissions from a  
combustor  
[NASA-CASE-ARC-10814-2] c25 N77-31260  
Fuel combustor  
[NASA-CASE-LEW-12137-1] c25 N78-10224  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c34 N78-27357  
Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c25 N79-11151  
A system for concurrently delivering a stream of  
powdered fuel and a stream of powdered  
oxidizer to a combustion chamber for a  
reaction motor  
[NASA-CASE-NPS-23904-1] c20 N79-13077  
Heat exchanger --- rocket combustion chambers  
and cooling systems  
[NASA-CASE-LEW-12252-1] c34 N79-13288  
Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c37 N79-14388  
General purpose rocket furnace  
[NASA-CASE-NPS-23460-1] c12 N79-26075
- COMBUSTION CONTROL**  
Pressurized gas injection for burning rate  
control of solid propellants  
[NASA-CASE-XLE-03494] c27 N71-21819
- COMBUSTION EFFICIENCY**  
Fuel injection system for maximum combustion  
efficiency of rocket engines  
[NASA-CASE-XLE-00111] c28 N70-38199
- COMBUSTION PHYSICS**  
Characteristics of solid propellant rocket  
engine with controlled rate of thrust buildup  
operating in vacuum environment  
[NASA-CASE-NPO-11559] c28 N73-24784
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c37 N79-11405
- COMBUSTION PRODUCTS**  
Contamination free separation nut eliminating  
combustion products from ambient surroundings  
generated by squib firing  
[NASA-CASE-IGS-01971] c15 N71-15922  
Device for generating and controlling combustion  
products for testing of fire detection system  
[NASA-CASE-GSC-11095-1] c14 N72-10375  
System for minimizing internal combustion engine  
pollution emission  
[NASA-CASE-NPO-13402-1] c37 N76-18457  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c44 N78-31527  
Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c25 N79-11151
- COMBUSTION STABILITY**  
Rocket combustion chamber stability by  
controlling transverse instability during  
propellant combustion  
[NASA-CASE-XLE-04603] c33 N71-21507
- COMMAND AND CONTROL**  
Multiple rate digital command detection system  
with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289
- COMMAND MODULES**  
Energy absorbing crew couch strut for Apollo  
command module  
[NASA-CASE-MSC-12279] c15 N72-17450
- COMMERCIAL AIRCRAFT**  
Aircraft design concept  
[NASA-CASE-LAR-11852-1] c05 N77-15027
- COMMUNICATING**  
Communication between computers using two  
identical communications links  
[NASA-CASE-NPO-11161] c08 N72-25207
- COMMUNICATION**  
Circuitry for developing autocorrelation  
function continuously within signal receiving  
period  
[NASA-CASE-XNP-00746] c07 N71-21476  
Superconductive resonant cavity for improved  
signal to noise ratio in communication signal  
[NASA-CASE-MSC-12259-2] c07 N72-33146
- COMMUNICATION CABLES**  
Method of making molded electric connector for  
use with flat conductor cables  
[NASA-CASE-XNP-03498] c15 N71-15986  
Process for making RP shielded cable connector  
assemblies and resulting structures  
[NASA-CASE-GSC-11215-1] c09 N73-28083  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c36 N76-24553  
High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c37 N79-23432  
A high-speed data link for moderate distances  
and noisy environments  
[NASA-CASE-NPO-14152-1] c32 N79-24212
- COMMUNICATION EQUIPMENT**  
Multiplexed communication system design  
including automatic correction of transmission  
errors introduced by frequency spectrum shifts  
[NASA-CASE-XNP-01306] c07 N71-20814  
Binary data decoding device for use at receiving  
end of communication channel  
[NASA-CASE-NPO-10118] c07 N71-24741  
Characteristics of data-aided carrier tracking  
loop used for tracking carrier in angle  
modulated communications system  
[NASA-CASE-NPO-11282] c10 N73-16205  
Doppler compensated communication system for  
locating supersonic transport position  
[NASA-CASE-GSC-10087-4] c07 N73-20174  
Differential phase shift keyed communication  
system  
[NASA-CASE-MSC-14065-1] c32 N74-26654
- COMMUNICATION SATELLITES**  
Erectable, inflatable, radio signal reflecting  
passive communication satellite  
[NASA-CASE-XLA-00210] c30 N70-40309  
Development of antenna system for spin  
stabilized communication satellite for  
simultaneous reception and transmission of data  
[NASA-CASE-IGS-02607] c31 N71-23009  
Elimination of tracking occultation problems  
occurring during continuous monitoring of  
interplanetary missions by using Earth  
orbiting communications satellite

- [ NASA-CASE-XAC-06029-1 ] c31 N71-24813  
Satellite radio communication system with remote steerable antenna
- [ NASA-CASE-XNP-02389 ] c07 N71-28900  
Satellite aided vehicle avoidance system
- [ NASA-CASE-ERC-10419-1 ] c03 N75-30132  
Ultra stable frequency distribution system
- [ NASA-CASE-NPO-13836-1 ] c32 N78-15323  
Satellite personal communications system
- [ NASA-CASE-NPO-14480-1 ] c32 N78-25275
- COMMUTATION**  
High speed low level voltage commutating switch  
[ NASA-CASE-XAC-00060 ] c09 N70-39915
- COMMUTATORS**  
Rocket-borne aspect sensor consisting of radiation sensor, apertured disk, commutator, and counting circuits  
[ NASA-CASE-XGS-08266 ] c14 N69-27432  
Commutator for steering precisely controlled bidirectional currents through numerous loads by use of magnetic core shift registers  
[ NASA-CASE-NPO-10743 ] c08 N72-21199
- COMPARATOR CIRCUITS**  
Describing frequency discriminator using digital logic circuits and supplying single binary output signal  
[ NASA-CASE-MFS-14322 ] c08 N71-18692  
Development of pulsed differential comparator circuit  
[ NASA-CASE-XLE-03804 ] c10 N71-19471  
Multi-cell battery protection system  
[ NASA-CASE-LEW-12039-1 ] c44 N78-14625  
Window comparator  
[ NASA-CASE-FRC-10090-1 ] c33 N78-18308
- COMPARATORS**  
Photometric flow meter with comparator reference means  
[ NASA-CASE-XGS-01331 ] c14 N71-22996  
Characteristics of comparator circuits for comparison of binary numbers in information processing system  
[ NASA-CASE-XNP-04819 ] c08 N71-23295
- COMPENSATORS**  
Star image motion compensator using telescope for maintaining fixed images  
[ NASA-CASE-LAR-10523-1 ] c14 N72-22444  
Compensating linkage for main rotor control  
[ NASA-CASE-LAR-11797-1 ] c08 N79-15057  
Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[ NASA-CASE-GSC-12168-1 ] c31 N79-17029
- COMPOSITE MATERIALS**  
High strength reinforced metallic composites for applications over wide temperature range  
[ NASA-CASE-XLE-02428 ] c17 N70-33288  
Method for producing fiber reinforced metallic composites with high strength and elasticity over wide temperature range  
[ NASA-CASE-XLE-00231 ] c17 N70-38198  
Composites reinforced with short metal fibers or whiskers and having high tensile strength  
[ NASA-CASE-XLE-00228 ] c17 N70-38490  
Unfired-ceramic, highly reflective composite insulation for large launch vehicles  
[ NASA-CASE-XMF-01030 ] c18 N70-41583  
Freeze casting of metal ceramic and refractory compound powders into plastic slips  
[ NASA-CASE-XLE-00106 ] c15 N71-16076  
Preparation and characteristics of lightweight refractory insulation  
[ NASA-CASE-XMF-05279 ] c18 N71-16124  
Flexible composite membrane structure impervious to extremely reactive chemicals in rocket propellants  
[ NASA-CASE-XNP-08837 ] c18 N71-16210  
Cryostat for flexure fatigue testing of composite materials  
[ NASA-CASE-XMF-02964 ] c14 N71-17659  
Description of method for producing metallic composites reinforced with ceramic and refractory hard metals that are fibered in place  
[ NASA-CASE-XLE-03925 ] c18 N71-22894  
Electrically coupled individually encapsulated solar cell matrix  
[ NASA-CASE-NPO-11190 ] c03 N71-34044  
Heat treatment and tooling for forming shapes from thermosetting honeycomb core sheets  
[ NASA-CASE-NPO-11036 ] c15 N72-24522
- Method for making fiber composites with high strength at high temperatures  
[ NASA-CASE-LEW-10424-2-2 ] c18 N72-25539  
Development of thermal compensating structure which maintains uniform length with changes in temperature  
[ NASA-CASE-MFS-20433 ] c15 N72-28496  
Bearing material --- composite material with low friction surface for rolling or sliding contact  
[ NASA-CASE-LEW-11930-1 ] c24 N76-22309  
Fluid seal for rotating shafts  
[ NASA-CASE-LEW-11676-1 ] c37 N76-22541  
Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[ NASA-CASE-NSC-14331-1 ] c27 N76-24405  
Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[ NASA-CASE-MFS-22926-1 ] c24 N77-27187  
Hybrid composite laminate structures  
[ NASA-CASE-LEW-12118-1 ] c24 N77-27188  
Bearing material  
[ NASA-CASE-LEW-11930-3 ] c24 N77-32249  
Honeycomb-laminate composite structure  
[ NASA-CASE-ARC-10913-1 ] c24 N78-15180  
High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[ NASA-CASE-NPO-13690-1 ] c27 N78-19302  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[ NASA-CASE-LAR-12018-1 ] c20 N78-24275  
Atomic hydrogen storage method and apparatus  
[ NASA-CASE-LEW-12081-1 ] c28 N78-24365  
Ceramic fiber insulating material and method of producing same --- aircraft construction materials  
[ NASA-CASE-NSC-14795-2 ] c24 N78-25138  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[ NASA-CASE-MFS-23626-1 ] c24 N78-32190  
Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[ NASA-CASE-LEW-11930-4 ] c24 N79-17916  
Composite seal for turbomachinery --- backings for turbine engine shrouds  
[ NASA-CASE-LEW-12131-1 ] c37 N79-18318  
Polyimide prepreg material having improved tack retention --- polyimide-graphite fiber composites  
[ NASA-CASE-LEW-12933-1 ] c23 N79-24061
- COMPOSITE PROPELLANTS**  
Ammonium perchlorate composite propellant with organic Cu/II/ chelate catalytic additive  
[ NASA-CASE-LAR-10173-1 ] c27 N71-14090
- COMPOSITE STRUCTURES**  
Inflatable honeycomb panel element for lightweight structures usable in space stations and other construction  
[ NASA-CASE-XLA-00204 ] c32 N70-36536  
Shrouded composite propulsion system configuration  
[ NASA-CASE-XLA-01043 ] c28 N71-10780  
Development of composite structures for spacecraft to serve as anti-meteoroid device  
[ NASA-CASE-LAR-10788-1 ] c31 N73-20880  
Bonding method in the manufacture of continuous regression rate sensor devices  
[ NASA-CASE-LAR-10337-1 ] c24 N75-30260  
Varying density composite structure  
[ NASA-CASE-LAR-11181-1 ] c39 N75-31479  
Leading edge protection for composite blades  
[ NASA-CASE-LEW-12550-1 ] c24 N77-19170  
Composite sandwich lattice structure  
[ NASA-CASE-LAR-11898-1 ] c24 N78-10214  
Method of making a composite sandwich lattice structure  
[ NASA-CASE-LAR-11898-2 ] c24 N78-17149  
Stainless steel panel for selective absorption of solar energy and the method of producing said panel  
[ NASA-CASE-MFS-23518-3 ] c44 N78-25557  
Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[ NASA-CASE-ARC-11040-2 ] c24 N78-27184
- COMPOSITION (PROPERTY)**  
Moving particle composition analyzer

- [NASA-CASE-GSC-11889-1] c35 N76-16393
- COMPRESSED AIR**  
Actuator using compressed gas as driving force to control valve handling large liquid flows  
[NASA-CASE-IHQ-01208] c15 N70-35409
- COMPRESSIBILITY**  
Nozzle extraction process and handlemeter for measuring handle  
[NASA-CASE-LAR-12147-1] c31 N79-11246
- COMPRESSIBLE FLUIDS**  
Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases  
[NASA-CASE-XLE-00193] c14 N70-36618  
Apparatus for tensile strength testing of specimen by pressurized fluid  
[NASA-CASE-XFS-06250] c14 N71-15600
- COMPRESSING**  
Method and apparatus for producing very low temperature refrigeration based on gas pressure balance  
[NASA-CASE-XNP-08877] c15 N71-23025  
Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c31 N74-18124
- COMPRESSION LOADS**  
Pressure transducer for systems for measuring forces of compression  
[NASA-CASE-NPO-10832] c14 N72-21405  
Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c44 N74-33379  
Locking redundant link  
[NASA-CASE-LAR-11900-1] c37 N79-14382
- COMPRESSION TESTS**  
Test equipment to prevent buckling of small diameter specimens during compression tests  
[NASA-CASE-LAR-10440-1] c14 N73-32323  
Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c09 N74-19528
- COMPRESSOR BLADES**  
Process for welding compressor and turbine blades to rotors and discs of jet engines  
[NASA-CASE-LEW-10533-1] c15 N73-28515
- COMPRESSORS**  
Thermal pump-compressor for converting solar energy  
[NASA-CASE-XLA-00377] c33 N71-17610  
Self-energized plasma compressor  
[NASA-CASE-MPS-22185-2] c75 N76-17951  
Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c35 N78-10428
- COMPUTATION**  
Apparatus for computing square roots  
[NASA-CASE-XGS-04768] c08 N71-19437  
Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c04 N78-17031
- COMPUTER COMPONENTS**  
Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c60 N78-17691  
Common data buffer system  
[NASA-CASE-KSC-11048-1] c60 N79-23674
- COMPUTER DESIGN**  
Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751
- COMPUTER GRAPHICS**  
System for digitizing graphic displays  
[NASA-CASE-NPO-10745] c08 N72-22164
- COMPUTER NETWORKS**  
A high-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c32 N79-24212
- COMPUTER PROGRAMMING**  
Encoders designed to generate comma free biorthogonal Reed-Muller type code comprising conversion of 64 6-bit words into 64 32-bit data for communication purposes  
[NASA-CASE-NPO-10595] c10 N71-25917  
Priority interrupt system --- comprised of four registers  
[NASA-CASE-NPO-13067-1] c60 N76-18800
- COMPUTER PROGRAMS**  
Self testing and repairing computer comprising control and diagnostic unit and rollback points for error correction  
[NASA-CASE-NPO-10567] c09 N71-24633  
Development of computer program for estimating reliability of self-repair and fault-tolerant systems with respect to selected system and mission parameters  
[NASA-CASE-NPO-13086-1] c15 N73-12495  
Development of flight simulator system to show position of joystick displacement  
[NASA-CASE-NPO-11497] c08 N73-25206
- COMPUTER STORAGE DEVICES**  
Magnetic matrix memory system for nondestructive reading of information contained in matrix  
[NASA-CASE-XMP-05835] c08 N71-12504  
Binary sequence detector with few memory elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505  
Pulsed magnetic core memory element with blocking oscillator feedback for interrogation without loss of digital information  
[NASA-CASE-XGS-03303] c08 N71-18595  
Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
[NASA-CASE-XNP-01318] c10 N71-23033  
Time division multiplexed telemetry transmitting system controlled by programmed memory  
[NASA-CASE-GSC-10131-1] c07 N71-24624  
Serial digital decoder design with square circuit matrix and serial memory storage units  
[NASA-CASE-NPO-10150] c08 N71-24650  
Digital memory system with multiple switch cores for driving each word location  
[NASA-CASE-XNP-01466] c10 N71-26434  
Redundant memory for enhanced reliability of digital data processing system  
[NASA-CASE-GSC-10564] c10 N71-29135  
Memory device employing semiconductor and ferroelectric properties of single crystal barium titanate  
[NASA-CASE-ERC-10307] c08 N72-21198  
Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c60 N76-21914
- COMPUTER SYSTEMS DESIGN**  
Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c62 N74-14920  
Computer interface system  
[NASA-CASE-NPO-13428-1] c60 N77-12721
- COMPUTER TECHNIQUES**  
Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c25 N76-18245  
Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c09 N77-27131  
Computerized system for translating a torch head  
[NASA-CASE-MPS-23620-1] c37 N79-10421  
Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c35 N79-27479
- COMPUTERIZED SIMULATION**  
Integrated time shared instrumentation display for aerospace vehicle simulators  
[NASA-CASE-XLA-01952] c08 N71-12507  
Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411  
Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MPS-23052-2] c74 N79-13855
- COMPUTERS**  
Telemetry data unit to form multibit words for use between demodulator and computer  
[NASA-CASE-XNP-09225] c09 N69-24333  
Data compression processor for monitoring analog signals by sampling procedure  
[NASA-CASE-NPO-10068] c08 N71-19288  
Communication between computers using two identical communications links  
[NASA-CASE-NPO-11161] c08 N72-25207
- CONCAVITY**  
Concave grating spectrometer for use in near and vacuum ultraviolet regions  
[NASA-CASE-XGS-01036] c14 N70-40003  
Diffractoid grating configuration for X-ray and ultraviolet focusing

CONCENTRATION (COMPOSITION)

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[ NASA-CASE-GSC-12357-1 ] c74 N78-32857  
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 [ NASA-CASE-MSC-16777-1 ] c51 N78-22588  
**CONCENTRATORS**  
 Concentrator device for controlling direction of solar energy onto energy converters  
 [ NASA-CASE-XLE-01716 ] c09 N70-40234  
 Thermostatically controlled non-tracking type solar energy concentrator  
 [ NASA-CASE-NPO-13497-1 ] c44 N76-14602  
 Three-dimensional tracking solar energy concentrator and method for making same  
 [ NASA-CASE-NPO-13736-1 ] c44 N77-32583  
 Non-tracking solar energy collector system  
 [ NASA-CASE-NPO-13817-1 ] c44 N79-11471  
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 [ NASA-CASE-NPO-14467-1 ] c44 N79-31753  
**CONDENSATES**  
 Apparatus for determining volatile condensable material present in polymeric products  
 [ NASA-CASE-XNP-09699 ] c06 N71-24607  
 Condensate removal device for heat exchanger  
 [ NASA-CASE-MSC-14143-1 ] c77 N75-20139  
**CONDENSERS (LIQUIFIERS)**  
 Condenser-separator for dehumidifying air utilizing sintered metal surface  
 [ NASA-CASE-XLA-08645 ] c15 N69-21465  
 Condensate removal device for heat exchanger  
 [ NASA-CASE-MSC-14143-1 ] c77 N75-20139  
**CONDENSING**  
 Preparation of heterocyclic block copolymer omega-diamidoximes  
 [ NASA-CASE-ARC-11060-1 ] c27 N79-22300  
**CONDUCTING FLUIDS**  
 Multiducted electromagnetic pump for conductive liquids  
 [ NASA-CASE-NPO-10755 ] c15 N71-27084  
 Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
 [ NASA-CASE-MFS-19193-1 ] c37 N75-19686  
**CONDUCTIVE HEAT TRANSFER**  
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 [ NASA-CASE-XLE-00266 ] c14 N70-34156  
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 [ NASA-CASE-XMS-09571 ] c05 N71-19439  
 Compact pulsed laser having improved heat conductance  
 [ NASA-CASE-NPO-13147-1 ] c36 N77-25502  
**CONDUCTORS**  
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 [ NASA-CASE-XNP-07587 ] c15 N71-18701  
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 [ NASA-CASE-LAR-10994-1 ] c24 N75-13032  
**CONES**  
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 [ NASA-CASE-XNP-09701 ] c14 N71-26475  
**CONFINEMENT**  
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 [ NASA-CASE-NPO-10890 ] c11 N73-12265  
**CONICAL BODIES**  
 Conical valve plug for use with reactive cryogenic fluids  
 [ NASA-CASE-XLE-00715 ] c15 N70-34859  
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 [ NASA-CASE-NPO-10303 ] c07 N72-22127  
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 [ NASA-CASE-NPO-11661 ] c07 N73-14130  
**CONICAL SCANNING**  
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 [ NASA-CASE-NPO-14009-1 ] c32 N79-13214  
**CONICAL SHELLS**  
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 [ NASA-CASE-XKS-03495 ] c14 N69-39785  
 Foldable, double cone and parabolic reflector system for solar ray concentration  
 [ NASA-CASE-XLA-04622 ] c03 N70-41580  
 Rotary spindle lathe attachments for machining geometrical cones  
 [ NASA-CASE-XMS-04292 ] c15 N71-22722  
**CONJUGATES**  
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 [ NASA-CASE-NPO-13641-1 ] c32 N79-24210  
**CONNECTIVE TISSUE**  
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 [ NASA-CASE-ARC-11091-1 ] c52 N79-11684  
**CONNECTORS**  
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 [ NASA-CASE-IGS-01395 ] c03 N69-21539  
 Design and development of quick release connector  
 [ NASA-CASE-XLA-01141 ] c15 N71-13789  
 Development and characteristics of strainer for flared tube fitting  
 [ NASA-CASE-XLA-05056 ] c15 N72-11389  
 Process for making RF shielded cable connector assemblies and resulting structures  
 [ NASA-CASE-GSC-11215-1 ] c09 N73-28083  
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 [ NASA-CASE-XLE-02367-1 ] c31 N79-21225  
**CONSCIOUSNESS**  
 Development of apparatus and method for quantitatively measuring brain activity as automatic indication of sleep state and level of consciousness  
 [ NASA-CASE-MSC-13282-1 ] c05 N71-24729  
**CONSOLES**  
 Telephone multiline signaling using common signal pair  
 [ NASA-CASE-KSC-11023-1 ] c32 N79-23310  
**CONSTANTS**  
 Spring operated accelerator and constant force spring mechanism therefor  
 [ NASA-CASE-ARC-10898-1 ] c35 N77-18417  
**CONSTRAINTS**  
 Three stage motion restraining mechanism for restraining and damping three dimensional vibrational movement of gimballed package during launch of spacecraft  
 [ NASA-CASE-GSC-10306-1 ] c15 N71-24694  
 Cable guide and restraint device for reefing tubes in uniform manner  
 [ NASA-CASE-LAR-10129-1 ] c15 N73-25512  
 Development of restraint system for securing personnel to ergometer while exercising under weightless conditions  
 [ NASA-CASE-MFS-21046-1 ] c14 N73-27377  
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 [ NASA-CASE-LAR-10129-2 ] c37 N74-20063  
 Restraining mechanism  
 [ NASA-CASE-MSC-13054 ] c54 N78-17677  
**CONSTRUCTION MATERIALS**  
 Apparatus and method of assembling building blocks by folding pre-cut flat sheets of material during on-site construction  
 [ NASA-CASE-MSC-12233-1 ] c15 N72-25454  
 Development of construction block in form of container folded from flat sheet and filled with solid material for architectural purposes  
 [ NASA-CASE-MSC-12233-2 ] c32 N73-13921  
**CONTACT POTENTIALS**  
 Lightweight, rugged, inexpensive satellite battery for producing electrical power from ionosphere using electrodes with different contact potentials  
 [ NASA-CASE-IGS-01593 ] c03 N70-35408  
**CONTACT RESISTANCE**  
 Bearing material  
 [ NASA-CASE-LEN-11930-3 ] c24 N77-32249  
**CONTAINERLESS BELTS**  
 Method of crystallization --- in gravity-free environments  
 [ NASA-CASE-MFS-23001-1 ] c76 N77-32919  
**CONTAINERS**  
 Manufacture of fluid containers from fused coated polyester sheets having resealable septum  
 [ NASA-CASE-NPO-10123 ] c15 N71-24835  
 Method for locating leaks in hermetically sealed containers  
 [ NASA-CASE-ERC-10045 ] c15 N71-24910  
 Quantitative liquid measurements in container by resonant frequencies

[NASA-CASE-XNP-02500] c18 N71-27397

**CONTAMINANTS**  
 Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention  
 [NASA-CASE-XMS-01905] c12 N71-21099

**CONTAMINATION**  
 Emission spectroscopy method for contamination monitoring of inert gas metal arc welding  
 [NASA-CASE-XMF-02039] c15 N71-15871  
 Contamination free separation nut eliminating combustion products from ambient surroundings generated by squib firing  
 [NASA-CASE-XGS-01971] c15 N71-15922  
 Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
 [NASA-CASE-NPO-10070] c15 N71-27372  
 Portable tester for monitoring bacterial contamination by adenosine triphosphate light reaction  
 [NASA-CASE-GSC-10879-1] c14 N72-25413  
 Biocontamination and particulate detection system  
 [NASA-CASE-NPO-13953-1] c35 N79-28527

**CONTINUOUS RADIATION**  
 CW ultrasonic bolt tensioning monitor  
 [NASA-CASE-LAR-12016-1] c39 N78-15512  
 Pseudo continuous wave instrument --- ultrasonics  
 [NASA-CASE-LAR-12260-1] c35 N79-10390

**CONTINUOUS WAVE LASERS**  
 High power laser apparatus and system  
 [NASA-CASE-XLE-2529-2] c36 N75-27364  
 Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
 [NASA-CASE-XNP-04167-3] c36 N77-19416

**CONTINUOUS WAVE RADAR**  
 Phase locked loop with sideband rejecting properties in continuous wave tracking radar  
 [NASA-CASE-XNP-02723] c07 N70-41680  
 FM/CW radar system  
 [NASA-CASE-MPS-22234-1] c32 N79-10264

**CONTOURS**  
 Describing device for surveying contour of surface using X-Y plotter and traveling transducer  
 [NASA-CASE-XLA-08646] c14 N71-17586  
 Processing system for semiperiodic electrical signals to produce real time contoured display  
 [NASA-CASE-MSC-13407-1] c10 N72-20225  
 Variable contour securing system  
 [NASA-CASE-MSC-16270-1] c37 N78-27423  
 Device for measuring the contour of a surface  
 [NASA-CASE-LAR-11869-1] c74 N78-27904  
 Cork-resin ablative insulation for complex surfaces and method for applying the same  
 [NASA-CASE-MPS-23626-1] c24 N78-32190  
 Contour detector and data acquisition system for the left ventricular outline  
 [NASA-CASE-ARC-10985-1] c52 N79-10724  
 Contour measurement system  
 [NASA-CASE-MPS-23726-1] c43 N79-26439

**CONTROL**  
 Valve assembly for controlling simultaneously more than one fluid flow, and having stable qualities under loads  
 [NASA-CASE-XMS-05890] c09 N71-23191  
 Control system for pressure balance device used in calibrating pressure gages  
 [NASA-CASE-XMF-04134] c14 N71-23755  
 Failure detection and control means for improved drift performance of a gimbaled platform system  
 [NASA-CASE-MPS-23551-1] c04 N76-26175  
 Improved power factor control system for ac induction motors  
 [NASA-CASE-MPS-23988-1] c33 N79-25315

**CONTROL BOARDS**  
 Ionization control system design for monitoring separately located ion gage pressures on vacuum chambers  
 [NASA-CASE-XLE-00787] c14 N71-21090

**CONTROL DATA (COMPUTERS)**  
 Computer interface system  
 [NASA-CASE-NPO-13428-1] c60 N77-12721

**CONTROL EQUIPMENT**  
 Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction

[NASA-CASE-GSC-10366-1] c10 N71-18772  
 Voltage drift compensation circuit for analog-to-digital converter  
 [NASA-CASE-XNP-04780] c08 N71-19687  
 Development of attitude control system for vertical takeoff aircraft using reaction nozzles displaced from various axes of aircraft  
 [NASA-CASE-XAC-08972] c02 N71-20570  
 Device for controlling rotary potentiometer mounted on aircraft steering wheel or aileron control  
 [NASA-CASE-XAC-10019] c15 N71-23809  
 Controlled release device for use in launching rockets or missiles  
 [NASA-CASE-XKS-03338] c15 N71-24043  
 Circuits for controlling reversible dc motor  
 [NASA-CASE-XNP-07477] c09 N71-26092  
 Digital memory system with multiple switch cores for driving each word location  
 [NASA-CASE-XNP-01466] c10 N71-26434  
 Fluid control jet amplifiers  
 [NASA-CASE-XLE-09341] c12 N71-28741  
 System for control of variable signal generator  
 [NASA-CASE-NPO-11064] c07 N72-11150  
 Solid state remote circuit selector switching circuit  
 [NASA-CASE-LEW-10387] c09 N72-22201  
 Development of device for simulating charge and discharge cycle of battery in synchronous orbit  
 [NASA-CASE-GSC-11211-1] c03 N72-25020  
 Bridge-type gain control circuit  
 [NASA-CASE-GSC-10786-1] c10 N72-28241  
 Interferometer prism and control system for precisely determining direction to remote light source  
 [NASA-CASE-ARC-10278-1] c14 N73-25463  
 Digital controller for a Baum folding machine --- providing automatic counting and machine shutoff  
 [NASA-CASE-LAR-10688-1] c37 N74-21056  
 Flow control valve --- for high temperature fluids  
 [NASA-CASE-NPO-11951-1] c37 N74-21065  
 Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
 [NASA-CASE-MSC-14245-1] c18 N75-27041  
 Anthropomorphic master/slave manipulator system  
 [NASA-CASE-ARC-10756-1] c54 N77-32721  
 Power factor control system for AC induction motors  
 [NASA-CASE-MPS-23280-1] c33 N78-10376  
 Variable cycle gas turbine engines  
 [NASA-CASE-LEW-12916-1] c37 N78-17384  
 Control for nuclear thermionic power source  
 [NASA-CASE-NPO-13114-2] c73 N78-28913  
 Dual acting slit control mechanism  
 [NASA-CASE-LAR-11370-1] c35 N78-32399  
 Pneumatic inflatable end effector  
 [NASA-CASE-MPS-23696-1] c54 N78-32724  
 Illumination control apparatus for compensating solar light  
 [NASA-CASE-KSC-11010-1] c74 N79-12890  
 Compensating linkage for main rotor control  
 [NASA-CASE-LAR-11797-1] c08 N79-15057

**CONTROL ROCKETS**  
 Unit for generating thrust from catalytic decomposition of hydrogen peroxide, for high altitude aircraft or spacecraft reaction control  
 [NASA-CASE-XMS-00583] c28 N70-38504

**CONTROL RODS**  
 Manual control mechanism for adjusting control rod to null position  
 [NASA-CASE-XLA-01808] c15 N71-20740

**CONTROL SIMULATION**  
 Helmet weight simulator  
 [NASA-CASE-LAR-12320-1] c54 N79-25761

**CONTROL STABILITY**  
 Design and development of active control system for air cushion vehicle to reduce or eliminate effects of excessive vertical vibratory acceleration  
 [NASA-CASE-LAR-10531-1] c02 N73-13023

**CONTROL SURFACES**  
 Conical valve plug for use with reactive cryogenic fluids  
 [NASA-CASE-XLE-00715] c15 N70-34859  
 Attitude control system for spacecraft based on conversion of incident solar radiation on movable control surfaces into mechanical torques

## CONTROL UNITS (COMPUTERS)

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[NASA-CASE-XNP-02982] c31 N70-41855  
Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c08 N79-14108

**CONTROL UNITS (COMPUTERS)**  
Self testing and repairing computer comprising control and diagnostic unit and rollback points for error correction  
[NASA-CASE-NPO-10567] c08 N71-24633

**CONTROL VALVES**  
Electromechanical actuator and its use in rocket thrust control valve  
[NASA-CASE-XNP-05975] c15 N69-23185  
Multiple orifice fluid flow control valve to provide different flow patterns  
[NASA-CASE-ERC-10208] c15 N70-10867  
Conical valve plug for use with reactive cryogenic fluids  
[NASA-CASE-XLE-00715] c15 N70-34859  
Control valve and coaxial variable injector for controlling bipropellant mixture ratio and flow  
[NASA-CASE-XNP-09702] c15 N71-17654  
Control valve for switching main stream of fluid from one stable position to another by means of electrohydrodynamic forces  
[NASA-CASE-NPO-10416] c12 N71-27332  
Force balanced throttle valve for fuel control in rocket engines  
[NASA-CASE-NPO-10808] c15 N71-27432  
Dual stage check valve for cryogenic supply systems used in space flight environmental control system  
[NASA-CASE-MSC-13587-1] c15 N73-30459  
Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c02 N74-20646  
Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c37 N75-25185  
Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c37 N77-28487  
Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c37 N78-25426  
Pressure control valve --- connecting pressure vessel and pressure source  
[NASA-CASE-ARC-11251-1] c37 N79-30553  
Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c37 N79-33468

**CONTROLLED ATMOSPHERES**  
Rectangular electric conductors for conductor cables to withstand spacecraft vibration and controlled atmosphere  
[NASA-CASE-MFS-14741] c09 N70-20737  
High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres  
[NASA-CASE-MSC-12178-1] c09 N71-13518  
System for continuous monitoring of exhalations, weighing, and cage cleaning for animal exposed to controlled atmosphere for toxic study  
[NASA-CASE-XAC-05333] c11 N71-22875

**CONTROLLERS**  
Unitary three-axis controller for flight vehicles within or outside atmosphere  
[NASA-CASE-XFR-00181] c21 N70-33279  
Two axis flight controller with potentiometer control shafts directly coupled to rotatable ball members  
[NASA-CASE-XFP-04104] c03 N70-42073  
Hand controller operable about three respectively perpendicular axes and capable of actuating signal generators for attitude control devices  
[NASA-CASE-XMS-07487] c15 N71-23255  
Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c08 N74-10942  
Active nutation controller  
[NASA-CASE-GSC-12273-1] c18 N78-23141  
Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c33 N78-32340  
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[NASA-CASE-NPO-13970-1] c33 N79-20315

**CONVECTIVE FLOW**  
Design and development of device to prevent geysering during convective circulation of cryogenic fluids  
[NASA-CASE-KSC-10615] c15 N73-12486

**CONVECTIVE HEAT TRANSFER**  
Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels

[NASA-CASE-NPO-10617-1] c35 N74-22095

**CONVERGENCE**  
Electrical device for developing converging spherical shock waves  
[NASA-CASE-MFS-20890] c14 N72-22439

**CONVERGENT NOZZLES**  
Nozzle extraction process and handmeter for measuring handle  
[NASA-CASE-LAR-12147-1] c31 N79-11246

**CONVERGENT-DIVERGENT NOZZLES**  
Gimballed partially submerged nozzle for solid propellant rocket engines for providing directional control  
[NASA-CASE-XMP-01544] c28 N70-34162  
Regenerative cooling system for rocket combustion chamber using coolant tubes in convergent-divergent nozzle  
[NASA-CASE-XLE-04857] c28 N71-23968

**CONVERTERS**  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c35 N76-16391

**COOLING**  
Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
[NASA-CASE-MFS-20333] c09 N71-13486  
Dissipative voltage regulator system for minimizing heat dissipation  
[NASA-CASE-GSC-10891-1] c10 N71-26626  
Cooling and radiation protection of ruby lasers using copper sulfate solution in alcohol  
[NASA-CASE-MFS-20180] c16 N72-12440  
Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c36 N77-25502

**COOLING SYSTEMS**  
Automatic thermal switch for improving efficiency of cooling gases below 40 K  
[NASA-CASE-XNP-03796] c23 N71-15467  
Differential thermopile for measuring cooling water temperature rise  
[NASA-CASE-XAC-00812] c14 N71-15598  
Electric power system with circulatory liquid coolant cooling system  
[NASA-CASE-MFS-14114-2] c09 N71-24807  
Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
[NASA-CASE-NPO-10467] c23 N71-26654  
Development and characteristics of natural circulation radiator for use with nuclear power plants installed in lunar space stations  
[NASA-CASE-XHQ-03673] c33 N71-29046  
Development and characteristics of cooling system to maintain temperature of rack mounted electronic modules  
[NASA-CASE-MSC-12389] c33 N71-29052  
Development of method for cooling high temperature wall members with cooling medium having high heat absorption capability  
[NASA-CASE-HQN-00938] c33 N71-29053  
Apparatus for liquid spray cooling of turbine blades  
[NASA-CASE-XLE-00027] c33 N71-29152  
Radial heat flux transformer for use in heating and cooling processes  
[NASA-CASE-NPO-10828] c33 N72-17948  
Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c34 N74-23066  
Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430  
Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c20 N76-14191  
Auxiliary power system for activity cooled aircraft  
[NASA-CASE-LAR-11626-1] c34 N77-12332  
Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c34 N77-19353  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c33 N77-22386  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467  
Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c31 N78-17237

- Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c31 N78-25256
- Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721
- Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c34 N79-13288
- Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c34 N79-20336
- A cooling system for an aircraft having a cruise range from Mach 2 to Mach 8  
[NASA-CASE-LAR-12406-1] c05 N79-24980
- COORDINATES**
- Mechanical coordinate converter for use with spacecraft tracking antennas  
[NASA-CASE-XNP-00614] c14 N70-36907
- System for locating lightning strokes by coordination of directional antenna signals  
[NASA-CASE-KSC-10729-1] c09 N73-32110
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c04 N77-19056
- COPOLYMERS**
- Method for producing alternating ether-siloxane copolymers with stable properties when exposed to elevated temperatures and UV radiation  
[NASA-CASE-XNP-02584] c06 N71-20905
- Preparation of dicyanoacetylene and vinylidene copolymers using organic compounds  
[NASA-CASE-XNP-03250] c06 N71-23500
- COPPER**
- Development of method for etching copper  
[NASA-CASE-XGS-06306] c17 N71-16044
- Method of plating copper on aluminum to permit conventional soldering of structural aluminum bodies  
[NASA-CASE-XLA-08966-1] c17 N71-25903
- Brazing alloy composition  
[NASA-CASE-XNP-06053] c26 N75-27126
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-NFS-23518-1] c44 N79-11469
- Copper doped polycrystalline silicon  
[NASA-CASE-NPO-14670-1] c44 N79-25512
- COPPER ALLOYS**
- Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c26 N77-20201
- COPPER COMPOUNDS**
- Gallium arsenide solar cell preparation by surface deposition of cuprous iodide on thin n-type polycrystalline layers and heating in iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027
- Cooling and radiation protection of ruby lasers using copper sulfate solution in alcohol  
[NASA-CASE-NFS-20180] c16 N72-12440
- Brazing alloy  
[NASA-CASE-XNP-03878] c26 N75-27127
- COPPER FLUORIDES**
- Method to produce high purity copper fluoride by heating copper hydroxyfluoride powder and subjecting to flowing fluorine gas  
[NASA-CASE-LEW-10794-1] c06 N72-17093
- CORDAGE**
- Fabrication of root cord restrained fabric suit sections from sheets of fabric  
[NASA-CASE-HSC-12398] c05 N72-20098
- CORE STORAGE**
- Memory device employing semiconductor and ferroelectric properties of single crystal barium titanate  
[NASA-CASE-ERC-10307] c08 N72-21198
- CORES**
- Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c37 N74-15128
- Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c35 N77-21392
- CORK (MATERIALS)**
- Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-NFS-23626-1] c24 N78-32190
- CORRECTION**
- Doppler frequency shift correction device for multiplex communication with Applications Technology Satellites  
[NASA-CASE-XGS-02749] c07 N69-39978
- CORRELATION DETECTION**
- Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c33 N75-26243
- Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c32 N78-18266
- CORRELATORS**
- Synchronous detection system for detecting weak radio astronomical signals  
[NASA-CASE-XNP-09832] c30 N71-23723
- Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c32 N79-14267
- Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c32 N79-28383
- CORROSION PREVENTION**
- Vapor deposited laminated nitride-silicon coating for corrosion prevention of carbonaceous surfaces  
[NASA-CASE-XLA-00284] c15 N71-16075
- Method to prevent stress corrosion cracking in titanium alloys  
[NASA-CASE-NPO-10271] c17 N71-16393
- Method and apparatus for inducing compressive stresses in pressure vessel to prevent stress corrosion  
[NASA-CASE-XLA-07390] c15 N71-18616
- Development of fluoride coating to prevent oxidation of beryllium surfaces at elevated temperatures  
[NASA-CASE-LEW-10327] c17 N71-33408
- Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c24 N76-14203
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c25 N79-10167
- CORROSION RESISTANCE**
- High strength, corrosion resistant cobalt-based alloys for aerospace structures  
[NASA-CASE-XLE-00726] c17 N71-15644
- Hydrazine monoperfluoro alkanoate solder flux leaving corrosion resistant coating, for metals such as copper  
[NASA-CASE-XNP-03459-2] c18 N71-15688
- High temperature cobalt-base alloy resistant to corrosion by liquid metals and to sublimation in vacuum environment  
[NASA-CASE-XLE-02991] c17 N71-16025
- Metal soldering with hydrazine monoperfluoro alkanoate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078
- Improved nozzle for use with abrasive and/or corrosive materials  
[NASA-CASE-NPO-13823-1] c37 N77-17466
- CORRUGATED PLATES**
- Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-PRC-11026-1] c39 N79-25424
- COSINE SERIES**
- Service life of electromechanical device for generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248
- Function generators for producing complex vibration mode patterns used to identify vibration mode data  
[NASA-CASE-LAR-10310-1] c10 N73-20253
- COSMIC DUST**
- Sensor for detecting and measuring energy, velocity and direction of travel of a cosmic dust particle  
[NASA-CASE-GSC-10503-1] c14 N72-20381
- System for detecting impact position of cosmic dust on detector surface  
[NASA-CASE-GSC-11291-1] c25 N72-33696
- Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331
- Cosmic dust analyzer  
[NASA-CASE-HSC-13802-2] c35 N76-15431
- COST ANALYSIS**
- Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c44 N78-17460
- COUCHES**
- Shock absorbing couch for body support under high acceleration or deceleration forces  
[NASA-CASE-XMS-01240] c05 N70-35152
- Low onset rate energy absorber in form of strut assembly for crew couch of Apollo command module  
[NASA-CASE-HSC-12279-1] c15 N70-35679

- Shock absorbing articulated multiple couch assembly  
[NASA-CASE-MSC-11253] c05 N71-12343  
Collapsible couch system for manned space vehicles  
[NASA-CASE-MSC-13140] c05 N72-11085
- COULOMETERS**  
Alkaline-type coulometer cell for primary charge control in secondary battery recharge circuits  
[NASA-CASE-XGS-05434] c03 N71-20491  
Development and characteristics of battery charging circuits with coulometer for control of available current  
[NASA-CASE-GSC-10487-1] c03 N71-24719
- COUNTERS**  
Circuit for measuring wide range of pulse rates by utilizing high capacity counter  
[NASA-CASE-XNP-06234] c10 N71-27137  
Electronic strain level counter on in-flight aircraft  
[NASA-CASE-LAR-10756-1] c02 N73-26910  
Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c25 N79-24073
- COUNTING CIRCUITS**  
Rocket-borne aspect sensor consisting of radiation sensor, apertured disk, commutator, and counting circuits  
[NASA-CASE-XGS-08266] c14 N69-27432  
Design of transistorized ring counter circuit with special steering and triggering circuits  
[NASA-CASE-XGS-03095] c09 N69-27463  
Counter-divider circuit for accuracy and reliability in binary circuits  
[NASA-CASE-XMP-00421] c09 N70-34502  
Reversible ring counter using cascaded single silicon controlled rectifier stages  
[NASA-CASE-XGS-01473] c09 N71-10673  
Capacitor sandwich structure containing metal sheets of known thickness for counting penetration rates of meteoroids  
[NASA-CASE-XLE-01246] c14 N71-10797  
Electronic counter circuit utilizing magnetic core and low power consumption  
[NASA-CASE-XNP-08836] c09 N71-12515  
Synchronous counter design incorporating cascaded binary stages driven by previous stages and inputs through NAND gates  
[NASA-CASE-XGS-02440] c08 N71-19432  
Digital cardiometer incorporating circuit for measuring heartbeat rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XMS-02399] c05 N71-22896  
Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897  
Noninterruptable digital counter circuit design with display device for pulse frequency modulation  
[NASA-CASE-XNP-09759] c08 N71-24891  
Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c33 N76-16331
- COUPLED MODES**  
Dual mode solid state power switch  
[NASA-CASE-MFS-22880-1] c33 N76-31410
- COUPLING**  
Coupling device for linear shaped charge for space vehicle abort system  
[NASA-CASE-XLA-00199] c33 N70-36846  
Base support for expandable and contractible coupling between two members  
[NASA-CASE-NPO-11059] c15 N72-17454
- COUPLING CIRCUITS**  
Interrogator and current driver circuit for combination with transistor flip-flop circuit  
[NASA-CASE-XGS-03058] c10 N71-19547  
Antenna array at focal plane of reflector with coupling network for beam switching  
[NASA-CASE-GSC-10220-1] c07 N71-27233  
Phase modulator with tuned variable length electrical lines including coupling and varactor diode circuits  
[NASA-CASE-MSC-13201-1] c07 N71-28429  
High efficiency transformerless amplitude modulator coupled to RF power amplifier  
[NASA-CASE-GSC-10668-1] c07 N71-28430
- Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c35 N74-21017  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c33 N75-19520
- COUPLINGS**  
Releasable coupling device designed to receive and retain matching ends of electrical connectors  
[NASA-CASE-XMS-07846-1] c09 N69-21927  
Stage separation using remote control release of joint with explosive insert  
[NASA-CASE-XLA-02854] c15 N69-27490  
Space vehicle stage coupling and quick release separation mechanism  
[NASA-CASE-XLA-01441] c15 N70-41679  
Standard coupling design for mass production  
[NASA-CASE-XMS-02532] c15 N70-41808  
Quick-release coupling for fueling rocket vehicles with cryogenic propellants  
[NASA-CASE-XKS-01985] c15 N71-10782  
Ratchet mechanism for high speed operation at reduced backlash  
[NASA-CASE-MFS-12805] c15 N71-17805  
Split nut and bolt separation device  
[NASA-CASE-XNP-06914] c15 N71-21489  
Quick disconnect duct coupling device for single-handed operation  
[NASA-CASE-MFS-20395] c15 N71-24903  
Coupling arrangement for isolating torque loads from axial, radial, and bending loads  
[NASA-CASE-XLA-04897] c15 N72-22482  
Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c33 N75-30430  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366  
Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c37 N78-25429  
Belt for coupling driven members  
[NASA-CASE-GSC-12276-1] c37 N78-32429  
A coupling device for moving vehicles  
[NASA-CASE-GSC-12429-1] c37 N79-19364  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c52 N79-26772
- COVERINGS**  
Apparatus for ejecting covers of instrument packages using differential pressure principle  
[NASA-CASE-XMP-04132] c15 N69-27502
- CRACKING (FRACTURING)**  
Method to prevent stress corrosion cracking in titanium alloys  
[NASA-CASE-NPO-10271] c17 N71-16393  
TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c39 N78-16387
- CRASH LANDING**  
Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c03 N76-32140
- CRASHES**  
Battery powered aircraft crash locator transmitter  
[NASA-CASE-MFS-16609] c14 N72-21431
- CREEP RUPTURE STRENGTH**  
Nickel base alloy with resistance to oxidation at high temperatures and superior stress-rupture properties  
[NASA-CASE-XLE-02082] c17 N71-16026
- CRITICAL EXPERIMENTS**  
Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
[NASA-CASE-NPO-10070] c15 N71-27372
- CRITICAL TEMPERATURE**  
Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XMP-05373-1] c33 N79-21264
- CROSS CORRELATION**  
Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c38 N78-17395
- CROSS POLARIZATION**  
Adaptive polarization separation experiments  
[NASA-CASE-LAR-12196-1] c32 N79-18154
- CROSSED FIELDS**  
Crossed-field plasma accelerator for laboratory simulation of atmospheric reentry conditions  
[NASA-CASE-XLA-00675] c25 N70-33267  
Direct conversion of thermal energy into electrical energy using crossed electric and

- magnetic fields  
[NASA-CASE-XLE-00212] c03 N70-34134  
Crossed field MHD plasma generator-accelerator  
[NASA-CASE-XLA-03374] c25 N71-15562
- CROSSLINKING**  
New trifunctional alcohol derived from trimer acid and novel method of preparation  
[NASA-CASE-NPO-10714] c06 N69-31244  
Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 N78-15276  
Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232  
Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c25 N79-14172  
Cross-linked polyvinyl alcohol and method of making same --- separator for alkaline batteries  
[NASA-CASE-LEW-13101-1] c25 N79-14173  
In-situ cross-linking of polyvinyl alcohol --- polymeric films for separators in alkaline batteries  
[NASA-CASE-LEW-13135-1] c25 N79-14174  
The 1,2;4-oxadiazole elastomers  
[NASA-CASE-ARC-11253-1] c27 N79-22302  
In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c44 N79-25481  
Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c27 N79-28307
- CRUCIBLES**  
Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483
- CRUDE OIL**  
Decontamination of petroleum products with honey  
[NASA-CASE-XNP-03935] c06 N71-23499
- CRUSTAL FRACTURES**  
System for near real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c46 N78-17529
- CRYOGENIC EQUIPMENT**  
Gas balancing, cryogenic refrigeration apparatus with Joule-Thomson valve assembly  
[NASA-CASE-NPO-10309] c15 N69-23190  
Low thermal loss piping arrangement for moving cryogenic media through double chamber structure  
[NASA-CASE-XNP-08882] c15 N69-39935  
Method and apparatus for removing plastic insulation from wire using cryogenic equipment  
[NASA-CASE-MPS-10340] c15 N71-17628  
Dual solid cryogenics for spacecraft refrigeration insuring low temperature cooling for extended periods  
[NASA-CASE-GSC-10188-1] c23 N71-24725  
Reliability of automatic refilling valving device for cryogenic liquid systems  
[NASA-CASE-NPO-11177] c15 N72-17453  
Dual stage check valve for cryogenic supply systems used in space flight environmental control system  
[NASA-CASE-MSC-13587-1] c15 N73-30459  
Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c20 N75-24837  
Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c31 N77-10229  
Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MPS-23281-1] c35 N77-22450  
Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c31 N78-25256  
System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c51 N79-10694  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c37 N79-28549
- CRYOGENIC FLUID STORAGE**  
Apparatus for cryogenic liquid storage with heat transfer reduction and for liquid transfer at zero gravity conditions  
[NASA-CASE-XLE-00345] c15 N70-38020  
Cryogenic storage system for gases onboard spacecraft  
[NASA-CASE-IMS-04390] c31 N70-41871  
Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015  
Fabrication of filament wound propellant tank for cryogenic storage  
[NASA-CASE-XLE-03803-2] c15 N71-17651  
Prefabricated multilayered self-evacuating insulation panels using gas with low vapor pressure at cryogenic temperatures for application to storage of cryogenics  
[NASA-CASE-XLE-04222] c23 N71-22881  
Multilayer insulation panels for cryogenic liquid containers  
[NASA-CASE-MPS-14023] c33 N71-25351  
Development of thermal insulation material for insulating liquid hydrogen tanks in spacecraft  
[NASA-CASE-XNP-05046] c33 N71-28892  
Apparatus for aligning shadow shields and cryogenic storage tanks in outer space with the sun  
[NASA-CASE-KSC-10622-1] c31 N72-21893  
Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093  
Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c31 N79-18087  
Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c31 N79-21225
- CRYOGENIC FLUIDS**  
Cryogenic flux-gated magnetometer using superconductors  
[NASA-CASE-XAC-02407] c14 N69-27423  
Fuel tank pressure-relief device for venting cryogenic liquid vapors through tubes with porous plug  
[NASA-CASE-XLE-00288] c15 N70-34247  
Conical valve plug for use with reactive cryogenic fluids  
[NASA-CASE-XLE-00715] c15 N70-34859  
Two component valve assembly for cryogenic liquid transfer regulation  
[NASA-CASE-XLE-00397] c15 N70-36492  
Measuring density of single and two-phase cryogenic fluids in rocket fuel tanks  
[NASA-CASE-XLE-00688] c14 N70-41330  
Leakproof soft metal seal for use in very high vacuum systems operating at cryogenic temperatures  
[NASA-CASE-XGS-02441] c15 N70-41629  
High pressure liquid flow sight assembly for wide temperature range applications including cryogenic fluids  
[NASA-CASE-XLE-02998] c14 N70-42074  
Automatic thermal switch for improving efficiency of cooling gases below 40 K  
[NASA-CASE-XNP-03796] c23 N71-15467  
Describing apparatus for separating gas from cryogenic liquid under zero gravity and for venting gas from fuel tank  
[NASA-CASE-XLE-00586] c15 N71-15968  
Development of apparatus for measuring thermal conductivity  
[NASA-CASE-XGS-01052] c14 N71-15992  
Method and apparatus for producing fine particles in cryogenic liquid bath for gelled rocket propellants  
[NASA-CASE-NPO-10250] c23 N71-16212  
Superconducting alternator design with cryogenic fluid for cooling windings below critical temperature  
[NASA-CASE-XLE-02823] c09 N71-23443  
Flow angle sensor and remote readout system for use with cryogenic fluids  
[NASA-CASE-XLE-04503] c14 N71-24864  
Design and development of device to prevent geysering during convective circulation of cryogenic fluids  
[NASA-CASE-KSC-10615] c15 N73-12486  
Magneto-caloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c37 N74-27904  
Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c35 N77-21393
- CRYOGENIC GYROSCOPES**  
Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MPS-21136-1] c35 N74-18323
- CRYOGENIC MAGNETS**  
Improved alternator with windings of

- superconducting materials acting as permanent magnet  
[NASA-CASE-XLE-02824] c03 N69-39890
- CRYOGENIC ROCKET PROPELLANTS**
- Quick-release coupling for fueling rocket vehicles with cryogenic propellants  
[NASA-CASE-XKS-01985] c15 N71-10782
- Hot-wire liquid level detector for cryogenic propellants  
[NASA-CASE-XLE-00454] c23 N71-17802
- Automatically reciprocating, high pressure pump for use in spacecraft cryogenic propellants  
[NASA-CASE-XNP-04731] c15 N71-24042
- CRYOGENIC STORAGE**
- Light weight plastic foam thermal insulation for cryogenic storage  
[NASA-CASE-XLE-02647] c18 N71-23658
- Development of foam insulation for filament wound cryogenic storage tank  
[NASA-CASE-XLE-03803] c15 N71-23816
- CRYOGENICS**
- High strength aluminum casting alloy for cryogenic applications in aerospace engineering  
[NASA-CASE-XMP-02786] c17 N71-20743
- Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
[NASA-CASE-NPO-10467] c23 N71-26654
- Germanium coated microbridge and method  
[NASA-CASE-NPS-23274-1] c33 N78-13320
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c36 N78-22359
- CRYOLITE**
- Ultraviolet filter of thorium fluoride and cryolite on quartz base  
[NASA-CASE-XNP-02340] c23 N69-24332
- CRYOSTATS**
- Cryostat for flexure fatigue testing of composite materials  
[NASA-CASE-XMP-02964] c14 N71-17659
- Cryostat for use with horizontal fatigue testing machines at low temperatures  
[NASA-CASE-XMP-10968] c14 N71-24234
- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093
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and decelerating flaps with reference to  
capsule recovery  
[ NASA-CASE-XMP-00641 ] c31 N70-36410
- Device for use in descending spacecraft as  
altitude sensor for actuating deceleration  
retro-rockets  
[ NASA-CASE-XMS-03792 ] c14 N70-41812
- Development and characteristics of hot air  
balloon deceleration and recovery system  
[ NASA-CASE-XLA-06824-2 ] c02 N71-11037
- Zero gravity apparatus utilizing pneumatic  
decelerating means to create payload subjected  
to zero gravity conditions by dropping its  
height  
[ NASA-CASE-XMP-06515 ] c14 N71-23227
- DECIMALS**
- Digital converter for scaling binary number to  
binary coded decimal number of higher multiple  
[ NASA-CASE-KSC-10595 ] c08 N73-12176
- DECISION MAKING**
- Method and apparatus for decoding compatible  
convolutional codes  
[ NASA-CASE-MSC-14070-1 ] c32 N74-32598
- DECODERS**
- Serial digital decoder design with square  
circuit matrix and serial memory storage units  
[ NASA-CASE-NPO-10150 ] c08 N71-24650
- Binary to decimal decoder logic circuit design  
with feedback control and display device  
[ NASA-CASE-XKS-06167 ] c08 N71-24890
- Design and development of encoder/decoder system  
to generate binary code which is function of  
outputs of plurality of bistable elements  
[ NASA-CASE-NPO-10342 ] c10 N71-33407
- Compact-bi-phase pulse coded modulation decoder  
[ NASA-CASE-KSC-10834-1 ] c33 N76-14371
- Low distortion receiver for bi-level baseband  
PCM waveforms  
[ NASA-CASE-FSC-14557-1 ] c32 N76-16249
- Three phase full wave dc motor decoder  
[ NASA-CASE-GSC-11824-1 ] c33 N77-26386
- Decommutator patchboard verifier  
[ NASA-CASE-FSC-11065-1 ] c60 N79-27865
- Serial data correlator/code translator  
[ NASA-CASE-KSC-11025-1 ] c32 N79-28383
- DECODING**
- Binary data decoding device for use at receiving  
end of communication channel  
[ NASA-CASE-NPO-10118 ] c07 N71-24741
- Development and characteristics of data decoder  
to process convolution encoded information  
[ NASA-CASE-NPO-11371 ] c08 N73-12177
- Method and apparatus for decoding compatible  
convolutional codes  
[ NASA-CASE-MSC-14070-1 ] c32 N74-32598
- Differential pulse code modulation  
[ NASA-CASE-FSC-12506-1 ] c32 N77-12239
- DECOMMUTATORS**
- Decommutator patchboard verifier  
[ NASA-CASE-KSC-11065-1 ] c60 N79-27865
- DECONTAMINATION**
- Decontamination of petroleum products with honey  
[ NASA-CASE-XNP-03835 ] c06 N71-23499
- Heat exchanger and decontamination system for  
multistage refrigeration unit  
[ NASA-CASE-NPO-10634 ] c23 N72-25619
- Plasma cleaning device --- designed for high  
vacuum environments  
[ NASA-CASE-MFS-22906-1 ] c75 N78-27913
- DEEP SPACE NETWORK**
- Low phase noise frequency divider for use with  
deep space network communication system  
[ NASA-CASE-NPO-11569 ] c10 N73-26229
- DEFECTS**
- Hybrid holographic non-destructive test system  
[ NASA-CASE-MFS-23114-1 ] c38 N78-32447
- DEFLECTION**
- Bipropellant injector with pair of concave  
deflector plates  
[ NASA-CASE-XNP-09461 ] c28 N72-23809
- Noncontacting method for measuring angular  
deflection  
[ NASA-CASE-LAR-12178-1 ] c74 N79-11866
- DEFLECTORS**
- Deflector for preventing objects from entering  
nacelle inlets of jet aircraft  
[ NASA-CASE-XLE-00388 ] c28 N70-34788
- Aircraft wheel spray drag alleviator for dual  
tandem landing gear  
[ NASA-CASE-XLA-01583 ] c02 N70-36825
- Ion beam deflector system for electronic thrust  
vector control for ion propulsion yaw, pitch,  
and roll forces  
[ NASA-CASE-LEW-10689-1 ] c28 N71-26173
- Exhaust flow deflector --- for ducted gas flow  
[ NASA-CASE-LAR-11570-1 ] c34 N76-18364
- Safety shield for vacuum/pressure chamber  
viewing port  
[ NASA-CASE-GSC-12513-1 ] c09 N79-32217
- DEFOCUSING**
- Optical retrodirective modulator with focus  
spoiling reflector driven by modulation signal  
[ NASA-CASE-GSC-10062 ] c14 N71-15605
- DEFORMATION**
- Deformation measuring apparatus with feedback  
control for arbitrarily shaped structures  
[ NASA-CASE-LAR-10098 ] c32 N71-26681
- Development of device for simulating cyclic  
thermal loading of flexible materials by  
application of mechanical stresses and  
deformations  
[ NASA-CASE-LAP-10270-1 ] c32 N72-25877
- Deformable bearing seat  
[ NASA-CASE-LEW-12527-1 ] c37 N77-32500
- DEGREES OF FREEDOM**
- Attitude control training device for astronauts  
permitting friction-free movement with five  
degrees of freedom  
[ NASA-CASE-XMS-02977 ] c11 N71-10746
- Tuned damped vibration absorber for mass  
vibrating in more than one degree of freedom  
for use with wind tunnel models  
[ NASA-CASE-LAR-10083-1 ] c15 N71-27006
- Kinesthetic control simulator --- for pilot  
training  
[ NASA-CASE-LAR-10276-1 ] c09 N75-15662
- DEHUMIDIFICATION**
- Condenser-separator for dehumidifying air  
utilizing sintered metal surface  
[ NASA-CASE-XLA-08645 ] c15 N69-21465
- DEHYDRATED FOOD**
- Rice preparation process consisting of cooking,  
two freezing-thawing cycles, and then freeze  
drying  
[ NASA-CASE-MSC-13540-1 ] c05 N72-33096
- DELAY CIRCUITS**
- Development of pulsed differential comparator  
circuit  
[ NASA-CASE-XLE-03804 ] c10 N71-19471
- Pulse duration control device for driving slow  
response time loads in selected sequence  
including switching and delay circuits and  
magnetic storage  
[ NASA-CASE-IGS-04224 ] c10 N71-26418
- Telemetry synchronizer  
[ NASA-CASE-GSC-11868-1 ] c17 N76-22245
- Swept group delay measurement  
[ NASA-CASE-NPO-13909-1 ] c33 N78-25319

- Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c33 N79-23347
- DELAY LINES**  
Development and characteristics of solid state acoustic variable time delay line using direct current voltage and radio frequency pulses  
[NASA-CASE-ERC-10032] c10 N71-25900
- DELTA MODULATION**  
Multifunction audio digitizer --- producing direct delta and pulse code modulation  
[NASA-CASE-MSC-13855-1] c35 N74-17885
- DELTA WING:**  
Delta winged, manned reentry vehicle capable of horizontal glide landing at low speeds  
[NASA-CASE-XLA-00241] c31 N70-37986
- DEHAGNETIZATION**  
Tumbling magnetron system for object demagnetization  
[NASA-CASE-XGS-02437] c15 N69-21472
- DEMODULATION**  
Plural channel data transmission system with quadrature modulation and complementary demodulation  
[NASA-CASE-XAC-06302] c08 N71-19763  
Restoration and improvement of demodulated facsimile video signals  
[NASA-CASE-GSC-10185-1] c07 N72-12081  
Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c33 N78-32338
- DEMODULATORS**  
Telemetry data unit to form multibit words for use between demodulator and computer  
[NASA-CASE-XNP-09225] c09 N69-24333  
Frequency shift keyed demodulator - circuit diagrams  
[NASA-CASE-XGS-02889] c07 N71-11282  
Demodulator for simultaneous demodulation of two modulating ac signal carriers close in frequency  
[NASA-CASE-XMF-01160] c07 N71-11299  
Development of demodulation system for removing amplitude modulation from two quadrature displaced data bearing signals  
[NASA-CASE-XAC-04030] c10 N71-19472  
Calibrator for measuring and modulating or demodulating laser outputs  
[NASA-CASE-XLA-03410] c16 N71-25914  
Threshold extension device for improving operating performance of frequency modulation demodulators by eliminating click-type noise impulses  
[NASA-CASE-MSC-12165-1] c07 N71-33696  
Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-PRC-10072-1] c33 N74-14939  
Unbalanced quadrature demodulator  
[NASA-CASE-MSC-14840-1] c32 N77-24331  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c32 N79-14267
- DENSITOMETERS**  
Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases  
[NASA-CASE-XLE-00143] c14 N70-36618  
Measuring density of single and two-phase cryogenic fluids in rocket fuel tanks  
[NASA-CASE-XLE-00688] c14 N70-41330  
Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c35 N75-12271
- DENSITY DISTRIBUTION**  
Increasing available power per unit area in ion rocket engine by increasing beam density  
[NASA-CASE-XLE-00519] c28 N70-41576  
Varying density composite structure  
[NASA-CASE-LAR-11181-1] c39 N75-31479  
Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c74 N76-20958
- DENSITY MEASUREMENT**  
Capacitor for measuring density of compressible fluid in liquid, gas, or liquid and gas phases  
[NASA-CASE-XLE-00143] c14 N70-36618  
Measuring density of single and two-phase cryogenic fluids in rocket fuel tanks  
[NASA-CASE-XLE-00688] c14 N70-41330  
Determining particle density using known material Hugoniot curves  
[NASA-CASE-LAR-11059-1] c76 N75-12810
- Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c35 N78-15461
- DENTISTRY**  
Process for preparing calcium phosphate salts for tooth repair  
[NASA-CASE-ERC-10338] c04 N72-33072
- DEOXYGENATION**  
Electrocatalyst for oxygen reduction in low temperature alkaline fuel cell  
[NASA-CASE-HQN-10537-1] c06 N72-10138
- DEPLOYMENT**  
Extendable, self-deploying boom apparatus  
[NASA-CASE-GSC-10566-1] c15 N72-18477  
Deployable cantilever support for deploying solar cell arrays aboard spacecraft and reducing transient loading  
[NASA-CASE-NPO-10883] c31 N72-22874  
Antenna deployment mechanism --- retractable spacecraft antennas  
[NASA-CASE-GSC-12331-1] c37 N78-32436  
High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c37 N79-23432
- DEPOSITION**  
Means and methods of depositing thin films on substrates  
[NASA-CASE-XNP-00595] c15 N70-34967  
Dual wavelength system for monitoring film deposition  
[NASA-CASE-MFS-20675] c26 N73-26751  
Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502  
Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c44 N79-18446
- DESALINIZATION**  
Water purification process  
[NASA-CASE-ARC-10643-2] c51 N75-13506
- DESCENT**  
Emergency descent device  
[NASA-CASE-MFS-23074-1] c54 N77-21844
- DESIGN ANALYSIS**  
Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
[NASA-CASE-LAR-10585-1] c02 N76-22154  
Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c52 N77-28717
- DESULFURIZING**  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c44 N78-31527  
Coal desulfurization  
[NASA-CASE-NPO-14272-1] c25 N78-33164
- DETECTION**  
Heated element sensor for fluid flow detection in thermal conductive conduit with adaptive means to determine flow rate and direction  
[NASA-CASE-MSC-12084-1] c12 N71-17569  
Fluid leakage detection system with automatic monitoring capability  
[NASA-CASE-LAR-10323-1] c12 N71-17573  
Metal detection system with electromagnetic transmitter with single coil and receiver with single coil  
[NASA-CASE-ARC-10265-1] c10 N72-28240  
System for detecting impact position of cosmic dust on detector surface  
[NASA-CASE-GSC-11291-1] c25 N72-33696  
Detection of bacteria in biological fluids and foods  
[NASA-CASE-GSC-11533-1] c14 N73-13435  
Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c36 N74-15145  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c35 N75-19612
- DETECTORS**  
Pressurized cell micrometeoroid detector  
[NASA-CASE-XLA-00936] c14 N71-14996  
Development of large area micrometeoroid impact detector panels  
[NASA-CASE-XLA-05906] c31 N71-16221  
Development of pulse-activated polarographic hydrogen detector  
[NASA-CASE-XNP-06531] c14 N71-17575  
Electro-optical detector for determining position of light source  
[NASA-CASE-XNP-01059] c23 N71-21821

- Method for locating leaks in hermetically sealed containers  
[NASA-CASE-ERC-10045] c15 N71-24910
- Precipitation detector and mechanism for stopping and restarting machinery at initiation and cessation of rain  
[NASA-CASE-XLA-02619] c10 N71-26334
- Hydrogen fire blink detector for high altitude rocket or ground installation  
[NASA-CASE-MFS-15063] c14 N72-25412
- Device for detection of combustion light preceding gaseous explosions  
[NASA-CASE-LAR-10739-1] c14 N73-16484
- Optical imaging system for increasing light absorption efficiency of imaging detector  
[NASA-CASE-ARC-10194-1] c23 N73-20741
- Cold cathode discharge tube with pressurized gas cell for meteoroid detection in space  
[NASA-CASE-LAR-10483-1] c14 N73-32327
- Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c35 N74-21062
- Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c35 N76-18403
- Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c43 N79-31706
- DETERGENTS**
- Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c23 N75-14834
- DETONATION**
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 N74-27425
- DETONATION WAVES**
- Detonation reaction engine comprising outer housing enclosing pair of inner walls for continuous flow  
[NASA-CASE-XMP-06926] c28 N71-22983
- DEUTERIUM**
- Gas chromatographic method for analyzing hydrogen deuterium mixtures  
[NASA-CASE-NPO-11322] c06 N72-25146
- Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c72 N76-15860
- DIAGNOSIS**
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751
- DIAGRAMS**
- Phototransistor with base collector junction diode for integration into photo sensor arrays  
[NASA-CASE-MFS-20407] c09 N73-19235
- DIAMINES**
- Preparation of elastomeric diamine silazane polymers  
[NASA-CASE-XMP-04133] c06 N71-20717
- Synthesis of aromatic diamines and aldehyde polymers using Schiff base  
[NASA-CASE-XMP-03074] c06 N71-24740
- Synthesis of siloxane containing epoxide and diamine polymers  
[NASA-CASE-MFS-13994-2] c06 N72-25148
- Stable polyimide synthesis from mixtures of monomeric diamines and polycarboxylic acid esters  
[NASA-CASE-LEW-11325-1] c06 N73-27980
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-2] c27 N79-19160
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c27 N79-33316
- DIAMONDS**
- Exponential horn, copper plate, magnetic hammer, and anvil in apparatus for making diamonds  
[NASA-CASE-MFS-20698] c15 N72-20446
- Simplified technique and device for producing industrial grade synthetic diamonds  
[NASA-CASE-MFS-20698-2] c15 N73-19457
- DIAPHRAGMS (MECHANICS)**
- Expulsion and measuring device for determining quantity of liquid in tank under conditions of weightlessness  
[NASA-CASE-XMS-01546] c14 N70-40233
- Reinforcing beam system for highly flexible diaphragms in valves or pressure switches  
[NASA-CASE-XNP-01962] c32 N70-41370
- Flexible rocket motor nozzle closure device to aid ignition and protect rocket chamber from foreign objects  
[NASA-CASE-XLA-02651] c28 N70-41967
- Knife structure for controlling rupture of shock tube diaphragms  
[NASA-CASE-YAC-00731] c11 N71-15960
- Magnetically opened diaphragm design with camera shutter and expansion tube applications  
[NASA-CASE-XLA-03660] c15 N71-21060
- Design and development of inertia diaphragm pressure transducer  
[NASA-CASE-YAC-02981] c14 N71-21072
- Punch and die device for forming convolution series in thin gage metal hemispheres  
[NASA-CASE-XNP-05297] c15 N71-23811
- Rubber composition for expulsion bladders and diaphragms for use with hydrazine  
[NASA-CASE-NPO-11433] c18 N71-31140
- Development of differential pressure control system using motion of mechanical diaphragms to operate electric switch  
[NASA-CASE-MFS-14216] c14 N73-13418
- DIATOMIC GASES**
- Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426
- DICHROISM**
- Dichroic plate --- as bandpass filters  
[NASA-CASE-NPO-13506-1] c35 N76-15435
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c33 N79-28416
- DICKE RADIOMETERS**
- Distributed-switch dicke radiometer  
[NASA-CASE-GSC-12219-1] c43 N78-22436
- DIELECTRIC POLARIZATION**
- Charge injection method and apparatus of producing large area electrets  
[NASA-CASE-MFS-23186-2] c24 N78-25137
- DIELECTRIC PROPERTIES**
- Capacitive tank gaging device for monitoring one constituent of two phase fluid by sensing dielectric constant  
[NASA-CASE-MFS-21629] c14 N72-22442
- Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c35 N79-17192
- DIELECTRICS**
- Fabricating solar cells with dielectric layers to improve glass fusion  
[NASA-CASE-XGS-04531] c03 N69-24267
- Temperature sensitive capacitor device for detecting very low intensity infrared radiation  
[NASA-CASE-XNP-09750] c14 N69-39937
- Electrical power system for space flight vehicles operating over extended periods  
[NASA-CASE-XMP-00517] c03 N70-34157
- Nose cone mounted heat resistant antenna comprising plurality of adjacent layers of silica not introducing paths of high thermal conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22984
- Broadband microwave waveguide window to compensate dielectric material filling  
[NASA-CASE-XNP-08880] c09 N71-24808
- Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HQN-10541-2] c15 N71-27135
- Quasi-optical microwave circuit with dielectric body for use with oversize waveguides  
[NASA-CASE-ERC-10011] c07 N71-29065
- Semiconductor device manufacture using refractory dielectrics as diffusant masks and interconnection insulating materials  
[NASA-CASE-XER-08476-1] c26 N72-17820
- Material compositions and processes for developing dielectric thick films used in microcircuit capacitors  
[NASA-CASE-LAR-10294-1] c26 N72-28762
- Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c32 N74-11000
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c33 N75-18477
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c76 N76-20994

- Charge injection method and apparatus of producing large area electrets  
[NASA-CASE-MPS-23186-1] c33 N76-23483
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c36 N78-22359
- Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c27 N79-14214
- DIES**
- Punch and die device for forming convolution series in thin gage metal hemispheres  
[NASA-CASE-XNP-05297] c15 N71-23811
- Development and characteristics of frusto-conical die nib for extrusion of refractory metals  
[NASA-CASE-XLF-06773] c15 N71-23817
- DIETS**
- Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c52 N75-15270
- DIFFERENTIAL AMPLIFIERS**
- Temperature compensated solid state differential amplifier with application in bioinstrumentation circuits  
[NASA-CASE-XAC-00435] c09 N70-35440
- Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772
- DIFFERENTIAL INTERFEROMETRY**
- Device for determining acceleration of gravity by interferometric measurement of travel of falling body  
[NASA-CASE-XMP-05844] c14 N71-17587
- DIFFERENTIAL PRESSURE**
- Relief valve to permit slow and fast bleeding rates at difference pressure levels  
[NASA-CASE-XMS-05894-1] c15 N69-21924
- Apparatus for ejecting covers of instrument packages using differential pressure principle  
[NASA-CASE-XMP-04132] c15 N69-27502
- Differential sound level meter  
[NASA-CASE-LAR-12106-1] c71 N78-14867
- Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c74 N78-17867
- An improved system for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c02 N79-17797
- DIFFERENTIATORS**
- Window comparator  
[NASA-CASE-FRC-10090-1] c33 N78-18308
- DIFFRACTION**
- Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-FRC-10001] c23 N71-24868
- DIFFRACTION PATTERNS**
- Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215
- DIFFRACTOMETERS**
- Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c14 N73-28491
- DIFFUSE RADIATION**
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c74 N78-15879
- DIFFUSERS**
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c84 N79-11468
- DIFFUSION**
- Selective gold diffusion on monolithic silicon chips for switching and nonswitching amplifier devices and circuits and linear and digital logic circuits  
[NASA-CASE-ERC-10072] c09 N70-11148
- Metallic film diffusion for boundary lubrication in aerospace engineering  
[NASA-CASE-XLE-10337] c15 N71-24046
- Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAP-10385-2] c70 N74-13436
- DIFFUSION PUMPS**
- Oil trap for preventing diffusion pump backstreaming into evacuated system  
[NASA-CASE-GSC-10518-1] c15 N72-22489
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c52 N74-22771
- DIFFUSION WELDING**
- Method for diffusion welding dissimilar metals in vacuum chamber  
[NASA-CASE-GSC-10303] c15 N72-22487
- Reinforced PEP Teflon composite material diffusion bonded to metal substrate  
[NASA-CASE-MPS-20482] c15 N72-22492
- Two-step diffusion welding process of unrecrystallized alloys  
[NASA-CASE-LEW-11388-1] c15 N73-32358
- Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c37 N76-18455
- DIGITAL COMMAND SYSTEMS**
- Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems  
[NASA-CASE-XGS-02317] c09 N71-23525
- System for maintaining motor at predetermined speed using digital pulses  
[NASA-CASE-XMP-06892] c09 N71-24805
- Digital filter for reducing jitter in digital control systems  
[NASA-CASE-NPO-11088] c08 N71-29034
- DIGITAL COMPUTERS**
- Device for removing plastic dust cover from digital computer disk packs for inspection and cleaning  
[NASA-CASE-LAR-10590-1] c15 N70-26819
- Binary number sorter for arranging numbers in order of magnitude  
[NASA-CASE-NPO-10112] c08 N71-12502
- Binary sequence detector with few memory elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505
- Digital computer system for automatic prelaunch checkout of spacecraft  
[NASA-CASE-XRS-08012-2] c31 N71-15566
- Description of error correcting methods for use with digital data computers and apparatus for encoding and decoding digital data  
[NASA-CASE-XNP-02748] c08 N71-22749
- Serial digital decoder design with square circuit matrix and serial memory storage units  
[NASA-CASE-NPO-10150] c08 N71-24650
- Digital magnetic core memory with sensing amplifier circuits  
[NASA-CASE-XNP-01012] c08 N71-28925
- Redundant memory for enhanced reliability of digital data processing system  
[NASA-CASE-GSC-10564] c10 N71-29135
- Digital converter for scaling binary number to binary coded decimal number of higher multiple  
[NASA-CASE-KSC-10595] c08 N73-12176
- Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c35 N75-30504
- Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751
- Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c60 N78-10709
- DIGITAL DATA**
- Phase shift data transmission system with pseudo-noise synchronization code modulated with digital data into single channel for spacecraft communication  
[NASA-CASE-XNP-00911] c08 N70-41961
- Tape guidance system for multichannel digital recording system  
[NASA-CASE-XNP-09453] c08 N71-19420
- Digital telemetry system apparatus to reduce tape recorder wow and flutter noise during playback  
[NASA-CASE-XGS-01812] c07 N71-23001
- Digital data handling circuits for pulse amplifiers  
[NASA-CASE-XNP-01068] c10 N71-28739
- Bit synchronization system using digital data transition tracking phased locked loop  
[NASA-CASE-NPO-10844] c07 N72-20140
- Control and information system for digital telemetry data using analog converter to

- digitize sensed parameter values  
[NASA-CASE-NPO-11016] c08 N72-31226
- Digital plus analog output encoder  
[NASA-CASE-CSC-12115-1] c62 N76-31946
- Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c60 N79-20751
- DIGITAL FILTERS**
- Design and development of signal detection and tracking apparatus  
[NASA-CASE-XGS-03502] c10 N71-20852
- Digital filter for reducing jitter in digital control systems  
[NASA-CASE-NPO-11088] c08 N71-29034
- Nonrecursive counting digital filter containing shift register  
[NASA-CASE-NPO-11821-1] c08 N73-26175
- Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c32 N76-21366
- DIGITAL INTEGRATORS**
- Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c33 N79-22373
- DIGITAL RADAR SYSTEMS**
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c32 N79-14278
- DIGITAL SPACECRAFT TELEVISION**
- TV camera output signal control system for digital spacecraft communication  
[NASA-CASE-XNP-01472] c14 N70-41807
- DIGITAL SYSTEMS**
- Light sensitive digital aspect sensor for attitude control of earth satellites or space probes  
[NASA-CASE-XGS-00359] c14 N70-34158
- Circuit diagram and operation of full binary adder  
[NASA-CASE-XGS-00689] c08 N70-34787
- Digital telemetry system apparatus to reduce tape recorder wow and flutter noise during playback  
[NASA-CASE-XGS-01812] c07 N71-23001
- Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
[NASA-CASE-XNP-01318] c10 N71-23033
- Noninterruptable digital counter circuit design with display device for pulse frequency modulation  
[NASA-CASE-XNP-09759] c08 N71-24891
- Digital memory system with multiple switch cores for driving each word location  
[NASA-CASE-XNP-01466] c10 N71-26434
- Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c08 N72-20176
- Digital function generator for generating any arbitrary single valued function  
[NASA-CASE-NPO-11104] c08 N72-22165
- Digital video system for displaying image and alphanumeric data on cathode ray tube  
[NASA-CASE-NPO-11342] c09 N72-25248
- Data compression using decreasing slope threshold test and digital techniques  
[NASA-CASE-NPO-11630] c08 N72-33172
- Characteristics of digital data processor using pulse from clock source to derive binary singles to show state of various indicators in processor  
[NASA-CASE-GSC-10975-1] c08 N73-13187
- Low phase noise frequency divider for use with deep space network communication system  
[NASA-CASE-NPO-11569] c10 N73-26229
- Synchronized digital communication system  
[NASA-CASE-XNP-03623] c09 N73-28084
- Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c33 N74-12887
- Digital controller for a Baum folding machine --- providing automatic counting and machine shutoff  
[NASA-CASE-LAR-10688-1] c37 N74-21056
- Digital transmitter for data bus communications system  
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- Automatic character skew and spacing checking network --- of digital tape drive systems  
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[NASA-CASE-LAR-11827-1] c32 N77-10392
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289
- Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c33 N77-24375
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[NASA-CASE-MSC-12743-1] c32 N79-10263
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- Digital demodulator-correlator  
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[NASA-CASE-NPO-14152-1] c32 N79-24212
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[NASA-CASE-XLA-07732] c08 N71-18751
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[NASA-CASE-XNP-06957] c14 N71-21088
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[NASA-CASE-XMS-02399] c05 N71-22896
- Digital synchronizer for extracting binary data in receiver of PSK/PCM communication system  
[NASA-CASE-NPO-10851] c07 N71-24613
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[NASA-CASE-GSC-12145-1] c33 N78-32339
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[NASA-CASE-XGS-03429] c03 N69-21330
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[NASA-CASE-XMS-04215-1] c09 N69-39987
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[NASA-CASE-NPO-10404] c03 N71-12255
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[NASA-CASE-XNP-09450] c10 N71-18723
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[NASA-CASE-GSC-10041-1] c10 N71-19418
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[NASA-CASE-XLA-03103] c25 N71-21693
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[NASA-CASE-XNP-14301] c09 N71-23188
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[NASA-CASE-XNP-08217] c03 N71-23239
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[NASA-CASE-XMS-06061] c05 N71-23317
- Radio frequency coaxial filter to provide dc isolation and low frequency signal rejection in audio range  
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[NASA-CASE-XGS-06226] c10 N71-25950
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[NASA-CASE-XNP-07477] c09 N71-26092
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[NASA-CASE-NPS-14610] c09 N71-28886
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[NASA-CASE-LEW-10155-1] c09 N71-29035
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[NASA-CASE-XER-11046] c09 N72-22203
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[NASA-CASE-GSC-11126-1] c09 N72-25253
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[NASA-CASE-XGS-07805] c15 N72-33476
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[NASA-CASE-MSC-12506-1] c32 N77-12239
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[NASA-CASE-GSC-11824-1] c33 N77-26386
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[NASA-CASE-NPS-23659-1] c33 N79-17133
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[NASA-CASE-NPO-13970-1] c33 N79-20315
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- Thermal pump-compressor for converting solar energy  
[NASA-CASE-XLA-00377] c33 N71-17610
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[NASA-CASE-XNP-08217] c03 N71-23239
- Unsaturating magnetic core transformer design with warning signal for electrical power processing equipment  
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- Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
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[NASA-CASE-YKS-08485] c07 N71-19493
- Tracking antenna system with array for synchronous satellite or ground based radar  
[NASA-CASE-GSC-10553-1] c07 N71-19854
- Drive system for parabolic tracking antenna with reversible motion and minimal backlash  
[NASA-CASE-NPO-10173] c15 N71-24696
- Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c32 N76-18295
- An improved suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c37 N79-12446
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[NASA-CASE-XNP-01544] c28 N70-34162
- Omnidirectional wheel  
[NASA-CASE-NPS-21309-1] c37 N74-18125
- A velocity vector control system augmented with direct lift control --- stability augmentation using manual control

- [NASA-CASE-LAR-12268-1] c08 N79-20136
- DIRECTIONAL STABILITY**
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[NASA-CASE-MPS-21311-1] c20 N76-21275
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[NASA-CASE-XLA-00326] c03 N70-34667
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[NASA-CASE-XLA-00711] c03 N71-12259
- Remotely actuated quick disconnect for tubular umbilical conduits used to transfer fluids from ground to rocket vehicle  
[NASA-CASE-XLA-01396] c03 N71-12259
- Design and development of quick release connector  
[NASA-CASE-XLA-01141] c15 N71-13789
- Split nut and bolt separation device  
[NASA-CASE-XNP-06914] c15 N71-21489
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[NASA-CASE-XKS-04631] c10 N71-23663
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[NASA-CASE-XPS-20395] c15 N71-24903
- Breakaway multiwire electrical cable connector with particular application for umbilical type cables  
[NASA-CASE-NPO-11140] c15 N72-17455
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[NASA-CASE-NPO-10704] c15 N72-20445
- Frangible connecting link suitable for rocket stage separation  
[NASA-CASE-MSC-11849-1] c15 N72-22488
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[NASA-CASE-NPO-11202] c15 N72-25450
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[NASA-CASE-MPS-22323-1] c37 N76-14463
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[NASA-CASE-XLA-08530] c32 N71-25360
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- Detector assembly for discriminating first signal with respect to presence or absence of second signal at time of occurrence of first signal  
[NASA-CASE-XNP-00701] c09 N70-40272
- Difference indicating circuit used in conjunction with device measuring gravitational fields  
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- Describing frequency discriminator using digital logic circuits and supplying single binary output signal  
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[NASA-CASE-XNP-04819] c08 N71-23295
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[NASA-CASE-ARC-10364-3] c33 N75-19520
- Diode-quad bridge circuit means  
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- Potable water dispenser  
[NASA-CASE-MPS-21115-1] c54 N74-12779
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[NASA-CASE-LAR-10544-1] c37 N74-13178
- Metering gun for dispensing precisely measured charges of fluid  
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- Cathode ray tube system for displaying ones and zeros in binary wave train  
[NASA-CASE-XGS-04987] c08 N71-20571
- Optical projector system for establishing optimum arrangement of instrument displays in aircraft, spacecraft, other vehicles, and industrial instrument consoles  
[NASA-CASE-XNP-03853] c23 N71-21882
- Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
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- Binary to decimal decoder logic circuit design with feedback control and display device  
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 [NASA-CASE-XLA-01220] c02 N70-41863

Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators  
 [NASA-CASE-LAR-10776-1] c02 N74-10034

**DRAG MEASUREMENT**  
 Device for measuring drag forces in flight tests  
 [NASA-CASE-ILA-00113] c14 N70-33386

Electric analog for measuring induced drag on nonplanar airfoils  
 [NASA-CASE-ILA-00755] c01 N71-13410

Electric analog for measuring induced drag on nonplanar airfoils  
 [NASA-CASE-ILA-05828] c01 N71-13411

Impact energy absorber with decreasing absorption rate  
 [NASA-CASE-ILA-01530] c14 N71-23092

An improved system for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
 [NASA-CASE-PRC-11024-1] c02 N79-17797

**DRAG REDUCTION**  
 Directed fluid stream for propeller blade loading control  
 [NASA-CASE-XAC-00139] c02 N70-34856

Aircraft wheel spray drag alleviator for dual tandem landing gear  
 [NASA-CASE-ILA-01583] c02 N70-36825

**DRIFT (INSTRUMENTATION)**  
 Automatic measuring and recording of gain and zero drift characteristics of electronic amplifier  
 [NASA-CASE-XMS-05562-1] c09 N69-39986

Solar radiation direction detector and device for compensating degradation of photocells  
 [NASA-CASE-ILA-00183] c14 N70-40239

Failure detection and control means for improved drift performance of a gimballed platform system  
 [NASA-CASE-MFS-23551-1] c04 N76-26175

**DRILL BITS**  
 Impact bit for cutting, collecting, and storing samples such as lunar rock cuttings  
 [NASA-CASE-XNP-01412] c15 N70-42034

Roll cutter --- drill bits and rotating shaft  
 [NASA-CASE-MFS-22649-1] c37 N75-25186

## DRILLS

Rotary impact-type rock drill for recovering rock cuttings  
[NASA-CASE-XMP-07478] c14 N69-21923

Auger-type soil penetrometer for burrowing into soil formations  
[NASA-CASE-XNP-05530] c14 N73-32321

**DRIVES**  
Inverter drive circuit for semiconductor switch  
[NASA-CASE-LEW-10233] c10 N71-27126

**DROPS (LIQUIDS)**  
Development of droplet monitoring probe for use in analysis of droplet propagation in mixed-phase fluid stream  
[NASA-CASE-NPO-10985] c14 N73-20478

**DRUGS**  
Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c25 N75-12086

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N79-14755

**DRY CELLS**  
Energy source with tantalum capacitors in parallel and miniature silver oxide button cells for initiating pyrotechnic devices on spacecraft and rocket vehicles  
[NASA-CASE-LAR-10367-1] c03 N70-26817

**DRYING**  
Drying chamber for photographic sheet material  
[NASA-CASE-GSC-11074-1] c14 N73-28489

**DRYING APPARATUS**  
Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080

**DUCTED FANS**  
Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c07 N79-14095

**DUCTS**  
Quick disconnect duct coupling device for single-handed operation  
[NASA-CASE-MPS-20395] c15 N71-24903

Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MPS-19194-1] c37 N76-14460

Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c54 N79-19688

**DUST COLLECTORS**  
Device for removing plastic dust cover from digital computer disk packs for inspection and cleaning  
[NASA-CASE-LAR-10590-1] c15 N70-26819

**DYE LASERS**  
Infrared tunable dye laser with nonlinear wavelength mixing crystal in optical cavity  
[NASA-CASE-ARC-10463-1] c09 N73-32111

Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c36 N75-19655

Two wavelength double pulse tunable dye laser  
[NASA-CASE-LAR-12012-1] c36 N77-10517

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[NASA-CASE-XMP-02221] c18 N71-27170

**DYNAMIC CHARACTERISTICS**  
Dynamic sensor for gas pressure or density measurement  
[NASA-CASE-XAC-02877] c14 N70-41681

Design of precision vertical alignment system using laser with gravitationally sensitive cavity  
[NASA-CASE-ARC-10444-1] c16 N73-33397

**DYNAMIC CONTROL**  
Motion restraining device  
[NASA-CASE-NPO-13619-1] c37 N78-16369

**DYNAMIC LOADS**  
Multilegged support system for wind tunnel test models subjected to thermal dynamic loading  
[NASA-CASE-XLA-01326] c11 N71-21481

Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
[NASA-CASE-XMS-04545] c15 N71-22878

Development and characteristics of device for indicating and recording magnitude of force

applied in axial direction  
[NASA-CASE-MSC-15626-1] c14 N72-25411

**DYNAMIC MODULUS OF ELASTICITY**  
Apparatus for testing metallic and nonmetallic beams or rods by bending at high temperatures in vacuum or inert atmosphere  
[NASA-CASE-XLE-01300] c15 N70-41993

**DYNAMIC RESPONSE**  
Lunar and planetary gravity simulator to test vehicular response to landing  
[NASA-CASE-XLA-00493] c11 N70-34786

Pressure sensor network for measuring liquid dynamic response in flight including fuel tank acceleration, liquid slosh amplitude, and fuel depth monitoring  
[NASA-CASE-XLA-05541] c12 N71-26387

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[NASA-CASE-MPS-11204] c14 N71-29134

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[NASA-CASE-XMP-01772] c11 N70-41677

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[NASA-CASE-XAC-05422] c04 N71-23185

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[NASA-CASE-GSC-12032-2] c35 N76-19408

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**EARTH ORBITS**  
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[NASA-CASE-MPS-20710] c11 N72-23215

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[NASA-CASE-NPO-14096-1] c44 N78-28625  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337  
Electroexplosive device  
[NASA-CASE-NPO-13858-1] c28 N79-11231  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315  
Lightning current detector  
[NASA-CASE-KSC-11057-1] c33 N79-14305
- ELECTRIC DISCHARGES**  
Electric discharge apparatus for electrohydraulic explosive forming  
[NASA-CASE-XMP-00375] c15 N70-34249  
High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres  
[NASA-CASE-MSC-12178-1] c09 N71-13518  
Pulse generating circuit for operation at very high duty cycles and repetition rates  
[NASA-CASE-XNP-00745] c10 N71-28960  
Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c33 N74-20859  
Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c33 N78-17297
- ELECTRIC ENERGY STORAGE**  
Electric current measuring apparatus design including saturable core transformer and energy storage device to avoid magnetizing current errors from transformer output winding  
[NASA-CASE-IGS-02439] c14 N71-19431  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MPS-23059-1] c44 N76-27664  
Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c44 N77-14581  
Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c44 N77-22606  
Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c44 N79-26474
- ELECTRIC EQUIPMENT**  
Characteristics of high power, low distortion, alternating current power amplifier  
[NASA-CASE-LAR-10218-1] c09 N70-34559  
Design and development of electric generator for space power system  
[NASA-CASE-XLE-04250] c09 N71-20446  
Development of electrical system for measuring high impedance  
[NASA-CASE-XMS-08589-1] c09 N71-20569  
Design, development, and operating principles of power supply with starting circuit which is independent of voltage regulator  
[NASA-CASE-XMS-01991] c09 N71-21449  
Development of method for improving signal to noise ratio and accuracy of Wheatstone bridge type radiation measuring instrument  
[NASA-CASE-XLA-02810] c14 N71-25901  
Design and development of buck-boost voltage regulator circuit with additive or subtractive alternating current impressed on variable direct current source voltage  
[NASA-CASE-GSC-10735-1] c10 N71-26085  
Development and characteristics of electronically resettable fuse with saturable core current sensing transformer having two outside legs and center leg  
[NASA-CASE-XGS-11177] c09 N71-27001  
Development and characteristics of voltage regulator for connection in series with alternating current source and load using three leg, two-window transformer  
[NASA-CASE-ERC-10113] c09 N71-27053  
Development of electric circuit for production of different pulse width signals  
[NASA-CASE-XLA-07788] c09 N71-29139  
Development of solar energy powered heliostrop assembly to orient solar array toward sun  
[NASA-CASE-GSC-10945-1] c21 N72-31637  
Development of temperature compensated light source with components and circuitry for maintaining luminous intensity independent of temperature variations  
[NASA-CASE-ARC-10467-1] c09 N73-14214  
Development and characteristics of hermetically sealed coaxial package for containing microwave semiconductor components  
[NASA-CASE-GSC-10791-1] c15 N73-14469  
Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c33 N74-17929  
Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MPS-21846-1] c37 N74-26976  
Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c37 N75-18573  
Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c77 N75-20140
- ELECTRIC EQUIPMENT TESTS**  
Fixture for simultaneously supporting several components for electrical testing  
[NASA-CASE-XNP-06032] c09 N69-21926

- Electrical testing apparatus for detecting amplitude and width of transient pulse  
[NASA-CASE-XMP-06519] c09 N71-12519
- Variable water load for dissipating large amounts of electrical power during high voltage power supply tests  
[NASA-CASE-XMP-05381] c09 N71-20842
- ELECTRIC FIELD STRENGTH**
- Low impedance apparatus for measuring electrostatic field intensity near space vehicles  
[NASA-CASE-XLE-00820] c14 N71-16014
- Space environment simulation system for measuring spacecraft electric field strength in plasma sheath  
[NASA-CASE-XLE-02038] c09 N71-16086
- Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790
- Apparatus to determine electric field strength by measuring deflection of electron beam impinging on target  
[NASA-CASE-XMP-06617] c09 N71-24843
- ELECTRIC FIELDS**
- Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-00755] c01 N71-13410
- Electric analog for measuring induced drag on nonplanar airfoils  
[NASA-CASE-XLA-05828] c01 N71-13411
- Instrument for measuring potentials on two dimensional electric field plot  
[NASA-CASE-XLA-08493] c10 N71-19421
- Electron beam deflection devices for measuring electric fields  
[NASA-CASE-XMP-10289] c14 N71-23699
- Electrodes having array of small surfaces for field ionization  
[NASA-CASE-ERC-10013] c09 N71-26678
- Apparatus for determining distance to lightning strokes from single station by magnetic and electric field sensing antennas  
[NASA-CASE-KSC-10698] c07 N73-20175
- Development and characteristics of apparatus for measuring intensity of electric field in atmosphere  
[NASA-CASE-KSC-10730-1] c14 N73-32318
- Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c33 N74-27862
- ELECTRIC FILTERS**
- Describing static inverter with single or multiple phase output  
[NASA-CASE-XMP-00663] c08 N71-18752
- Apparatus for filtering input signals  
[NASA-CASE-NPO-10198] c09 N71-24806
- Active RC filter networks and amplifiers for deep space magnetic field measurement  
[NASA-CASE-XAC-05462-2] c10 N72-17171
- Multiloop RC active filter network with low parameter sensitivity and low amplifier gain  
[NASA-CASE-ARC-10192] c09 N72-21245
- Development of electric connector and pin assembly with radio frequency absorbing sleeve to reduce radio frequency interference  
[NASA-CASE-XLA-02609] c09 N72-25256
- Filter for third order phase locked loops in signal receivers  
[NASA-CASE-NPO-11941-1] c10 N73-27171
- ELECTRIC FUSES**
- Development of in-line fuse device for protection of electric circuits from excessive currents and voltages  
[NASA-CASE-MSC-12135-1] c09 N71-12526
- Single electrical circuit component combining diode, fuse, and blown indicator with elongated tube of heat resistant transparent material  
[NASA-CASE-XKS-03381] c09 N71-22796
- Fused switch  
[NASA-CASE-XMS-01244-1] c33 N79-33393
- ELECTRIC GENERATORS**
- Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c03 N69-21330
- Design and development of electric generator for space power system  
[NASA-CASE-XLE-04250] c09 N71-20446
- Development and characteristics of single or double pulse generator which produces constant width pulses in nanosecond region  
[NASA-CASE-XGS-03427] c10 N71-23029
- Development of slip ring assembly with inner and outer peripheral surfaces used as electrical contacts for brushes  
[NASA-CASE-XMP-01049] c15 N71-23049
- Conversion of positive dc voltage to positive dc voltage of lower amplitude  
[NASA-CASE-XMP-14301] c09 N71-23188
- High temperature ferromagnetic cobalt-base alloy for electrical power generating equipment  
[NASA-CASE-XLE-03629] c17 N71-23248
- Solid state integrator for converting variable width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315
- Electric power system with circulatory liquid coolant cooling system  
[NASA-CASE-MFS-14114-2] c09 N71-24807
- Device utilizing RC rate generators for continuous slow speed measurement  
[NASA-CASE-XMP-02966] c10 N71-24863
- Device for voltage conversion using controlled pulse widths and arrangements to generate ac output voltage  
[NASA-CASE-MFS-10068] c10 N71-25139
- Multiple varactor for generating high frequencies with high power and high conversion efficiency  
[NASA-CASE-XMP-04958-1] c10 N71-26414
- Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366
- Electric power system with thermionic diodes and circulatory liquid metal coolant lines  
[NASA-CASE-MFS-14114] c33 N71-27862
- Power converters for supplying direct current at one voltage from source at another voltage  
[NASA-CASE-XER-11046] c09 N72-22203
- Inductive-capacitive loops as load insensitive power converters  
[NASA-CASE-ERC-10268] c09 N72-25252
- Dc to ac to dc converter with transistor driven synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c09 N72-25253
- Device for converting electromagnetic wave energy into electric power  
[NASA-CASE-GSC-11394-1] c09 N73-32109
- Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c20 N75-24837
- Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c36 N75-30524
- Smoke generator  
[NASA-CASE-ARC-10905-1] c37 N77-13418
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c33 N77-26387
- Kine-Pak: A self-contained, electrical power generator system --- using a helical spring to rotate a rotor and generate electric current  
[NASA-CASE-LAR-11551-1] c44 N78-22468
- Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c44 N78-22469
- ELECTRIC IGNITION**
- Method of making solid propellant rocket motor having reliable high altitude capabilities, long shelf life, and capable of firing with nozzle closure with foamed plastic permanent mandrel  
[NASA-CASE-XLA-04126] c28 N71-26779
- ELECTRIC MOTORS**
- Automatic control of voltage supply to direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987
- Electronic circuit system for controlling electric motor speed  
[NASA-CASE-XMP-01129] c09 N70-38712
- Using electron beam switching for brushless motor commutation  
[NASA-CASE-XGS-01451] c09 N71-10677
- Direct current electromotive system for regenerative braking of electric motor  
[NASA-CASE-XMP-01096] c10 N71-16030
- Describing angular position and velocity sensing apparatus  
[NASA-CASE-XGS-05680] c14 N71-17585

- Reversible current directing circuitry for reversible motor control  
[NASA-CASE-XLA-09371] c10 N71-18724
- Stepping motor control apparatus exciting windings in proper time sequence to cause motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772
- Electromagnetic braking arrangement for controlling rotor rotation in electric motor  
[NASA-CASE-XNP-06936] c15 N71-24695
- Electric motor control system with pulse width modulation for providing automatic null seeking servo  
[NASA-CASE-XNP-05195] c10 N71-24861
- Velocity limiting safety system for motor driven research vehicle  
[NASA-CASE-XLA-07473] c15 N71-24895
- Design and development of electric motor with stationary field and armature windings which operates on direct current  
[NASA-CASE-XGS-05290] c09 N71-25999
- Circuits for controlling reversible dc motor  
[NASA-CASE-XNP-07477] c09 N71-26092
- Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418
- Feedback control for direct current motor to achieve constant speed under varying loads  
[NASA-CASE-MFS-14610] c09 N71-28886
- Optimal control system for automatic speed regulation of electric driven motor vehicle  
[NASA-CASE-NPO-11210] c11 N72-20244
- Direct current motor including stationary field windings and stationary armature winding  
[NASA-CASE-XGS-07805] c15 N72-33476
- Speed control system for dc motor equipped with brushless Hall effect device  
[NASA-CASE-MFS-20207-1] c09 N73-32107
- Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c33 N77-26386
- Rotary electric device  
[NASA-CASE-GSC-12138-1] c33 N79-20314
- Controller for computer control of brushless DC motors  
[NASA-CASE-NPO-13970-1] c33 N79-20315
- ELECTRIC NETWORKS**
- Electric network for monitoring temperatures, detecting critical temperatures, and indicating critical time duration  
[NASA-CASE-XNP-01097] c10 N71-16058
- Development and characteristics of single or double pulse generator which produces constant width pulses in nanosecond region  
[NASA-CASE-XGS-03827] c10 N71-23029
- Switching series regulator with gating control network  
[NASA-CASE-XMS-09352] c09 N71-23316
- Broadband frequency discriminator with resistive captive inductive networks  
[NASA-CASE-NPO-10096] c07 N71-24583
- Electrical short locator --- identifying shorts occurring while an electrical system is being wired  
[NASA-CASE-ARC-11116-1] c33 N79-31498
- ELECTRIC POTENTIAL**
- Battery charging system with cell to cell voltage balance  
[NASA-CASE-XGS-05432] c03 N71-19438
- Conversion of positive dc voltage to positive dc voltage of lower amplitude  
[NASA-CASE-XNP-14301] c09 N71-23188
- Solid state integrator for converting variable width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315
- Device for monitoring voltage by generating signal when voltages drop below predetermined value  
[NASA-CASE-KSC-10020] c10 N71-27338
- Plotter device for automatically drawing equipotential lines on sheet of resistance paper  
[NASA-CASE-WPO-11134] c09 N72-21246
- Pulsed excitation voltage circuit for strain gage bridge transducers  
[NASA-CASE-PRC-10036] c09 N72-22200
- Power converters for supplying direct current at one voltage from source at another voltage  
[NASA-CASE-XER-11046] c09 N72-22203
- Continuously variable, voltage-controlled phase shifter  
[NASA-CASE-NPO-11129] c09 N72-33204
- Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c35 N78-10429
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c44 N78-28625
- ELECTRIC POWER**
- Switching circuit with regeneratively connected transistors eliminating power consumption when not in use  
[NASA-CASE-XNP-02654] c10 N70-42032
- Variable water load for dissipating large amounts of electrical power during high voltage power supply tests  
[NASA-CASE-XNP-05381] c09 N71-20842
- Power factor control system for AC induction motors  
[NASA-CASE-MFS-23280-1] c33 N78-10376
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c33 N78-17296
- ELECTRIC POWER PLANTS**
- Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c44 N78-32542
- ELECTRIC POWER SUPPLIES**
- Current dependent variable inductance for input filter chokes of ac or dc power supplies  
[NASA-CASE-ERC-10139] c09 N72-17154
- Development of thermal to electric power conversion system using solid state switches of electrical currents to load for Seebeck effect compensation  
[NASA-CASE-NPO-11388] c03 N72-23048
- Development of electrical circuit for suppressing oscillations across inductor operating in resonant mode  
[NASA-CASE-ERC-10403-1] c10 N73-26228
- Powerplexer for distribution of dc power levels to loads which require different voltages  
[NASA-CASE-MSC-12396-1] c03 N73-31988
- Reliable electrical element heater using plural wire system and backup power sources  
[NASA-CASE-MFS-21462-1] c33 N74-14935
- Temperature compensated current source  
[NASA-CASE-MSC-11235] c33 N78-17294
- ELECTRIC POWER TRANSMISSION**
- Power switch with transfluxor type magnetic core  
[NASA-CASE-NPO-10242] c09 N71-24803
- Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366
- Powerplexer for distribution of dc power levels to loads which require different voltages  
[NASA-CASE-MSC-12396-1] c03 N73-31988
- Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c44 N74-19870
- ELECTRIC PROPULSION**
- Electric propulsion engine test chamber  
[NASA-CASE-XLE-00252] c11 N70-34844
- ELECTRIC PULSES**
- RC transistor circuit to indicate each pulse of pulse train and occurrence of nth pulse  
[NASA-CASE-XNP-00906] c09 N70-41655
- Design and development of variable pulse width multiplier  
[NASA-CASE-XLA-02850] c09 N71-20447
- Piezoelectric transducer for monitoring sound waves of physiological origin  
[NASA-CASE-XMS-05365] c14 N71-22993
- Development and characteristics of single or double pulse generator which produces constant width pulses in nanosecond region  
[NASA-CASE-XGS-03427] c10 N71-23029
- Solid state integrator for converting variable width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315
- Development and characteristics of electric circuitry for detecting electrical pulses rise time and amplitude  
[NASA-CASE-XNP-08804] c09 N71-24717
- Circuit for measuring wide range of pulse rates by utilizing high capacity counter

- [NASA-CASE-XNP-06234] c10 N71-27137  
Precision full wave rectifier circuit for  
rectifying incoming electrical signals having  
positive or negative polarity with only  
positive output signals
- [NASA-CASE-ARC-10101-1] c09 N71-33109  
Phase modulating with odd and even finite power  
series of a modulating signal
- [NASA-CASE-LAR-11607-1] c32 N77-14292  
Telephone multiline signaling using common  
signal pair
- [NASA-CASE-KSC-11023-1] c32 N79-23310
- ELECTRIC RELAYS**
- Spark gap type protective circuit for fast  
sensing and removal of overvoltage conditions
- [NASA-CASE-XAC-08981] c09 N69-39897  
Time division multiplexer with magnetic latching  
relays
- [NASA-CASE-XNP-00431] c09 N70-38998  
Alarm system design for monitoring one or more  
relay circuits
- [NASA-CASE-XMS-10984-1] c10 N71-19417  
Time division relay synchronizer with master  
sync pulse for activating binary counter to  
produce signal identifying time slot for station
- [NASA-CASE-GSC-10373-1] c07 N71-19773  
Relay circuit breaker with magnetic latching to  
provide conductive and nonconductive paths for  
current devices
- [NASA-CASE-HSC-11277] c09 N71-29008  
Multi-cell battery protection system
- [NASA-CASE-LEW-12039-1] c44 N78-14625
- ELECTRIC ROCKET ENGINES**
- Electric rocket engine with electron bombardment  
ionization chamber
- [NASA-CASE-NXP-04124] c28 N71-21822
- ELECTRIC STIMULI**
- Tread drum for animals --- having an electrical  
shock station
- [NASA-CASE-ARC-10917-1] c51 N78-27733
- ELECTRIC SWITCHES**
- Thermionic diode switch for use in high  
temperature region to chop current from dc  
source
- [NASA-CASE-NPO-10404] c03 N71-12255  
Characteristics of hermetically sealed electric  
switch with flexible operating capability
- [NASA-CASE-XNP-09808] c09 N71-12518  
Electrical switching device comprising  
conductive liquid confined within square loop  
of deformable nonconductive tubing also used  
for leveling
- [NASA-CASE-NPO-10037] c09 N71-19610  
System for checking status of several  
double-throw switches by readout indications
- [NASA-CASE-XLA-08799] c10 N71-27272  
Pulse generating circuit for operation at very  
high duty cycles and repetition rates
- [NASA-CASE-XNP-00745] c10 N71-28960  
High dc switch for causing abrupt, cyclic,  
decreases of current to operate under zero or  
varying gravity conditions
- [NASA-CASE-LEW-10155-1] c09 N71-29035  
Zero power telemetry actuated switch for  
biomedical equipment
- [NASA-CASE-ARC-10105] c09 N72-17153  
Development of differential pressure control  
system using motion of mechanical diaphragms  
to operate electric switch
- [NASA-CASE-MFS-14216] c14 N73-13418  
Dual mode solid state power switch
- [NASA-CASE-MFS-22880-1] c33 N76-31410  
Pulse switching for high energy lasers
- [NASA-CASE-NPO-14556-1] c36 N79-21336  
Fused switch
- [NASA-CASE-XMS-01244-1] c33 N79-33393
- ELECTRIC TERMINALS**
- Electrical connector pin with wiping action to  
assure reliable contact
- [NASA-CASE-XMP-04238] c09 N69-39734  
Patent data on terminal insert connector for  
flat electric cables
- [NASA-CASE-XMP-00324] c09 N70-34596  
Tool attachment for spreading or moving away  
loose elements from terminal posts during  
winding of filamentary elements
- [NASA-CASE-MFP-02107] c15 N71-10809  
Electrical spot terminal assembly for printed  
circuit boards
- [NASA-CASE-NPO-10034] c15 N71-17685  
Device for resistance soldering electrical leads  
to solder cups of multiple terminal block
- [NASA-CASE-GSC-10913] c15 N72-22491  
Development of electric connector and pin  
assembly with radio frequency absorbing sleeve  
to reduce radio frequency interference
- [NASA-CASE-XLA-02609] c09 N72-25256  
Device for configuring multiple leads --- method  
for connecting electric leads to printed  
circuit board
- [NASA-CASE-MFS-22133-1] c33 N74-26977
- ELECTRIC WELDING**
- Development of electric weeding torch with  
casing on one end to form inert gas shield
- [NASA-CASE-XMP-02330] c15 N71-23798  
Electrical resistance butt welder for welding  
fine gauge tungsten/rhenium thermocouple wire
- [NASA-CASE-LAR-10103-1] c15 N73-14468  
Electric resistance spot welding and brazing for  
producing metal bonds with superior mechanical  
and structural characteristics
- [NASA-CASE-LAR-11072-1] c15 N73-20535  
Process for welding compressor and turbine  
blades to rotors and discs of jet engines
- [NASA-CASE-LEW-10533-1] c15 N73-28515
- ELECTRIC WIRE**
- Apparatus for forming wire grids for electric  
strain gages
- [NASA-CASE-XLE-00023] c15 N70-33330  
Control of fusion welding through use of  
thermocouple wire
- [NASA-CASE-MFS-06074] c15 N71-20393  
Ablation sensor for measuring char layer  
recession rate using electric wires
- [NASA-CASE-XLA-01794] c33 N71-21586  
Device for resistance soldering electrical leads  
to solder cups of multiple terminal block
- [NASA-CASE-GSC-10913] c15 N72-22491  
Lead attachment for high temperature operation  
of electronic devices
- [NASA-CASE-ERC-10224] c09 N72-25261  
Means for accommodating large overstrain in lead  
wires --- by storing extra length of wire in  
stretchable loop
- [NASA-CASE-LAR-10168-1] c33 N74-22865  
Device for configuring multiple leads --- method  
for connecting electric leads to printed  
circuit board
- [NASA-CASE-MFS-22133-1] c33 N74-26977  
High current electrical lead --- for thermionic  
converters
- [NASA-CASE-LEW-10950-1] c33 N74-27683  
Wire stripper
- [NASA-CASE-PRC-10111-1] c37 N79-10419  
Method and apparatus for preparing  
multiconductor cable with flat conductors
- [NASA-CASE-MFS-10946-1] c31 N79-21226  
Edge coating of flat wires
- [NASA-CASE-XNP-05757-1] c31 N79-21227
- ELECTRICAL ENGINEERING**
- Counter-divider circuit for accuracy and  
reliability in binary circuits
- [NASA-CASE-XMP-00421] c09 N70-34502  
Vibrating element electrometer producing high  
conversion gain by input current control of  
elements resonant frequency displacement  
amplitude
- [NASA-CASE-XAC-02807] c09 N71-23021
- ELECTRICAL FAULTS**
- Overcurrent protecting circuit for push-pull  
transistor amplifiers
- [NASA-CASE-HSC-12033-1] c09 N71-13531  
Circuit design for failure sensing and  
protecting low voltage electric generator and  
power transmission networks
- [NASA-CASE-GSC-10114-1] c10 N71-27366  
Test method and equipment for identifying faulty  
cells or connections in solar cell assemblies
- [NASA-CASE-NPO-10401] c03 N72-20033  
Shared memory for a fault-tolerant computer
- [NASA-CASE-NPO-13139-1] c60 N76-21914
- ELECTRICAL IMPEDANCE**
- High voltage transistor circuit
- [NASA-CASE-XNP-06937] c09 N71-19516  
Development of electrical system for measuring  
high impedance
- [NASA-CASE-XMS-08589-1] c09 N71-20569

- Signaling summary alarm circuit with semiconductor switch for faulty contact indications  
[NASA-CASE-XLE-03061-1] c10 N71-24798
- Signal conditioning circuit apparatus --- with constant input impedance  
[NASA-CASE-ARC-10348-1] c33 N75-19518
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c33 N77-14335
- ELECTRICAL INSULATION**
- Water cooled solenoid capable of producing magnetic field intensities up to 100 kilogauss  
[NASA-CASE-XNP-01951] c09 N70-41929
- Method and apparatus for removing plastic insulation from wire using cryogenic equipment  
[NASA-CASE-MFS-10340] c15 N71-17628
- Nonconductive tube as feed system for plasma thruster  
[NASA-CASE-XLE-02902] c25 N71-21694
- Internal labyrinth and shield structure to improve electrical isolation of propellant feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781
- Development of process for forming insulating layer between two electrical conductor or semiconductor materials  
[NASA-CASE-LEW-10489-1] c15 N72-25447
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c33 N74-21851
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331
- Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c24 N75-33181
- Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c36 N78-17366
- Wire stripper  
[NASA-CASE-PRC-10111-1] c37 N79-10419
- ELECTRICAL MEASUREMENT**
- Capacitance measuring device for determining flare accuracy on tapered tubes  
[NASA-CASE-KKS-03495] c14 N69-39785
- Bootstrap unloading circuits for sampling transducer voltage sources without drawing current  
[NASA-CASE-XNP-09768] c09 N71-12516
- Micromicroampere current measuring circuit, with two subminiature thermionic diodes with filament cathodes  
[NASA-CASE-XNP-00384] c09 N71-13530
- Low impedance apparatus for measuring electrostatic field intensity near space vehicles  
[NASA-CASE-XLE-00820] c14 N71-16014
- Electric current measuring apparatus design including saturable core transformer and energy storage device to avoid magnetizing current errors from transformer output winding  
[NASA-CASE-XGS-02439] c14 N71-19431
- High voltage divider system for attenuating high voltages to convenient levels suitable for introduction to measuring circuits  
[NASA-CASE-XLE-02008] c09 N71-21583
- Ablation sensor for measuring char layer recession rate using electric wires  
[NASA-CASE-XLA-01794] c33 N71-21586
- Current measurement by use of Hall effect generator  
[NASA-CASE-XAC-01662] c14 N71-23037
- Connector internal force gage for measuring strength of electrical connection  
[NASA-CASE-XNP-03918] c14 N71-23087
- Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244
- Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c33 N75-26246
- Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c44 N76-14601
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-19339
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c33 N76-21390
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c33 N78-28340
- ELECTRICAL PROPERTIES**
- Voltage drift compensation circuit for analog-to-digital converter  
[NASA-CASE-XNP-04780] c08 N71-19687
- Development and characteristics of electronically resettable fuse with saturable core current sensing transformer having two outside legs and center leg  
[NASA-CASE-XGS-11177] c09 N71-27001
- Development and characteristics of voltage regulator for connection in series with alternating current source and load using three leg, two-window transformer  
[NASA-CASE-PRC-10113] c09 N71-27053
- Development of system with electrical properties which vary with changes in temperature for use with feedback loop in operational amplifier circuit  
[NASA-CASE-MSC-13276-1] c14 N71-27058
- Electrically coupled individually encapsulated solar cell matrix  
[NASA-CASE-NPO-11190] c03 N71-34044
- Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c44 N74-19693
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c35 N76-15434
- Modification of the electrical and optical properties of polymers --- ion irradiation  
[NASA-CASE-LEW-13027-1] c27 N79-11216
- ELECTRICAL RESISTANCE**
- Development of electrical system for indicating optimum contact between electrode and metal surface to permit improved soldering operation  
[NASA-CASE-KSC-10242] c15 N72-23497
- Radio frequency source resistance measuring instruments of varied design  
[NASA-CASE-NPO-11291-1] c14 N73-30388
- Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c33 N78-28340
- ELECTRICAL RESISTIVITY**
- Describing method for vapor deposition of gallium arsenide films to manganese substrates to provide semiconductor devices with low resistance substrates  
[NASA-CASE-XNP-01328] c26 N71-18064
- Simulating operation of thermopile vacuum gage tube at high and low pressures  
[NASA-CASE-XLA-02758] c14 N71-18481
- Electrically conductive fluorocarbon polymers  
[NASA-CASE-XLE-06774-2] c06 N72-25150
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-19339
- Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c27 N78-14164
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c33 N79-12331
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c24 N79-14156
- A method and alloy for making electrical connections to conductive thin film  
[NASA-CASE-GSC-12404-1] c33 N79-17135
- ELECTRICITY**
- Thermionic converter for converting heat energy directly into electrical energy  
[NASA-CASE-XL3-01903] c22 N71-23599
- Method of fabricating a photovoltaic of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c44 N78-28626
- ELECTRO-OPTICS**
- Electro-optical system with scan-in illuminator and scan-out photosensor for scanning variable transmittance objects  
[NASA-CASE-NPO-11106] c14 N70-34697

- Electro-optical system for maintaining two-axis alignment during milling operations on large tank-sections  
[NASA-CASE-XNP-00908] c14 N70-40238
- Automatic polarimeter capable of measuring transient birefringence changes in electro-optical materials  
[NASA-CASE-XNP-08883] c23 N71-16101
- Design and development of light sensing device for controlling orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11201] c14 N72-27409
- Electro-optical stabilization of calibrated light source  
[NASA-CASE-MS-C-12293-1] c14 N72-27411
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MS-C-12618-1] c74 N78-17865
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c74 N79-11866
- ELECTROACOUSTIC TRANSDUCERS**
- Transducer for monitoring oxygen flow in respirator  
[NASA-CASE-PRC-10012] c14 N72-17329
- Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c12 N75-24774
- ELECTROACOUSTIC WAVES**
- Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
[NASA-CASE-XKS-10804] c05 N71-24606
- ELECTROCARDIOGRAPHY**
- Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
[NASA-CASE-XKS-10804] c05 N71-24606
- Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MPS-20418] c14 N73-24473
- Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MS-C-14339-1] c05 N75-24716
- ELECTROCATALYSTS**
- Electrocatalyst for oxygen reduction in low temperature alkaline fuel cell  
[NASA-CASE-HQN-10537-1] c06 N72-10138
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c44 N79-14538
- ELECTROCHEMICAL CELLS**
- Apparatus for measuring polymer membrane expansion in electrochemical cells  
[NASA-CASE-XGS-03865] c14 N69-21363
- Preventing pressure buildup in electrochemical cells by reacting palladium oxide with evolved hydrogen  
[NASA-CASE-IGS-01419] c03 N70-41864
- Nonmagnetic hermetically sealed battery case made of epoxy resin and woven glass tape for use with electrochemical cells in spacecraft  
[NASA-CASE-XGS-00886] c03 N71-11053
- Epoxy resin sealing device for electrochemical cells in high vacuum environments  
[NASA-CASE-IGS-02630] c03 N71-22974
- Sealed electrochemical cell with flexible casing for varying electrolyte level in cell  
[NASA-CASE-XGS-01513] c03 N71-23336
- Elimination of two step voltage discharge property of silver zinc batteries by using divalent silver oxide capacity of cell to charge anodes to monovalent silver state  
[NASA-CASE-XGS-01674] c03 N71-29129
- Flexible, frangible electrochemical cell and package for operation in low temperature environment  
[NASA-CASE-XGS-10010] c03 N72-15986
- Porous electrode for use in electrochemical cells  
[NASA-CASE-GSC-11368-1] c09 N73-32108
- Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MPS-20761-1] c44 N74-27519
- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c33 N76-19339
- Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c44 N78-14625
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c44 N79-14538
- Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c25 N79-22235
- Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c44 N79-26474
- ELECTROCHEMICAL OXIDATION**
- Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c25 N79-22235
- ELECTROCHEMISTRY**
- Electrochemically reversible silver-silver chloride electrode for detecting bioelectric potential differences generated by human muscles and organs  
[NASA-CASE-XMS-02872] c05 N69-21925
- Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c25 N79-24073
- ELECTRODE FILM BARRIERS**
- Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313
- ELECTRODELESS DISCHARGES**
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c33 N79-25313
- ELECTRODEPOSITION**
- Finding layer of semiconductor particles by electrodeposition  
[NASA-CASE-XNP-01959] c26 N71-23043
- Electrodeposition method for producing crystalline material from dense gaseous medium  
[NASA-CASE-NPO-10440] c15 N72-21466
- Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MPS-21395-1] c25 N74-26948
- Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c37 N75-19684
- Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c25 N79-22235
- ELECTRODES**
- Hollow spherical electrode for shielding dielectric junction between high voltage conductor and insulator  
[NASA-CASE-XLE-03778] c09 N69-21542
- Electrochemically reversible silver-silver chloride electrode for detecting bioelectric potential differences generated by human muscles and organs  
[NASA-CASE-XMS-02872] c05 N69-21925
- Bonding method for improving contact between lead telluride thermoelectric elements and tungsten electrodes  
[NASA-CASE-XGS-04554] c15 N69-39786
- Ionization vacuum gage  
[NASA-CASE-XNP-00646] c14 N70-35666
- Accel and focus electrode design for ion engine with improved efficiency  
[NASA-CASE-XNP-02839] c28 N70-41922
- Including didymium hydrate in nickel hydroxide of positive electrode of storage batteries to increase ampere hour capacity  
[NASA-CASE-XGS-03505] c03 N71-10608
- Apertured electrode focusing system for ion sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618
- Electromedical garment, applying vectorcardiologic type electrodes to human torsos for data recording during physical activity  
[NASA-CASE-IFR-10856] c05 N71-11189
- Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193
- Characteristics of pressed disc electrode for biological measurements  
[NASA-CASE-XMS-04212-1] c05 N71-12346
- Electrode connection for n-on-p silicon solar cell  
[NASA-CASE-XLE-04787] c03 N71-20492
- Arc electrode of graphite with tantalum ball tip  
[NASA-CASE-XLE-04788] c09 N71-22987

- Electrode sealing and insulation for fuel cells containing caustic liquid electrolytes using powdered plastic and metal  
[NASA-CASE-XMS-01625] c15 N71-23022
- Automatic recording McLeod gage with three electrodes and solenoid valve connection  
[NASA-CASE-XLE-03280] c14 N71-23093
- Dry electrode design with wire sandwiched between two flexible conductive discs for monitoring physiological responses  
[NASA-CASE-XRC-10029] c09 N71-24618
- Development and characteristics of electrodes in which poisoning by organic molecules is prevented by ion selective electrolytic deposition of hydrophilic protein colloid  
[NASA-CASE-XMS-04213-1] c09 N71-26002
- Adhesive spray process for attaching biomedical skin electrodes  
[NASA-CASE-XRF-07658-1] c05 N71-26293
- Electrodes having array of small surfaces for field ionization  
[NASA-CASE-ERC-10013] c09 N71-26678
- Manufacturing process for making perspiration resistant-stress resistant biopotential electrode  
[NASA-CASE-MS-C-90153-2] c05 N72-25120
- Dry electrode manufacture, using silver powder with cement  
[NASA-CASE-PRC-10029-2] c05 N72-25121
- Compressible electrolyte saturated sponge electrode for biomedical applications  
[NASA-CASE-MS-C-13648] c05 N72-27103
- Electrode with multiple columnar conductors for limiting field emission current  
[NASA-CASE-ERC-10015-2] c10 N72-27246
- Coaxial, high density, hypervelocity plasma generator and accelerator using electrodes  
[NASA-CASE-MFS-20589] c25 N72-32688
- Characteristics of ion rocket engine with combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c28 N73-24783
- Silicon carbide backward diode with coated lead attachment  
[NASA-CASE-ERC-10224-2] c09 N73-27150
- Porous electrode for use in electrochemical cells  
[NASA-CASE-GSC-11368-1] c09 N73-32108
- High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c33 N74-12913
- Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c44 N74-19692
- Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MS-C-14339-1] c05 N75-24716
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c44 N77-22606
- Snap-in compressible biomedical electrode  
[NASA-CASE-MS-C-14623-1] c52 N77-28717
- Cesium thermionic converters having improved electrodes  
[NASA-CASE-LEW-12038-3] c44 N78-25555
- ELECTROFORMING**  
Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c20 N74-32919
- ELECTROHYDRAULIC FORMING**  
Electric discharge apparatus for electrohydraulic explosive forming  
[NASA-CASE-XMF-00375] c15 N70-34249
- ELECTROHYDRODYNAMICS**  
Control valve for switching main stream of fluid from one stable position to another by means of electrohydrodynamic forces  
[NASA-CASE-NPO-10416] c12 N71-27332
- ELECTROKINETICS**  
Zeta potential flowmeter for measuring very slow to very high flows  
[NASA-CASE-XMF-06509] c14 N71-23226
- ELECTROLYSIS**  
Water electrolysis rocket engine with self-regulating stoichiometric fuel mixing regulator  
[NASA-CASE-XGS-08729] c28 N71-14044
- Operation method for combined electrolysis device and fuel cell using molten salt to produce power by thermoelectric regeneration mechanism  
[NASA-CASE-XLE-01645] c03 N71-20904
- Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c35 N78-25391
- ELECTROLYTES**  
Apparatus for measuring polymer membrane expansion in electrochemical cells  
[NASA-CASE-XGS-03865] c14 N69-21363
- Electrolytically regenerative hydrogen-oxygen fuel cells  
[NASA-CASE-XLE-04526] c03 N71-11052
- Sealed electrochemical cell with flexible casing for varying electrolyte level in cell  
[NASA-CASE-XGS-01513] c03 N71-23336
- Compressible electrolyte saturated sponge electrode for biomedical applications  
[NASA-CASE-MS-C-13648] c05 N72-27103
- ELECTROLYTIC CELLS**  
Heat activated cell with aluminum anode  
[NASA-CASE-LEW-11359-2] c03 N72-20034
- Actuator operated by electrolytic drive gas generator and evacuator  
[NASA-CASE-NPO-11369] c15 N73-13467
- Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c33 N75-27252
- Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MS-C-12568-1] c24 N76-14204
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c44 N79-14538
- ELECTROMAGNETIC ABSORPTION**  
Optical imaging system for increasing light absorption efficiency of imaging detector  
[NASA-CASE-ARC-10194-1] c23 N73-20741
- Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c35 N77-14411
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186
- ELECTROMAGNETIC FIELDS**  
Tumbling motion system for object demagnetization  
[NASA-CASE-XGS-02437] c15 N69-21472
- Device for high vacuum film deposition with electromagnetic ion steering  
[NASA-CASE-NPO-10331] c09 N71-26701
- Metal detection system with electromagnetic transmitter with single coil and receiver with single coil  
[NASA-CASE-ARC-10265-1] c10 N72-28240
- Low power electromagnetic flowmeter system producing zero output signal for zero flow  
[NASA-CASE-ARC-10362-1] c14 N73-32326
- Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c35 N74-21018
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411
- ELECTROMAGNETIC HAMMERS**  
Method and apparatus for shaping and joining large diameter metal tubes using magnetomotive forces  
[NASA-CASE-XMF-05114] c15 N71-17650
- Portable magnetomotive hammer for metal working  
[NASA-CASE-XMF-03793] c15 N71-24833
- ELECTROMAGNETIC INTERFERENCE**  
Sealed housing for protecting electronic equipment against electromagnetic interference  
[NASA-CASE-MS-C-12168-1] c09 N71-18600
- Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c27 N77-32308
- ELECTROMAGNETIC MEASUREMENT**  
Apparatus for measuring backscatter and transmission characteristics of sample segment of large spherical passive satellites  
[NASA-CASE-IGS-02608] c07 N70-41678
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c35 N78-28411
- ELECTROMAGNETIC NOISE**  
Development of idler feedback system to reduce electronic noise problem in two parametric amplifiers  
[NASA-CASE-LAR-10253-1] c09 N72-25258

- Audio equipment for removing impulse noise from audio signals  
[NASA-CASE-NPO-11631] c10 N73-12248
- Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-NFS-22729-1] c32 N76-21366
- ELECTROMAGNETIC PROPULSION**  
Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c09 N79-21084
- ELECTROMAGNETIC PUMPS**  
Multiducted electromagnetic pump for conductive liquids  
[NASA-CASE-NPO-10755] c15 N71-27084
- ELECTROMAGNETIC RADIATION**  
Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063
- Development of electromagnetic wave transmission line circulator and application to parametric amplifier circuits  
[NASA-CASE-XNP-02140] c09 N71-23097
- Left and right hand circular electromagnetic polarization excitation by phase shifter and hybrid networks  
[NASA-CASE-GSC-10021-1] c09 N71-24595
- Development of method for suppressing excitation of electromagnetic surface waves on dielectric converter antenna  
[NASA-CASE-XLA-10772] c07 N71-28980
- Characteristics of microwave antenna with conical reflectors to generate plane wave front  
[NASA-CASE-NPO-11661] c07 N73-14130
- Method and apparatus for measuring electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c14 N73-28488
- Multiple band circularly polarized antenna  
[NASA-CASE-MSC-18334-1] c32 N79-27348
- ELECTROMAGNETIC SHIELDING**  
Shielded flat conductor cable fabricated by electroless and electrolytic plating  
[NASA-CASE-NFS-13687] c09 N71-28691
- Wire stripper  
[NASA-CASE-FRC-10111-1] c37 N79-10419
- ELECTROMAGNETIC WAVE FILTERS**  
Design and characteristics of laser camera system with diffusion filter of small particles with average diameter larger than wavelength of laser light  
[NASA-CASE-NPO-10417] c16 N71-33410
- ELECTROMAGNETIC WAVE TRANSMISSION**  
Apparatus for measuring backscatter and transmission characteristics of sample segment of large spherical passive satellites  
[NASA-CASE-XGS-02608] c07 N70-41678
- Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c32 N79-10271
- ELECTROMAGNETISM**  
Electromagnetic braking arrangement for controlling rotor rotation in electric motor  
[NASA-CASE-XNP-06936] c15 N71-24695
- ELECTROMAGNETS**  
Oscillatory electromagnetic mirror drive system for horizon scanners  
[NASA-CASE-XLA-03724] c14 N69-27461
- Water cooled solenoid capable of producing magnetic field intensities up to 100 kilogauss  
[NASA-CASE-XNP-01951] c09 N70-41929
- Magnetic element position sensing device, using misaligned electromagnets  
[NASA-CASE-XGS-07514] c23 N71-16099
- Electroexplosive safe-arm initiator using electric driven electromagnetic coils and magnets to align charge  
[NASA-CASE-LAR-10372] c09 N71-18599
- Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c37 N75-18574
- ELECTROMECHANICAL DEVICES**  
Electromechanical actuator and its use in rocket thrust control valve  
[NASA-CASE-XNP-05975] c15 N69-23185
- Power controlled bimetallic electromechanical actuator for accurate, timely, and reliable response to remote control signal  
[NASA-CASE-XNP-09776] c09 N69-39929
- Electro-mechanical circuit for converting floating intelligence signal to common electrically grounded intelligence recorder  
[NASA-CASE-XAC-00086] c09 N70-33182
- Describing device for velocity control of electromechanical drive mechanism of scanning mirror of interferometer  
[NASA-CASE-XGS-03532] c14 N71-17627
- Mechanical actuator wherein linear motion changes to rotational motion  
[NASA-CASE-XGS-04548] c15 N71-24045
- Solid state force measuring electromechanical transducers made of piezoresistive materials  
[NASA-CASE-ERC-10088] c26 N71-25490
- Electromechanical control actuator system using double differential screws  
[NASA-CASE-ERC-10022] c15 N71-26635
- Miniature electromechanical junction transducer operating on piezjunction effect and utilizing epoxy for stress coupling component  
[NASA-CASE-ERC-10087] c14 N71-27334
- Service life of electromechanical device for generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248
- Mechanical actuator for producing mechanical force and/or motion in response to electrical signals  
[NASA-CASE-NPO-11738-1] c09 N73-30185
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c33 N77-26387
- Rotary electric device  
[NASA-CASE-GSC-12138-1] c33 N79-20314
- ELECTROMETERS**  
Vibrating element electrometer producing high conversion gain by input current control of elements resonant frequency displacement amplitude  
[NASA-CASE-XAC-02807] c09 N71-23021
- ELECTROMOTIVE FORCES**  
Heat activated emf cells with aluminum anode  
[NASA-CASE-LEW-11359] c03 N71-28579
- ELECTRON BEAM WELDING**  
Portable electron beam welding chamber  
[NASA-CASE-LEW-11531] c15 N71-14932
- Development of device to prevent high voltage arcing in electron beam welding  
[NASA-CASE-XNP-08522] c15 N71-19486
- ELECTRON BEAMS**  
Using electron beam switching for brushless motor commutation  
[NASA-CASE-XGS-01451] c09 N71-10677
- Electron beam scanning system for improved image definition and reduced power requirements for video signal transmission  
[NASA-CASE-ERC-10552] c09 N71-12539
- Electron beam deflection devices for measuring electric fields  
[NASA-CASE-XNP-10289] c14 N71-23699
- Apparatus to determine electric field strength by measuring deflection of electron beam impinging on target  
[NASA-CASE-XNP-06617] c09 N71-24843
- Characteristics of infrared photodetectors manufactured from semiconductor material irradiated by electron beam  
[NASA-CASE-LAR-10728-1] c14 N73-12445
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195
- Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c33 N74-21850
- Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c33 N75-27250
- ELECTRON BOMBARDMENT**  
Improved cathode containing barium carbonate block and heated tungsten screen for electron bombardment ion thruster  
[NASA-CASE-XLE-07087] c06 N69-39889
- Device and method for particle bombardment of specimens in electron microscope and measurement of beam intensities  
[NASA-CASE-XGS-01725] c14 N69-39982
- Electric rocket engine with electron bombardment ionization chamber  
[NASA-CASE-XNP-04124] c28 N71-21822
- Electronic cathodes for use in electron bombardment ion thrusters  
[NASA-CASE-XLE-04501] c09 N71-23190

- Single grid accelerator system for electron bombardment type ion thruster  
[NASA-CASE-XLE-10453-2] c28 N73-27699
- Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c35 N79-29492
- ELECTRON CAPTURE**  
Multistage depressed collector for dual node operation --- for travelling wave tubes  
[NASA-CASE-LEF-13282-1] c33 N79-32463
- ELECTRON DISTRIBUTION**  
Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156
- ELECTRON EMISSION**  
Vacuum thermionic converter with short-circuited triodes and increased electron transmission and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898
- ELECTRON FLUX DENSITY**  
Device and method for particle bombardment of specimens in electron microscope and measurement of beam intensities  
[NASA-CASE-XGS-01725] c14 N69-39982
- ELECTRON IRRADIATION**  
Electrostatic ion engines using high velocity electrons to ionize propellant  
[NASA-CASE-XLE-00376] c28 N70-37245
- ELECTRON MICROSCOPES**  
Device and method for particle bombardment of specimens in electron microscope and measurement of beam intensities  
[NASA-CASE-XGS-01725] c14 N69-39982  
Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c74 N75-12732  
Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c35 N77-14408
- ELECTRON PHOTON CASCADES**  
Resistive anode image converter  
[NASA-CASE-RQN-10876-1] c33 N76-27473
- ELECTRON PLASMA**  
Apparatus for producing highly conductive, high temperature electron plasma with homogenous temperature and pressure distribution  
[NASA-CASE-XLA-00147] c25 N70-34661
- ELECTRON SOURCES**  
Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c35 N77-14408
- ELECTRON TRANSPER**  
Method for treating metal surfaces to prevent secondary electron transmission  
[NASA-CASE-XNP-09469] c24 N71-25555
- ELECTRON TRANSITIONS**  
Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426
- ELECTRON TUBES**  
Direct radiation cooling of linear beam collector tubes  
[NASA-CASE-XNP-09227] c15 N69-24319  
Refractory filament series circuitry for radiant heater  
[NASA-CASE-XLE-00387] c33 N70-34812
- ELECTRON TUNNELING**  
Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c33 N75-31332
- ELECTRONIC CONTROL**  
Electronic and mechanical scanning control system for monopulse tracking antenna  
[NASA-CASE-XGS-05582] c07 N69-27460  
Electronic circuit system for controlling electric motor speed  
[NASA-CASE-XMF-01129] c09 N70-38712  
Scanning signal phase and amplitude electronic control device with hybrid T waveguide junction  
[NASA-CASE-NPO-10302] c10 N71-26142  
Ion beam deflector system for electronic thrust vector control for ion propulsion yaw, pitch, and roll forces  
[NASA-CASE-LEW-10689-1] c28 N71-26173  
Electronic detection system for peak acceleration limits in vibrational testing of spacecraft components  
[NASA-CASE-NPO-10556] c14 N71-27185  
Control and information system for digital telemetry data using analog converter to digitize sensed parameter values  
[NASA-CASE-NPO-11016] c08 N72-31226
- ELECTRONIC EQUIPMENT**  
Electronic and mechanical scanning control system for monopulse tracking antenna  
[NASA-CASE-XGS-05582] c07 N69-27460  
Development of pulse-activated polarographic hydrogen detector  
[NASA-CASE-XMF-06531] c14 N71-17575  
Development of stable electronic amplifier adaptable for monolithic and thin film construction  
[NASA-CASE-XGS-02812] c09 N71-19466  
Development and characteristics of oscillating static inverter  
[NASA-CASE-XGS-05289] c09 N71-19470  
Development of electromagnetic wave transmission line circulator and application to parametric amplifier circuits  
[NASA-CASE-XNP-02140] c09 N71-23097  
Development of optimum pre-detection diversity combining receiving system adapted for use with amplitude modulation, phase modulation, and frequency modulation systems  
[NASA-CASE-XGS-00740] c07 N71-23098  
Electronic cathodes for use in electron bombardment ion thrusters  
[NASA-CASE-XLE-04501] c09 N71-23190  
Method and apparatus for adjusting thermal conductance in electronic components for space use  
[NASA-CASE-XNP-05524] c33 N71-24876  
Development and characteristics of solid state acoustic variable time delay line using direct current voltage and radio frequency pulses  
[NASA-CASE-ERC-10032] c10 N71-25900  
Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244  
Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215  
Device for rapid adjustment and maintenance of temperature in electronic components  
[NASA-CASE-XNP-02792] c14 N71-28958  
Apparatus with summing network for compression of analog data by decreasing slope threshold sampling  
[NASA-CASE-NPO-10769] c08 N72-11171  
Readily assembled universal environment housing for electronic equipment  
[NASA-CASE-KSC-10031] c15 N72-22486  
Lead attachment for high temperature operation of electronic devices  
[NASA-CASE-ERC-10224] c09 N72-25261  
Development of method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c15 N72-25457  
Development and characteristics of data decoder to process convolution encoded information  
[NASA-CASE-NPO-11371] c08 N73-12177  
Characteristics of digital data processor using pulse from clock source to derive binary singles to show state of various indicators in processor  
[NASA-CASE-GSC-10975-1] c08 N73-13187  
Thermochromic compositions for detecting heat levels in electronic circuits and devices  
[NASA-CASE-NPO-10764-1] c14 N73-14428  
Development of phase control coupling for use with phased array antenna  
[NASA-CASE-ERC-10285] c10 N73-16206  
Device for locating electrically nonlinear objects and determining distance to object by FM signal transmission  
[NASA-CASE-KSC-10108] c14 N73-25461  
Electronic strain level counter on in-flight aircraft  
[NASA-CASE-LAR-10756-1] c32 N73-26910  
Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c32 N74-12912  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014  
Electronic analog divider  
[NASA-CASE-LEW-11881-1] c33 N77-17354

- Improved subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N79-15576
- Multistage depressed collector for dual node operation --- for travelling wave tubes  
[NASA-CASE-LEW-13282-1] c33 N79-32463
- ELECTRONIC EQUIPMENT TESTS**
- Apparatus for automatically testing analog to digital converters for open and short circuits  
[NASA-CASE-XLA-06713] c14 N71-28991
- Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c35 N75-12270
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c60 N79-27865
- ELECTRONIC FILTERS**
- Self-tuning electronic filter for maintaining constant bandwidth and center frequency gain  
[NASA-CASE-ARC-10264-1] c09 N73-20231
- Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c33 N74-32712
- Notch filter  
[NASA-CASE-MFS-23303-1] c32 N77-18307
- ELECTRONIC MODULES**
- Thermal conductive, electrically insulated cleavable adhesive connection between electronic module and heat sink  
[NASA-CASE-XMS-02087] c09 N70-41717
- Fabrication methods for matrices of solar cell submodules  
[NASA-CASE-INP-05821] c03 N71-11056
- Development and characteristics of cooling system to maintain temperature of rack mounted electronic modules  
[NASA-CASE-MSC-12389] c33 N71-29052
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c37 N74-32918
- Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c33 N77-30365
- Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c44 N78-25528
- Electronically scanned pressure sensor module with in SITU calibration capability  
[NASA-CASE-LAR-12230-1] c35 N79-14347
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c33 N79-24257
- ELECTRONIC PACKAGING**
- Electrical feedthrough connection for printed circuit boards  
[NASA-CASE-XMP-01483] c14 N69-27431
- Capacitor fabrication by solidifying mixture of ferromagnetic metal particles, nonferromagnetic particles, and dielectric material  
[NASA-CASE-LEW-10364-1] c09 N71-13522
- Method of evaluating moisture barrier properties of materials used in electronics encapsulation  
[NASA-CASE-NPO-10051] c18 N71-24934
- Electrical connections for thin film hybrid microcircuits  
[NASA-CASE-XMS-02182] c10 N71-28783
- Flexible, frangible electrochemical cell and package for operation in low temperature environment  
[NASA-CASE-XGS-10010] c03 N72-15986
- Development and characteristics of hermetically sealed coaxial package for containing microwave semiconductor components  
[NASA-CASE-GSC-10791-1] c15 N73-14469
- Techniques for packaging and mounting printed circuit boards  
[NASA-CASE-MFS-21919-1] c10 N73-25243
- Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c33 N74-12951
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c37 N74-32918
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c37 N79-33467
- ELECTRONIC RECORDING SYSTEMS**
- Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- ELECTRONIC TRANSDUCERS**
- Fiber optic transducers for monitoring and analysis of vibration in aerospace vehicles and onboard equipment  
[NASA-CASE-XMF-02433] c14 N71-10616
- Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597
- Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366
- Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c35 N77-21392
- Distributed-switch dicke radiometer  
[NASA-CASE-GSC-12219-1] c43 N78-22436
- ELECTROPHORESIS**
- Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c25 N74-26948
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744
- Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c25 N78-14104
- Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c25 N79-10163
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c25 N79-14169
- A method for separating biological cells  
[NASA-CASE-MFS-23883-1] c51 N79-21743
- ELECTROPHOTOMETERS**
- Method and photodetector device for locating abnormal voids in low density materials  
[NASA-CASE-MFS-20044] c14 N71-28993
- ELECTROPHYSIOLOGY**
- Dry electrode design with wire sandwiched between two flexible conductive discs for monitoring physiological responses  
[NASA-CASE-PRC-10029] c09 N71-24618
- ELECTROPLATING**
- Method of plating copper on aluminum to permit conventional soldering of structural aluminum bodies  
[NASA-CASE-XLA-08966-1] c17 N71-25903
- Shielded flat conductor cable fabricated by electroless and electrolytic plating  
[NASA-CASE-MFS-13687] c09 N71-28691
- Technique and equipment for sputtering using apertured electrode and pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c17 N73-24569
- ELECTROSTATIC CHARGE**
- Charged particle analyzer with periodically varying voltage applied across electrostatic deflection members  
[NASA-CASE-YAC-05506-1] c24 N71-16095
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c33 N75-18477
- Internal combustion engine with electrostatic discharging fuels  
[NASA-CASE-NPO-13798-1] c37 N77-25535
- ELECTROSTATIC ENGINES**
- Colloidal particle generator for electrostatic engine for propelling space vehicles  
[NASA-CASE-XLE-00817] c28 N70-33265
- Encapsulated heater forming hollow body for cathode used in ion thruster  
[NASA-CASE-LEW-10814-1] c28 N70-35422
- Electrostatic ion engines using high velocity electrons to ionize propellant  
[NASA-CASE-XLE-00376] c28 N70-37245
- Electron bombardment ion rocket engine with improved propellant introduction system  
[NASA-CASE-XLE-02066] c28 N71-15661
- ELECTROSTATIC GENERATORS**
- Electrostatic modulator for communicating through plasma sheath formed around spacecraft during reentry  
[NASA-CASE-XLA-01400] c07 N70-41331
- ELECTROSTATIC PRECIPITATORS**
- Zero gravity separator

[ NASA-CASE-LAR-10344-1] c35 N76-33470  
 Fine particulate capture device  
 [ NASA-CASE-LEW-11583-1] c35 N79-17192  
**ELECTROSTATIC PROBES**  
 Low impedance apparatus for measuring  
 electrostatic field intensity near space  
 vehicles  
 [ NASA-CASE-XLE-00820 ] c14 N71-16014  
**ELECTROSTATIC PROPULSION**  
 High voltage insulators for direct current in  
 acceleration system of electrostatic thruster  
 [ NASA-CASE-XLE-01902 ] c28 N71-10574  
 Electrostatic microthrust propulsion system with  
 annular slit colloid thruster  
 [ NASA-CASE-GSC-10709-1 ] c28 N71-25213  
**ELECTROSTATIC SHIELDING**  
 Ion beam thruster shield  
 [ NASA-CASE-LEW-12082-1 ] c20 N77-10148  
 Shielded conductor cable system  
 [ NASA-CASE-MSC-12745-1 ] c33 N77-13338  
**ELECTROSTATICS**  
 Controllable high voltage source having fast  
 settling time  
 [ NASA-CASE-GSC-11844-1 ] c33 N75-19522  
**ELECTROTHERMAL ENGINES**  
 Electrothermal rocket engine using resistance  
 heated heat exchanger  
 [ NASA-CASE-XLE-00267 ] c28 N70-33356  
 High resistance cross flow heat exchangers for  
 electrothermal rocket engines  
 [ NASA-CASE-XLE-01783 ] c28 N70-34175  
**ELEVATION**  
 Tracking mount for laser telescope employed in  
 tracking large rockets and space vehicles to  
 give information regarding azimuth and elevation  
 [ NASA-CASE-MFS-14017 ] c14 N71-26627  
 Automatic braking device for rapidly  
 transferring humans or materials from elevated  
 location  
 [ NASA-CASE-XKS-07814 ] c15 N71-27067  
**ELEVATORS (LIPTS)**  
 Centrifuge mounted motion simulator with  
 elevator mechanism  
 [ NASA-CASE-XAC-00399 ] c11 N70-34815  
 Guide member for stabilizing cable of open shaft  
 elevator  
 [ NASA-CASE-KSC-10513 ] c15 N72-25453  
**ELEVONS**  
 Supersonic or hypersonic vehicle control system  
 comprising elevons with hinge line sweep and  
 free of adverse aerodynamic cross coupling  
 [ NASA-CASE-XLA-08967 ] c02 N71-27088  
**ELLIPSES**  
 Ellipsograph for describing and cutting ellipses  
 with minimal axial dimensions  
 [ NASA-CASE-XLA-03102 ] c14 N71-21079  
**ELLIPSOIDMETERS**  
 Remote sensing of vegetation and soil using  
 microwave ellipsometry  
 [ NASA-CASE-GSC-11976-1 ] c43 N78-10529  
**ELONGATION**  
 Strain gage measurement of elongation due to  
 thermally and mechanically induced stresses  
 [ NASA-CASE-XGS-04478 ] c14 N71-24233  
 Amplifying ribbon extensometer  
 [ NASA-CASE-LAR-11825-1 ] c35 N77-22449  
**ELUTION**  
 Amino acid analysis  
 [ NASA-CASE-NPO-12130-1 ] c25 N75-14844  
**EMERGENCIES**  
 Silent alarm system for mutiple room facility or  
 school  
 [ NASA-CASE-NPO-11307-1 ] c10 N73-30205  
 Emergency space-suit helmet  
 [ NASA-CASE-MSC-10954-1 ] c54 N78-18761  
**EMERGENCY BREATHING TECHNIQUES**  
 Pulmonary resuscitation method and apparatus  
 with adjustable pressure regulator  
 [ NASA-CASE-XMS-01115 ] c05 N70-39922  
**EMERGENCY LIFE SUSTAINING SYSTEMS**  
 Development and characteristics of inflatable  
 structure to provide escape from orbit for  
 spacecrews under emergency conditions  
 [ NASA-CASE-XMS-06162 ] c31 N71-28851  
 Three transceiver lunar emergency system to  
 relay voice communication of astronaut  
 [ NASA-CASE-MFS-21042 ] c07 N72-25171  
 Emergency descent device  
 [ NASA-CASE-MFS-23074-1 ] c54 N77-21844

**EMISSION SPECTRA**  
 Emission spectroscopy method for contamination  
 monitoring of inert gas metal arc welding  
 [ NASA-CASE-XMP-02039 ] c15 N71-15871  
**EMITTANCE**  
 High thermal emittance black surface coatings  
 and process for applying to metal and metal  
 alloy surfaces used in radiative cooling of  
 spacecraft  
 [ NASA-CASE-XLA-06199 ] c15 N71-24875  
**EMITTERS**  
 Inverted geometry transistor for use with  
 monolithic integrated circuit  
 [ NASA-CASE-ARC-10330-1 ] c09 N73-32112  
**EMULSIONS**  
 Apparatus for obtaining isotropic irradiation on  
 film emulsion from parallel radiation source  
 [ NASA-CASE-MFS-20095 ] c24 N72-11595  
**ENAMELS**  
 Refractory porcelain enamel passive control  
 coating for high temperature alloys  
 [ NASA-CASE-MFS-22324-1 ] c27 N75-27160  
 Method for applying photographic resists to  
 otherwise incompatible substrates  
 [ NASA-CASE-HSC-18107-1 ] c35 N79-19319  
**ENCAPSULATING**  
 Development of bacteriostatic conformal coating  
 and methods of application  
 [ NASA-CASE-GSC-10007 ] c18 N71-16046  
 Flexible, repairable, pottable composition for  
 encapsulating electric connectors  
 [ NASA-CASE-XGS-05180 ] c18 N71-25881  
 Test chambers with orifice and helium mass  
 spectrometer for detecting leak rate of  
 encapsulated semiconductor devices  
 [ NASA-CASE-ERC-10150 ] c14 N71-28992  
 Electrically coupled individually encapsulated  
 solar cell matrix  
 [ NASA-CASE-NPO-11190 ] c03 N71-34044  
 Method of making encapsulated solar cell modules  
 [ NASA-CASE-LEW-12185-1 ] c44 N78-25528  
**ENCLOSURES**  
 Method and apparatus for bowing of instrument  
 panels to improve radio frequency shielded  
 enclosure  
 [ NASA-CASE-XMP-09422 ] c07 N71-19436  
 Totally confined explosive welding  
 [ NASA-CASE-LAR-10941-2 ] c37 N79-13364  
**ENDOSCOPES**  
 Borescope with adjustable hinged telescoping  
 optical system  
 [ NASA-CASE-MFS-15162 ] c14 N72-32452  
 Apparatus for endoscopic examination  
 [ NASA-CASE-NPO-14092-1 ] c52 N79-19678  
**ENDOTHERMIC REACTIONS**  
 Sensor device with switches for measuring  
 surface recession of charring and noncharring  
 ablators  
 [ NASA-CASE-XLA-01781 ] c14 N69-39975  
**ENEMY PERSONNEL**  
 Development of electronic detection system for  
 remotely determining number and movement of  
 enemy personnel  
 [ NASA-CASE-ARC-10097-2 ] c07 N73-25160  
**ENERGY ABSORPTION**  
 Non-reusable kinetic energy absorber for  
 application in soft landing of space vehicles  
 [ NASA-CASE-XLE-00810 ] c15 N70-34861  
 Low onset rate energy absorber in form of strut  
 assembly for crew couch of Apollo command module  
 [ NASA-CASE-MSC-12279-1 ] c15 N70-35679  
 Air brake device for absorbing and measuring  
 power from rotating shafts  
 [ NASA-CASE-XLE-00720 ] c14 N70-40201  
 Design and development of double acting shock  
 absorber for spacecraft docking operations  
 [ NASA-CASE-XMS-03722 ] c15 N71-21530  
 Nonreusable energy absorbing device comprising  
 ring member with plurality of recesses,  
 cutting members, and guide member mounted in  
 each recess  
 [ NASA-CASE-XMP-10040 ] c15 N71-22877  
 Suspended mass oscillation damper based on  
 impact energy absorption for damping wind  
 induced oscillations of tall stacks, antennas,  
 and umbilical towers  
 [ NASA-CASE-LAR-10193-1 ] c15 N71-27146  
 Energy absorption device in high precision gear  
 train for protection against damage to

- components caused by stop loads  
[NASA-CASE-XNP-01848] c15 N71-28959
- Shock absorber for use as protective barrier in impact energy absorbing system  
[NASA-CASE-NPO-10671] c15 N72-20443
- High energy absorption docking system design for docking large spacecraft  
[NASA-CASE-MFS-20863] c31 N73-26876
- Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c15 N73-30460
- ENERGY CONSERVATION**
- Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c15 N75-13007
- ENERGY CONVERSION**
- Thermoelectric power conversion by liquid metal flowing through magnetic field  
[NASA-CASE-XNP-00644] c03 N70-36803
- Concentrator device for controlling direction of solar energy onto energy converters  
[NASA-CASE-XLE-01716] c09 N70-40234
- Device for converting electromagnetic wave energy into electric power  
[NASA-CASE-GSC-11394-1] c09 N73-32109
- Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c36 N75-30524
- Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c37 N77-12402
- Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c44 N77-32581
- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c44 N77-32582
- Microwave power converter  
[NASA-CASE-NPO-14068-1] c44 N78-19609
- An improved solar energy receiver for a stirling engine  
[NASA-CASE-NPO-14619-1] c44 N79-20513
- ENERGY CONVERSION EFFICIENCY**
- Vacuum thermionic converter with short-circuited triodes and increased electron transmission and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898
- Direct conversion of thermal energy into electrical energy using crossed electric and magnetic fields  
[NASA-CASE-XLE-00212] c03 N70-34134
- Increasing power conversion efficiency of electronic amplifiers by power supply switching  
[NASA-CASE-XMS-00945] c09 N71-10798
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c44 N78-24608
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-1] c44 N78-25553
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N78-27520
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c44 N79-26475
- ENERGY DISSIPATION**
- Energy dissipating shock absorbing system for land payload recovery or vehicle braking  
[NASA-CASE-XLA-00754] c15 N70-34850
- Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c02 N77-10001
- Motion restraining device  
[NASA-CASE-NPO-13619-1] c37 N78-16369
- ENERGY DISTRIBUTION**
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c76 N76-20994
- ENERGY POLICY**
- Solar energy power system  
[NASA-CASE-MFS-21628-2] c44 N76-23675
- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c44 N76-31667
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c35 N77-20401
- Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28933
- Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c44 N77-32580
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599
- Microwave power converter  
[NASA-CASE-NPO-14068-1] c44 N78-19609
- Solar pond  
[NASA-CASE-NPO-13581-2] c44 N78-31525
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c44 N78-31526
- Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c44 N78-31527
- Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c44 N79-14529
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c44 N79-24432
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433
- ENERGY SOURCES**
- Energy source with tantalum capacitors in parallel and miniature silver oxide button cells for initiating pyrotechnic devices on spacecraft and rocket vehicles  
[NASA-CASE-LAR-10367-1] c03 N70-26817
- Pulse generator for synchronizing or resetting electronic signals without requiring separate external source  
[NASA-CASE-XGS-03632] c09 N71-23311
- Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c33 N75-19522
- ENERGY STORAGE**
- Switching mechanism with energy stored in coil spring  
[NASA-CASE-XGS-00473] c03 N70-38713
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331
- Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c52 N78-10686
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N78-23567
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c44 N78-24608
- A solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-3] c44 N78-25560
- Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c37 N79-10422
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c44 N79-18455
- ENERGY TECHNOLOGY**
- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c44 N77-32582
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c44 N78-33526
- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152
- Back wall solar cell  
[NASA-CASE-LEW-12236-2] c44 N79-14528
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433
- ENERGY TRANSFER**
- Solar energy absorber  
[NASA-CASE-MFS-22743-1] c44 N76-22657
- ENGINE ANALYZERS**
- Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c35 N79-14345
- ENGINE CONTROL**
- Direct current electromotive system for regenerative braking of electric motor  
[NASA-CASE-XMF-01096] c10 N71-16030
- Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c05 N75-12930
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c37 N78-25430
- ENGINE COOLANTS**
- Apparatus for cooling and injecting hypergolic propellants into combustion chamber of small rocket engine  
[NASA-CASE-XLE-00303] c15 N70-36535
- Injector manifold assembly for bipropellant rocket engines providing for fuel propellant to serve as coolant  
[NASA-CASE-XMP-00148] c28 N70-38710

## ENGINE DESIGN

Design and development of gas turbine combustion unit with nozzle guide vanes for introducing diluent air into combustion gases  
[NASA-CASE-XLE-103477-1] c28 N71-20330

Construction and method of arranging plurality of ion engines to form cluster thereby increasing efficiency and control by decreasing heat radiated to space  
[NASA-CASE-INP-02923] c28 N71-23081

Space vehicle system  
[NASA-CASE-MS-C-12561-1] c18 N76-17185

Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c07 N76-18131

Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179

Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c44 N78-33526

Solar engine --- Flat plate type  
[NASA-CASE-LAR-12148-1] c44 N79-29608

## ENGINE FAILURE

System for monitoring presence of neutrals in streams of ions - ion engine control  
[NASA-CASE-INP-02592] c24 N71-20518

## ENGINE INLETS

Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270

The engine air intake system  
[NASA-CASE-ARC-10761-1] c07 N77-18154

Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 N79-24976

## ENGINE MONITORING INSTRUMENTS

System for monitoring presence of neutrals in streams of ions - ion engine control  
[NASA-CASE-INP-02592] c24 N71-20518

## ENGINE NOISE

Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270

Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-1] c07 N77-15036

Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055

## ENGINE PARTS

Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c07 N78-17056

## ENGINE STARTERS

A portable device particularly suited for use in starting air-start units for aircraft  
[NASA-CASE-FRC-10113-1] c09 N78-19166

## ENGINE TESTS

Electric propulsion engine test chamber  
[NASA-CASE-XLE-00252] c11 N70-34844

## ENGINEERING DRAWINGS

High-temperature, high-pressure spherical segment valve  
[NASA-CASE-IAC-00074] c15 N70-34817

Graphic illustration of lifting body design  
[NASA-CASE-FRC-10063] c01 N71-12217

Specifications and drawings for semipassive optical communication system  
[NASA-CASE-XLA-01090] c07 N71-12389

Method of making molded electric connector for use with flat conductor cables  
[NASA-CASE-INP-03498] c15 N71-15986

## ENGINES

A phase-angle controller for stirling engines  
[NASA-CASE-NPO-14388-1] c37 N79-17217

## ENTHALPY

Measuring conductive heat flow and thermal conductivity of laminar gas stream in cylindrical plug to simulate atmospheric reentry  
[NASA-CASE-XLE-00266] c14 N70-34156

## ENTRAINMENT

Water separator  
[NASA-CASE-IMS-01295-1] c37 N79-21345

## ENVIRONMENT SIMULATION

Method and apparatus for applying compressional forces to skeletal structure of subject to simulate force during ambulatory conditions  
[NASA-CASE-ARC-10100-1] c05 N71-24738

Gravity environment simulation by locomotion and restraint aid for studying manual operation performance of astronauts at zero gravity  
[NASA-CASE-ARC-10153] c05 N71-28619

## ENVIRONMENT SIMULATORS

Space environment simulator for testing

spacecraft components under aerospace conditions  
[NASA-CASE-NPO-10141] c11 N71-24964

Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c09 N79-33220

## ENVIRONMENTAL CONTROL

Portable environmental control and life support system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-09632-1] c05 N71-11203

Portable apparatus producing high velocity annular air column surrounding low velocity, filtered, superclean air central core for industrial clean room environmental control  
[NASA-CASE-XHF-03212] c15 N71-22721

Development and characteristics of thermal sensitive panel for controlling ratio of solar absorptivity to surface emissivity for space vehicle temperature control  
[NASA-CASE-XLA-07728] c33 N71-22890

Dual solid cryogenics for spacecraft refrigeration insuring low temperature cooling for extended periods  
[NASA-CASE-GSC-10188-1] c23 N71-24725

Vibration control of flexible bodies in steady accelerating environment  
[NASA-CASE-LAR-10106-1] c15 N71-27169

Test chamber for determining decomposition and autoignition of materials used in spacecraft under controlled environmental conditions  
[NASA-CASE-KSC-10198] c11 N71-28629

Readily assembled universal environment housing for electronic equipment  
[NASA-CASE-KSC-10031] c15 N72-22486

Environmentally controlled suit for working in sterile chamber  
[NASA-CASE-LAR-10076-1] c05 N73-20137

Dual stage check valve for cryogenic supply systems used in space flight environmental control system  
[NASA-CASE-MS-C-13587-1] c15 N73-30459

Spacecraft with artificial gravity and earthlike atmosphere  
[NASA-CASE-LEW-11101-1] c31 N73-32750

## ENVIRONMENTAL ENGINEERING

Thermal control wall panel with application to spacecraft cabins  
[NASA-CASE-XLA-01243] c33 N71-22792

## ENVIRONMENTAL MONITORING

System for near real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c46 N78-17529

## ENVIRONMENTAL TESTS

Multisample test chamber for exposing materials to X rays, temperature change, and gaseous conditions and determination of material effects  
[NASA-CASE-IMS-02930] c11 N71-23042

Space suit using nonflexible material with low leakage and providing protection against thermal extremes, physical punctures, and radiation with high mobility articulation  
[NASA-CASE-IAC-07043] c05 N71-23161

Flammability test chamber for testing materials in certain predetermined environments  
[NASA-CASE-KSC-10126] c11 N71-24985

Multiaxes vibration device for making vibration tests along orthogonal axes of test specimen  
[NASA-CASE-MFS-20242] c14 N73-19421

## ENVIRONMENTS

Hermetically sealed elbow actuator for use in severe environments  
[NASA-CASE-MFS-14710] c09 N72-22195

## ENZYME ACTIVITY

Use of enzyme hexokinase and glucose to reduce inherent light levels of ATP in luciferase compositions  
[NASA-CASE-XGS-05533] c04 N69-27487

Enzymatic luminescent bioassay method for determining bacterial levels in urine  
[NASA-CASE-GSC-11092-2] c04 N73-27052

## ENZYMES

Protein sterilization of firefly luciferase without denaturation  
[NASA-CASE-GSC-10225-1] c06 N73-27086

## EPICYCLOIDS

Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c37 N79-20377

## EPITAXY

Method for the preparation of inorganic single crystal and polycrystalline electronic materials

- [NASA-CASE-XLE-02545-1] c76 N79-21910  
Schottky barrier cell and method of fabricating it  
[NASA-CASE-NPO-13689A] c33 N79-25311
- EPOXY COMPOUNDS**
- Synthesis of siloxane containing epoxy polymers with low dielectric properties  
[NASA-CASE-MFS-13994-1] c06 N71-11240
- Synthesis of siloxane containing epoxide and diamine polymers  
[NASA-CASE-MFS-13994-2] c06 N72-25148
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100
- EPOXY RESINS**
- Nonmagnetic hermetically sealed battery case made of epoxy resin and woven glass tape for use with electrochemical cells in spacecraft  
[NASA-CASE-XGS-00886] c03 N71-11053
- Epoxy resin sealing device for electrochemical cells in high vacuum environments  
[NASA-CASE-XGS-02630] c03 N71-22974
- Cold metal hydroforming techniques using epoxy molds for counteracting creep or stretch  
[NASA-CASE-XLE-05641-1] c15 N71-26346
- Miniature electromechanical junction transducer operating on piezjunction effect and utilizing epoxy for stress coupling component  
[NASA-CASE-ERC-10087] c14 N71-27334
- Infusible polymer production from reaction of polyfunctional epoxy resins with polyfunctional aziridine compounds  
[NASA-CASE-NPO-10701] c06 N71-28620
- Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c24 N74-30001
- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c27 N76-16230
- Curing agent for polyepoxides and epoxy resins and composites cured therewith  
[NASA-CASE-LEW-13226-1] c23 N79-31345
- EQUIPMENT**
- Bi-metallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c35 N74-15126
- EQUIPMENT SPECIFICATIONS**
- Differential pressure cell insensitive to changes in ambient temperature and extreme overload  
[NASA-CASE-XAC-00042] c14 N70-34816
- High-temperature, high-pressure spherical segment valve  
[NASA-CASE-XAC-00074] c15 N70-34817
- Remote-reading torque meter for use where high horsepower are transmitted at high rotative speeds  
[NASA-CASE-XLE-00503] c14 N70-34818
- Magnetically centered liquid column float  
[NASA-CASE-XAC-00030] c14 N70-34820
- Electric propulsion engine test chamber  
[NASA-CASE-XLE-00252] c11 N70-34844
- Channel-type shell construction for rocket engines and related configurations  
[NASA-CASE-XLE-00144] c28 N70-34860
- Non-reusable kinetic energy absorber for application in soft landing of space vehicles  
[NASA-CASE-XLE-00810] c15 N70-34861
- Slit regulated gas journal bearing  
[NASA-CASE-XNP-00476] c15 N70-38620
- Specifications and drawings for semipassive optical communication system  
[NASA-CASE-XLA-01090] c07 N71-12389
- Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-XMP-06589] c05 N71-23159
- Development of vortex fluid amplifier for throttling rocket exhaust  
[NASA-CASE-LEW-10374-1] c28 N73-13773
- Simplified technique and device for producing industrial grade synthetic diamonds  
[NASA-CASE-MFS-20698-2] c15 N73-19457
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c09 N74-19528
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744
- Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c35 N76-15434
- Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c33 N78-27326
- EQUIPOTENTIALS**
- Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195
- Instrument for measuring potentials on two dimensional electric field plot  
[NASA-CASE-XLA-08493] c10 N71-19421
- ERGOMETERS**
- Development of restraint system for securing personnel to ergometer while exercising under weightless conditions  
[NASA-CASE-MFS-21046-1] c14 N73-27377
- Versatile ergometer with work load control  
[NASA-CASE-MFS-21109-1] c05 N73-27941
- Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices  
[NASA-CASE-MFS-21010-1] c05 N73-30078
- Pneumatic foot pedal operated fluidic exercising device  
[NASA-CASE-MSC-11561-1] c05 N73-32014
- Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c35 N75-15932
- EROSION**
- Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206
- ERROR ANALYSIS**
- Development of computer program for estimating reliability of self-repair and fault-tolerant systems with respect to selected system and mission parameters  
[NASA-CASE-NPO-13086-1] c15 N73-12495
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-10263
- ERROR CORRECTING DEVICES**
- Error correction circuitry for binary signal channels  
[NASA-CASE-XNP-03263] c09 N71-18843
- Multiplexed communication system design including automatic correction of transmission errors introduced by frequency spectrum shifts  
[NASA-CASE-XNP-01306] c07 N71-20814
- Description of error correcting methods for use with digital data computers and apparatus for encoding and decoding digital data  
[NASA-CASE-XNP-02748] c08 N71-22749
- Failure detection and control means for improved drift performance of a gimballed platform system  
[NASA-CASE-MFS-23551-1] c04 N76-26175
- Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c37 N77-19457
- ERROR DETECTION CODES**
- Self testing and repairing computer comprising control and diagnostic unit and rollback points for error correction  
[NASA-CASE-NPO-10567] c08 N71-24633
- Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c33 N79-23347
- ERROR SIGNALS**
- Error correction circuitry for binary signal channels  
[NASA-CASE-XNP-03263] c09 N71-18843
- Feedback controller for sampling error signals within single control formulation time interval  
[NASA-CASE-GSC-10554-1] c08 N71-29033
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c32 N79-10263
- ERRORS**
- Analogue to digital converter using offset voltage to eliminate errors  
[NASA-CASE-MSC-13110-1] c08 N72-22163
- ESCAPE CAPSULES**
- Aerial capsule emergency separation device using jettisonable towers  
[NASA-CASE-XLA-00115] c03 N70-33343
- Emergency escape cabin system for launch towers  
[NASA-CASE-XKS-02342] c05 N71-11199

- Spacecraft design with single point aerodynamic and hydrodynamic stability for emergency transport of men from space station to splashdown  
[NASA-CASE-MSC-13281] c31 N72-18859
- ESCAPE SYSTEMS**  
Design and specifications of emergency escape system for spacecraft structures  
[NASA-CASE-MSC-12086-1] c05 N71-12345  
Automatic braking device for rapidly transferring humans or materials from elevated location  
[NASA-CASE-XKS-07814] c15 N71-27067
- ESCHERICHIA**  
Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c51 N78-22588
- ESTERS**  
Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature  
[NASA-CASE-MFS-21040-1] c06 N73-30098
- ETCHING**  
Reusable masking boot for chemical machining operations  
[NASA-CASE-XNP-02092] c15 N70-42033  
Development of method for etching copper  
[NASA-CASE-XGS-06306] c17 N71-16044  
Composition and process for improving definition of resin masks used in chemical etching  
[NASA-CASE-XGS-04993] c14 N71-17574  
Etching aluminum alloys with aqueous solution containing sulfuric acid, hydrofluoric acid, and an alkali metal dichromate for adhesive bonding  
[NASA-CASE-XMP-02303] c17 N71-23828  
Selective plating of etched circuits without removing previous plating  
[NASA-CASE-XGS-03120] c15 N71-24047  
Nickel plating onto etched aluminum castings  
[NASA-CASE-XNP-04148] c17 N71-24830  
Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c31 N74-23065  
Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c35 N79-19319  
Method for anisotropically etching a silicon wafer having a reinforced peripheral portion  
[NASA-CASE-NPO-14482-1] c44 N79-25511
- ETHANE**  
Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-1] c23 N78-22154  
Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-2] c23 N78-22155
- ETHERS**  
Method for producing alternating ether-siloxane copolymers with stable properties when exposed to elevated temperatures and UV radiation  
[NASA-CASE-XNP-02584] c06 N71-20905  
Chemical synthesis of hydroxy terminated perfluoro ethers as intermediates for highly fluorinated polyurethane resins  
[NASA-CASE-NPO-10768] c06 N71-27254  
Formation of polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c06 N72-27144
- ETHYLENE OXIDE**  
Using ethylene oxide in preparation of sterilized solid rocket propellants and encapsulating materials  
[NASA-CASE-XNP-01749] c27 N70-41897  
Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XNP-09763] c14 N71-20461  
A system for sterilizing objects --- such as water systems on the space shuttle using ethylene oxide  
[NASA-CASE-KSC-11085-1] c54 N79-33848
- EUTECTIC ALLOYS**  
Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c37 N75-15992  
Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c24 N77-27187
- Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c26 N77-32279  
Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c26 N78-18183  
Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c24 N79-25143
- EVACUATING (VACUUM)**  
Filling honeycomb matrix with deaerated paste filler  
[NASA-CASE-XHS-01108] c15 N69-24322  
Sealing evacuation port and evacuating vacuum container such as space jackets  
[NASA-CASE-INP-03290] c15 N71-23256  
Gas leak detection in evacuated systems using ultraviolet radiation probe  
[NASA-CASE-ERC-10034] c15 N71-24896  
Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c31 N75-13111
- EVAPORATION**  
Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483
- EVAPORATIVE COOLING**  
Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c34 N77-19353
- EVAPORATORS**  
Spatter proof evaporant source design for use in vacuum deposition of solid thin films on substrates  
[NASA-CASE-XNP-06065] c15 N71-20395  
Means of vapor deposition using electric current and evaporator filament  
[NASA-CASE-LAR-10541-1] c15 N72-32487
- EXAMINATION**  
Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c76 N78-24950
- EXCLUSION**  
Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c07 N78-25090
- EXHAUST GASES**  
Device for adding water to high velocity exhaust jets to reduce velocity, noise, and temperature  
[NASA-CASE-XMP-01813] c28 N70-41582  
Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c07 N74-15453  
Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c07 N74-33218  
Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c34 N76-18364  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c07 N78-27122  
High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c28 N79-28342
- EXHAUST NOZZLES**  
High thrust annular liquid propellant rocket engine and exhaust nozzle design  
[NASA-CASE-XLE-00078] c28 N70-33284  
Exhaust nozzle with afterburning for generating thrust  
[NASA-CASE-XLA-00154] c28 N70-33374  
Penshaped, supersonic exhaust nozzle design  
[NASA-CASE-XLE-00057] c28 N70-38711  
Automatic ejection valve for attitude control and midcourse guidance of space vehicles  
[NASA-CASE-XNP-00676] c15 N70-38996  
Jet aircraft exhaust nozzle for noise reduction  
[NASA-CASE-LAR-10951-1] c28 N73-19819  
Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c07 N78-27121  
Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c07 N79-14097
- EXOTHERMIC REACTIONS**  
Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215
- EXPANDABLE STRUCTURES**  
Expanding and contracting connector strip for solar cell array of Nimbus satellite  
[NASA-CASE-XGS-01395] c03 N69-21539

- Method of compactly packaging centrifugally expandable lightweight flexible reflector satellite  
[NASA-CASE-XLA-00138] c31 N70-37981
- Poldable conduit capable of springing back as self erecting structural member  
[NASA-CASE-XLE-00620] c32 N70-41579
- Collapsible high gain antenna which can be automatically expanded to operating state  
[NASA-CASE-KSC-10392] c07 N73-26117
- Expandable space frames with high expansion to collapse ratio  
[NASA-CASE-ERC-10365-1] c31 N73-32749
- Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c33 N74-22865
- EXPANSION**  
Apparatus for measuring polymer membrane expansion in electrochemical cells  
[NASA-CASE-XGS-03865] c14 N69-21363
- EXPERIMENTAL DESIGN**  
Efficient operation of improved hydrofoil design  
[NASA-CASE-XLA-00229] c12 N70-33305
- Sealed electric storage battery with gas manifold interconnecting each cell  
[NASA-CASE-XNP-03378] c03 N71-11051
- Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193
- Conditioning suit for normal function of astronaut cardiovascular system in gravity environment  
[NASA-CASE-XLA-02898] c05 N71-20268
- Space suit using nonflexible material with low leakage and providing protection against thermal extremes, physical punctures, and radiation with high mobility articulation  
[NASA-CASE-XAC-07043] c05 N71-23161
- EXPIRED AIR**  
Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750
- EXPLOSIONS**  
Device for detection of combustion light preceding gaseous explosions  
[NASA-CASE-LAR-10739-1] c14 N73-16484
- EXPLOSIVE DEVICES**  
Stage separation using remote control release of joint with explosive insert  
[NASA-CASE-XLA-02854] c15 N69-27490
- Hermetically sealed explosive release mechanism for actuator device  
[NASA-CASE-IGS-00824] c15 N71-16078
- Development of non-magnetic indexing device for orienting magnetic flux sensing instrument in magnetic field without generation of detrimental magnetic fields  
[NASA-CASE-XGS-02422] c15 N71-21529
- Development of apparatus for detonating explosive devices in order to determine forces generated and detonation propagation rate  
[NASA-CASE-LAR-10800-1] c33 N72-27959
- Development and characteristics of squib actuated explosive disconnect for spacecraft release from launch vehicle  
[NASA-CASE-NPO-11330] c33 N73-26958
- A pressure limiting propellant actuating system  
[NASA-CASE-MSC-16179-1] c20 N78-31162
- EXPLOSIVE FORMING**  
Electric discharge apparatus for electrohydraulic explosive forming  
[NASA-CASE-XNF-00375] c15 N70-34249
- EXPLOSIVE WELDING**  
Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c37 N74-21057
- Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c37 N75-12326
- Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c37 N79-13364
- EXPLOSIVES**  
Production of intermetallic compounds by effect of shock waves from explosions and compaction of powder  
[NASA-CASE-MPS-20861-1] c18 N73-32437
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 N74-27425
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c28 N79-11231
- EXPONENTIAL FUNCTIONS**  
Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c08 N72-20176
- EXPOSURE**  
Mechanical exposure interlock device for preventing film overexposure in oscilloscope camera  
[NASA-CASE-LAR-10319-1] c14 N73-32322
- Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c35 N78-15461
- EXPULSION BLADDERS**  
Expulsion bladder equipped storage tank structure  
[NASA-CASE-XNP-00612] c11 N70-38182
- Rubber composition for expulsion bladders and diaphragms for use with hydrazine  
[NASA-CASE-NPO-11433] c18 N71-31140
- EXTENSIONS**  
Support for flexible conductor cable between drawers or racks holding electronic equipment and cabinet assembly housing drawers or racks  
[NASA-CASE-XNP-07587] c15 N71-18701
- EXTENSOMETERS**  
Transducer frame for use with extensometer to continuously monitor specimen sample  
[NASA-CASE-XLA-10322] c15 N72-17452
- Conductive elastomeric extensometer  
[NASA-CASE-MPS-21049-1] c52 N74-27864
- Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c35 N77-22449
- Laser extensometer  
[NASA-CASE-MPS-19259-1] c36 N78-14380
- EXTRACTION**  
Liquid-gas separator adapted for use in zero gravity environment - drawings  
[NASA-CASE-XMS-01624] c15 N70-40062
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c37 N79-33467
- EXTRAVEHICULAR ACTIVITY**  
Portable environmental control and life support system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-09632-1] c05 N71-11203
- Hand-held maneuvering unit for propulsion and attitude control of astronauts in zero or reduced gravity environment  
[NASA-CASE-XMS-05304] c05 N71-12336
- Internal and external serpentine devices for performing physical operations around orbital space stations  
[NASA-CASE-XNF-05344] c31 N71-16345
- Peelable, pin-type fastener, easily operated during EVA  
[NASA-CASE-ARC-10140-1] c15 N71-17653
- Design and development of flexible tunnel for use by spacecrews in performing extravehicular activities  
[NASA-CASE-MSC-12243-1] c05 N71-24728
- Open loop life support subsystem using breathing bag as reservoir for EVA  
[NASA-CASE-MSC-12411-1] c05 N72-20096
- Intra- and extravehicular life support space suite for Apollo astronauts  
[NASA-CASE-MSC-12609-1] c05 N73-32012
- EXTREMELY LOW RADIO FREQUENCIES**  
VHF/UHF parasitic probe antenna for spacecraft communication  
[NASA-CASE-XKS-09340] c07 N71-24614
- EXTRUDING**  
Hydrostatic extrusion of refractory materials using simple press  
[NASA-CASE-NPO-10811] c15 N71-34425
- Extrusion can for extruding ceramics under heat and pressure  
[NASA-CASE-NPO-10812] c15 N73-13464
- Brazing alloy binder  
[NASA-CASE-XNF-05868] c26 N75-27125
- EYE (ANATOMY)**  
Sight switch using infrared source and sensor mounted beside eye  
[NASA-CASE-XNF-03934] c09 N71-22985
- Ultrasonic device for ophthalmic eye surgery with safe removal of macerated material  
[NASA-CASE-LEW-11669-1] c05 N73-27062
- Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c04 N77-12031

- Corneal seal device  
[NASA-CASE-LEW-12258-1] c52 N77-28716
- EYE EXAMINATIONS**  
Automated visual sensitivity tester for determining visual field sensitivity and blind spot size  
[NASA-CASE-ARC-10329-1] c05 N73-26072  
Multiparameter vision testing apparatus  
[NASA-CASE-MS-C-13601-2] c54 N75-27759  
Visual examination apparatus  
[US-PATENT-RE-28,921] c52 N76-30793
- EYEPIECES**  
Wide angle eyepiece with long eye-relief distance  
[NASA-CASE-XMS-06056-1] c23 N71-24857
- F**
- FABRICATION**  
Fabrication of pressure-telemetry transducers  
[NASA-CASE-XNP-09752] c14 N69-21541  
Fabrication method for lightweight regeneratively cooled combustion chamber of channel construction  
[NASA-CASE-XLE-00150] c28 N70-41818  
Fabrication methods for matrices of solar cell submodules  
[NASA-CASE-XNP-05821] c03 N71-11056  
Capacitor fabrication by solidifying mixture of ferromagnetic metal particles, nonferromagnetic particles, and dielectric material  
[NASA-CASE-LEW-10364-1] c09 N71-13522  
Method and apparatus for fabricating solar cell panels  
[NASA-CASE-XNP-03413] c03 N71-26726  
Fabrication of root cord restrained fabric suit sections from sheets of fabric  
[NASA-CASE-MSC-12398] c05 N72-20098  
Method of fabricating equal length insulated wire  
[NASA-CASE-PRC-10038] c15 N72-20444  
Development of thin film temperature sensor from TaO  
[NASA-CASE-NPO-11775] c26 N72-28761  
Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c44 N76-28635  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28933  
Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262  
Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c44 N79-17314  
Method for fabricating solar cells having integrated collector grids  
[NASA-CASE-LEW-12819-2] c44 N79-18444  
An improved solar panel and method for fabricating the same  
[NASA-CASE-NPO-14490-1] c44 N79-18445  
Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c44 N79-18446  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431
- FABRICS**  
Fabrication of root cord restrained fabric suit sections from sheets of fabric  
[NASA-CASE-MSC-12398] c05 N72-20098  
Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c35 N77-22449  
Nozzle extraction process and handlemeter for measuring handle  
[NASA-CASE-LAR-12147-1] c31 N79-11246
- FABRY-PEROT INTERFEROMETERS**  
Fabry-Perot interferometer retrodirective reflector modulator for optical communication  
[NASA-CASE-XGS-04480] c16 N69-27491
- FACSIMILE COMMUNICATION**  
Restoration and improvement of demodulated facsimile video signals  
[NASA-CASE-GSC-10185-1] c07 N72-12081  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613
- FACTORIAL DESIGN**  
Space suit with pressure-volume compensator system  
[NASA-CASE-XLA-05332] c05 N71-11194
- Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195
- FAIL-SAFE SYSTEMS**  
Fail-safe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c09 N72-25262  
Latch mechanism  
[NASA-CASE-MSC-12549-1] c37 N74-27903  
Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c44 N79-14527  
Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254
- FAILURE ANALYSIS**  
Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c39 N79-22537
- FAILURE MODES**  
Method for reducing mass of ball bearings for long life operation at high speed  
[NASA-CASE-LEW-10856-1] c15 N72-22490  
Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c35 N74-18090
- PAIRINGS**  
System for deploying and ejecting releasable clamshell fairing sections from spinning sounding rockets  
[NASA-CASE-GSC-10590-1] c31 N73-14853
- FALLING SPHERES**  
Device for determining acceleration of gravity by interferometric measurement of travel of falling body  
[NASA-CASE-XNP-05844] c14 N71-17587
- FAR INFRARED RADIATION**  
Collimator for analyzing spatial location of near and distant sources of radiation  
[NASA-CASE-MPS-20546-2] c14 N73-30389
- FAR ULTRAVIOLET RADIATION**  
Transient heat transfer gage for measuring total radiant intensity from far ultraviolet and ionized high temperature gases  
[NASA-CASE-XNP-09802] c33 N71-15641
- FASTENERS**  
Force measuring instrument for structural members, particularly fastening bolts or studs  
[NASA-CASE-XNF-00456] c14 N70-34705  
Lightweight life preserver without fastening devices  
[NASA-CASE-XMS-00864] c05 N70-36493  
Nut and bolt fastener permitting all-directional movement of skin sections with respect to supporting structure  
[NASA-CASE-XLA-01807] c15 N71-10799  
Releasable, pin-type fastener, easily operated during EVA  
[NASA-CASE-ARC-10140-1] c15 N71-17653  
Ultrasonic wrench for applying vibratory energy to mechanical fasteners  
[NASA-CASE-MPS-20586] c15 N71-17686  
Design and development of electric connectors for rigid and semirigid coaxial cables  
[NASA-CASE-XNP-04732] c09 N71-20851  
Design, development, and characteristics of latching mechanism for operation in limited access areas  
[NASA-CASE-XMS-03745] c15 N71-21076  
Design and development of module joint clamping device for application to solar array construction  
[NASA-CASE-XNP-02341] c15 N71-21531  
Threadless fastener apparatus comprising receiving apertures for plurality of articles, self-locked condition, and capable of using nonmalleable materials in both ends  
[NASA-CASE-XPR-05302] c15 N71-23254  
Development of resilient fastener for attaching skin of aerospace vehicles to permit movement of skin relative to framework  
[NASA-CASE-XLA-01027] c31 N71-24035  
Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975  
Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c54 N78-17678  
Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c37 N79-33467

## FATIGUE (MATERIALS)

Servocontrol system for measuring local stresses at geometric discontinuity in stressed material [NASA-CASE-XLA-08530] c32 N71-25360

TV fatigue crack monitoring system [NASA-CASE-LAR-11490-1] c39 N78-16387

**FATIGUE LIFE**

Fatigue resistant shear pin with hollow shaft and two plugs [NASA-CASE-XLA-09122] c15 N69-27505

Improving load capacity and fatigue life of rolling element systems in rockets and missiles [NASA-CASE-XLE-02999] c15 N71-16052

Method for reducing mass of ball bearings for long life operation at high speed [NASA-CASE-LEW-10856-1] c15 N72-22490

Fatigue life of hybrid antifriction bearings at ultrahigh speeds [NASA-CASE-LEW-11152-1] c15 N73-32359

Machine for use in monitoring fatigue life for a plurality of elastomeric specimens [NASA-CASE-NPO-13731-1] c39 N78-10493

**FATIGUE TESTING MACHINES**

Cryostat for use with horizontal fatigue testing machines at low temperatures [NASA-CASE-XMF-10968] c14 N71-24234

Fatigue testing apparatus with light shield and infrared reflector for high temperature evaluation of loaded sheet samples [NASA-CASE-XLA-01782] c14 N71-26136

**FATIGUE TESTS**

Fatigue testing device applying random discrete load levels to test specimen and applicable to aircraft structures [NASA-CASE-XLA-02131] c32 N70-42003

Fatigue failure load indicator [NASA-CASE-LAR-12027-1] c39 N79-22537

**FATS**

Oil and fat absorbing polymers [NASA-CASE-NPO-11609-2] c27 N77-31308

**FECS**

Fecal waste disposal container [NASA-CASE-XMS-06761] c05 N69-23192

**FEED SYSTEMS**

Nonconductive tube as feed system for plasma thruster [NASA-CASE-XLE-02902] c25 N71-21694

Method and apparatus for pressurizing propellant tanks used in propulsion motor feed system [NASA-CASE-XNP-00650] c27 N71-28929

Pressurized tank for feeding liquid waste into processing equipment [NASA-CASE-LAR-10365-1] c05 N72-27102

Pressurized inert gas feed for lighting system [NASA-CASE-KSC-10644] c09 N72-27227

Dual frequency feed systems for Cassegrainian antennas [NASA-CASE-NPO-13091-1] c09 N73-12214

Improved injector with porous plug for bubbles of gas into feed lines of electrically conductive liquid [NASA-CASE-NPO-11377] c15 N73-27406

Liquid reactant feeder for arc assisted metal reduction reactor [NASA-CASE-NPO-14382-1] c25 N78-22186

**FEEDBACK**

RC networks with voltage amplifier, RC input circuit, and positive feedback [NASA-CASE-ARC-10020] c10 N72-17172

Multistage feedback shift register with states decomposable into cycles of equal length [NASA-CASE-NPO-11082] c08 N72-22167

Inverter oscillator with voltage feedback [NASA-CASE-NPO-10760] c09 N72-25254

A pitch attitude stabilization system utilizing engine pressure ratio feedback signals [NASA-CASE-LAR-12562-1] c08 N79-20135

**FEEDBACK AMPLIFIERS**

Development of system with electrical properties which vary with changes in temperature for use with feedback loop in operational amplifier circuit [NASA-CASE-MS-C-13276-1] c14 N71-27058

Phase locked demodulator with bandwidth switching amplifier circuit [NASA-CASE-INP-01107] c10 N71-28859

Monostable multivibrator for producing output pulse widths with positive feedback NOR gates [NASA-CASE-MS-C-13492-1] c10 N71-28860

## FEEDBACK CIRCUITS

Low power drain transistor feedback circuit [NASA-CASE-XGS-04999] c09 N69-24317

Linear three-tap feedback shift register [NASA-CASE-NPO-10351] c08 N71-12503

Frequency control network for current feedback oscillators converting dc voltage to ac or higher dc voltages [NASA-CASE-GSC-10041-1] c10 N71-19418

Feedback integrating circuit with grounded capacitor for signal processing [NASA-CASE-XAC-10607] c10 N71-23669

Development of idler feedback system to reduce electronic noise problem in two parametric amplifiers [NASA-CASE-LAR-10253-1] c09 N72-25258

Linear shift register with feedback logic for generating pseudonoise linear recurring binary sequences [NASA-CASE-NPO-11406] c08 N73-12175

Logarithmic circuit with wide dynamic range [NASA-CASE-GSC-12145-1] c33 N78-32339

**FEEDBACK CONTROL**

Describing continuous analog to digital converter with parallel digital output and nonlinear feedback [NASA-CASE-XAC-04031] c08 N71-18594

Pulsed magnetic core memory element with blocking oscillator feedback for interrogation without loss of digital information [NASA-CASE-XGS-03303] c08 N71-18595

Binary to decimal decoder logic circuit design with feedback control and display device [NASA-CASE-XKS-06167] c08 N71-24890

Feedback control for direct current motor to achieve constant speed under varying loads [NASA-CASE-MFS-14610] c09 N71-28886

Feedback controller for sampling error signals within single control formulation time interval [NASA-CASE-GSC-10554-1] c08 N71-29033

Closed loop servosystem for variable speed tape recorders onboard spacecraft [NASA-CASE-NPO-10700] c07 N71-33613

Development of aerodynamic control system to control flutter over large range of oscillatory frequencies using stability augmentation techniques [NASA-CASE-LAR-10682-1] c02 N73-26004

Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation [NASA-CASE-HQN-10792-1] c33 N74-11049

Diffused waveguiding capillary tube with distributed feedback for a gas laser [NASA-CASE-NPO-13544-1] c36 N76-18428

The dc-to-dc converters employing staggered-phase power switches with two-loop control [NASA-CASE-NPO-13512-1] c33 N77-10428

System and method for tracking a signal source --- employing feedback control [NASA-CASE-HQN-10880-1] c17 N78-17140

Closed loop spray cooling apparatus --- for particle accelerator targets [NASA-CASE-LEW-11981-1] c31 N78-17237

Wide power range microwave feedback controller [NASA-CASE-GSC-12146-1] c33 N78-32340

Discriminator aided phase lock acquisition for suppressed carrier signals [NASA-CASE-NPO-14311-1] c32 N79-14276

**FEEDBACK FREQUENCY MODULATION**

Method and apparatus for communicating through ionized layer of gases surrounding spacecraft during reentry into planetary atmospheres [NASA-CASE-XLA-01127] c07 N70-41372

Characteristics of data-aided carrier tracking loop used for tracking carrier in angle modulated communications system [NASA-CASE-NPO-11282] c10 N73-16205

Linear phase demodulator including a phase locked loop with auxiliary feedback loop [NASA-CASE-GSC-12018-1] c33 N77-14334

**FEEDERS**

Automatic real-time pair-feeding system for animals [NASA-CASE-ARC-10302-1] c51 N74-15778

**FEET (ANATOMY)**

Drop foot corrective device [NASA-CASE-LAR-12259-1] c54 N78-18762

- FEELS**  
Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c27 N79-12221
- FEMALES**  
Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c52 N77-14736  
Urine collection device  
[NASA-CASE-MSC-16433-1] c52 N78-27750  
Urine collection apparatus  
[NASA-CASE-MSC-18381-1] c52 N79-23657
- FERRITES**  
Magnetic recording head composed of ferrite core coated with thin film of aluminum-iron-silicon alloy  
[NASA-CASE-GSC-10097-1] c08 N71-27210  
Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c24 N75-13032  
Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MPS-22907-1] c26 N76-18257
- FERROMAGNETIC MATERIALS**  
Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c34 N78-17335
- FERROMAGNETISM**  
High temperature ferromagnetic cobalt-base alloy for electrical power generating equipment  
[NASA-CASE-XLE-03629] c17 N71-23248
- FIBER COMPOSITES**  
Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c24 N79-24062
- FIBER OPTICS**  
Fiber optic transducers for monitoring and analysis of vibration in aerospace vehicles and onboard equipment  
[NASA-CASE-XNP-02433] c14 N71-10616  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c36 N76-24553  
Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c74 N78-14889  
Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c74 N79-20857
- FIBERS**  
Process for fiberizing ceramic materials with high fusion temperatures and tensile strength  
[NASA-CASE-XNP-00597] c18 N71-23088  
Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c37 N76-18456  
Composite lamination method  
[NASA-CASE-LAR-12019-1] c24 N78-17150  
Method of manufacture of bonded fiber flywheel  
[NASA-CASE-MPS-23674-1] c24 N78-27182  
Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c44 N79-10513
- FIELD EFFECT TRANSISTORS**  
Frequency to analog converters with unipolar field effect transistor for determining potential charge by pulse duration of input signal  
[NASA-CASE-XNP-07040] c08 N71-12500  
Voltage controlled, variable frequency relaxation oscillator with MOSFET variable current feed  
[NASA-CASE-GSC-10022-1] c10 N71-25882  
Circuitry for high input impedance video processor with high noise immunity  
[NASA-CASE-NPO-10199] c09 N72-17156  
Development and characteristics of data multiplexer circuit using field effect transistors arranged in tree switching configuration  
[NASA-CASE-NPO-11333] c08 N72-22162  
Single integrated circuit chip with field effect transistor  
[NASA-CASE-GSC-10835-1] c09 N72-33205  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c76 N74-20329  
Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331
- Field effect transistor and method of construction thereof  
[NASA-CASE-MPS-23312-1] c33 N78-27326
- FIELD EMISSION**  
Electrode with multiple columnar conductors for limiting field emission current  
[NASA-CASE-ERC-10015-2] c10 N72-27246
- FILAMENT WINDING**  
Tool attachment for spreading or moving away loose elements from terminal posts during winding of filamentary elements  
[NASA-CASE-XNP-02107] c15 N71-10809  
Fabrication of filament wound propellant tank for cryogenic storage  
[NASA-CASE-XLE-03803-2] c15 N71-17651  
Twisted wire or tube superconductor for filament windings  
[NASA-CASE-LEW-11015] c26 N73-32571  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c24 N77-19171
- FILAMENTS**  
Refractory filament series circuitry for radiant heater  
[NASA-CASE-XLE-00387] c33 N70-34812  
Controlled diffusion reaction process for masking substrate of twisted multifilament superconductive ribbon  
[NASA-CASE-LEW-11726-1] c26 N73-26752
- FILLERS**  
Filling honeycomb matrix with deaerated paste filler  
[NASA-CASE-XMS-01108] c15 N69-24322  
Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c24 N78-27180
- FILM COOLING**  
Multislit film cooled pyrolytic graphite rocket nozzle  
[NASA-CASE-XNP-04389] c28 N71-20942
- FILM THICKNESS**  
Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c25 N79-28253
- FILMS**  
Apparatus for obtaining isotropic irradiation on film emulsion from parallel radiation source  
[NASA-CASE-MPS-20095] c24 N72-11595  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c76 N76-20994
- FILTERS**  
Development of filter system for control of outgas contamination in vacuum conditions using absorbent beds of molecular sieve zeolite, silica gel, and charcoal  
[NASA-CASE-MPS-14711] c15 N71-26185  
Heated tungsten filter for removing oxygen impurities from cesium  
[NASA-CASE-XNP-04262-2] c17 N71-26773  
Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c34 N74-30608
- FINS**  
Thrust and attitude control apparatus using jet nozzle in movable canard surface or fin configuration  
[NASA-CASE-XLE-03583] c31 N71-17629  
Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421
- FIRE EXTINGUISHERS**  
Penetrator nozzle  
[NASA-CASE-KSC-11064-1] c34 N78-22328
- FIRE PREVENTION**  
Hydrogen fire blink detector for high altitude rocket or ground installation  
[NASA-CASE-MPS-15063] c14 N72-25412  
Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c35 N74-21019
- FIREPROOFING**  
Fireproof potassium silicate coating composition, insoluble in water after application  
[NASA-CASE-GSC-10072] c18 N71-14014  
Lightweight fire resistant plastic foam for thermal protection of reentry vehicles and aircraft structures  
[NASA-CASE-ARC-10180-1] c28 N72-20767

- Intumescent paint containing nitrile rubber for fire protection  
[NASA-CASE-ARC-10196-1] c18 N73-13562
- Para-benzoquinone dioxime and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials  
[NASA-CASE-ARC-10304-1] c18 N73-26572
- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c27 N74-12814
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-ARC-14331-1] c27 N76-24405
- Flame retardant spandex type polyurethanes  
[NASA-CASE-ARC-14331-2] c27 N78-17213
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100
- FIRES**
- Device for generating and controlling combustion products for testing of fire detection system  
[NASA-CASE-GSC-11095-1] c14 N72-10375
- Device for detecting hydrogen fires onboard high altitude rockets  
[NASA-CASE-HFS-13130] c10 N72-17173
- FIRING (IGNITING)**
- Contamination free separation nut eliminating combustion products from ambient surroundings generated by squib firing  
[NASA-CASE-XGS-01971] c15 N71-15922
- FITTINGS**
- Design and development of quick release connector  
[NASA-CASE-XLA-01141] c15 N71-13789
- Development and characteristics of strainer for flared tube fitting  
[NASA-CASE-XLA-05056] c15 N72-11389
- FIXED WINGS**
- Design of supersonic aircraft with novel fixed, swept wing planform  
[NASA-CASE-XLA-04451] c02 N71-12243
- FIXTURES**
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c37 N74-32918
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[NASA-CASE-HFS-21577-1] c19 N74-29410
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[NASA-CASE-ARC-14903-3] c27 N78-25217
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[NASA-CASE-ARC-16307-1] c25 N78-27232
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[NASA-CASE-ARC-11174-1] c24 N78-28178
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[NASA-CASE-ARC-14331-3] c27 N78-32262
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[NASA-CASE-XLA-00302] c15 N71-16077
- Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control  
[NASA-CASE-ARC-10098-1] c06 N71-24739
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[NASA-CASE-LAR-10170-1] c37 N74-11301
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[NASA-CASE-LFW-11877-1] c34 N78-27357
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[NASA-CASE-XLE-00035] c33 N71-29151
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[NASA-CASE-KSC-10126] c11 N71-24985
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[NASA-CASE-NPO-10337] c14 N71-15604
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[NASA-CASE-ARC-19372-1] c39 N76-31562
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[NASA-CASE-XLA-00087] c02 N70-33332
- Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery  
[NASA-CASE-XMF-00641] c31 N70-36410
- Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft  
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[NASA-CASE-MPS-13687] c09 N71-28691
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[NASA-CASE-MPS-13687-2] c09 N72-22198
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[NASA-CASE-LAR-10753-1] c08 N74-30421

Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-HFS-19193-1] c37 N75-19686

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Aeroflexible wing structure with air scoop for inflating stiffeners with ram air  
[NASA-CASE-XLA-06095] c01 N69-39981

Deployment system for flexible wing with rigid superstructure  
[NASA-CASE-XLA-01220] c02 N70-41863

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[NASA-CASE-ARC-10345-1] c15 N73-12488

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Flow meter for measuring stagnation pressure in boundary layer around high speed flight vehicle  
[NASA-CASE-YPR-02007] c12 N71-24692

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Surface based altitude measuring system for accurately measuring altitude of airborne vehicle  
[NASA-CASE-ERC-10412-1] c09 N73-12211

Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-PRC-10049-1] c04 N74-13420

Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c35 N79-18296

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Aircraft indicator for pilot control of takeoff roll, climbout path and verticle flight path in poor visibility conditions  
[NASA-CASE-XLA-00487] c14 N70-40157

Two axis flight controller with potentiometer control shafts directly coupled to rotatable ball members  
[NASA-CASE-YPR-04104] c03 N70-42073

Development of aircraft control system with high performance electrically controlled and mechanically operated hydraulic valves for precise flight operation  
[NASA-CASE-XAC-00048] c02 N71-29128

Development of flight simulator system to show position of joystick displacement  
[NASA-CASE-NPO-11497] c08 N73-25206

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[NASA-CASE-HSC-12394-1] c08 N74-10942

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[NASA-CASE-LAR-11941-1] c06 N77-20098

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[NASA-CASE-XLA-01832] c14 N71-21006

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[NASA-CASE-XLA-00115] c03 N70-33343

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[NASA-CASE-XAC-00399] c11 N70-34815

Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury  
[NASA-CASE-XNP-00708] c14 N70-35394

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[NASA-CASE-HFS-20509] c11 N72-17183

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[NASA-CASE-NPO-11497] c08 N73-25206

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[NASA-CASE-LAR-10550-1] c09 N74-30597

Vehicle simulator binocular multiplanar visual display system  
[NASA-CASE-ARC-10808-1] c09 N76-24280

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[NASA-CASE-ARC-10903-1] c09 N78-18083

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[NASA-CASE-XLA-01486] c01 N71-23497

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[NASA-CASE-XGS-00823] c10 N71-15910

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[NASA-CASE-XNP-00952] c10 N71-23271
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- Externally supported internally stabilized flexible duct joint  
[NASA-CASE-NFS-19194-1] c37 N76-14460
- Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c34 N77-24423
- Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c36 N77-25501
- Accumulator  
[NASA-CASE-NFS-19287-1] c34 N77-30399
- Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c35 N78-19465
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c34 N78-25351
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c37 N78-25426
- Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c37 N79-11402
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c34 N79-12359
- Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c37 N79-12445
- FLUID INJECTION**
- Solid propellant ignition with hypergolic fluid injected to predetermined portions of propellant  
[NASA-CASE-XLE-00207] c28 N70-33375
- Method for igniting solid propellant rocket motors by injecting hypergolic fluids  
[NASA-CASE-XLE-01988] c27 N71-15634
- Constructing fluid spike nozzle to eliminate heat transfer and high temperature problems inherent in physical spikes  
[NASA-CASE-XGS-01143] c31 N71-15647
- Method and apparatus for producing fine particles in cryogenic liquid bath for gelled rocket propellants  
[NASA-CASE-NPO-10250] c23 N71-16212
- Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention  
[NASA-CASE-XMS-01905] c12 N71-21089
- Tertiary flow injection system for thrust vectoring of propulsive nozzle flow  
[NASA-CASE-NFS-20831] c28 N71-29153
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c52 N74-22771
- FLUID JETS**
- Directed fluid stream for propeller blade loading control  
[NASA-CASE-IAC-00139] c02 N70-34856
- FLUID LOGIC**
- Logic AND gate for fluid circuits  
[NASA-CASE-XLA-07391] c12 N71-17579
- FLUID MECHANICS**
- Fluid leakage detection system with automatic monitoring capability  
[NASA-CASE-LAR-10323-1] c12 N71-17573
- Development and characteristics of parallel plate viscometer for determination of absolute viscosity of liquids and viscoelastic materials  
[NASA-CASE-NPO-11387] c14 N73-14429
- FLUID POWER**
- Fluid power transmission and gas bearing system  
[NASA-CASE-XMS-01445] c12 N71-16031
- Low friction gas bearing system for fluid power transmission to bearing-supported payload  
[NASA-CASE-ERC-10097] c15 N71-28465
- FLUID PRESSURE**
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c34 N78-25351
- Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c37 N79-12445
- FLUID ROTOR GYROSCOPES**
- Piezoelectric pump for supplying fluid at high frequencies to gyroscope fluid suspension system  
[NASA-CASE-XNP-05429] c26 N71-21824
- FLUID SWITCHING ELEMENTS**
- Two phase fluid pressurization system for propellant tank  
[NASA-CASE-MSC-12390] c27 N71-29155
- FLUID TRANSMISSION LINES**
- Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c31 N79-21225
- FLUIDIC CIRCUITS**
- Using molds for fabricating individual fluid circuit components  
[NASA-CASE-XLA-07829] c15 N72-16329
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c35 N75-30503
- FLUIDICS**
- Fluidic-thermochromic display device  
[NASA-CASE-ERC-10031] c12 N71-18603
- Plasma-fluidic hybrid display system combining high brightness and memory characteristics  
[NASA-CASE-ERC-10100] c09 N71-33519
- Continuous gas flow control by fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c28 N72-22769
- Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c33 N74-11050
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c37 N78-25426
- FLUIDIZED BED PROCESSORS**
- Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c37 N79-14388
- FLUIDS**
- Automated fluid chemical analyzer for microchemical analysis of small quantities of liquids by use of selected reagents and analyzer units  
[NASA-CASE-XNP-09451] c06 N71-26754
- Detection of bacteria in biological fluids and foods  
[NASA-CASE-GSC-11533-1] c14 N73-13435
- Fluid polydimethylsiloxane resin with low outgassing properties in cured state  
[NASA-CASE-GSC-11358-1] c06 N73-26100
- Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MSC-14653-1] c35 N77-19385
- FLUORESCENCE**
- Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons  
[NASA-CASE-XGS-01231] c14 N70-41676
- Sealed fluorescent tube light unit capable of connection with other units to form string of work lights  
[NASA-CASE-XKS-05932] c09 N71-26787
- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c25 N74-26947
- Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c45 N75-27585
- FLUORIDES**
- Self lubricating fluoride-metal composite materials for outer space applications  
[NASA-CASE-XLE-08511] c18 N71-23710
- Development of fluoride coating to prevent oxidation of beryllium surfaces at elevated temperatures  
[NASA-CASE-LEW-10327] c17 N71-33408
- Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c06 N72-20121
- FLUORINATION**
- Fluorinated polyurethanes produced by reacting hydroxy terminated perfluoro polyether with diisocyanate  
[NASA-CASE-NPO-10767-2] c06 N72-27151
- Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature  
[NASA-CASE-NFS-21040-1] c06 N73-30098
- FLUORINE**
- Reaction of polyperfluoropolyenes with fluorine to produce saturated polymer chain or create reactive sites on chain  
[NASA-CASE-NPO-10862] c06 N72-22107
- FLUORINE COMPOUNDS**
- Fluorine-containing polyformals  
[NASA-CASE-IHP-06900-1] c27 N79-21191
- FLUORO COMPOUNDS**
- Synthesis of polyfluorobutadiene by polymerization of perfluorobutadiene with diisopropyl peroxydicarbonate  
[NASA-CASE-NPO-10863] c06 N70-11251
- Low pressure perfluorobutadiene polymerization with peroxide catalysts  
[NASA-CASE-NPO-10447] c06 N70-11252

- Preparation of fluorohydroxy ethers by reacting fluoroalkylene oxides with alkali salt of polyfluoroalkylene diol  
[NASA-CASE-MFS-10507] c06 N73-30101
- Preparation of fluorinated polyethers from 2-hydro-perhaloisopropyl alcohols  
[NASA-CASE-MFS-11492] c06 N73-30102
- Chemical and elastic properties of fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c06 N73-33076
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c27 N76-16228
- Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-1] c23 N78-22154
- Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-2] c23 N78-22155
- FLUOROCARBONS**  
Electrically conductive fluorocarbon polymers  
[NASA-CASE-XLE-06774-2] c06 N72-25150
- FLUOROPOLYMERS**  
New perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups --- sealers for aircraft structures  
[NASA-CASE-ARC-11241-1] c27 N79-24153
- Ion beam sputter deposition of fluoropolymers  
[NASA-CASE-LEW-13122-1] c27 N79-24154
- FLUTTER**  
Antiflutter check valve for use with high pressure fluid flow  
[NASA-CASE-XNP-01152] c15 N70-41811
- Development of aerodynamic control system to control flutter over large range of oscillatory frequencies using stability augmentation techniques  
[NASA-CASE-LAR-10682-1] c02 N73-26004
- FLUX (RATE)**  
Fluxgate magnetometer for measuring magnetic field along two axes using one sensor  
[NASA-CASE-GSC-10441-1] c14 N71-27325
- FLUX DENSITY**  
Particle beam power density detection and measurement apparatus  
[NASA-CASE-XLE-00243] c14 N70-38602
- FLUXES**  
Hydrazine monoperofluoro alkanoate solder flux leaving corrosion resistant coating, for metals such as copper  
[NASA-CASE-XNP-03459-2] c18 N71-15688
- Metal soldering with hydrazine monoperofluoro alkanoate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078
- FLYWHEELS**  
Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c44 N78-24608
- Method of manufacture of bonded fiber flywheel  
[NASA-CASE-MFS-23674-1] c24 N78-27182
- Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c37 N79-10422
- Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-RQM-10888-1] c44 N79-14527
- FOAMS**  
Plastic foam generator for space vehicle instrument payload package flotation in water landing  
[NASA-CASE-XLA-00838] c03 N70-36778
- Continuous variation of propellant flow and thrust by application of liquid foam flow theory to injection orifice  
[NASA-CASE-XLE-00177] c28 N70-40367
- Development of foam insulation for filament wound cryogenic storage tank  
[NASA-CASE-XLE-03803] c15 N71-23816
- Carboxyl terminated polyester prepolymers and foams produced from prepolymers and materials  
[NASA-CASE-NPO-10596] c06 N71-25929
- Storage stable, thermally activated foaming compositions for erecting and rigidizing mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155
- Method of making solid propellant rocket motor having reliable high altitude capabilities, long shelf life, and capable of firing with nozzle closure with foamed plastic permanent mandrel  
[NASA-CASE-XLA-04126] c28 N71-26779
- Foam insulation thickness measuring and injection device for spacecraft applications  
[NASA-CASE-MFS-20261] c14 N71-27005
- Description of method for making homogeneous foamed materials in weightless environment using materials having different physical properties  
[NASA-CASE-XNP-09902] c15 N72-11387
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c27 N78-12812
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c27 N74-27037
- Ceramic fiber insulating material and methods of producing same --- product development of foams for thermal insulation  
[NASA-CASE-MS-14795-1] c27 N76-15314
- Ceramic fiber insulating material and method of producing same --- aircraft construction materials  
[NASA-CASE-MS-14795-2] c24 N78-25138
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215
- FOCUSING**  
X ray collimating structure for focusing radiation directly onto detector  
[NASA-CASE-XHQ-04106] c14 N70-40240
- Apertured electrode focusing system for ion sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618
- Development and characteristics of Petzval type objective including field shaping lens for focusing light of specified wavelength band on curved photoreceptor  
[NASA-CASE-GSC-10700] c23 N71-30027
- Absolute focus locking device for microscopes to maintain set focus for extended time period  
[NASA-CASE-LAR-10184] c14 N72-22445
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014
- Multiplate focusing collimator --- for scanning small near radiation sources  
[NASA-CASE-MFS-20932-1] c35 N75-19616
- RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c44 N78-28594
- FOG**  
Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MS-13530-2] c23 N75-14834
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c09 N79-33220
- FOILS (MATERIALS)**  
Foil seal between parts moving relative to each other  
[NASA-CASE-XLE-05130] c15 N69-21362
- Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c24 N75-33181
- Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c24 N78-22162
- FOLDING**  
Characteristics of device for folding thin flexible sheets into compact configuration  
[NASA-CASE-XLA-00137] c15 N70-33180
- FOLDING STRUCTURES**  
Lenticular vehicle with foldable aerodynamic control flaps and reaction jets for operation above and within earth's atmosphere  
[NASA-CASE-XGS-00260] c31 N70-37924
- Collapsible, space erectable loop antenna system for space vehicle  
[NASA-CASE-XNP-00437] c07 N70-40202
- Unfolding boom assembly with knuckle joints for positioning equipment for spacecraft  
[NASA-CASE-XGS-00938] c32 N70-41367
- Foldable conduit capable of springing back as self erecting structural member  
[NASA-CASE-XLE-00620] c32 N70-41579

- Foldable, double cone and parabolic reflector system for solar ray concentration  
[NASA-CASE-XLA-04622] c03 N70-41580
- Method for deployment of flexible wing glider from space vehicle with minimum impact and loading  
[NASA-CASE-XMS-00907] c02 N70-41630
- Development and characteristics of variable sweep wing control system for supersonic aircraft  
[NASA-CASE-XLA-03659] c02 N71-11041
- Hydraulic actuator design for space deployment of heat radiators  
[NASA-CASE-MSC-11817-1] c15 N71-26611
- Apparatus and method of assembling building blocks by folding pre-cut flat sheets of material during on-site construction  
[NASA-CASE-MSC-12233-1] c15 N72-25454
- Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c18 N75-27040
- Variable dihedral shuttle orbiter  
[NASA-CASE-LAR-10706-2] c05 N77-31132
- Foldable beam  
[NASA-CASE-LAR-12077-1] c39 N79-25425
- FOOD**  
Detection of bacteria in biological fluids and foods  
[NASA-CASE-GSC-11533-1] c14 N73-13435
- FORCE**  
Electromechanical actuator for producing mechanical force and/or motion in response to electrical signals  
[NASA-CASE-NPO-11738-1] c09 N73-30185
- FORCE DISTRIBUTION**  
Device for handling heavy loads by distributing forces  
[NASA-CASE-XNP-04969] c11 N69-27466
- Development of two force component measuring device  
[NASA-CASE-XAC-04886-1] c14 N71-20439
- Tensile strength testing device having pulley guides for exerting multiple forces on test specimen  
[NASA-CASE-XNP-05634] c15 N71-24834
- Development and characteristics of device for indicating and recording magnitude of force applied in axial direction  
[NASA-CASE-MSC-15626-1] c14 N72-25411
- Variable direction force coupler for transmitting force along selectable curve path  
[NASA-CASE-NFS-20317] c15 N73-13463
- Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c33 N75-31329
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N79-17813
- FORCED VIBRATION**  
Seismic vibration source  
[NASA-CASE-NPO-14112-1] c46 N79-22679
- FOREBODIES**  
Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c02 N79-17813
- FORMALDEHYDE**  
An improved synthesis of 2, 4, 8, 10-tetroxaspiro (5.5)undecane  
[NASA-CASE-ARC-11243-1] c27 N79-30375
- FORMAT**  
Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c60 N79-20751
- FORMATES**  
Preparation of polyurethane polymer by reacting hydroxy polyformal with organic diisocyanate  
[NASA-CASE-NFS-10509] c06 N73-30103
- FORMING TECHNIQUES**  
Apparatus for forming wire grids for electric strain gages  
[NASA-CASE-XLE-00023] c15 N70-33330
- Hot forming of plastic sheets  
[NASA-CASE-XMS-05516] c15 N71-17803
- Forming tubes from long thin flat metal strips  
[NASA-CASE-XGS-04775] c15 N71-18579
- Portable magnetomotive hammer for metal working  
[NASA-CASE-XMP-03793] c15 N71-24833
- Forming mold for polishing and machining curved solar magnesium reflector with reinforcing ribs  
[NASA-CASE-XLE-08917-2] c15 N71-24836
- Heat treatment and tooling for forming shapes from thermosetting honeycomb core sheets  
[NASA-CASE-NPO-11036] c15 N72-24522
- Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c26 N74-10521
- Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c31 N74-32920
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c37 N75-26371
- Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c37 N75-31446
- Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c37 N76-14461
- Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c71 N78-10837
- Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c37 N78-13436
- Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c26 N78-24333
- Method and apparatus for producing concentric hollow spheres  
[NASA-CASE-NPO-14596-1] c31 N79-24197
- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c48 N79-31752
- FORWARD SCATTERING**  
Forward-scatter polarimeter for determining the gaseous depolarization factor in the presence of polluting polydispersed particles  
[NASA-CASE-NPO-13756-1] c35 N76-14434
- FOUNDATIONS**  
Base support for expansible and contractible coupling between two members  
[NASA-CASE-NPO-11059] c15 N72-17454
- Adjustable securing base  
[NASA-CASE-MSC-19666-1] c37 N78-17383
- FOURIER TRANSFORMATION**  
Photographic film restoration system using Fourier transformation lenses and spatial filter  
[NASA-CASE-MSC-12448-1] c14 N72-20394
- Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c60 N75-13539
- FRACTIONATION**  
Purification apparatus for vaporization and fractional distillation of liquids  
[NASA-CASE-XNP-08124] c15 N71-27184
- FRACTURE MECHANICS**  
Apparatus for testing metallic and nonmetallic beams or rods by bending at high temperatures in vacuum or inert atmosphere  
[NASA-CASE-XLE-01300] c15 N70-41993
- FRACTURE STRENGTH**  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-1] c26 N77-24254
- Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c26 N79-22271
- FRAMES**  
Shock absorbing articulated multiple couch assembly  
[NASA-CASE-MSC-11253] c05 N71-12343
- Pliable frame for sunglasses in emergency survival kits  
[NASA-CASE-XMS-06064] c05 N71-23096
- Expandable space frames with high expansion to collapse ratio  
[NASA-CASE-ERC-10365-1] c31 N73-32749
- FRAMING CAMERAS**  
High speed photo-optical time recorder for indicating time at exposure of each frame of high speed movie camera film  
[NASA-CASE-KSC-10294] c14 N72-18411
- FREE FLIGHT TEST APPARATUS**  
Hydraulic support equipment for full scale dynamic testing of large rocket vehicle under free flight conditions  
[NASA-CASE-XMP-01772] c11 N70-41677
- Hydraulic support apparatus for dynamic testing of space vehicles under near-free flight conditions  
[NASA-CASE-XMP-03248] c11 N71-10604
- Free flight suspension system for use with aircraft models in wind tunnel tests  
[NASA-CASE-XLA-00939] c11 N71-15926

**FREE WING AIRCRAFT**  
Free wing assembly for an aircraft  
[NASA-CASE-PRC-10092-1] c05 N79-12061

**FREEZE DRYING**  
Rice preparation process consisting of cooking,  
two freezing-thawing cycles, and then freeze  
drying  
[NASA-CASE-MSC-13540-1] c05 N72-33096

**FREEZING**  
System for and method of freezing biological  
tissue  
[NASA-CASE-GSC-12173-1] c51 N79-10694

**PREON**  
Solar energy power system --- using Preon  
[NASA-CASE-MFS-21628-1] c44 N75-32581

**FREQUENCIES**  
Controlled oscillator system with a time  
dependent output frequency  
[NASA-CASE-NPO-11962-1] c33 N74-10194  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c32 N74-20863

**FREQUENCY ANALYZERS**  
Describing frequency discriminator using digital  
logic circuits and supplying single binary  
output signal  
[NASA-CASE-MFS-14322] c08 N71-18692  
Broadband frequency discriminator with resistive  
captive inductive networks  
[NASA-CASE-NPO-10096] c07 N71-24583  
Audio frequency analysis circuit for  
determining, displaying, and recording  
frequency of sweeping audio frequency signal  
[NASA-CASE-NPO-11147] c14 N72-27408  
Continuous Fourier transform method and apparatus  
--- for the analysis of simultaneous analog  
signal components  
[NASA-CASE-ARC-10466-1] c60 N75-13539  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c33 N77-13315  
Frequency translating phase conjugation circuit  
for active retrodirective antenna array  
[NASA-CASE-NPO-14536-1] c32 N79-14277

**FREQUENCY CONTROL**  
Automatic control of voltage supply to direct  
current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987  
Variable frequency magnetic coupled  
multivibrator with temperature compensated  
frequency control circuit  
[NASA-CASE-XGS-00458] c09 N70-38604  
Variable frequency magnetic coupled  
multivibrator with output signal of constant  
amplitude and waveform  
[NASA-CASE-XGS-00131] c09 N70-38995  
Development of automatic frequency  
discriminators and control for phase lock loop  
providing frequency preset capabilities  
[NASA-CASE-XNP-08665] c10 N71-19467  
Linear accelerator frequency control system  
[NASA-CASE-XGS-05441] c10 N71-22962  
Tuning arrangement for frequency control of  
magnetron-type electron discharge device  
[NASA-CASE-XNP-09771] c09 N71-24841  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c32 N74-11000  
Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c32 N74-19790  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c36 N75-31427  
Reflex feed system for dual frequency antenna  
with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c32 N78-31321  
Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c07 N79-14095

**FREQUENCY CONVERTERS**  
Frequency to analog converters with unipolar  
field effect transistor for determining  
potential charge by pulse duration of input  
signal  
[NASA-CASE-XNP-07040] c08 N71-12500  
Describing static inverter with single or  
multiple phase output  
[NASA-CASE-XNP-00663] c08 N71-18752  
Voltage controlled, variable frequency  
relaxation oscillator with MOSFET variable  
current feed  
[NASA-CASE-GSC-10022-1] c10 N71-25882  
Development of family of frequency to amplitude  
converters for frequency analysis of complex  
input signal waveforms  
[NASA-CASE-MSC-12395] c09 N72-25257  
Variable frequency inverter for ac induction  
motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c33 N75-15874

**FREQUENCY DISCRIMINATORS**  
PN lock indicator for dithered PN code tracking  
loop  
[NASA-CASE-NPO-14435-1] c33 N79-18224

**FREQUENCY DISTRIBUTION**  
Monopole antenna system for maximum  
omnidirectional efficiency for use on satellites  
[NASA-CASE-XLA-00414] c07 N70-38200  
Variable frequency subcarrier oscillator with  
temperature compensation  
[NASA-CASE-XNP-03916] c09 N71-28810  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c32 N78-15323  
A phase insensitive ultrasonic transducer ---  
annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c71 N78-29871

**FREQUENCY DIVIDERS**  
Low phase noise frequency divider for use with  
deep space network communication system  
[NASA-CASE-NPO-11569] c10 N73-26229  
Technique for extending the frequency range of  
digital dividers  
[NASA-CASE-LAR-10730-1] c33 N74-10223  
Symmetrical odd-modulus frequency divider  
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[NASA-CASE-XNP-01160] c07 N71-11298  
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[NASA-CASE-LEW-11326-1] c23 N73-30665
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- [ NASA-CASE-LEW-12608-1] c07 N77-27116  
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- [ NASA-CASE-MSC-19095-1] c37 N75-19683
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- Recording and reconstructing focused image holograms  
[NASA-CASE-ERC-10017] c16 N71-15567
- Method and means for recording and reconstructing holograms without use of reference beam  
[NASA-CASE-ERC-10020] c16 N71-26154
- Nondestructive stress testing of solder joints on printed circuit boards by holographic techniques  
[NASA-CASE-MFS-20687] c16 N72-11415
- Multiple image storing system for obtaining holographic record on film of high speed projectile  
[NASA-CASE-MFS-20596] c14 N72-17324
- Thin film analyzer utilizing holographic techniques  
[NASA-CASE-MFS-20823-1] c16 N73-30476
- Method and apparatus for checking the stability of a setup for making reflection type holograms  
[NASA-CASE-MFS-21455-1] c35 N74-15146
- Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c35 N74-17153
- Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c35 N74-26946
- Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c35 N75-25124
- Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c35 N75-27328
- Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c35 N76-18402
- Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c43 N77-10584
- HOMING DEVICES**  
Location identification system with ground based transmitter and aircraft borne receiver/decoder  
[NASA-CASE-EPC-10324] c07 N72-25173
- HONEYCOMB CORES**  
Technique for making foldable, inflatable, plastic honeycomb core panels for use in building and bridge structures, light and radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713
- Heat treatment and tooling for forming shapes from thermosetting honeycomb core sheets  
[NASA-CASE-NPO-11036] c15 N72-24522
- Honeycomb core structures of minimum surface tubule sections  
[NASA-CASE-ERC-10363] c18 N72-25541
- HONEYCOMB STRUCTURES**  
Filling honeycomb matrix with deaerated paste filler  
[NASA-CASE-XMS-01108] c15 N69-24322
- Inflatable honeycomb panel element for lightweight structures usable in space stations and other construction  
[NASA-CASE-XLA-00204] c32 N70-36536
- Fluid flow control valve for regulating fluids in molecular quantities  
[NASA-CASE-XLE-00703] c15 N71-15967
- Method and apparatus for fabrication of heat insulating and ablative reentry structure  
[NASA-CASE-XMS-02009] c33 N71-20834
- Method for honeycomb panel bonding by thermosetting film adhesive with electrical heat means  
[NASA-CASE-XNP-01402] c18 N71-21651
- Development of thermal insulation material for insulating liquid hydrogen tanks in spacecraft  
[NASA-CASE-XNP-05046] c33 N71-28892
- Honeycomb panels of minimal surface, periodic tubule layers  
[NASA-CASE-ERC-10364] c18 N72-25540
- Development of process for bonding resinous body in cavities of honeycomb structures  
[NASA-CASE-MSC-12357] c15 N73-12489
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c37 N74-25968
- Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c37 N76-24575
- Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c24 N78-15180
- Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c24 N78-17149
- Low density bismaleimide-carbon microballoon composites

- [NASA-CASE-ARC-11040-1] c24 N79-16915
- HOPPERS**  
Design and development of device to prevent clogging in hoppers containing particulate materials  
[NASA-CASE-LAR-10961-1] c15 N73-12496
- HORIZON SCANNERS**  
Oscillatory electromagnetic mirror drive system for horizon scanners  
[NASA-CASE-XLA-03724] c14 N69-27461  
Multi-lobar scan horizon sensor  
[NASA-CASE-XGS-00809] c21 N70-35427  
Attitude orientation control of spin stabilized final stage space vehicles, using horizon scanners  
[NASA-CASE-XLA-00281] c21 N70-36943  
Clamped amplifier circuit for horizon scanner enabling amplification and accurate measurement of specified parameters  
[NASA-CASE-XGS-01784] c10 N71-20782  
Horizon sensor design with digital sampling of spaced radiation-compensated thermopile infrared detectors  
[NASA-CASE-XNP-06957] c14 N71-21089  
Method and equipment for locating earth infrared horizon from space, independent of season and latitude  
[NASA-CASE-LAP-10726-1] c14 N73-20475
- HORIZONTAL FLIGHT**  
A system for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-PRC-11005-1] c06 N79-24988
- HORIZONTAL SPACECRAFT LANDING**  
Delta winged, manned reentry vehicle capable of horizontal glide landing at low speeds  
[NASA-CASE-XLA-00241] c31 N70-37986
- HORIZONTAL TAIL SURFACES**  
Development and characteristics of translating horizontal tail assembly for supersonic aircraft  
[NASA-CASE-XLA-09801-1] c02 N71-11043
- HORN ANTENNAS**  
Device for improving efficiency of parabolic horn antenna system for linearly polarized signals  
[NASA-CASE-XNP-00611] c09 N70-35219  
Device for improving efficiency of parabolic reflector horn for linearly or circularly polarized waves  
[NASA-CASE-XNP-00540] c09 N70-35382  
Characteristics of antenna horn feeds consisting of central horn with overlapping peripheral horns  
[NASA-CASE-GSC-10452] c07 N71-12396  
Multiple mode horn antenna with radiation pattern of equal beamwidths and suppressed sidelobes  
[NASA-CASE-XNP-01057] c07 N71-15907  
Multipurpose microwave antenna, employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c07 N72-25174  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c32 N76-15330  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c32 N76-21365  
Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N77-24339  
Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c32 N78-31321  
Multifrequency broadband horn antenna  
[NASA-CASE-NPO-14588-1] c32 N79-17067  
Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c32 N79-17068
- HOT CATHODES**  
Improved cathode containing barium carbonate block and heated tungsten screen for electron bombardment ion thruster  
[NASA-CASE-XLE-07087] c06 N69-39889
- HOT PRESSING**  
Cermets for nuclear fuel constructed by pressing metal coated ceramic particles in die at temperature to cause bonding of metal coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- HOT WORKING**  
Hot forming of plastic sheets  
[NASA-CASE-XMS-05516] c15 N71-17803
- HOT-WIRE ANEMOMETERS**  
Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c35 N77-20400  
Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c35 N77-24454
- HOT-WIRE FLOWMETERS**  
Hot-wire liquid level detector for cryogenic propellants  
[NASA-CASE-XLE-00454] c23 N71-17402  
Flow separation detector  
[NASA-CASE-ARC-11046-1] c35 N78-14364
- HOUSINGS**  
Sealed housing for protecting electronic equipment against electromagnetic interference  
[NASA-CASE-MS-C-12163-1] c09 N71-18600  
Open type urine receptacle with tubular housing  
[NASA-CASE-MS-C-12324-1] c95 N72-22093  
Readily assembled universal environment housing for electronic equipment  
[NASA-CASE-KSC-10031] c15 N72-22486  
Gas flow control device, including housing and input port  
[NASA-CASE-NPO-11479] c15 N73-13462  
Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MPS-21136-1] c35 N74-18323  
Heat transfer device  
[NASA-CASE-NPO-11120-1] c34 N74-18552  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c37 N77-32500
- HOVERING**  
Hovering type flying vehicle design and principle mechanisms for manned or unmanned use  
[NASA-CASE-MS-C-12111-1] c02 N71-11039
- HUGONOT EQUATION OF STATE**  
Determining particle density using known material Hugoniot curves  
[NASA-CASE-LAP-11059-1] c76 N75-12810
- HULLS (STRUCTURES)**  
Efficient operation of improved hydrofoil design  
[NASA-CASE-XLA-00229] c12 N70-33305
- HUMAN BEINGS**  
Method and apparatus for applying compressional forces to skeletal structure of subject to simulate force during ambulatory conditions  
[NASA-CASE-ARC-10100-1] c05 N71-24738  
Automatic braking device for rapidly transferring humans or materials from elevated location  
[NASA-CASE-IKS-07814] c15 N71-27067
- HUMAN BODY**  
Apparatus for measuring human body mass in zero or reduced gravity environment  
[NASA-CASE-XMS-03371] c05 N70-42000  
Electromedical garment, applying vectorcardiologic type electrodes to human torsos for data recording during physical activity  
[NASA-CASE-XPR-10856] c05 N71-11189  
Thermoregulating with cooling flow pipe network for humans  
[NASA-CASE-XMS-10269] c05 N71-24147  
Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices  
[NASA-CASE-MPS-21010-1] c05 N73-30078  
Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MS-C-14276-1] c52 N77-14737  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c54 N78-22720
- HUMAN FACTORS ENGINEERING**  
Shock absorbing couch for body support under high acceleration or deceleration forces  
[NASA-CASE-XMS-01240] c05 N70-35152  
Harness assembly adapted to support man on ground based apparatus which simulates weightlessness  
[NASA-CASE-MPS-14671] c05 N71-12341  
Multiple circuit switch apparatus requiring minimum hand and eye movement by operator  
[NASA-CASE-XAC-03777] c10 N71-15909  
Remote control device operated by movement of finger tips for manual control of spacecraft

- attitude  
[NASA-CASE-XAC-02405] c09 N71-16089
- Design and development of flexible tunnel for use by spacecrews in performing extravehicular activities  
[NASA-CASE-MSC-12243-1] c05 N71-24728
- Development of apparatus and method for quantitatively measuring brain activity as automatic indication of sleep state and level of consciousness  
[NASA-CASE-MSC-13282-1] c05 N71-24729
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12092-2] c52 N77-27694
- Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c54 N78-31735
- Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c54 N78-31736
- Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c52 N79-27836
- HUMAN PERFORMANCE**
- Color perception tester for testing color code perceptiveness of individuals  
[NASA-CASE-KSC-10278] c05 N72-16015
- HUMAN REACTIONS**
- Reaction tester for testing reaction to light stimuli  
[NASA-CASE-MSC-13604-1] c05 N73-13114
- HUMAN WASTES**
- Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MPS-22102-1] c54 N74-20725
- Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804
- HUMIDITY**
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c35 N77-19390
- Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c54 N79-19688
- HYBRID COMPUTERS**
- Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c62 N74-14920
- HYBRID PROPELLANTS**
- Liner for hybrid solid propellants to bind propellant to rocket motor case  
[NASA-CASE-XWP-09744] c27 N71-16392
- HYDRAULIC CONTROL**
- Shear modulated fluid amplifier of high pressure hydraulic vortex amplifier type  
[NASA-CASE-MPS-10412] c12 N71-17578
- Throttle valve for regulating fluid flow volume  
[NASA-CASE-XWP-09698] c15 N71-18580
- Fluidic-thermochromic display device  
[NASA-CASE-ERC-10031] c12 N71-18603
- Development and characteristics of variable displacement fluid pump for transforming hydraulic pressures  
[NASA-CASE-MPS-20830] c15 N71-30028
- Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c37 N77-22479
- HYDRAULIC EQUIPMENT**
- Hydraulic support equipment for full scale dynamic testing of large rocket vehicle under free flight conditions  
[NASA-CASE-XNP-01772] c11 N70-41677
- Hydraulic support apparatus for dynamic testing of space vehicles under near-free flight conditions  
[NASA-CASE-XNP-03248] c11 N71-10604
- Hydraulic drive mechanism for leveling isolation platforms  
[NASA-CASE-XNS-03252] c15 N71-10658
- Antibacklash circuit for hydraulic drive system  
[NASA-CASE-XNP-01020] c03 N71-12260
- Hydraulic clamping of sheet stock specimens  
[NASA-CASE-XLA-05100] c15 N71-17696
- Design and development of double acting shock absorber for spacecraft docking operations  
[NASA-CASE-XNS-03722] c15 N71-21530
- Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XNP-07659] c06 N71-22975
- System to control speed of hydraulically movable members by limiting energy applied to actuators with hydraulic servo loop  
[NASA-CASE-ARC-10131-1] c15 N71-27754
- Development of aircraft control system with high performance electrically controlled and mechanically operated hydraulic valves for precise flight operation  
[NASA-CASE-XAC-00048] c02 N71-29128
- Development and characteristics of variable displacement fluid pump for transforming hydraulic pressures  
[NASA-CASE-MPS-20830] c15 N71-30028
- Design and characteristics of mechanically extended and telescoping boom on crane assembly  
[NASA-CASE-NPO-11118] c03 N72-25021
- Design and development of device to prevent geysering during convective circulation of cryogenic fluids  
[NASA-CASE-KSC-10615] c15 N73-12486
- Pendant hydraulic control system for actuators with three main valve combination  
[NASA-CASE-MPS-20944] c15 N73-13466
- Rocket propellant injector with porous faceplate for rocket engine combustion chamber  
[NASA-CASE-LW-11071-1] c27 N73-27695
- Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c37 N75-15050
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c37 N75-25185
- Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c34 N75-33342
- Quick disconnect filter coupling  
[NASA-CASE-MPS-22323-1] c37 N76-14463
- Actuator device for artificial leg  
[NASA-CASE-MPS-23225-1] c52 N77-14735
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LW-12274-1] c37 N79-10426
- HYDRAULIC FLUIDS**
- Miniature hydraulic actuator --- for control surfaces on airfoils  
[NASA-CASE-LAR-11522-1] c34 N74-34881
- HYDRAZINE ENGINES**
- Reciprocating engines  
[NASA-CASE-MSC-16239-1] c37 N78-11399
- Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-PRC-11013-1] c05 N79-24979
- HYDRAZINE NITROFORM**
- Solid propellant containing hydrazinium nitroformate oxidizer and polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c27 N73-16764
- HYDRAZINES**
- Catalyst bed ignition system for hydrazine propellants  
[NASA-CASE-XNP-00876] c28 N70-41311
- Hydrazine monoperfluoro alkanoate solder flux leaving corrosion resistant coating, for metals such as copper  
[NASA-CASE-XNP-03459-2] c18 N71-15688
- Pubber composition for expulsion bladders and diaphragms for use with hydrazine  
[NASA-CASE-NPO-11433] c18 N71-31140
- Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c24 N76-14203
- HYDROCARBON COMBUSTION**
- In-situ laser retorting of oil shale  
[NASA-CASE-LW-12217-1] c43 N78-14452
- HYDROCARBON FUELS**
- Apparatus for producing hydrocarbon slurry containing small particles of magnesium for use as jet aircraft fuel  
[NASA-CASE-XLE-00010] c15 N70-33382
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c44 N76-29700
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c44 N76-29704
- HYDROCARBONS**
- Solid propellant containing hydrazinium nitroformate oxidizer and polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c27 N73-16764
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c37 N76-16446
- Pyrolysis system and process --- recovering energy from solid wastes containing hydrocarbons  
[NASA-CASE-MSC-12669-1] c44 N76-16621
- Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c37 N77-31497

## HYDROCHLORIC ACID

Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13874-1] c45 N76-21742

## HYDROFOILS

Efficient operation of improved hydrofoil design  
[NASA-CASE-XLA-00229] c12 N70-33305

## HYDROFORMING

Cold metal hydroforming techniques using epoxy molds for counteracting creep or stretch  
[NASA-CASE-XLE-05641-1] c15 N71-26346

## HYDROGEN

Method and transducer device for detecting presence of hydrogen gas  
[NASA-CASE-NMP-03873] c06 N69-39733

Preventing pressure buildup in electrochemical cells by reacting palladium oxide with evolved hydrogen  
[NASA-CASE-XGS-01419] c03 N70-41864

Development of pulse-activated polarographic hydrogen detector  
[NASA-CASE-NMP-06531] c14 N71-17575

Development of device for detecting hydrogen in ambient environments  
[NASA-CASE-NPS-11537] c14 N71-20442

Gas chromatographic method for analyzing hydrogen deuterium mixtures  
[NASA-CASE-NPO-11322] c06 N72-25146

Hydrogen fire blink detector for high altitude rocket or ground installation  
[NASA-CASE-NFS-15063] c14 N72-25412

Separation of dissolved hydrogen from water and coating with palladium black  
[NASA-CASE-MSC-13335-1] c06 N72-31140

Atomic hydrogen maser with bulb temperature control by output frequency difference signal for wall shift elimination  
[NASA-CASE-HQV-10654-1] c16 N73-13489

Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c36 N75-15029

Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c35 N76-15436

Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c37 N76-16446

Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c44 N76-18641

Hydrogen-rich gas generator  
[NASA-CASE-NPO-13464-1] c44 N76-18642

Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c44 N77-22607

Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c44 N77-32580

Improved synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c27 N79-30376

## HYDROGEN ATOMS

Atomic hydrogen storage method and apparatus --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c72 N78-19907

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c28 N78-24365

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c44 N79-18455

## HYDROGEN ENBRITTELEMENT

Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c24 N76-14203

## HYDROGEN ENGINES

Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c44 N78-33526

## HYDROGEN FUELS

Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c44 N76-29700

Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c44 N76-29704

Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c44 N77-10636

## HYDROGEN IONS

Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c75 N79-10894

## HYDROGEN OXYGEN FUEL CELLS

Electrolytically regenerative hydrogen-oxygen fuel cells  
[NASA-CASE-XLE-04526] c03 N71-11052

Water electrolysis rocket engine with self-regulating stoichiometric fuel mixing regulator  
[NASA-CASE-XGS-08729] c28 N71-14044

## HYDROGEN PEROXIDE

Unit for generating thrust from catalytic decomposition of hydrogen peroxide, for high altitude aircraft or spacecraft reaction control  
[NASA-CASE-XMS-00583] c28 N70-38504

## HYDROGENATION

Producing high purity silicon carbide on carbon base by hydrogen reduction of silicon tetrachloride  
[NASA-CASE-XLA-00158] c26 N70-36805

Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c35 N79-15127

## HYDROLOGY

Fadar target remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N78-33511

## HYDROSTATIC PRESSURE

Hydrostatic extrusion of refractory materials using simple press  
[NASA-CASE-NPO-10811] c15 N71-34425

## HYDROSTATICS

Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c37 N77-28486

## HYDROXIDES

Method for determining presence and type of OH in MgO  
[NASA-CASE-NPO-10774] c06 N72-17095

## HYGROMETERS

Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c35 N78-25391

## HYGROSCOPICITY

Method of evaluating moisture barrier properties of materials used in electronics encapsulation  
[NASA-CASE-NPO-10051] c18 N71-24934

## HYPERFINE STRUCTURE

Process for producing dispersion strengthened nickel with aluminum comprising metallic matrices embedded with oxides or other hyperfine compounds  
[NASA-CASE-XLE-06969] c17 N71-24142

## HYPERGOLIC ROCKET PROPELLANTS

Solid propellant ignition with hypergolic fluid injected to predetermined portions of propellant  
[NASA-CASE-XLE-00207] c28 N70-33375

Regenerative cooling system for small rocket engine having restart capability and using noncryogenic hypergolic propellants  
[NASA-CASE-XLE-00685] c28 N70-41992

Method for igniting solid propellant rocket motors by injecting hypergolic fluids  
[NASA-CASE-XLE-01988] c27 N71-15634

## HYPERSONIC AIRCRAFT

Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-NMP-02263] c05 N79-10907

A cooling system for an aircraft having a cruise range from Mach 2 to Mach 8  
[NASA-CASE-LAR-12406-1] c05 N79-24980

## HYPERSONIC FLIGHT

Hyperersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168

## HYPERSONIC FLOW

Design of hypersonic test facility for ablation tests and performance tests of vehicles under conditions of high temperature and pressure  
[NASA-CASE-XLA-05378] c11 N71-21475

## HYPERSONIC SPEED

Leading edge design for hypersonic reentry vehicles  
[NASA-CASE-XLA-00165] c31 N70-33242

Aerospace vehicle with variable planform for hypersonic and subsonic flight  
[NASA-CASE-XLA-00805] c31 N70-38010

Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings  
[NASA-CASE-XLA-03591] c31 N71-15674

Supersonic or hypersonic vehicle control system comprising elevons with hinge line sweep and free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088

Generation of high temperature, high mass flow, and high Reynolds number air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c12 N73-25262

Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c12 N73-28144

## HYPERSONIC VEHICLES

- Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015
- HYPERVELOCITY GUNS**  
Method and apparatus for use in forming highly collimated beam of microparticles with high charge to mass ratio and injecting beam into electrostatic accelerating tube  
[NASA-CASE-XGS-06628] c24 N71-16213  
Implosion driven, light gas, hypervelocity gun  
[NASA-CASE-XAC-05902] c11 N71-18578  
Collapsible piston for hypervelocity gun  
[NASA-CASE-MSC-13789-1] c11 N73-32152  
Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c09 N79-21084
- HYPERVELOCITY IMPACT**  
Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c91 N74-13130
- HYPERVELOCITY PROJECTILES**  
Impact measuring technique for determining size of hypervelocity projectiles  
[NASA-CASE-LAR-10913] c14 N72-16282  
Multiple image storing system for obtaining holographic record on film of high speed projectile  
[NASA-CASE-MPS-20596] c14 N72-17324
- HYPERVELOCITY WIND TUNNELS**  
Hypersonic test facility for studying ablation in models under high pressure and high temperature  
[NASA-CASE-XLA-00378] c11 N71-15925  
Design of hypersonic test facility for ablation tests and performance tests of vehicles under conditions of high temperature and pressure  
[NASA-CASE-XLA-05378] c11 N71-21475
- HYSTERESIS**  
Belleville spring assembly with elastic guides having low hysteresis  
[NASA-CASE-XNP-09452] c15 N69-27504
- IGNITERS**  
Characteristics of solid propellant rocket engine with controlled rate of thrust buildup operating in vacuum environment  
[NASA-CASE-NPO-11559] c28 N73-24784  
Remote fire stack igniter --- with solenoid-controlled valve  
[NASA-CASE-MPS-21675-1] c25 N74-33378  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275  
Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c37 N79-11405
- IGNITION**  
Magnetically controlled plasma accelerator capable of ignition in low density gaseous environment  
[NASA-CASE-XLA-00327] c25 N71-29184
- IGNITION LIMITS**  
High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres  
[NASA-CASE-MSC-12178-1] c09 N71-13518
- IGNITION SYSTEMS**  
Solid propellant ignition with hypergolic fluid injected to predetermined portions of propellant  
[NASA-CASE-XLE-00207] c28 N70-33375  
Ignition system for monopropellant combustion devices  
[NASA-CASE-XNP-00249] c28 N70-38249  
Igniter capsule for chemical ignition of liquid rocket propellants  
[NASA-CASE-XLE-00323] c28 N70-38505  
Catalyst bed ignition system for hydrazine propellants  
[NASA-CASE-XNP-00876] c28 N70-41311  
Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c33 N77-28385
- IGNITION TEMPERATURE**  
Test chamber for determining decomposition and autoignition of materials used in spacecraft
- under controlled environmental conditions  
[NASA-CASE-KSC-10198] c11 N71-28629
- ILLUMINATORS**  
Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XNP-03844-1] c14 N71-26474  
Illumination system design for use as sunlight simulator in space environment simulators with multiple light sources reflected to single virtual source  
[NASA-CASE-HQN-10781] c23 N71-30292
- IMAGE CONTRAST**  
Video signal enhancement of signal component representing brightness of scene element in low contrast  
[NASA-CASE-NPO-10343] c07 N71-27341  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932
- IMAGE CONVERTERS**  
Real time liquid crystal image converter  
[NASA-CASE-LAR-11206-1] c74 N74-30118  
Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c36 N75-19652  
Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c33 N76-27473  
Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c35 N79-33449
- IMAGE CORRELATORS**  
Multiple pattern holographic information storage and readout system  
[NASA-CASE-ERC-10151] c16 N71-29131  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014  
Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c32 N79-14268
- IMAGE DISSECTOR TUBES**  
Apparatus for calibrating an image dissector tube  
[NASA-CASE-MPS-22208-1] c33 N75-26244  
Electronic optical transfer function analyzer  
[NASA-CASE-MPS-21672-1] c74 N76-19935
- IMAGE ENHANCEMENT**  
Electron beam scanning system for improved image definition and reduced power requirements for video signal transmission  
[NASA-CASE-ERC-10552] c09 N71-12539  
Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c74 N75-25706  
Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MPS-23461-1] c35 N79-10389
- IMAGE FILTERS**  
Filter arrangement for controlling light intensity in motion picture camera used in optical pyrometry  
[NASA-CASE-XLA-00062] c14 N70-33254  
Development and characteristics of spectroradiometer with wedge filters to eliminate adverse effect of pinholes in filters  
[NASA-CASE-HQN-10683] c14 N71-34389  
Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c74 N75-25706
- IMAGE INTENSIFIERS**  
Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c74 N78-18905  
Diffractoid grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c74 N78-32857  
Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MPS-23461-1] c35 N79-10389
- IMAGE PROCESSING**  
Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c32 N79-14268
- IMAGE TUBES**  
Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c33 N74-21850  
System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c74 N77-18893
- IMAGES**  
Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XNP-03844-1] c14 N71-26474

- Stereoscopic television system, including projecting pair of binocular images  
[NASA-CASE-ARC-10160-1] c23 N72-27728
- System for forming a quadrifid image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c35 N78-22348
- IMAGING TECHNIQUES**
- Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-ERC-10001] c23 N71-24868
- Noise elimination in coherent imaging system by axial rotation of optical lens for spectral distribution of degrading affects  
[NASA-CASE-GSC-11133-1] c23 N72-11568
- Phototransistor imaging system with mosaic of phototransistors on semiconductor substrate  
[NASA-CASE-MPS-20809] c23 N73-13660
- Computerized optical system for producing multiple images of a scene simultaneously  
[NASA-CASE-MSC-12404-1] c23 N73-13661
- Optical imaging system for increasing light absorption efficiency of imaging detector  
[NASA-CASE-ARC-10194-1] c23 N73-20741
- Device for displaying and recording angled views of samples to be viewed by microscope  
[NASA-CASE-GSC-11690-1] c14 N73-28499
- Ritchey-Chretien telescope responsive to images located off telescope optical axis  
[NASA-CASE-GSC-11487-1] c14 N73-30393
- Data storage, image tube type  
[NASA-CASE-MSC-14053-1] c60 N74-12888
- Optical instruments  
[NASA-CASE-MSC-14096-1] c74 N74-15095
- Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c35 N77-14408
- Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c09 N78-18083
- Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c33 N79-13262
- Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c74 N79-14892
- Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c43 N79-17288
- System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c74 N79-20856
- Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c74 N79-20857
- Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c74 N79-22880
- IMIDES**
- Synthesis and chemical properties of imidazopyrrolone/imide copolymers  
[NASA-CASE-XLA-08802] c06 N71-11239
- Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c31 N74-13177
- Catalysts for imide formation from aromatic isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c23 N78-22156
- Curing agent for polyepoxides and epoxy resins and composites cured therewith  
[NASA-CASE-LEW-13226-1] c23 N79-31345
- IMINES**
- Synthesis of polymeric schiff bases by schiff-base exchange reactions  
[NASA-CASE-XMP-08651] c06 N71-11236
- Direct synthesis of polymeric schiff bases from two amines and two aldehydes  
[NASA-CASE-XMP-08655] c06 N71-11239
- Synthesis of schiff bases for heat shields by acetal amine reactions  
[NASA-CASE-XMP-08652] c06 N71-11243
- Synthesis of aromatic diamines and dialdehyde polymers using Schiff base  
[NASA-CASE-XMP-03074] c06 N71-24740
- IMMOBILIZATION**
- Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint  
[NASA-CASE-XMP-06589] c05 N71-23159
- Absolute focus locking device for microscopes to maintain set focus for extended time period  
[NASA-CASE-LAP-10184] c14 N72-22445
- IMPACT**
- Shock absorber for use as protective barrier in impact energy absorbing system  
[NASA-CASE-NPO-10671] c15 N72-20443
- System for detecting impact position of cosmic dust on detector surface  
[NASA-CASE-GSC-11291-1] c25 N72-33696
- Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331
- IMPACT ACCELERATION**
- Suspended mass oscillation damper based on impact energy absorption for damping wind induced oscillations of tall stacks, antennas, and umbilical towers  
[NASA-CASE-LAR-10193-1] c15 N71-27146
- IMPACT DAMAGE**
- Measuring micrometeoroid depth of penetration into various materials  
[NASA-CASE-XLA-00941] c14 N71-23240
- IMPACT LOADS**
- Piezoelectric transducer for detecting and measuring micrometeoroids  
[NASA-CASE-XAC-01101] c14 N70-41957
- Impact testing machine for imparting large impact forces on high velocity packages  
[NASA-CASE-XMP-04817] c14 N71-23225
- IMPACT RESISTANCE**
- Electric storage battery with high impact resistance  
[NASA-CASE-NPO-11021] c03 N72-20032
- Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c24 N77-27189
- IMPACT STRENGTH**
- High impact pressure regulator having minimum number of lightweight movable elements  
[NASA-CASE-NPO-10175] c14 N71-18625
- IMPACT TESTING MACHINES**
- Development and characteristics of pentrometer for measuring physical properties of lunar surface  
[NASA-CASE-XLA-00934] c14 N71-22765
- Impact testing machine for imparting large impact forces on high velocity packages  
[NASA-CASE-XMP-04817] c14 N71-23225
- IMPACT TOLERANCES**
- High impact antennas with high radiating efficiency  
[NASA-CASE-NPO-10231] c07 N71-26101
- Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c37 N79-10420
- IMPEDANCE MATCHING**
- Impedance transformation device for signal mixing  
[NASA-CASE-XGS-01110] c07 N69-24334
- Reflectometer for receiver input impedance match measurement  
[NASA-CASE-XMP-10843] c07 N71-11267
- Radio frequency coaxial filter to provide dc isolation and low frequency signal rejection in audio range  
[NASA-CASE-XGS-01418] c09 N71-23573
- Pattern and impedance matching improvements in transversely polarized triaxial antenna  
[NASA-CASE-XGS-02290] c07 N71-28809
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c36 N79-21336
- IMPEDANCE MEASUREMENTS**
- Development of electrical system for measuring high impedance  
[NASA-CASE-XMS-08589-1] c09 N71-20569
- IMPLANTATION**
- Biotelemetry apparatus with dual voltage generators for implanting in animals  
[NASA-CASE-XAC-05706] c05 N71-12342
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c52 N77-25772
- IMPLANTED ELECTRODES (BIOLOGY)**
- Improved subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N79-15576
- IMPLOSIONS**
- Implosion driven, light gas, hypervelocity gun  
[NASA-CASE-XAC-05902] c11 N71-18578
- IMPREGNATING**
- Composite lamination method

- [ NASA-CASE-LAR-12019-1 ] c24 W78-17150
- IMPULSE GENERATORS**
- Percutaneous connector device  
[ NASA-CASE-KSC-10849-1 ] c52 W77-14738
- IMPURITIES**
- Fabrication of sintered impurity semiconductor brushes for electrical energy transfer  
[ NASA-CASE-XMF-01016 ] c26 W71-17818
- Method of mitigating titanium impurities effects in P-type silicon material for solar cells  
[ NASA-CASE-NPO-14635-1 ] c44 W79-17315
- IN-FLIGHT MONITORING**
- An improved system for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[ NASA-CASE-PRC-11024-1 ] c02 W79-17797
- INCIDENCE**
- Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[ NASA-CASE-MFS-22409-2 ] c74 W78-15880
- INCIDENT RADIATION**
- Frequency scanning particle size spectrometer  
[ NASA-CASE-NPO-13606-1 ] c35 W75-19627
- Solar cell assembly --- for use under high intensity illumination  
[ NASA-CASE-LEW-11549-1 ] c44 W77-19571
- INCLINATION**
- Hingeless helicopter rotor with improved stability  
[ NASA-CASE-ARC-10807-1 ] c05 W77-17029
- INCOHERENT SCATTERING**
- Rapidly pulsed, high intensity, incoherent light source  
[ NASA-CASE-XLE-2529-3 ] c33 W74-20859
- INDICATING INSTRUMENTS**
- Piezoelectric means for missile stage separation indication and stage initiation  
[ NASA-CASE-XLA-00791 ] c03 W70-39930
- Inductive liquid level detection system  
[ NASA-CASE-XLE-01609 ] c14 W71-10500
- Apparatus for determining quality of bond between high density material and low density material  
[ NASA-CASE-MFS-13686 ] c15 W71-18132
- Device for detecting hydrogen fires onboard high altitude rockets  
[ NASA-CASE-MFS-13130 ] c10 W72-17173
- Fatigue failure load indicator  
[ NASA-CASE-LAR-12027-1 ] c39 W79-22537
- INDIUM ALLOYS**
- Method for attaching a fused-quartz mirror to a conductive metal substrate  
[ NASA-CASE-MFS-23405-1 ] c26 W77-29260
- Solar cell collector  
[ NASA-CASE-LEW-12552-1 ] c44 W78-25527
- INDOLES**
- Indonethacin-antihistamine combination for gastric ulceration control  
[ NASA-CASE-ARC-11118-2 ] c52 W79-14755
- INDUCTANCE**
- Current dependent variable inductance for input filter chokes of ac or dc power supplies  
[ NASA-CASE-ERC-10139 ] c09 W72-17154
- Inductance device with vacuum insulation and materials of low gas entrapping capability  
[ NASA-CASE-LEW-10330-1 ] c09 W72-27226
- Direct reading inductance meter  
[ NASA-CASE-NPO-13792-1 ] c35 W77-32455
- INDUCTION HEATING**
- Induction heating of metallurgical specimens to high temperatures in coil furnace  
[ NASA-CASE-XLE-04026 ] c14 W71-23267
- INDUCTION MOTORS**
- Voltage controlled oscillator circuit for two-phase induction motor control  
[ NASA-CASE-MFS-21465-1 ] c10 W73-32145
- Variable frequency inverter for ac induction motors with torque, speed and braking control  
[ NASA-CASE-MFS-22088-1 ] c33 W75-15874
- Power factor control system for AC induction motors  
[ NASA-CASE-MFS-23280-1 ] c33 W78-10376
- Improved power factor control system for ac induction motors  
[ NASA-CASE-MFS-23988-1 ] c33 W79-25315
- INDUCTORS**
- Inductive liquid level detection system  
[ NASA-CASE-XLE-01609 ] c14 W71-10500
- Describing apparatus used in vacuum deposition of thin film inductive windings for spacecraft microcircuitry  
[ NASA-CASE-XMF-01667 ] c15 W71-17647
- Double-induction variable speed system for constant-frequency electrical power generation  
[ NASA-CASE-ERC-10065 ] c09 W71-27364
- INDUSTRIAL PLANTS**
- Simplified technique and device for producing industrial grade synthetic diamonds  
[ NASA-CASE-MFS-20698-2 ] c15 W73-19457
- INDUSTRIAL WASTES**
- Process of forming catalytic surfaces for wet oxidation reactions  
[ NASA-CASE-MSC-14831-1 ] c25 W78-10225
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[ NASA-CASE-NPO-13847-2 ] c85 W79-17747
- INERTIA**
- Gearing system for eliminating backlash and filtering input torque fluctuations from high inertia load  
[ NASA-CASE-XGS-04227 ] c15 W71-21744
- INERTIAL GUIDANCE**
- Hermetically sealed vibration damper design for use in gimbal assembly of spacecraft inertial guidance system  
[ NASA-CASE-MSC-10959 ] c15 W71-26243
- INERTIAL NAVIGATION**
- Autonomous navigation system --- using gyroscopic pendulums and gimbals for air navigation system which disposes  
[ NASA-CASE-ARC-11257-1 ] c04 W79-33177
- INERTIAL PLATFORMS**
- Inertial component clamping assembly design for spacecraft guidance and control system mounting  
[ NASA-CASE-XMS-02184 ] c15 W71-20813
- Inertial gimbal alignment system for spacecraft guidance  
[ NASA-CASE-XMF-01669 ] c21 W71-23289
- Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[ NASA-CASE-NPO-13044-1 ] c35 W74-15094
- Attitude control system  
[ NASA-CASE-MFS-22787-1 ] c15 W77-10113
- INERTIAL REFERENCE SYSTEMS**
- Development of attitude control system for spacecraft orientation  
[ NASA-CASE-XGS-04393 ] c21 W71-14159
- Large amplitude, linear inertial reference system of vibrating string type for spacecraft reference plane  
[ NASA-CASE-XAC-03107 ] c23 W71-16098
- INFLATABLE SPACECRAFT**
- Passive thermal control coating on aluminum foil laminate for inflatable spacecraft surfaces  
[ NASA-CASE-XLA-01291 ] c33 W70-36617
- Erectable, inflatable, radio signal reflecting passive communication satellite  
[ NASA-CASE-XLA-00210 ] c30 W70-40309
- Rotating, multisided mandrel for fabricating gored inflatable spacecraft  
[ NASA-CASE-XLA-04143 ] c15 W71-17687
- Forming inflatable panels erectable in space for passive communication satellite  
[ NASA-CASE-XLA-03497 ] c15 W71-23052
- Development and characteristics of inflatable structure to provide escape from orbit for spacecrews under emergency conditions  
[ NASA-CASE-XMS-06162 ] c31 W71-28851
- INFLATABLE STRUCTURES**
- Aeroflexible wing structure with air scoop for inflating stiffeners with ram air  
[ NASA-CASE-XLA-06095 ] c01 W69-39981
- Design of inflatable life raft for aircrafts and boats  
[ NASA-CASE-XMS-00863 ] c05 W70-34857
- Lightweight life preserver without fastening devices  
[ NASA-CASE-XMS-00864 ] c05 W70-36493
- Inflatable honeycomb panel element for lightweight structures usable in space stations and other construction  
[ NASA-CASE-XLA-00204 ] c32 W70-36536
- Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and

- deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063
- Temperature sensor warning system for pneumatic tires of aircraft and ground vehicles  
[NASA-CASE-XLA-01925] c14 N71-15620
- Inflation system for balloon type satellites  
[NASA-CASE-XGS-03351] c31 N71-16081
- Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XNP-02507] c31 N71-17579
- Development and characteristics of self supporting space vehicle  
[NASA-CASE-XLA-00117] c31 N71-17680
- Conforming polisher for aspheric surfaces of revolution with inflatable tube  
[NASA-CASE-XGS-02894] c15 N71-22705
- Technique for making foldable, inflatable, plastic honeycomb core panels for use in building and bridge structures, light and radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713
- Collapsible antenna boom and coaxial transmission line having inflatable inner tube  
[NASA-CASE-MPS-20068] c07 N71-27191
- Space expandable tether device for use as passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936
- Inflatable rocket engine nozzle skirt with transpiration cooling  
[NASA-CASE-MPS-20619] c23 N72-11708
- Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c54 N74-14845
- Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c54 N78-18761
- Spine immobilization method and apparatus --- rigid bladder  
[NASA-CASE-ARC-11167-1] c52 N79-30921
- INFORMATION RETRIEVAL**  
Multiple pattern holographic information storage and readout system  
[NASA-CASE-ERC-10151] c16 N71-29131
- INFRARED DETECTORS**  
Temperature sensitive capacitor device for detecting very low intensity infrared radiation  
[NASA-CASE-XNP-09750] c14 N69-39937
- Sight switch using infrared source and sensor mounted beside eye  
[NASA-CASE-XMP-03934] c09 N71-22985
- Characteristics of infrared photodetectors manufactured from semiconductor material irradiated by electron beam  
[NASA-CASE-LAP-10728-1] c14 N73-12445
- Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c33 N75-31332
- INFRARED INSTRUMENTS**  
Infrared scanning system for maintaining spacecraft orientation with earth reference  
[NASA-CASE-XLA-00120] c21 N70-33181
- INFRARED INTERFEROMETERS**  
Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c35 N78-18395
- INFRARED LASERS**  
Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c35 N74-11284
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c31 N79-17029
- INFRARED RADIATION**  
High speed infrared furnace  
[NASA-CASE-XLP-10466] c17 N69-25147
- High field CDS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c35 N74-18088
- INFRARED REFLECTION**  
Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186
- INFRARED SCANNERS**  
Infrared scanning system for maintaining spacecraft orientation with earth reference  
[NASA-CASE-XLA-00120] c21 N70-33181
- Method and equipment for locating earth infrared horizon from space, independent of season and latitude  
[NASA-CASE-LAR-10726-1] c14 N73-20475
- INFRARED SPECTRA**  
Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426
- INFRARED SPECTROMETERS**  
Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
[NASA-CASE-XLA-03273] c14 N71-18699
- INFRARED SPECTROSCOPY**  
Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c35 N79-14348
- INFRASONIC FREQUENCIES**  
Resonant infrasonic gauging device for measuring liquid quantity in closed bladderless reservoir  
[NASA-CASE-MSC-11847-1] c14 N72-11363
- INHIBITORS**  
Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c28 N79-14228
- INITIATORS (EXPLOSIVES)**  
Piezoelectric means for missile stage separation indication and stage initiation  
[NASA-CASE-XLA-00791] c03 N70-39930
- Electroexplosive safe-arm initiator using electric driven electromagnetic coils and magnets to align charge  
[NASA-CASE-LAR-10372] c09 N71-18599
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c28 N79-11231
- INJECTION**  
Foam insulation thickness measuring and injection device for spacecraft applications  
[NASA-CASE-MPS-20261] c14 N71-27005
- INJECTORS**  
Propellant injectors for rocket combustion chambers  
[NASA-CASE-XLE-00103] c28 N70-33241
- Fuel injection system for maximum combustion efficiency of rocket engines  
[NASA-CASE-XLE-00111] c28 N70-38199
- Injector manifold assembly for bipropellant rocket engines providing for fuel propellant to serve as coolant  
[NASA-CASE-XNP-00148] c28 N70-38710
- Method and apparatus for use in forming highly collimated beam of microparticles with high charge to mass ratio and injecting beam into electrostatic accelerating tube  
[NASA-CASE-XGS-06628] c24 N71-16213
- Control valve and coaxial variable injector for controlling bipropellant mixture ratio and flow  
[NASA-CASE-XNP-09702] c15 N71-17654
- Rocket engine injector orifice to accommodate changes in density, velocity, and pressure, thereby maintaining constant mass flow rate of propellant into rocket combustion chamber  
[NASA-CASE-XLE-03157] c28 N71-24736
- Bipropellant injector with pair of concave deflector plates  
[NASA-CASE-XNP-09461] c28 N72-23809
- Coaxial injector for mixing liquid propellants within combustion chambers  
[NASA-CASE-NPO-11095] c15 N72-25455
- Improved injector with porous plug for bubbles of gas into feed lines of electrically conductive liquid  
[NASA-CASE-NPO-11377] c15 N73-27406
- Pocket injector head  
[NASA-CASE-XNP-04592-1] c20 N79-21125
- INLET FLOW**  
High pressure four-way valve with O ring adapted to pass across inlet port  
[NASA-CASE-XNP-00214] c15 N70-36908
- Method for maintaining good performance in gas turbine during air flow distortion  
[NASA-CASE-LEW-10286-1] c28 N71-28915
- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c02 N74-20646
- Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c07 N74-31270
- Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c35 N76-14431

- Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c35 N77-24455
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c05 N79-24976
- INLET NOZZLES**
- Rocket injector head  
[NASA-CASE-XMP-04592-1] c20 N79-21125
- INLET PRESSURE**
- Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
[NASA-CASE-XLE-03512] c12 N69-21466
- Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c35 N76-14431
- INOCULATION**
- Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c51 N75-13502
- INORGANIC COATINGS**
- Composition of diffuse reflective coating containing sodium chloride in combination with diol solvent and organic wetting and drying agents  
[NASA-CASE-GSC-11214-1] c06 N73-13128
- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233
- INORGANIC COMPOUNDS**
- Inorganic ion exchange membrane electrolytes for fuel cell use  
[NASA-CASE-XNP-04264] c03 N69-21337
- Preparation of inorganic solid film lubricants with long wear life and stability in aerospace environments  
[NASA-CASE-XMP-03988] c15 N71-21403
- Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control  
[NASA-CASE-ARC-10098-1] c06 N71-24739
- Inorganic thermal control and solar reflector coatings  
[NASA-CASE-MPS-20011] c18 N72-22566
- Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c44 N78-25530
- Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c76 N79-21910
- INORGANIC PEROXIDES**
- Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c26 N78-32229
- Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c25 N79-10162
- INPUT**
- Apparatus for filtering input signals  
[NASA-CASE-NPO-10198] c09 N71-24806
- PC networks with voltage amplifier, RC input circuit, and positive feedback  
[NASA-CASE-ARC-10020] c10 N72-17172
- INPUT/OUTPUT ROUTINES**
- Analog to digital converter  
[NASA-CASE-NPO-13385-1] c33 N76-18345
- INSERTION**
- Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c52 N79-27836
- INSERTION LOSS**
- High impedance alternating current sensing transformer device between two bolometers for measuring insertion loss of test component  
[NASA-CASE-XNP-01193] c10 N71-16057
- INSPECTION**
- Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c38 N78-17396
- INSTALLING**
- Device for installing rocket engines  
[NASA-CASE-MPS-19220-1] c20 N76-22296
- Thermocouple installation  
[NASA-CASE-NPO-13540-1] c35 N77-14409
- A method and technique for installing light-weight fragile, high-temperature fiber insulation --- sealing recoverable spacecraft  
[NASA-CASE-MSC-16934-1] c24 N79-16923
- A method of making high temperature seals  
[NASA-CASE-MSC-16973-1] c37 N79-17224
- INSTRUMENT ERRORS**
- Solar radiation direction detector and device for compensating degradation of photocells  
[NASA-CASE-XLA-00183] c14 N70-40239
- INSTRUMENT FLIGHT RULES**
- Controlled visibility device for simulating poor visibility conditions in training pilots in instrument landing and flight procedures  
[NASA-CASE-XPR-04147] c11 N71-10749
- INSTRUMENT ORIENTATION**
- Sensor consisting of photocells mounted on pyramidal base for improved pointing accuracy of planetary trackers  
[NASA-CASE-XNP-04180] c07 N69-39736
- Inertial gimbals alignment system for spacecraft guidance  
[NASA-CASE-XMP-01669] c21 N71-23289
- Optical gauging system for monitoring machine tool alignment  
[NASA-CASE-XAC-09489-1] c15 N71-26673
- Development of solar energy powered heliostats assembly to orient solar array toward sun  
[NASA-CASE-GSC-10945-1] c21 N72-31637
- Visible and infrared polarization ratio spectroradiometer  
[NASA-CASE-LAR-12285-1] c35 N78-32398
- INSTRUMENT PACKAGES**
- Apparatus for ejecting covers of instrument packages using differential pressure principle  
[NASA-CASE-XMP-04132] c15 N69-27502
- Removable potting compound for instrument shock protection  
[NASA-CASE-XLA-00482] c15 N70-36409
- Plastic foam generator for space vehicle instrument payload package flotation in water landing  
[NASA-CASE-XLA-00838] c03 N70-36778
- High velocity guidance and spin stabilization gyro controlled jet reaction system for launch vehicle payloads  
[NASA-CASE-XLA-01339] c31 N71-15692
- Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XNP-09763] c14 N71-20461
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c34 N79-31523
- INSTRUMENTS**
- Method and apparatus for bowing of instrument panels to improve radio frequency shielded enclosure  
[NASA-CASE-XMP-09422] c07 N71-19436
- Design and development of pressure sensor for measuring differential pressures of few pounds per square inch  
[NASA-CASE-XMP-01974] c14 N71-22752
- Development of temperature compensated thrust measuring gage for measuring forces as function of time in environment with varying temperature  
[NASA-CASE-XGS-02319] c14 N71-22965
- Development and characteristics of self-calibrating displacement transducer for measuring magnitude and frequency of displacement of bodies  
[NASA-CASE-XLA-00781] c09 N71-22999
- Design, development, and characteristics of pressure and temperature sensor operating immersed in fluid flow  
[NASA-CASE-LEW-10281-1] c14 N72-17327
- Development of apparatus for mounting scientific experiments in spacecraft to permit utilization without maneuvering spacecraft  
[NASA-CASE-MSC-12372-1] c31 N72-25842
- Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c37 N78-27424
- Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c37 N78-27425
- INSULATED STRUCTURES**
- Low thermal loss piping arrangement for moving cryogenic media through double chamber structure  
[NASA-CASE-XNP-08882] c15 N69-39935

## INSULATION

Electrode attached to helmets for detecting low level signals from skin of living creatures  
[NASA-CASE-ARC-10043-1] c05 N71-11193

Characteristics of foamed-in-place ceramic refractory insulating material and method of fabrication  
[NASA-CASE-YGS-02435] c19 N71-22998

Method of fabricating equal length insulated wire  
[NASA-CASE-FRC-10038] c15 N72-20444

Inductance device with vacuum insulation and materials of low gas entrapping capability  
[NASA-CASE-LEW-10330-1] c09 N72-27226

Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-HSC-14339-1] c05 N75-24716

Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c27 N76-22376

Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c27 N76-22377

Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c27 N76-23426

Field effect transistor and method of construction thereof  
[NASA-CASE-MPS-23312-1] c33 N78-27326

Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MPS-23626-1] c24 N78-32190

A method of making high temperature seals  
[NASA-CASE-MSC-16973-1] c37 N79-17224

## INSULATORS

High voltage insulators for direct current in acceleration system of electrostatic thruster  
[NASA-CASE-XLE-01902] c28 N71-10574

High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302

## INTAKE SYSTEMS

Deflector for preventing objects from entering nacelle inlets of jet aircraft  
[NASA-CASE-XLE-00388] c28 N70-34788

The engine air intake system  
[NASA-CASE-ARC-10761-1] c07 N77-18154

Fluid sampling device  
[NASA-CASE-GSC-12143-1] c35 N77-32456

Reciprocating engines  
[NASA-CASE-MSC-16239-1] c37 N78-11399

## INTEGRATED CIRCUITS

Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897

Development and characteristics of electric circuitry for detecting electrical pulses rise time and amplitude  
[NASA-CASE-YMF-08804] c09 N71-24717

Method and apparatus for testing integrated circuit microtab welds  
[NASA-CASE-ARC-10176-1] c15 N72-21464

Single integrated circuit chip with field effect transistor  
[NASA-CASE-GSC-10835-1] c09 N72-33205

Integrated circuit tangent function generator  
[NASA-CASE-MSC-13907-1] c10 N73-26230

Inverted geometry transistor for use with monolithic integrated circuit  
[NASA-CASE-ARC-10330-1] c09 N73-32112

Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MPS-21374-1] c33 N74-12951

Integrated P-channel MOS gyrator  
[NASA-CASE-MPS-22343-1] c33 N74-34638

Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c33 N75-14957

Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MPS-22342-1] c33 N75-30428

Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c38 N78-17395

Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-1] c44 N78-25553

Method for analyzing radiation sensitivity of integrated circuits

[NASA-CASE-NPO-14350-1] c33 N78-27330

Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MPS-23845-1] c33 N78-32347

Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c33 N79-12321

A general logic structure for custom LSI circuits  
[NASA-CASE-NPO-14410-1] c33 N79-25314

## INTEGRATORS

Solid state operational integrator  
[NASA-CASE-NPO-10230] c09 N71-12520

Variable duration pulse integrator design for integrating pulse duration modulated pulses with elimination of ripple content  
[NASA-CASE-XLA-01219] c10 N71-23084

Solid state integrator for converting variable width pulses into analog voltage  
[NASA-CASE-XLA-03356] c10 N71-23315

Feedback integrating circuit with grounded capacitor for signal processing  
[NASA-CASE-XAC-10607] c10 N71-23669

High speed phase detector design indicating phase relationship between two square wave input signals  
[NASA-CASE-XNP-01306-2] c09 N71-24596

## INTERFEROMETERS

Describing device for velocity control of electromechanical drive mechanism of scanning mirror of interferometer  
[NASA-CASE-YGS-03532] c14 N71-17627

Incremental motion drive system applied to interferometer components  
[NASA-CASE-XNP-08897] c15 N71-17694

Design and development of optical interferometer with laser light source for application to schlieren systems  
[NASA-CASE-XLA-04295] c16 N71-24170

Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215

Two beam interferometer-polarimeter  
[NASA-CASE-NPO-11239] c14 N73-12446

Interferometer prism and control system for precisely determining direction to remote light source  
[NASA-CASE-ARC-10278-1] c14 N73-25463

High resolution Fourier interferometer-spectropolarimeter  
[NASA-CASE-NPO-13604-1] c35 N76-31490

Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c74 N78-22891

Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c35 N79-14348

Interferometer  
[NASA-CASE-NPO-14502-1] c35 N79-19317

Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c74 N79-23777

A scannable beam-forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c32 N79-26252

## INTERFEROMETRY

Interferometric locating system  
[NASA-CASE-NPO-14173-1] c04 N79-10039

Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391

## INTERMEDIATE FREQUENCY AMPLIFIERS

Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c32 N76-14321

## INTERMETALLICS

Controlled diffusion reaction process for masking substrate of twisted multifilament superconductive ribbon  
[NASA-CASE-LEW-11726-1] c26 N73-26752

Production of intermetallic compounds by effect of shock waves from explosions and compaction of powder  
[NASA-CASE-MPS-20861-1] c18 N73-32437

INTERNAL COMBUSTION ENGINES

Variable displacement fuel pump for internal combustion engines  
[NASA-CASE-MSC-12139-1] c28 N71-14058

- Detonation reaction engine comprising outer housing enclosing pair of inner walls for continuous flow  
[NASA-CASE-XMP-06926] c28 N71-22983
- Development of system for preheating vaporized fuel for use with internal combustion engines  
[NASA-CASE-NPO-12072] c28 N72-22772
- System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c37 N76-18457
- Internal combustion engine with electrostatic discharging fuels  
[NASA-CASE-NPO-13798-1] c37 N77-25535
- Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c37 N77-31497
- Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c37 N78-25431
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c07 N78-27122
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c44 N78-33526
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c37 N79-11405
- Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c35 N79-14345
- INTERPLANETARY SPACE**
- Compact heat shielding for interplanetary space vehicles  
[NASA-CASE-XMS-004861] c33 N70-33344
- Active RC filter networks and amplifiers for deep space magnetic field measurement  
[NASA-CASE-XAC-05462-2] c10 N72-17171
- INTERPLANETARY SPACECRAFT**
- Transpirationally cooled heat ablation system for interplanetary spacecraft reentry shielding  
[NASA-CASE-XMS-02677] c31 N70-42075
- INTERPLANETARY TRAJECTORIES**
- Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury  
[NASA-CASE-XNP-00708] c14 N70-35394
- INTRACRANIAL PRESSURE**
- Induction powered biological radiosonde --- for measuring intracranial pressure  
[NASA-CASE-ARC-11120-1] c52 N77-23743
- INTRAOCULAR PRESSURE**
- Intra-ocular pressure normalization apparatus  
[NASA-CASE-LEW-12955-1] c52 N77-30736
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c52 N77-30737
- INTRAVENICULAR ACTIVITY**
- Intra- and extravehicular life support space suite for Apollo astronauts  
[NASA-CASE-MSC-12609-1] c05 N73-32012
- INTRUSION**
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c35 N77-19390
- INVENTIONS**
- Gas path seal  
[NASA-CASE-LEW-12131-2] c07 N78-31103
- INVERTED CONVERTERS (DC TO AC)**
- Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c35 N74-18090
- Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MPS-22088-1] c33 N75-15874
- INVERTERS**
- Silicon controlled rectifier inverter with compensation of transients to avoid false gating  
[NASA-CASE-XLA-08507] c09 N69-39984
- Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c09 N72-25254
- Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c33 N78-10377
- Improved base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c37 N78-22376
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254
- IODINE**
- Method of producing output voltage from photovoltaic cell using poly-N-vinyl carbazole complexed with iodine  
[NASA-CASE-NPO-10373] c03 N71-18698
- Gallium arsenide solar cell preparation by surface deposition of cuprous iodide on thin n-type polycrystalline layers and heating in iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c54 N78-14784
- IODINE COMPOUNDS**
- New perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups --- sealers for aircraft structures  
[NASA-CASE-ARC-11241-1] c27 N79-24153
- IODINE ISOTOPES**
- Apparatus for producing high purity I-123 from Xe-123 by bombarding tellurium target with cyclotron beam  
[NASA-CASE-LEW-10518-2] c24 N72-28714
- Production of I-123 for use as radiopharmaceutical for low radiation exposure  
[NASA-CASE-LEW-10518-1] c24 N72-33681
- Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c25 N76-27383
- Production of I-123  
[NASA-CASE-LEW-11390-3] c25 N76-29379
- ION ACCELERATORS**
- Helium outgassing process for fused glass coating on ion accelerator grid  
[NASA-CASE-LEW-10278-1] c15 N71-28582
- ION BEAMS**
- Ion beam deflector system for electronic thrust vector control for ion propulsion yaw, pitch, and roll forces  
[NASA-CASE-LEW-10689-1] c28 N71-26173
- Dispensing targets for ion beam particle generators  
[NASA-CASE-NPO-13112-1] c73 N74-26767
- Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c20 N74-31269
- Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c20 N77-10148
- Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c25 N78-27226
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N78-28459
- Ion beam sputter deposition of fluoropolymers  
[NASA-CASE-LEW-13122-1] c27 N79-24154
- ION CHARGE**
- Quadrupole mass spectrometer using noise spectrum for ion separation and identification  
[NASA-CASE-XNP-04231] c14 N73-32325
- ION CONCENTRATION**
- Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c27 N74-13270
- ION CURRENTS**
- System for monitoring presence of neutrals in streams of ions - ion engine control  
[NASA-CASE-XNP-02592] c24 N71-20518
- ION CYCLOTRON RADIATION**
- Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c35 N77-10492
- ION DENSITY (CONCENTRATION)**
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c76 N76-20994
- ION ENGINES**
- Improved cathode containing barium carbonate block and heated tungsten screen for electron bombardment ion thruster  
[NASA-CASE-XLE-07087] c06 N69-39889
- High-vacuum condenser tank for testing ion rocket engines  
[NASA-CASE-XLE-00168] c11 N70-33278
- Encapsulated heater forming hollow body for cathode used in ion thruster  
[NASA-CASE-LEW-10814-1] c28 N70-35422
- Electrostatic ion engines using high velocity electrons to ionize propellant  
[NASA-CASE-XLE-00376] c28 N70-37245
- Metal ion rocket engine design  
[NASA-CASE-XLE-00342] c28 N70-37980
- Dynamometer measuring microforce thrust produced by ion engine

- [NASA-CASE-XLE-00702] c14 N70-40203  
Increasing available power per unit area in ion  
rocket engine by increasing beam density  
[NASA-CASE-XLE-00519] c29 N70-41576  
Accel and focus electrode design for ion engine  
with improved efficiency  
[NASA-CASE-XNP-02839] c28 N70-41922  
Ion engine with magnetic circuit for optimal  
discharge  
[NASA-CASE-XLE-01124] c28 N71-18043  
Electron bombardment ion rocket engine with  
improved propellant introduction system  
[NASA-CASE-XLE-02066] c28 N71-15661  
System for monitoring presence of neutrals in  
streams of ions - ion engine control  
[NASA-CASE-XNP-02592] c24 N71-20518  
Construction and method of arranging plurality  
of ion engines to form cluster thereby  
increasing efficiency and control by  
decreasing heat radiated to space  
[NASA-CASE-XNP-02923] c29 N71-23091  
Electronic cathodes for use in electron  
bombardment ion thrusters  
[NASA-CASE-XLP-04501] c09 N71-23190  
Permanently magnetized ion engine casing  
construction for use in spacecraft propulsion  
systems  
[NASA-CASE-XNP-06942] c29 N71-23293  
Development and characteristics of ion thruster  
accelerator with single glass coated grid to  
provide increased ion extraction capability  
and larger diameter accelerator system  
[NASA-CASE-LEW-10106-1] c28 N71-26642  
Internal labyrinth and shield structure to  
improve electrical isolation of propellant  
feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781  
Low mass ionizing device for use in electric  
thrust spacecraft engines  
[NASA-CASE-XNP-01954] c28 N71-28850  
Development of system for delivering vaporized  
mercury to electron bombardment ion engine  
[NASA-CASE-NPO-10737] c28 N72-11709  
Characteristics of ion rocket engine with  
combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c28 N73-24783  
Single grid accelerator system for electron  
bombardment type ion thruster  
[NASA-CASE-XLE-10453-2] c28 N73-27699  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310  
Method of constructing dished ion thruster grids  
to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c20 N76-21276
- ION EXCHANGE MEMBRANE ELECTROLYTES**  
Inorganic ion exchange membrane electrolytes for  
fuel cell use  
[NASA-CASE-XNP-04264] c03 N69-21337  
Development and characteristics of ion-exchange  
membrane and electrode assembly for fuel cells  
or electrolysis cells  
[NASA-CASE-XMS-02063] c03 N71-29044  
Formulated plastic separators for soluble  
electrode cells  
[NASA-CASE-LEW-12358-2] c25 N78-25149  
Formulated plastic separators for soluble  
electrode cells --- rubber-ion transport  
membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313
- ION EXCHANGE RESINS**  
Inorganic-organic separators for alkaline  
batteries  
[NASA-CASE-LEW-12649-1] c44 N78-25530
- ION EXTRACTION**  
Apparatus for extraction and separation of a  
preferentially photo-dissociated molecular  
isotope into positive and negative ions by  
means of an electric field  
[NASA-CASE-LEW-12465-1] c25 N78-25149
- ION IRRADIATION**  
Modification of the electrical and optical  
properties of polymers --- ion irradiation  
[NASA-CASE-LEW-13027-1] c27 N79-11216
- ION PROBES**  
Ion microprobe mass spectrometer with cooled  
electrode target for analyzing traces of fluids  
[NASA-CASE-PRC-10014] c14 N71-28863
- ION PROPULSION**  
Variable thrust ion engine using thermal  
decomposition of solid cesium compound to  
produce propulsive vapor  
[NASA-CASE-XNP-00923] c28 N70-36802  
Electrostatic ion engines using high velocity  
electrons to ionize propellant  
[NASA-CASE-XLV-00376] c28 N70-37245  
Metal ion rocket engine design  
[NASA-CASE-XLE-00342] c28 N70-37980  
Method for producing porous tungsten plates for  
ionizing cesium compounds for propulsion of  
ion engines  
[NASA-CASE-XLE-00455] c28 N70-38197  
Accel and focus electrode design for ion engine  
with improved efficiency  
[NASA-CASE-XNP-02939] c28 N70-41922  
Electric rocket engine with electron bombardment  
ionization chamber  
[NASA-CASE-XNP-04124] c28 N71-21822  
Ion beam deflector system for electronic thrust  
vector control for ion propulsion yaw, pitch,  
and roll forces  
[NASA-CASE-LEW-10689-1] c28 N71-26173  
Development and characteristics of ion thruster  
accelerator with single glass coated grid to  
provide increased ion extraction capability  
and larger diameter accelerator system  
[NASA-CASE-LEW-10106-1] c28 N71-26642  
Development of system for delivering vaporized  
mercury to electron bombardment ion engine  
[NASA-CASE-NPO-10737] c28 N72-11709  
Radial magnetic field for ion thruster  
[NASA-CASE-LEW-10770-1] c28 N72-22770  
Automatic shunting of ion thruster magnetic  
field when thruster is not operating  
[NASA-CASE-LEW-10835-1] c28 N72-22771  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310  
Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c37 N76-14461  
Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c20 N77-20162  
Closed Loop solar array-ion thruster system with  
power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179
- ION PUMPS**  
Mass spectrometer with magnetic pole pieces  
providing the magnetic fields for both the  
magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c35 N77-14406
- ION SOURCES**  
Apertured electrode focusing system for ion  
sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618  
Multilayer porous refractory metal ionizer  
design with thick, porous, large-grain  
substrates and thin, porous micron-grain  
substrates  
[NASA-CASE-XNP-04338] c17 N71-23046  
Development and characteristics of ion thruster  
accelerator with single glass coated grid to  
provide increased ion extraction capability  
and larger diameter accelerator system  
[NASA-CASE-LEW-10106-1] c28 N71-26642  
Low mass ionizing device for use in electric  
thrust spacecraft engines  
[NASA-CASE-XNP-01954] c28 N71-28850  
Development and characteristics of apparatus for  
ionization analysis  
[NASA-CASE-ARC-10017-1] c14 N72-29464  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c20 N74-31269  
Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c37 N75-19684  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c75 N79-10894
- ION TRAPS (INSTRUMENTATION)**  
Method and apparatus for measurement of trap  
density and energy distribution in dielectric  
films  
[NASA-CASE-NPO-13443-1] c76 N76-20994
- IONIZATION CHAMBERS**  
Automatic baseline stabilization for ionization  
detector used in gas chromatograph  
[NASA-CASE-XNP-03128] c10 N70-41991  
Electric rocket engine with electron bombardment  
ionization chamber  
[NASA-CASE-XNP-04124] c28 N71-21822  
Multichannel photoionization chamber for  
measuring absorption, photoionization yield,

- and coefficients of gases  
[NASA-CASE-ERC-10044-1] c14 N71-27090
- Development and characteristics of apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c14 N72-29464
- IONIZATION GAGES**
- Ionization vacuum gage  
[NASA-CASE-XNP-00646] c14 N70-35666
- Ionization control system design for monitoring separately located ion gage pressures on vacuum chambers  
[NASA-CASE-XLE-00787] c14 N71-21090
- Development and characteristics of apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c14 N72-29464
- Ionization gage for measuring ultrahigh vacuum levels  
[NASA-CASE-XLA-05087] c14 N73-30391
- IONIZATION POTENTIALS**
- Electrodes having array of small surfaces for field ionization  
[NASA-CASE-ERC-10013] c09 N71-26678
- IONIZED GASES**
- Plasma probes having guard ring and primary sensor at same potential to prevent stray wall current collection in ionized gases  
[NASA-CASE-XLE-00690] c25 N69-39884
- Transient heat transfer gage for measuring total radiant intensity from far ultraviolet and ionized high temperature gases  
[NASA-CASE-XNP-09802] c33 N71-15641
- Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c25 N78-25149
- IONIZERS**
- Description of electrical equipment and system for purification of waste water by producing silver ions for bacterial control  
[NASA-CASE-MSC-10960-1] c03 N71-24718
- Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c20 N75-18310
- IONIZING RADIATION**
- High voltage cable for use in high intensity ionizing radiation fields  
[NASA-CASE-XNP-00738] c09 N70-38201
- Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MPS-21364-1] c37 N74-18126
- IONOSPHERE**
- Lightweight, rugged, inexpensive satellite battery for producing electrical power from ionosphere using electrodes with different contact potentials  
[NASA-CASE-XGS-01593] c03 N70-35408
- IONS**
- Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
[NASA-CASE-ARC-10443-1] c14 N73-20477
- IRIDIUM**
- Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346
- IRISES (MECHANICAL APERTURES)**
- Waveguide, thin film window and microwave irises  
[NASA-CASE-LAR-10513-1] c07 N72-25170
- Development of thin film microwave iris installed in microwave waveguide transverse to flow of energy in waveguide  
[NASA-CASE-LAR-10511-1] c09 N72-29172
- IRON**
- Coal desulfurization  
[NASA-CASE-NPO-14272-1] c25 N78-33164
- IRON ALLOYS**
- Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c26 N78-18182
- High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c26 N79-19145
- Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c26 N79-22271
- IRRADIATION**
- Solar sensor with coarse and fine sensing elements for matching preirradiated cells on degradation rates  
[NASA-CASE-XLA-01584] c14 N71-23269
- Apparatus for obtaining isotropic irradiation on film emulsion from parallel radiation source  
[NASA-CASE-MPS-20095] c24 N72-11595
- Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502
- Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c33 N78-27330
- IRRIGATION**
- Solar-powered pump  
[NASA-CASE-NPO-13567-1] c44 N76-29701
- ISOLATORS**
- Internal labyrinth and shield structure to improve electrical isolation of propellant feed source from ion thruster  
[NASA-CASE-LEW-10210-1] c28 N71-26781
- Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c37 N79-11402
- ISOPROPYL ALCOHOL**
- Preparation of fluorinated polyethers from 2-hydro-perhaloisopropyl alcohols  
[NASA-CASE-MPS-11492] c06 N73-30102
- ISOTHERMAL LAYERS**
- Double-wall isothermal cylinder containing heat transfer fluid thermal reservoir as spacecraft insulation cover  
[NASA-CASE-MPS-20355] c33 N71-25353
- ISOTHERMAL PROCESSES**
- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366
- ISOTOPE SEPARATION**
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c36 N77-26477
- J**
- JET AIRCRAFT**
- Deflector for preventing objects from entering nacelle inlets of jet aircraft  
[NASA-CASE-XLE-00388] c28 N70-34788
- JET AIRCRAFT NOISE**
- Upper surface, external flow, jet-augmented flap configuration for high wing jet aircraft for noise reduction  
[NASA-CASE-XLA-00087] c02 N70-33332
- Jet aircraft exhaust nozzle for noise reduction  
[NASA-CASE-LAR-10951-1] c28 N73-19819
- Development of aircraft configuration for reduction of jet aircraft noise by exhausting engine gases over upper surface of wing  
[NASA-CASE-LAR-11087-1] c02 N73-26008
- Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c07 N74-32413
- Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c07 N74-33219
- Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c35 N75-19614
- Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-1] c07 N77-15036
- JET AMPLIFIERS**
- Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
[NASA-CASE-XLE-03512] c12 N69-21466
- Fluid control jet amplifiers  
[NASA-CASE-XLE-09341] c12 N71-28741
- JET BLAST EFFECTS**
- Separation mechanism for use between stages of multistage rocket vehicles  
[NASA-CASE-XLA-00188] c15 N71-22874
- JET CONTROL**
- Attitude control device for space vehicles  
[NASA-CASE-XNP-00294] c21 N70-36938
- JET ENGINES**
- Absorptive, nonreflecting barrier mounted between closely spaced jet engines on supersonic aircraft, for preventing shock wave interference  
[NASA-CASE-XLA-02865] c28 N71-15563
- Development of thrust dynamometer for measuring performance of jet and rocket engines  
[NASA-CASE-XLE-05260] c14 N71-20429
- Afterburner-equipped jet engine nacelle with slotted configuration afterbody

- [NASA-CASE-XLA-10450] c28 N71-21493  
 Process for welding compressor and turbine blades to rotors and discs of jet engines  
 [NASA-CASE-LEW-10533-1] c15 N73-28515  
 Variably positioned guide vanes for aerodynamic choking  
 [NASA-CASE-LAR-10642-1] c07 N74-31270  
 Cascade plug nozzle --- for jet noise reduction  
 [NASA-CASE-LAP-11674-1] c07 N76-18117  
 The engine air intake system  
 [NASA-CASE-ARC-10761-1] c07 N77-18154  
 Stator rotor tools  
 [NASA-CASE-MSC-16000-1] c37 N78-24544
- JET EXHAUST**  
 Development of aircraft configuration for reduction of jet aircraft noise by exhausting engine gases over upper surface of wing  
 [NASA-CASE-LAR-11087-1] c02 N73-26008  
 Jet exhaust noise suppressor  
 [NASA-CASE-LEW-11286-1] c07 N74-27490  
 Reduction of nitric oxide emissions from a combustor  
 [NASA-CASE-ARC-10814-2] c25 N77-31260  
 Gas turbine engine with recirculating bleed  
 [NASA-CASE-LEW-12452-1] c07 N78-25089
- JET FLAPS**  
 Upper surface, external flow, jet-augmented flap configuration for high wing jet aircraft for noise reduction  
 [NASA-CASE-XLA-00087] c02 N70-33332
- JET FLOW**  
 Two-phase flow system with discrete, impinging two-phase jets  
 [NASA-CASE-NPO-11556] c12 N72-25292
- JET MIXING FLOW**  
 Fuel injection system for maximum combustion efficiency of rocket engines  
 [NASA-CASE-XLR-00111] c28 N70-38199
- JET NOZZLES**  
 Fluid jet amplifier with fluid from jet nozzle deflected by inlet pressure  
 [NASA-CASE-XLE-03512] c12 N69-21466  
 Thrust and attitude control apparatus using jet nozzle in movable canard surface or fin configuration  
 [NASA-CASE-XLE-03583] c31 N71-17629  
 Heater-mixer for stored fluids  
 [NASA-CASE-ARC-10442-1] c35 N74-15093
- JET PROPULSION**  
 Two dimensional wedge/translating shroud nozzle  
 [NASA-CASE-LAP-11919-1] c07 N78-27121
- JET THRUST**  
 System for aerodynamic control of rocket vehicles by secondary injection of fluid into nozzle exhaust stream  
 [NASA-CASE-XLA-01163] c21 N71-15582  
 Drive mechanism for operating reactance attitude control system for aerospace bodies  
 [NASA-CASE-XMP-01598] c21 N71-15583
- JET VANES**  
 Aircraft engine nozzle  
 [NASA-CASE-ARC-10977-1] c07 N79-23971
- JETTISON SYSTEMS**  
 Describing assembly for opening stabilizing and decelerating flaps of flight capsules used in space research  
 [NASA-CASE-XMP-03169] c31 N71-15675  
 System for deploying and ejecting releasable clamshell fairing sections from spinning sounding rockets  
 [NASA-CASE-GSC-10590-1] c31 N73-14853
- JIGS**  
 Apparatus for positioning modular components on a vertical or overhead surface  
 [NASA-CASE-LAR-11465-1] c37 N76-21554  
 Solar cell module assembly jig  
 [NASA-CASE-XGS-00829-1] c44 N79-19447
- JOINING**  
 Integrated gas turbine engine-nacelle  
 [NASA-CASE-LEW-12389-3] c07 N79-14096
- JOINTS (ANATOMY)**  
 Space suit with pressure-volume compensator system  
 [NASA-CASE-XLA-05332] c05 N71-11194  
 Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
 [NASA-CASE-LAR-10007-1] c05 N71-11195  
 Cord restraint system for pressure suit joints  
 [NASA-CASE-XMS-09635] c05 N71-24623
- Orthotic arm joint --- for use in mechanical arms  
 [NASA-CASE-MPS-21611-1] c54 N75-12616  
 Rotational joint assembly for the prosthetic leg  
 [NASA-CASE-RSC-11004-1] c54 N77-30749  
 Spacesuit mobility knee joints  
 [NASA-CASE-ARC-11058-2] c54 N79-24651
- JOINTS (JUNCTIONS)**  
 Hollow spherical electrode for shielding dielectric junction between high voltage conductor and insulator  
 [NASA-CASE-XLE-03778] c09 N69-21542  
 Plastic universal joint for rocket motor mounting  
 [NASA-CASE-XMP-00816] c15 N70-36947  
 Portable device for aligning surfaces of two adjacent wall or sheet sections for joining at point of junction  
 [NASA-CASE-XMP-01452] c15 N70-41371  
 Design and development of flexible joint for pressure suits  
 [NASA-CASE-XMS-09636] c05 N71-12344  
 Flaw forming in jacketed pipes while maintaining separation between core shape and jacket pipes  
 [NASA-CASE-XMP-10475] c15 N71-24679  
 Method and apparatus for precision sizing and joining of large diameter tubes by bulging or constricting overlapping ends  
 [NASA-CASE-XMP-05114-2] c15 N71-26148  
 Universal joints for connecting two displaced shafts or members  
 [NASA-CASE-NPO-10646] c15 N71-28867  
 Flexible bellows joint shielding sleeve for propellant transfer pipelines  
 [NASA-CASE-XMP-01855] c15 N71-28937  
 Mechanism for restraining universal joints to prevent separation while allowing bending, angulation, and lateral offset in any position about axis  
 [NASA-CASE-XMP-02278] c15 N71-28951  
 Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
 [NASA-CASE-LEW-11387-1] c37 N74-18128  
 Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
 [NASA-CASE-LAR-10900-1] c37 N74-23064  
 Flexible joint for pressurizable garment  
 [NASA-CASE-MSC-11072] c54 N74-32546  
 Method of making an explosively welded scarf joint  
 [NASA-CASE-LAR-11211-1] c37 N75-12326  
 Latching device  
 [NASA-CASE-MPS-21606-1] c37 N75-19685  
 Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
 [NASA-CASE-MPS-21931-1] c37 N75-26372  
 Externally supported internally stabilized flexible duct joint  
 [NASA-CASE-MPS-19194-1] c37 N76-14460  
 Wrist joint assembly  
 [NASA-CASE-MPS-23311-1] c54 N78-17676  
 Spacesuit mobility joints  
 [NASA-CASE-ARC-11058-1] c54 N78-31735
- JOSEPHSON JUNCTIONS**  
 Doped Josephson tunneling junction for use in a sensitive IR detector  
 [NASA-CASE-NPO-13348-1] c33 N75-31332
- JOULE-THOMSON EFFECT**  
 Gas balancing, cryogenic refrigeration apparatus with Joule-Thomson valve assembly  
 [NASA-CASE-NPO-10309] c15 N69-23190
- JOURNAL BEARINGS**  
 Slit regulated gas journal bearing  
 [NASA-CASE-XMP-00476] c15 N70-38620  
 Journal air bearing with cylindrical cup designed to ride on shaft  
 [NASA-CASE-MPS-20423] c15 N72-11388  
 Journal bearings --- for lubricant films  
 [NASA-CASE-LEW-11076-1] c37 N74-21061  
 Journal Bearings  
 [NASA-CASE-LEW-11076-2] c37 N74-32921  
 Lubricated journal bearing  
 [NASA-CASE-LEW-11076-3] c37 N75-30562  
 Fluid journal bearings  
 [NASA-CASE-LEW-11076-4] c37 N76-15461
- JUNCTION DIODES**  
 Phototransistor with base collector junction diode for integration into photo sensor arrays  
 [NASA-CASE-MPS-20407] c09 N73-19235

Diode-quad bridge circuit means  
 [NASA-CASE-ARC-10364-2] c33 N75-25041  
 Charge storage diode modulators and demodulators  
 [NASA-CASE-NPO-10189-1] c33 N77-21314

**JUNCTION TRANSISTORS**

Apparatus for ballasting high frequency transistors  
 [NASA-CASE-XGS-05003] c09 N69-24318  
 Miniature piezjunction semiconductor transducer with in situ stress coupling  
 [NASA-CASE-ERC-10087-2] c14 N72-31446  
 Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
 [NASA-CASE-MFS-21931-1] c37 N75-26372

**K**

**KEYING**

High-speed multiplexing of keyboard data inputs  
 [NASA-CASE-NPO-14554-1] c60 N79-14797

**KIDNEY DISEASES**

Aldehyde-containing urea-absorbing polysaccharides  
 [NASA-CASE-NPO-13620-1] c27 N77-30236

**KINETIC ENERGY**

Non-reusable kinetic energy absorber for application in soft landing of space vehicles  
 [NASA-CASE-XLE-00810] c15 N70-34861  
 Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
 [NASA-CASE-NPO-14130-1] c34 N79-20335

**KINETIC FRICTION**

Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
 [NASA-CASE-XNP-08680] c14 N71-22995

**KINETICS**

Micrometeoroid analyzer using arrays of interconnected capacitors and ion detector  
 [NASA-CASE-ARC-10443-1] c14 N73-20477

**KRAFT PROCESS (WOODPULP)**

Process for purification of waste water produced by a Kraft process pulp and paper mill  
 [NASA-CASE-NPO-13847-2] c85 N79-17747

**L**

**LABORATORY EQUIPMENT**

Design of mechanical device for stirring several test tubes simultaneously  
 [NASA-CASE-XAC-06956] c15 N71-21177  
 Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
 [NASA-CASE-XLE-02531] c05 N71-23080  
 Apparatus and process for volumetrically dispensing reagent quantities of volatile chemicals for small batch reactions  
 [NASA-CASE-NPO-10070] c15 N71-27372  
 Development of variable angle device for positioning test tubes to permit optimum drying of culture medium  
 [NASA-CASE-LAR-10507-1] c11 N72-25284  
 Development of method for controlling vapor content of gas  
 [NASA-CASE-NPO-10633] c03 N72-28025  
 Apparatus for mixing two or more liquids under zero gravity conditions  
 [NASA-CASE-LAR-10195-1] c15 N73-19458  
 Automatic real-time pair-feeding system for animals  
 [NASA-CASE-ARC-10302-1] c51 N74-15778  
 Automated single-slide staining device  
 [NASA-CASE-LAR-11649-1] c51 N77-27677  
 Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
 [NASA-CASE-NPO-13731-1] c39 N78-10493  
 The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
 [NASA-CASE-GSC-12088-1] c74 N78-13874  
 Automatic multiple-sample applicator and electrophoresis apparatus  
 [NASA-CASE-ARC-10991-1] c25 N78-14104  
 Microelectrophoretic apparatus and process  
 [NASA-CASE-ARC-11121-1] c25 N79-14169

**LACQUERS**

Method for applying photographic resists to otherwise incompatible substrates  
 [NASA-CASE-MSC-18107-1] c35 N79-19319

**LAMINAR FLOW**

Laminar flow of liquid coolants in rocket engines  
 [NASA-CASE-NPO-10122] c12 N71-17631  
 Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure noise levels during wind tunnel tests  
 [NASA-CASE-LAR-12261-1] c02 N79-16805

**LAMINATES**

Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
 [NASA-CASE-XNP-04338] c17 N71-23046  
 Development and characteristics of polyimide impregnated laminates with fiberglass cloth backing for application as printed circuit boards  
 [NASA-CASE-MFS-20408] c18 N73-12604  
 Development of composite structures for spacecraft to serve as anti-meteoroid device  
 [NASA-CASE-LAR-10788-1] c31 N73-20880  
 Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
 [NASA-CASE-MFS-21364-1] c37 N74-18126  
 Method of laminating structural members  
 [NASA-CASE-XLA-11028-1] c24 N74-27035  
 Bonding method in the manufacture of continuous regression rate sensor devices  
 [NASA-CASE-LAR-10337-1] c24 N75-30260  
 Transparent fire resistant polymeric structures  
 [NASA-CASE-ARC-10813-1] c27 N76-16230  
 Leading edge protection for composite blades  
 [NASA-CASE-LEW-12550-1] c24 N77-19170  
 Hybrid composite laminate structures  
 [NASA-CASE-LEW-12118-1] c24 N77-27188  
 Honeycomb-laminate composite structure  
 [NASA-CASE-ARC-10913-1] c24 N78-15180  
 Composite lamination method  
 [NASA-CASE-LAR-12019-1] c24 N78-17150  
 Method for alleviating thermal stress damage in laminates  
 [NASA-CASE-LEW-12493-1] c24 N78-22163  
 Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
 [NASA-CASE-MSC-12662-1] c33 N79-12331

**LANDING AIDS**

Electro-optical attitude sensing device for landing approach of flight vehicle  
 [NASA-CASE-XMS-01994-1] c14 N72-17326  
 Magnetic method for detection of aircraft position relative to runway  
 [NASA-CASE-ARC-10179-1] c21 N72-22619  
 Full color hybrid display for aircraft simulators --- landing aids  
 [NASA-CASE-ARC-10903-1] c09 N78-18083

**LANDING GEAR**

Pivotal shock absorbing assembly for use as load distributing portion in landing gear systems of space vehicles  
 [NASA-CASE-XNP-03856] c31 N70-34159  
 Nose gear steering system for vehicles with main skids to provide directional stability after loss of aerodynamic control  
 [NASA-CASE-XLA-01804] c02 N70-34160  
 Landing pad assembly for aerospace vehicles  
 [NASA-CASE-XNP-02853] c31 N70-36654  
 Aircraft wheel spray drag alleviator for dual tandem landing gear  
 [NASA-CASE-XLA-01583] c02 N70-36825  
 Spacecraft shock absorbing system for soft landings  
 [NASA-CASE-XNP-02108] c31 N70-36845  
 Shock absorber for landing gear of lunar or planetary landing modules  
 [NASA-CASE-XNP-01045] c15 N70-40354  
 Vertically descending flight vehicle landing gear for rough terrain  
 [NASA-CASE-XNP-01174] c02 N70-41589  
 Crosswind landing gear position indicator  
 [NASA-CASE-LAR-11941-1] c06 N77-20098

**LANDING MODULES**

Shock absorber for landing gear of lunar or planetary landing modules  
 [NASA-CASE-XNP-01045] c15 N70-40354

**LANDING SIMULATION**

Lunar and planetary gravity simulator to test

- vehicular response to landing  
[NASA-CASE-XLA-00493] c11 N70-34786
- LANTHANUM COMPOUNDS**  
Cesium thermionic converters having improved electrodes  
[NASA-CASE-LPW-12038-3] c44 N78-25555
- LARGE SCALE INTEGRATION**  
A general logic structure for custom LSI circuits  
[NASA-CASE-NPO-14410-1] c33 N79-25314
- LARGE SPACE TELESCOPE**  
System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c74 N79-11865
- LASER APPLICATIONS**  
High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c36 N75-27364  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c36 N76-24553  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c47 N77-10753  
Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c36 N77-25501  
Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c36 N77-25502  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c36 N78-14380  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LW-12465-1] c25 N78-25148  
Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c36 N79-18307
- LASER DOPPLER VELOCIMETERS**  
Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c35 N75-16783  
Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c36 N76-14447  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c35 N77-10493  
Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c36 N77-25501  
Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c74 N78-17866  
Laser Doppler velocity simulator  
[NASA-CASE-LAR-12176-1] c36 N78-29435  
Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c35 N79-14349  
Direction sensitive laser velocimeter --- determining the direction of particle motion using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c36 N79-28532
- LASER DRILLING**  
In-situ laser retorting of oil shale  
[NASA-CASE-LW-12217-1] c43 N78-14452
- LASER HEATING**  
Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c36 N75-30524
- LASER MATERIALS**  
Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c36 N75-19655
- LASER MODE LOCKING**  
Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c36 N75-19653  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c36 N75-19654  
Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c36 N77-25499
- LASER MODES**  
Xenon flashlamp driver system for optical laser pumping  
[NASA-CASE-ERC-10283] c16 N72-25485  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c36 N75-31427
- LASER OUTPUTS**  
Method and apparatus using temperature control for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c16 N69-31343
- Describing laser Doppler velocimeter for measuring mean velocity and turbulence of fluid flow  
[NASA-CASE-MFS-20386] c21 N71-19212  
Development of apparatus for amplitude modulation of diode laser by periodic discharge of direct current power supply  
[NASA-CASE-XMS-04269] c16 N71-22895  
Doppler shifted laser beam as fluid velocity sensor  
[NASA-CASE-XAC-10770-1] c16 N71-24828  
Calibrator for measuring and modulating or demodulating laser outputs  
[NASA-CASE-XLA-03410] c16 N71-25914  
Method and apparatus for optically modulating light or microwave beam  
[NASA-CASE-GSC-10216-1] c23 N71-26722  
Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HQN-10541-2] c15 N71-27135  
Optical communication system with gas filled waveguide for laser beam transmission  
[NASA-CASE-HQN-10541-4] c16 N71-27183  
Design and development of multichannel laser remote control system using modulated helium-neon laser as transmitter and light collector as receiving antenna  
[NASA-CASE-LAR-10311-1] c16 N73-16536  
Performance of ac power supply developed for CO2 laser system  
[NASA-CASE-GSC-11222-1] c16 N73-32391  
Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c36 N74-13205  
Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c36 N74-20009  
Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 N74-27425  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c36 N75-19654  
Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c36 N75-19655  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c36 N75-31427  
Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MSC-12640-1] c74 N76-31998  
Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c36 N77-25499  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c25 N77-32255
- LASER PLASMAS**  
Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c36 N77-19416
- LASER PUMPING**  
A laser apparatus  
[NASA-CASE-GSC-12237-1] c36 N78-10445  
Large volume multiple path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c36 N79-26385
- LASER RANGER/TRACKER**  
Laser beam projector for continuous, precise alignment between target, laser generator, and astronomical telescope during tracking  
[NASA-CASE-NPO-11087] c23 N71-29125
- LASER WINDOWS**  
Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c74 N78-17866
- LASERS**  
Laser device for removing material from rotating object for dynamic balancing  
[NASA-CASE-MFS-11279] c16 N71-20400  
Design and development of optical interferometer with laser light source for application to schlieren systems  
[NASA-CASE-XLA-04295] c16 N71-24170  
Self-generating optical frequency waveguide  
[NASA-CASE-HQN-10541-1] c07 N71-26291  
Design and characteristics of laser camera system with diffusion filter of small particles with average diameter larger than

- wavelength of laser light  
[NASA-CASE-NPO-10417] c16 N71-33410
- Nondestructive stress testing of solder joints on printed circuit boards by holographic techniques  
[NASA-CASE-MPS-20687] c16 N72-11415
- Optical sensing of supersonic flows by correlating deflections in laser beams through flow  
[NASA-CASE-MPS-20642] c14 N72-21407
- Laser technique for breaking ice in ship path  
[NASA-CASE-LAR-10815-1] c16 N72-22520
- Design of precision vertical alignment system using laser with gravitationally sensitive cavity  
[NASA-CASE-ARC-10444-1] c16 N73-33397
- Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c36 N74-11313
- Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c36 N74-15145
- Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c36 N74-21091
- Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c36 N75-19652
- Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10884-1] c36 N75-19653
- Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c36 N75-31427
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c36 N76-29575
- Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c74 N76-30053
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942
- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c32 N77-28346
- Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c73 N78-32848
- Large volume multiple path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c36 N79-26385
- Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c37 N79-28549
- LATCHES**
- Bolt-latch mechanism for releasing despin weights from space vehicle  
[NASA-CASE-XLA-00679] c15 N70-38601
- Transparent polycarbonate resin, shell helmet and latch design for high altitude and space flight  
[NASA-CASE-XMS-04935] c05 N71-11190
- Quick disconnect latch and handle combination for mounting articles on walls or supporting bases in spacecraft under zero gravity conditions  
[NASA-CASE-MPS-11132] c15 N71-17649
- Design, development, and characteristics of latching mechanism for operation in limited access areas  
[NASA-CASE-XMS-03745] c15 N71-21076
- Latching mechanism with pivoting catch and self-contained spring ejector  
[NASA-CASE-XLA-03538] c15 N71-24897
- Latch for fastening spacecraft docking rings  
[NASA-CASE-MSC-15474-1] c15 N71-26162
- Latch mechanism  
[NASA-CASE-MSC-12549-1] c37 N74-27903
- Latching device  
[NASA-CASE-MPS-21606-1] c37 N75-19685
- Load regulating latch  
[NASA-CASE-MSC-19535-1] c37 N77-32499
- Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c54 N78-17678
- LATERAL CONTROL**
- Three-axis controller operated by hand-wrist motion for yaw, pitch, and roll control  
[NASA-CASE-XAC-01404] c05 N70-41581
- Star sensor system for roll attitude control of spacecraft  
[NASA-CASE-XNP-01307] c21 N70-41856
- Supersonic or hypersonic vehicle control system comprising elevons with hinge line sweep and free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088
- Vortex-lift roll-control device  
[NASA-CASE-LAR-11869-2] c08 N79-14108
- LATERAL STABILITY**
- An annular wing  
[NASA-CASE-PRC-11007-2] c02 N79-24959
- LATEX**
- Process for preparation of large-particle size monodisperse latexes  
[NASA-CASE-MPS-25000-1] c25 N79-14171
- LATHES**
- Rotary spindle lathe attachments for machining geometrical cones  
[NASA-CASE-XMS-04292] c15 N71-22722
- Lathe tool and holder combination for machining resin impregnated fiberglass cloth laminates  
[NASA-CASE-XLA-10470] c15 N72-21489
- LAUNCH ESCAPE SYSTEMS**
- Emergency escape cabin system for launch towers  
[NASA-CASE-XKS-02342] c05 N71-11199
- Ejector for separating astronaut from ejection seat during prelaunch or initial launch phase of flight  
[NASA-CASE-XMS-04625] c05 N71-20718
- LAUNCH VEHICLE CONFIGURATIONS**
- Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c09 N77-19076
- LAUNCH VEHICLES**
- Support techniques for restraint of slender bodies such as launch vehicles  
[NASA-CASE-XLA-02704] c11 N69-21540
- Microleak detector mounted on weld seam of propellant tank of launch vehicle  
[NASA-CASE-XMF-02307] c14 N71-10779
- Small air breathing launch vehicle  
[NASA-CASE-LAR-12250-1] c15 N78-25120
- LAUNCHING PADS**
- Launch pad missile release system with bending moment change rate reduction in thrust distribution structure at liftoff  
[NASA-CASE-XMF-03198] c30 N70-40353
- Remotely actuated quick disconnect for tubular umbilical conduits used to transfer fluids from ground to rocket vehicle  
[NASA-CASE-XLA-01396] c03 N71-12259
- Portable equipment for validating C band launch pad antennas and transmission lines used for spacecraft checkout  
[NASA-CASE-XKS-10543] c07 N71-26292
- LAYERS**
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c28 N78-24365
- LEACHING**
- Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c28 N79-10227
- LEAD (METAL)**
- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MPS-23059-1] c44 N76-27664
- LEAD TELLURIDES**
- Bonding method for improving contact between lead telluride thermoelectric elements and tungsten electrodes  
[NASA-CASE-XGS-04554] c15 N69-39786
- Procedure for segmenting lead telluride and silicon germanium thermoelectric elements to obtain composite elements effective over wide temperature range  
[NASA-CASE-XGS-05718] c26 N71-16037
- LEADING EDGES**
- Leading edge design for hypersonic reentry vehicles  
[NASA-CASE-XLA-00165] c31 N70-33242
- Construction of leading edges of surfaces for aerial vehicles performing from subsonic to above transonic speeds  
[NASA-CASE-XLA-01486] c01 N71-23497
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170
- LEAKAGE**
- Pocket chamber leak test fixture using tubular plug  
[NASA-CASE-XPR-09479] c14 N69-27503
- Microleak detector mounted on weld seam of propellant tank of launch vehicle  
[NASA-CASE-XMF-02307] c14 N71-10779
- Fluid leakage detection system with automatic monitoring capability

- [NASA-CASE-LAR-10323-1] c12 N71-17573  
Space suit using nonflexible material with low leakage and providing protection against thermal extremes, physical punctures, and radiation with high mobility articulation
- [NASA-CASE-XAC-07043] c05 N71-23161  
Development of apparatus and method for testing leakage of large tanks
- [NASA-CASE-XMP-02392] c32 N71-24285  
Gas leak detection in evacuated systems using ultraviolet radiation probe
- [NASA-CASE-ERC-10034] c15 N71-24896  
Method for locating leaks in hermetically sealed containers
- [NASA-CASE-ERC-10045] c15 N71-24910  
Volume displacement transducer for leak detection in hermetically sealed semiconductor devices
- [NASA-CASE-ERC-10033] c14 N71-26672  
Test chambers with orifice and helium mass spectrometer for detecting leak rate of encapsulated semiconductor devices
- [NASA-CASE-ERC-10150] c14 N71-28992  
Leak detector
- [NASA-CASE-MPS-21761-1] c35 N75-15931  
Vacuum leak detector
- [NASA-CASE-LAR-11237-1] c35 N75-19612  
Low heat leak connector for cryogenic system
- [NASA-CASE-XLE-02367-1] c31 N79-21225
- LEG (ANATOMY)**
- Actuator device for artificial leg  
[NASA-CASE-MPS-23225-1] c52 N77-14735
- Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c54 N77-30749
- Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c52 N78-10686
- LENS DESIGN**
- Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c74 N79-14892
- LENSES**
- Lens assembly for solar furnace or solar simulator  
[NASA-CASE-XMP-04111] c14 N71-15622
- Camera adapter design for image magnification including lens and illuminator  
[NASA-CASE-XMP-03844-1] c14 N71-26474
- Development and characteristics of Petzval type objective including field shaping lens for focusing light of specified wavelength band on curved photoreceptor  
[NASA-CASE-GSC-10700] c23 N71-30027
- Noise elimination in coherent imaging system by axial rotation of optical lens for spectral distribution of degrading affects  
[NASA-CASE-GSC-11133-1] c23 N72-11568
- Photographic film restoration system using Fourier transformation lenses and spatial filter  
[NASA-CASE-MSC-12448-1] c14 N72-20394
- Plural beam antenna with parabolic reflectors  
[NASA-CASE-GSC-11013-1] c09 N73-19234
- Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c36 N77-32478
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polyethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c74 N78-32854
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c74 N79-17683
- LENTICULAR BODIES**
- Lenticular vehicle with foldable aerodynamic control flaps and reaction jets for operation above and within earth's atmosphere  
[NASA-CASE-XGS-00260] c31 N70-37924
- LEVEL (HORIZONTAL)**
- Hot-wire liquid level detector for cryogenic propellants  
[NASA-CASE-XLE-00454] c23 N71-17802
- Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c37 N78-27425
- LEVEL (QUANTITY)**
- Gauge for measuring quantity of liquid in spherical tank in reduced gravity  
[NASA-CASE-XMS-06236] c14 N71-21007
- Conversion of positive dc voltage to positive dc voltage of lower amplitude  
[NASA-CASE-XMP-14301] c09 N71-23189
- LEVELING**
- Development of adjustable attitude guide block for setting pins perpendicular to irregular convex work surface  
[NASA-CASE-XLA-07911] c15 N71-15571
- Electrical switching device comprising conductive liquid confined within square loop of deformable nonconductive tubing also used for leveling  
[NASA-CASE-NPO-10037] c09 N71-19610
- Adjustable support device with jacket screw for altering distance between base and supported member  
[NASA-CASE-NPO-10721] c15 N72-27484
- Automatically operable self-leveling load table  
[NASA-CASE-MPS-22039-1] c09 N75-12968
- LEVITATION**
- Method and apparatus for shaping and enhancing acoustical levitation forces --- ultrasonic transducer for generating a radiation pressure field  
[NASA-CASE-MPS-25050-1] c71 N79-29956
- LIFE (DURABILITY)**
- Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c37 N74-21064
- LIFE DETECTORS**
- Use of enzyme hexokinase and glucose to reduce inherent light levels of ATP in luciferase compositions  
[NASA-CASE-XGS-05533] c04 N69-27487
- Describing method for lyophilization of luciferase containing mixtures for use in life detection reactions  
[NASA-CASE-XGS-05532] c06 N71-17705
- LIFE RAFTS**
- Design of inflatable life raft for aircrafts and boats  
[NASA-CASE-XMS-00963] c05 N70-34857
- Inflatable stabilizing system for use on life raft to reduce rocking and preclude capsizing  
[NASA-CASE-MSC-12393-1] c02 N73-26006
- Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c54 N74-14845
- LIFE SUPPORT SYSTEMS**
- Shock absorbing couch for body support under high acceleration or deceleration forces  
[NASA-CASE-XMS-01240] c05 N70-35152
- Portable environmental control and life support system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-09632-1] c05 N71-11203
- Design and development of flexible tunnel for use by spacecrews in performing extravehicular activities  
[NASA-CASE-MSC-12243-1] c05 N71-24728
- Development of improved convolute section for pressurized suits to provide high degree of mobility in response to minimum of applied torque  
[NASA-CASE-XMS-09637-1] c05 N71-24730
- Development and characteristics of inflatable structure to provide escape from orbit for spacecrews under emergency conditions  
[NASA-CASE-XMS-06162] c31 N71-28851
- Chlorine generator for purifying water in life support systems of manned spacecraft  
[NASA-CASE-XLA-08913] c14 N71-28933
- Open loop life support subsystem using breathing bag as reservoir for EVA  
[NASA-CASE-MSC-12411-1] c05 N72-20096
- Device for removing air from water for use in life support systems in manned space flight  
[NASA-CASE-XLA-8914] c15 N73-12492
- Intra- and extravehicular life support space suite for Apollo astronauts  
[NASA-CASE-MSC-12609-1] c05 N73-32012
- Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813
- Helmet feedport  
[NASA-CASE-XMS-09653] c54 N78-17680
- Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721
- LIFT DEVICES**
- Device for handling heavy loads by distributing forces

- [NASA-CASE-XNP-04969] c11 N69-27466  
Techniques for recovery of multistage rocket vehicles by providing lifting surfaces on individual sections  
[NASA-CASE-XMP-00389] c31 N70-34176
- Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft  
[NASA-CASE-LAR-10249-1] c02 N71-26110
- Development of auxiliary lifting system to provide ferry capability for entry vehicles  
[NASA-CASE-LAR-10574-1] c11 N73-13257
- High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c05 N75-25914
- Device for installing rocket engines  
[NASA-CASE-MPS-19220-1] c20 N76-22296
- Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c08 N79-14108
- LIFT DRAG RATIO**  
Design of ring wing vehicle of high drag-to-weight ratio to withstand reentry stress into low density atmosphere  
[NASA-CASE-XLA-04901] c31 N71-24315
- An annular wing  
[NASA-CASE-PRC-11007-2] c02 N79-24959
- LIFTING BODIES**  
Techniques for recovery of multistage rocket vehicles by providing lifting surfaces on individual sections  
[NASA-CASE-XMP-00389] c31 N70-34176
- Graphic illustration of lifting body design  
[NASA-CASE-PRC-10063] c01 N71-12217
- Static force balancing system attached to lifting body  
[NASA-CASE-LAR-10348-1] c11 N73-12264
- LIFTING REENTRY VEHICLES**  
Lenticular vehicle with foldable aerodynamic control flaps and reaction jets for operation above and within earth's atmosphere  
[NASA-CASE-XGS-00260] c31 N70-37924
- Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings  
[NASA-CASE-XLA-03691] c31 N71-15674
- Designing spacecraft for flight into space, atmospheric reentry, and landing at selected sites  
[NASA-CASE-XAC-02058] c02 N71-16087
- LIGHT (VISIBLE RADIATION)**  
Light baffle with oblate hemispheroid surface and shading flange  
[NASA-CASE-NPO-10337] c14 N71-15604
- Maksutov spectrograph for low light level research  
[NASA-CASE-XLA-10402] c14 N71-29041
- Device for detection of combustion light preceding gaseous explosions  
[NASA-CASE-LAR-10739-1] c14 N73-16484
- LIGHT AIRCRAFT**  
Direct lift control system having flaps with slots adjacent to their leading edge and particularly adapted for lightweight aircraft  
[NASA-CASE-LAP-10249-1] c02 N71-26110
- LIGHT BEAMS**  
Cylindrical reflector for resolving wide angle light beam from telescope into narrow beam for spectroscopic analysis  
[NASA-CASE-XGS-08269] c23 N71-26206
- Development and characteristics of optical communications system based on modulation of light beams  
[NASA-CASE-XLA-01090] c16 N71-28963
- Multiple pattern holographic information storage and readout system  
[NASA-CASE-ERC-10151] c16 N71-29131
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c74 N79-17683
- LIGHT GAS GUNS**  
Implosion driven, light gas, hypervelocity gun  
[NASA-CASE-XAC-05902] c11 N71-18578
- LIGHT MODULATION**  
Optical retrodirective modulator with focus spoiling reflector driven by modulation signal  
[NASA-CASE-GSC-10062] c14 N71-15605
- Modulating and controlling intensity of light beam from high temperature source by servocontrolled rotating cylinders  
[NASA-CASE-XMS-04300] c09 N71-19479
- Method and apparatus for optically modulating light or microwave beam  
[NASA-CASE-GSC-10216-1] c23 N71-26722
- Development and characteristics of optical communications system based on modulation of light beams  
[NASA-CASE-XLA-01090] c16 N71-28963
- Lamp modulator for generating visual indication of presence and magnitude of signal  
[NASA-CASE-KSC-10565] c09 N72-25250
- Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c74 N76-30053
- LIGHT SCATTERING**  
Forward-scatter polarimeter for determining the gaseous depolarization factor in the presence of polluting polydispersed particles  
[NASA-CASE-NPO-13756-1] c35 N76-14434
- The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13874
- LIGHT SCATTERING METERS**  
System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MPS-23513-1] c74 N79-11865
- LIGHT SOURCES**  
Light radiation direction indicator with baffle of two parallel grids  
[NASA-CASE-XNP-03930] c14 N69-24331
- High intensity heat and light unit containing quartz lamp elements protectively positioned to withstand severe environmental stress  
[NASA-CASE-XLA-00141] c09 N70-33312
- Photosensitive light source device for detecting unmanned spacecraft deviation from reference attitude  
[NASA-CASE-XNP-00438] c21 N70-35089
- Electro-optical detector for determining position of light source  
[NASA-CASE-XNP-01059] c23 N71-21821
- Optical system for selecting particular wavelength light beams from multiple wavelength light source  
[NASA-CASE-ERC-10248] c14 N72-17323
- Electro-optical stabilization of calibrated light source  
[NASA-CASE-MSC-12293-1] c14 N72-27411
- Development of temperature compensated light source with components and circuitry for maintaining luminous intensity independent of temperature variations  
[NASA-CASE-ARC-10467-1] c09 N73-14214
- Interferometer prism and control system for precisely determining direction to remote light source  
[NASA-CASE-ARC-10278-1] c14 N73-25463
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089
- Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c33 N75-27250
- Plectric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c33 N75-29318
- Uniform variable light source  
[NASA-CASE-NPO-11429-1] c74 N77-21941
- LIGHT TRANSMISSION**  
Hybrid holographic system using reference, transmitted, and reflected beams simultaneously  
[NASA-CASE-MPS-20074] c16 N71-15565
- Optical characteristics measuring apparatus  
[NASA-CASE-XNP-08840] c23 N71-16365
- Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
[NASA-CASE-XKS-03509] c14 N71-23175
- Solar cell panel with light transmitting cover plate  
[NASA-CASE-NPO-10747] c03 N72-22042
- Method and system for transmitting and distributing optical frequency radiation  
[NASA-CASE-HQN-10541-3] c23 N72-23695
- Thin absorbing metallic film for increased visible light transmission

- [NASA-CASE-LAR-10836-1] c26 N72-27784  
Transmitting and reflecting diffuser --- for  
ultraviolet light
- [NASA-CASE-LAR-10385-2] c70 N74-13436  
Optical instrument employing reticle having  
preselected visual response pattern formed  
thereon
- [NASA-CASE-ARC-10976-1] c74 N77-22950  
Transmitting and reflecting diffuser --- using  
ultraviolet grade fused silica coatings
- [NASA-CASE-LAR-10385-3] c74 N78-15879
- LIGHTING EQUIPMENT**  
Sealed fluorescent tube light unit capable of  
connection with other units to form string of  
work lights
- [NASA-CASE-XKS-05932] c09 N71-26787  
Pressurized inert gas feed for lighting system
- [NASA-CASE-KSC-10644] c09 N72-27227  
Pezote lightning monitor system
- [NASA-CASE-KSC-11031-1] c33 N79-11315  
Power converter --- for display devices,  
lighting equipment
- [NASA-CASE-PRC-11014-1] c33 N79-27395
- LIGHTNING**  
Apparatus for determining distance to lightning  
strokes from single station by magnetic and  
electric field sensing antennas
- [NASA-CASE-KSC-10698] c07 N73-20175  
System for locating lightning strokes by  
coordination of directional antenna signals
- [NASA-CASE-KSC-10729-1] c09 N73-32110  
Monitoring and recording lightning strokes in  
predetermined area
- [NASA-CASE-KSC-10728-1] c14 N73-32319  
Lightning current measuring systems
- [NASA-CASE-KSC-10807-1] c33 N75-26246  
Lightning current waveform measuring system
- [NASA-CASE-KSC-11018-1] c33 N79-10337  
Lightning current detector
- [NASA-CASE-KSC-11057-1] c33 N79-14305  
Lightning discharge identification system
- [NASA-CASE-KSC-11099-1] c33 N79-25313
- LIMBS (ANATOMY)**  
Prosthesis coupling
- [NASA-CASE-KSC-11069-1] c52 N79-26772
- LIMITER CIRCUITS**  
Variable duration pulse integrator design for  
integrating pulse duration modulated pulses  
with elimination of ripple content
- [NASA-CASE-XLA-01219] c10 N71-23084  
Circuits for amplitude limiting of random noise  
inputs
- [NASA-CASE-NPO-10169] c10 N71-24844  
Velocity limiting safety system for motor driven  
research vehicle
- [NASA-CASE-XLA-07473] c15 N71-24895  
Low level signal limiter
- [NASA-CASE-XLE-04791] c32 N74-22096  
Inrush current limiter
- [NASA-CASE-GSC-11789-1] c33 N77-14333
- LINEAR ACCELERATORS**  
Linear accelerator frequency control system
- [NASA-CASE-XGS-05441] c10 N71-22962
- LINEAR ARRAYS**  
Multispectral imaging and analysis system ---  
using charge coupled devices and linear arrays
- [NASA-CASE-NPO-13691-1] c43 N79-17288
- LINEAR RECEIVERS**  
Antenna array at focal plane of reflector with  
coupling network for beam switching
- [NASA-CASE-GSC-10220-1] c07 N71-27233
- LINEAR SYSTEMS**  
Linear three-tap feedback shift register
- [NASA-CASE-NPO-10351] c08 N71-12503  
Family of m-ary linear feedback shift register  
with binary logic
- [NASA-CASE-NPO-11868] c10 N73-20254
- LINEARITY**  
Semilinear bearing comprising two rows of roller  
bearings separated by spherical bearings and  
permitting rotational and translational movement
- [NASA-CASE-XLA-02809] c15 N71-22982  
Mechanical actuator wherein linear motion  
changes to rotational motion
- [NASA-CASE-XGS-04548] c15 N71-24045
- LINKAGES**  
Development of collapsible nozzle extension for  
rocket engines
- [NASA-CASE-MFS-11497] c28 N71-16224
- Design and construction of mechanical probe for  
determining if object is properly secured
- [NASA-CASE-MFS-20760] c14 N72-33377  
Locking redundant link
- [NASA-CASE-LAR-11900-1] c37 N79-14382  
Compensating linkage for main rotor control
- [NASA-CASE-LAR-11797-1] c08 N79-15057
- LIQUEFACTION**  
Ophthalmic liquifaction pump
- [NASA-CASE-LEW-12051-1] c52 N75-33640
- LIQUID BEARINGS**  
Fatigue life of hybrid antifriction bearings at  
ultrahigh speeds
- [NASA-CASE-LEW-11152-1] c15 N73-32359
- LIQUID COOLING**  
Water cooled contactors for holding rotating  
carbon arc anode
- [NASA-CASE-IMS-03700] c15 N69-24266  
External device for liquid spray cooling of gas  
turbine blades
- [NASA-CASE-XLE-00037] c28 N70-33372  
Water cooled solenoid capable of producing  
magnetic field intensities up to 100 kilogauss
- [NASA-CASE-XNP-01951] c09 N70-41929  
Laminar flow of liquid coolants in rocket engines
- [NASA-CASE-WPO-10122] c12 N71-17631  
Space suit body heat exchanger design composed  
of thermal conductance yarn and liquid coolant  
loops
- [NASA-CASE-XMS-09571] c05 N71-19439  
Electric power system with circulatory liquid  
coolant cooling system
- [NASA-CASE-MFS-14114-2] c09 N71-24807  
Electric power system with thermionic diodes and  
circulatory liquid metal coolant lines
- [NASA-CASE-MFS-14114] c33 N71-27862  
Apparatus for liquid spray cooling of turbine  
blades
- [NASA-CASE-XLE-00027] c33 N71-29152  
Automatic control device for regulating inlet  
water temperature of liquid cooled spacesuit
- [NASA-CASE-MSC-13917-1] c05 N72-15098  
Automatic temperature control for liquid cooled  
space suit
- [NASA-CASE-ARC-10599-1] c05 N73-26071  
Heat exchanger system and method
- [NASA-CASE-LAR-10799-2] c34 N76-17317  
Liquid cooled brassiere and method of diagnosing  
malignant tumors therewith
- [NASA-CASE-ARC-11007-1] c52 N77-14736  
Closed loop spray cooling apparatus --- for  
particle accelerator targets
- [NASA-CASE-LEW-11981-1] c31 N78-17237  
Low cost cryostat
- [NASA-CASE-NPO-14513-1] c31 N79-20283
- LIQUID CRYSTALS**  
Development of combined velocimeter and  
accelerometer based on color changes in liquid  
crystalline material subjected to shear stresses
- [NASA-CASE-ERC-10292] c14 N72-25410  
Input signal measurement using liquid  
crystalline elements
- [NASA-CASE-ERC-10275] c26 N72-25680  
Real time liquid crystal image converter
- [NASA-CASE-LAR-11206-1] c74 N74-30118
- LIQUID FILLED SHELLS**  
Liquid rocket systems for propulsion and control  
of spacecraft
- [NASA-CASE-XNP-00610] c28 N70-36910  
Design and development of fluid sample collector
- [NASA-CASE-IMS-06767-1] c14 N71-20435  
Manufacture of fluid containers from fused  
coated polyester sheets having resealable septum
- [NASA-CASE-NPO-10123] c15 N71-24835  
Omnidirectional liquid filled accelerometer  
design with liquid and housing temperature  
compensation
- [NASA-CASE-HQN-10780] c14 N71-30265
- LIQUID FLOW**  
Reduced gravity liquid configuration simulator  
to study propellant behavior in rocket fuel  
tanks
- [NASA-CASE-XLE-02624] c12 N69-39988  
Liquid junction for glass electrode or pH meters
- [NASA-CASE-NPO-10682] c15 N70-34699  
Actuator using compressed gas as driving force  
to control valve handling large liquid flows
- [NASA-CASE-IRQ-01208] c15 N70-35409

- Two component valve assembly for cryogenic liquid transfer regulation  
[NASA-CASE-XLE-00397] c15 N70-36492
- Positive displacement flowmeter for measuring extremely low flows of fluid with self calibrating features  
[NASA-CASE-XMP-02822] c14 N70-41994
- High pressure liquid flow sight assembly for wide temperature range applications including cryogenic fluids  
[NASA-CASE-XLE-02998] c14 N70-42074
- Carrier liquid system containing bodies of ablative material  
[NASA-CASE-LEW-10359-2] c33 N73-25952
- Zero gravity liquid transfer device, using spiral shaped screen  
[NASA-CASE-KSC-10626] c14 N73-27378
- System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c34 N76-27517
- LIQUID HELIUM**
- Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c20 N75-24837
- Helium refrigerator  
[NASA-CASE-NPO-13435-1] c31 N76-14284
- Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c31 N77-10229
- Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c31 N78-25256
- Stabilization of He<sub>2</sub>(a 3 Sigma +) molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13826
- Low cost cryostat  
[NASA-CASE-NPO-14513-1] c31 N79-20283
- LIQUID HYDROGEN**
- Development of thermal insulation material for insulating liquid hydrogen tanks in spacecraft  
[NASA-CASE-NPO-05046] c33 N71-28892
- Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MPS-21364-1] c37 N74-18126
- LIQUID INJECTION**
- Thrust vector control by secondary injection of fluid into rocket nozzle flow field to separate exhaust flow  
[NASA-CASE-XLE-00208] c28 N70-34294
- System for aerodynamic control of rocket vehicles by secondary injection of fluid into nozzle exhaust stream  
[NASA-CASE-XLA-01163] c21 N71-15582
- Propellant injection assembly having individually removable and replaceable nozzles for liquid fueled rocket engines  
[NASA-CASE-XMP-00968] c28 N71-15660
- LIQUID LASERS**
- Method and apparatus using temperature control for wavelength tuning of liquid lasers  
[NASA-CASE-PRC-10187] c16 N69-31343
- LIQUID LEVELS**
- Inductive liquid level detection system  
[NASA-CASE-XLE-01609] c14 N71-10500
- LIQUID METALS**
- Magnetohydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs  
[NASA-CASE-XLE-02083] c03 N69-39983
- Thermoelectric power conversion by liquid metal flowing through magnetic field  
[NASA-CASE-XNP-00644] c03 N70-36803
- Analytical test apparatus and method for determining oxygen content in alkali liquid metal  
[NASA-CASE-XLE-01997] c06 N71-23527
- Electric power system with thermionic diodes and circulatory liquid metal coolant lines  
[NASA-CASE-MPS-14114] c33 N71-27862
- Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747
- Shell-side liquid metal boiler employing tube and shell heat exchanger  
[NASA-CASE-NPO-10831] c33 N72-20915
- U shaped heated tube for distillation and purification of liquid metals  
[NASA-CASE-XNP-08124-2] c06 N73-13129
- Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c35 N74-21018
- Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c33 N77-26385
- Liquid metal slip ring  
[NASA-CASE-LEW-12277-2] c33 N78-25323
- LIQUID NITROGEN**
- Transferring liquid nitrogen through vacuum chamber to cryopanel  
[NASA-CASE-LAR-10031] c15 N72-22484
- LIQUID OXYGEN**
- Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen  
[NASA-CASE-XMP-02221] c18 N71-27170
- LIQUID PHASES**
- Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment  
[NASA-CASE-XLE-01182] c27 N71-15635
- Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XNP-07659] c06 N71-22975
- Mixed liquid and vapor phase analyzer design with thermocouples for relative heat transfer measurement  
[NASA-CASE-NPO-10691] c14 N71-26199
- Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c35 N77-21393
- Liquid reactant feeder for arc assisted metal reduction reactor  
[NASA-CASE-NPO-14382-1] c25 N78-22186
- LIQUID PROPELLANT ROCKET ENGINES**
- High thrust annular liquid propellant rocket engine and exhaust nozzle design  
[NASA-CASE-XLE-00078] c28 N70-33284
- Attitude and propellant flow control system for liquid propellant rocket vehicles  
[NASA-CASE-XMP-00185] c21 N70-34539
- Injector manifold assembly for bipropellant rocket engines providing for fuel propellant to serve as coolant  
[NASA-CASE-XMP-00148] c28 N70-38710
- Collapsible auxiliary tank for restarting liquid propellant rocket motors under zero gravity  
[NASA-CASE-XNP-01390] c28 N70-41275
- Rocket propellant injector with porous faceplate for rocket engine combustion chamber  
[NASA-CASE-LEW-11071-1] c27 N73-27695
- Supersonic combustion rocket  
[NASA-CASE-LEW-11058-1] c20 N74-13502
- Space vehicle  
[NASA-CASE-MPS-22734-1] c18 N75-19329
- Low thrust monopropellant engine --- low temperature environments  
[NASA-CASE-GSC-12194-2] c20 N79-15151
- Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMP-05964-1] c20 N79-21124
- Rocket injector head  
[NASA-CASE-XMP-04592-1] c20 N79-21125
- LIQUID ROCKET PROPELLANTS**
- Propellant injectors for rocket combustion chambers  
[NASA-CASE-XLE-00103] c28 N70-33241
- Liquid rocket systems for propulsion and control of spacecraft  
[NASA-CASE-XNP-00610] c28 N70-36910
- Igniter capsule for chemical ignition of liquid rocket propellants  
[NASA-CASE-XLE-00323] c28 N70-38505
- High temperature spark plug for igniting liquid rocket propellants  
[NASA-CASE-XLE-00660] c28 N70-39925
- Compact high pressure filter for rocket fuel lines  
[NASA-CASE-XNP-00732] c28 N70-41447
- Venting device for liquid propellant storage tank using magnetic field to separate liquid and gaseous phases  
[NASA-CASE-XLE-01449] c15 N70-41646
- Liquid propellant tank design with spheroidal bulkhead  
[NASA-CASE-XMP-01899] c31 N70-41948
- Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment

- [ NASA-CASE-XLE-01182 ] c27 N71-15635  
Control valve and coaxial variable injector for  
controlling bipropellant mixture ratio and flow  
[ NASA-CASE-XNP-09702 ] c15 N71-17654  
Slosh and swirl alleviator for liquid propellant  
tanks during transport and flight  
[ NASA-CASE-XLA-05749 ] c15 N71-19569  
Filler valve design for supplying liquid  
propellants at high pressure to space vehicles  
[ NASA-CASE-XNP-01747 ] c15 N71-23024  
Electronic recording system for spatial mass  
distribution of liquid rocket propellant  
droplets or vapors ejected from high velocity  
nozzles  
[ NASA-CASE-NPO-10185 ] c10 N71-26339  
Flexible barrier membrane comprising porous  
substrate and incorporating liquid gallium or  
indium metal used as sealant barriers for  
spacecraft walls and pumping liquid propellants  
[ NASA-CASE-XNP-08881 ] c17 N71-28747  
Response analyzing apparatus for liquid vapor  
interface sensor of sloshing rocket propellant  
[ NASA-CASE-MFS-11204 ] c14 N71-29134
- LIQUID SLOSHING**  
Slosh damping method for liquid rocket  
propellant tanks  
[ NASA-CASE-XMP-00658 ] c12 N70-38997  
Flexible ring slosh damping baffle for  
spacecraft fuel tank  
[ NASA-CASE-LAR-10317-1 ] c32 N71-16103  
Submerged fuel tank baffles to prevent sloshing  
in liquid propellant rocket flight  
[ NASA-CASE-XLA-04605 ] c32 N71-16106  
Hot-wire liquid level detector for cryogenic  
propellants  
[ NASA-CASE-XLE-00454 ] c23 N71-17802  
Slosh and swirl alleviator for liquid propellant  
tanks during transport and flight  
[ NASA-CASE-XLA-05749 ] c15 N71-19569  
Pressure sensor network for measuring liquid  
dynamic response in flight including fuel tank  
acceleration, liquid slosh amplitude, and fuel  
depth monitoring  
[ NASA-CASE-XLA-05541 ] c12 N71-26387
- LIQUID-GAS MIXTURES**  
Liquid-gas separator adapted for use in zero  
gravity environment - drawings  
[ NASA-CASE-XMS-01624 ] c15 N70-40062  
Absent apparatus for separating gas from  
liquid-gas stream used in environmental  
control under zero gravity conditions  
[ NASA-CASE-XMS-01492 ] c05 N70-41297  
Venting device for liquid propellant storage  
tank using magnetic field to separate liquid  
and gaseous phases  
[ NASA-CASE-XLE-01449 ] c15 N70-41646  
Liquid-gaseous centrifugal separator for  
weightlessness environment  
[ NASA-CASE-XLA-00415 ] c15 N71-16079  
Vapor-liquid separator design with vapor driven  
pump for separated liquid pumping for  
application in propellant transfer  
[ NASA-CASE-XMP-04042 ] c15 N71-23023
- LIQUID-VAPOR INTERFACES**  
Describing apparatus for separating gas from  
cryogenic liquid under zero gravity and for  
venting gas from fuel tank  
[ NASA-CASE-XLE-00586 ] c15 N71-15968  
Liquid-vapor interface seal design for turbine  
rotating shafts including helical and  
molecular pumps and liquid cooling of mercury  
vapor  
[ NASA-CASE-XNP-02862-1 ] c15 N71-26294  
Response analyzing apparatus for liquid vapor  
interface sensor of sloshing rocket propellant  
[ NASA-CASE-MFS-11204 ] c14 N71-29134
- LIQUIDS**  
Liquid-gas separator adapted for use in zero  
gravity environment - drawings  
[ NASA-CASE-XMS-01624 ] c15 N70-40062  
Electrical switching device comprising  
conductive liquid confined within square loop  
of deformable nonconductive tubing also used  
for leveling  
[ NASA-CASE-NPO-10037 ] c09 N71-19610  
Purification apparatus for vaporization and  
fractional distillation of liquids  
[ NASA-CASE-XNP-08124 ] c15 N71-27184
- Quantitative liquid measurements in container by  
resonant frequencies  
[ NASA-CASE-XNP-02500 ] c18 N71-27397  
Resonant infrasonic gauging device for measuring  
liquid quantity in closed bladderless reservoir  
[ NASA-CASE-MSC-11847-1 ] c14 N72-11363  
Ablative system with liquid carrying ablative  
material bodies and forming self-replacing  
ablative surface  
[ NASA-CASE-LEW-10359 ] c33 N72-25911  
Pressurized tank for feeding liquid waste into  
processing equipment  
[ NASA-CASE-LAR-10365-1 ] c05 N72-27102  
Apparatus for mixing two or more liquids under  
zero gravity conditions  
[ NASA-CASE-LAR-10195-1 ] c15 N73-19458  
Rimetallic fluid displacement apparatus --- for  
stirring and heating stored gases and liquids  
[ NASA-CASE-ARC-10441-1 ] c35 N74-15126  
Method and device for detection of surface  
discontinuities or defects  
[ NASA-CASE-MSC-14187-1 ] c35 N74-32879  
Automatic liquid inventory collecting and  
dispensing unit  
[ NASA-CASE-LAR-11071-1 ] c35 N75-19611  
Thermal energy storage system --- operating on  
superheating of liquids  
[ NASA-CASE-MFS-23167-1 ] c44 N76-31667  
Low gravity phase separator  
[ NASA-CASE-MSC-14773-1 ] c35 N78-12390  
Automatic fluid dispenser  
[ NASA-CASE-ARC-10820-1 ] c35 N78-19466
- LITHIUM COMPOUNDS**  
Utilization of lithium p-lithiphenoxide to  
prepare star polymers  
[ NASA-CASE-NPO-10998-1 ] c06 N73-32029
- LOAD DISTRIBUTION (FORCES)**  
Force measuring instrument for structural  
members, particularly fastening bolts or studs  
[ NASA-CASE-XMP-00456 ] c14 N70-34705  
Multiple Belleville spring assembly with even  
load distribution  
[ NASA-CASE-XNP-00840 ] c15 N70-38225  
Device for use in loading tension members ---  
characterized by elongated elastic body  
[ NASA-CASE-MFS-21488-1 ] c14 N75-24794  
Pneumatic load compensating or controlling system  
[ NASA-CASE-ARC-10907-1 ] c37 N75-32465
- LOAD TESTING MACHINES**  
Load cell protection device using spring-loaded  
breakaway mechanism  
[ NASA-CASE-XMS-06782 ] c32 N71-15974  
Development of device for transferring load from  
load cell to bypass mechanism  
[ NASA-CASE-XMS-06329-1 ] c15 N71-20441  
Method and apparatus for tensile testing of  
metal foil  
[ NASA-CASE-LAR-10208-1 ] c35 N76-18400  
Fatigue failure load indicator  
[ NASA-CASE-LAR-12027-1 ] c39 N79-22537
- LOAD TESTS**  
Differential pressure cell insensitive to  
changes in ambient temperature and extreme  
overload  
[ NASA-CASE-XAC-00042 ] c14 N70-34816
- LOADING OPERATIONS**  
Air bearings for near frictionless transfer of  
loads from one body to another  
[ NASA-CASE-XNP-01887 ] c15 N71-10617
- LOADS (FORCES)**  
Device for handling heavy loads by distributing  
forces  
[ NASA-CASE-XNP-04969 ] c11 N69-27466  
Two plane balance for simultaneous measurements  
of multiple forces  
[ NASA-CASE-XAC-00073 ] c14 N70-34813  
Improving load capacity and fatigue life of  
rolling element systems in rockets and missiles  
[ NASA-CASE-XLE-02999 ] c15 N71-16052  
Development of device for transferring load from  
load cell to bypass mechanism  
[ NASA-CASE-XMS-06329-1 ] c15 N71-20441  
Valve assembly for controlling simultaneously  
more than one fluid flow, and having stable  
qualities under loads  
[ NASA-CASE-XMS-05890 ] c09 N71-23191  
Solid state force measuring electromechanical  
transducers made of piezoresistive materials  
[ NASA-CASE-ERC-10088 ] c26 N71-25490

- Turn on current transient limiter for  
controlling peak current flow in high capacity  
load  
[NASA-CASE-GSC-10413] c10 N71-26531
- Synchronous dc direct-drive system comprising  
multiple-loop hybrid control system  
controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136
- Force balanced throttle valve for fuel control  
in rocket engines  
[NASA-CASE-NPO-10808] c15 N71-27432
- Energy absorption device in high precision gear  
train for protection against damage to  
components caused by stop loads  
[NASA-CASE-XNP-01848] c15 N71-28959
- Air bearing for use in exterior environment for  
moving heavy loads  
[NASA-CASE-WLP-10002] c15 N72-17451
- Measuring device for bearing preload using  
spring washers  
[NASA-CASE-MPS-20434] c11 N72-25288
- Variable direction force coupler for  
transmitting force along selectable curve path  
[NASA-CASE-MPS-20317] c15 N73-13463
- Versatile ergometer with work load control  
[NASA-CASE-MPS-21109-1] c05 N73-27941
- Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c35 N74-13129
- G-load measuring and indicator apparatus --- for  
aircraft  
[NASA-CASE-ARC-10806] c06 N74-27872
- Spring operated accelerator and constant force  
spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c35 N77-18417
- Penetrometer --- for determining load bearing  
characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c35 N77-27367
- Load regulating latch  
[NASA-CASE-MSC-19535-1] c37 N77-32499
- LOCATES SYSTEM**
- System for locating lightning strokes by  
coordination of directional antenna signals  
[NASA-CASE-KSC-10729-1] c09 N73-32110
- Position determination systems --- using orbital  
antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c17 N76-21250
- LOCKING**
- Releasable coupling device designed to receive  
and retain matching ends of electrical  
connectors  
[NASA-CASE-XMS-07846-1] c09 N69-21927
- LOCKS (FASTENERS)**
- Ball locking device which releases in response  
to small forces when subjected to high axial  
loads  
[NASA-CASE-XMF-01371] c15 N70-41829
- Low friction bearing and lock mechanism for  
two-axis gimbal carrying satellite payload  
[NASA-CASE-GSC-10556-1] c31 N71-26537
- Locking device for retaining turbine rotor  
blades on turbine wheel  
[NASA-CASE-XNP-00816] c28 N71-28928
- Longitudinal film gate and lock mechanism for  
securing film in motion picture cameras under  
vibration and high acceleration loads  
[NASA-CASE-LAR-10686] c14 N71-28935
- Design of quick release locking pin for joining  
two or more load-carrying structural members  
[NASA-CASE-MPS-18495] c15 N72-11385
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22914
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N77-27694
- Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c33 N79-13261
- LOCOMOTION**
- Jet shoes for space locomotion  
[NASA-CASE-XLA-08491] c05 N69-21380
- Attitude control training device for astronauts  
permitting friction-free movement with five  
degrees of freedom  
[NASA-CASE-XMS-02977] c11 N71-10746
- Restraint torso for increased mobility and  
reduced physiological effects while wearing  
pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119
- LOGARITHMIC RECEIVERS**
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c33 N78-32339
- LOGARITHMS**
- Technique for deriving logarithm of input signal  
using exponentially varying electric signal  
inversely  
[NASA-CASE-ERC-10267] c09 N72-23173
- LOGIC CIRCUITS**
- Selective gold diffusion on monolithic silicon  
chips for switching and nonswitching amplifier  
devices and circuits and linear and digital  
logic circuits  
[NASA-CASE-ERC-10072] c09 N70-11148
- Counter-divider circuit for accuracy and  
reliability in binary circuits  
[NASA-CASE-XNP-00421] c09 N70-34502
- Binary to binary-coded decimal converter using  
single set of logic circuits notwithstanding  
number of shift register decades  
[NASA-CASE-XNP-00432] c08 N70-35423
- Conversion system for increasing resolution of  
analog to digital converters  
[NASA-CASE-XAC-00404] c08 N70-40125
- Data processor having multiple sections  
activated at different times by selective  
power coupling to sections  
[NASA-CASE-XGS-04767] c08 N71-12494
- Binary sequence detector with few memory  
elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505
- Bistable multivibrator circuits operating at  
high speed and low power dissipation  
[NASA-CASE-XGS-00823] c10 N71-15910
- Logic AND gate for fluid circuits  
[NASA-CASE-XLA-07391] c12 N71-17579
- Logic circuit to ripple add and subtract binary  
counters for spaceborne computers  
[NASA-CASE-XGS-04766] c08 N71-18602
- Constructing Exclusive-Or digital logic circuit  
in single module  
[NASA-CASE-XLA-07732] c08 N71-18751
- Stepping motor control apparatus exciting  
windings in proper time sequence to cause  
motor to rotate in either direction  
[NASA-CASE-GSC-10366-1] c10 N71-18772
- Serial digital decoder design with square  
circuit matrix and serial memory storage units  
[NASA-CASE-NPO-10150] c08 N71-24650
- Binary to decimal decoder logic circuit design  
with feedback control and display device  
[NASA-CASE-XKS-06167] c08 N71-24890
- Design and development of multistage current  
steering switch with inductively coupled  
magnetic cores  
[NASA-CASE-XNP-08567] c09 N71-26000
- Logic circuit for generating multibit binary  
code word in parallel  
[NASA-CASE-XNP-04623] c10 N71-26103
- Adaptive signal generating system and logic  
circuits for satellite television systems  
[NASA-CASE-GSC-11367] c10 N71-26374
- Transistorized switching logic circuits with  
tunnel diodes  
[NASA-CASE-GSC-10878-1] c10 N72-22236
- Logical function and circuit generator  
[NASA-CASE-XLA-05099] c09 N73-13209
- A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c60 N74-20836
- Four phase logic systems --- including  
integrated microcircuits  
[NASA-CASE-MSC-14240-1] c33 N75-14957
- An interleaving device --- for computer logic  
circuits used in optical data processing  
[NASA-CASE-GSC-12111-2] c60 N77-31800
- A general logic structure for custom LSI circuits  
[NASA-CASE-NPO-14410-1] c33 N79-25314
- LOGICAL ELEMENTS**
- An interleaving device --- for computer logic  
circuits used in optical data processing  
[NASA-CASE-GSC-12111-2] c60 N77-31800
- LONGITUDINAL CONTROL**
- Three-axis controller operated by hand-wrist  
motion for yaw, pitch, and roll control  
[NASA-CASE-XAC-01404] c05 N70-41581
- LONGITUDINAL STABILITY**
- An annular wing  
[NASA-CASE-FRC-11007-2] c02 N79-24959
- LOOP ANTENNAS**
- Collapsible, space erectable loop antenna system  
for space vehicle  
[NASA-CASE-XNP-00437] c07 N70-40202

- Automatic carrier acquisition system for phase locked loop receiver  
[NASA-CASE-NPO-11628-1] c07 N73-30113
- LOOPS**  
Tape cartridge with high capacity storage of endless-loop, magnetic tape  
[NASA-CASE-XGS-00769] c14 N70-41647  
Endless loop tape transport mechanism for driving and tensioning recording medium in magnetic tape recorder  
[NASA-CASE-XGS-01223] c07 N71-10609  
Filter for third order phase locked loops in signal receivers  
[NASA-CASE-NPO-11941-1] c10 N73-27171  
High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c70 N74-21300  
Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c33 N74-22865  
Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c34 N79-20336  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c33 N79-23347
- LOW ASPECT RATIO**  
Aerospace configuration with low and high aspect ratio variability for high and low speed flight  
[NASA-CASE-XLA-00142] c02 N70-33286  
Aerodynamic configuration for aircraft capable of high speed flight and low drag for low speed takeoff or landing upon presently existing airfields  
[NASA-CASE-XLA-00806] c02 N70-34858
- LOW COST**  
Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c44 N76-28635  
Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c44 N78-24609
- LOW CURRENTS**  
Low current linearization of magnetic amplifier for dc transformer  
[NASA-CASE-NPO-14617-1] c33 N79-26311
- LOW DENSITY MATERIALS**  
Method and photodetector device for locating abnormal voids in low density materials  
[NASA-CASE-MPS-20004] c14 N71-28993  
Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c27 N74-27037  
Mixing insert for foam dispensing apparatus  
[NASA-CASE-MPS-20607-1] c37 N76-19436  
Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c24 N78-27184  
Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c24 N79-16915
- LOW FREQUENCIES**  
Determining sway of buildings by low frequency device using pendulum  
[NASA-CASE-XMP-00479] c14 N70-34794
- LOW GRAVITY MANUFACTURING**  
Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c12 N76-15189
- LOW MOLECULAR WEIGHTS**  
Process for preparing high molecular weight polyaryloxysilanes from lower molecular weight forms  
[NASA-CASE-XMP-08674] c06 N71-28807
- LOW NOISE**  
Low phase noise frequency divider for use with deep space network communication system  
[NASA-CASE-NPO-11569] c10 N73-26229  
Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c36 N76-31512  
Support assembly for cryogenically coolable low-noise choked waveguide  
[NASA-CASE-NPO-14253-1] c31 N79-10246
- LOW PASS FILTERS**  
Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c08 N79-23097
- LOW PRESSURE**  
Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies  
[NASA-CASE-PRC-10022] c12 N71-26546  
Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c35 N79-33450
- LOW SPEED**  
Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings  
[NASA-CASE-XLA-03691] c31 N71-15674  
Device utilizing RC rate generators for continuous slow speed measurement  
[NASA-CASE-XMP-02966] c10 N71-24863
- LOW TEMPERATURE**  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c44 N79-18455
- LOW TEMPERATURE ENVIRONMENTS**  
Flexible, frangible electrochemical cell and package for operation in low temperature environment  
[NASA-CASE-XGS-10010] c03 N72-15986  
Low thrust monopropellant engine --- low temperature environments  
[NASA-CASE-GSC-12194-2] c20 N79-15151
- LOW TEMPERATURE TESTS**  
Cryostat for flexure fatigue testing of composite materials  
[NASA-CASE-XMP-02964] c14 N71-17659  
Cryostat for use with horizontal fatigue testing machines at low temperatures  
[NASA-CASE-XMP-10968] c14 N71-24234
- LOW THRUST PROPULSION**  
Low thrust monopropellant engine --- low temperature environments  
[NASA-CASE-GSC-12194-2] c20 N79-15151
- LOW VACUUM**  
Vibration damping system operating in low vacuum environment for spacecraft mechanisms  
[NASA-CASE-XMS-01620] c23 N71-15673
- LOW VOLTAGE**  
High speed low level voltage commutating switch  
[NASA-CASE-XAC-00060] c09 N70-39915  
Flexible monopole antenna with broad bandwidth and low voltage standing wave ratio  
[NASA-CASE-MSC-12101] c09 N71-18720  
Circuit design for failure sensing and protecting low voltage electric generator and power transmission networks  
[NASA-CASE-GSC-10114-1] c10 N71-27366
- LUBRICANTS**  
Metallic film diffusion into metal or ceramic surfaces for boundary lubrication in aerospace environments  
[NASA-CASE-XLE-01765] c18 N71-10772  
Metallic film diffusion for boundary lubrication in aerospace engineering  
[NASA-CASE-XLE-10337] c15 N71-24046  
Fluorinated esters of polycarboxylic acid and lubricating compositions for use at extreme temperature  
[NASA-CASE-MPS-21040-1] c06 N73-30098  
Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MPS-22411-1] c37 N74-21058  
Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c37 N74-21061
- LUBRICATING OILS**  
Fluid seal formed by flexible disk on rotating shaft to retain lubricating oils around shaft  
[NASA-CASE-XLE-05130-2] c15 N71-19570
- LUBRICATION**  
Follow high strength rolling elements for antifriction bearings fabricated from preformed components  
[NASA-CASE-LEW-11026-1] c15 N73-33383  
Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper  
[NASA-CASE-KSC-10723-1] c37 N75-13265  
Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c37 N76-15461
- LUBRICATION SYSTEMS**  
Development of hybrid bearing lubrication system with combination of standard type lubrication and magnetic flux field for earth atmosphere and space environment operation  
[NASA-CASE-XMP-01641] c15 N71-22997

- Lubrication for bearings by capillary action from oil reservoir of porous material  
[NASA-CASE-XNP-03972] c15 N71-23048
- Journal Bearings  
[NASA-CASE-LEW-11076-2] c37 N74-32921
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467
- LUMINAIRES**  
Visual target luminaires for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c31 N69-27499
- Development of ultraviolet resonance lamp with improved transmission of radiation  
[NASA-CASE-ARC-10030] c09 N71-12521
- Lamp modulator for generating visual indication of presence and magnitude of signal  
[NASA-CASE-KSC-10565] c09 N72-25250
- Electrodeless lamp circuit driven by induction  
[NASA-CASE-MFS-21214-1] c09 N73-30181
- Uniform variable light source  
[NASA-CASE-NPO-11429-1] c74 N77-21941
- LUMINOUSITY**  
Mechanism for measuring nanosecond time differences between luminous events using streak camera  
[NASA-CASE-XLA-01987] c23 N71-23976
- LUMINOUS INTENSITY**  
Filter arrangement for controlling light intensity in motion picture camera used in optical pyrometry  
[NASA-CASE-XLA-00062] c14 N70-33254
- Development of star intensity measuring system which minimizes effects of outside interference  
[NASA-CASE-XNP-06510] c14 N71-23797
- Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c36 N77-19416
- Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c44 N77-19571
- Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c33 N77-21315
- System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c74 N79-11965
- LUNAR BASES**  
Development and characteristics of natural circulation radiator for use with nuclear power plants installed in lunar space stations  
[NASA-CASE-XHQ-03673] c33 N71-29046
- LUNAR COMMUNICATION**  
Conversion system for transforming slow scan rate of Apollo TV camera on moon to fast scan of commercial TV  
[NASA-CASE-XMS-07168] c07 N71-11300
- Three transceiver lunar emergency system to relay voice communication of astronaut  
[NASA-CASE-MFS-21042] c07 N72-25171
- LUNAR COMPOSITION**  
Development and characteristics of pentrometer for measuring physical properties of lunar surface  
[NASA-CASE-XLA-00934] c14 N71-22765
- LUNAR EXPLORATION**  
Backpack carrier with retractable legs suitable for lunar exploration and convertible to rescue vehicle  
[NASA-CASE-LAR-10056] c05 N71-12351
- Development and characteristics of pentrometer for measuring physical properties of lunar surface  
[NASA-CASE-XLA-00934] c14 N71-22765
- Lightweight propulsion unit for movement of personnel and equipment across lunar surface  
[NASA-CASE-MFS-20130] c28 N71-27585
- Three transceiver lunar emergency system to relay voice communication of astronaut  
[NASA-CASE-MFS-21042] c07 N72-25171
- LUNAR GRAVITATION**  
Apparatus for training astronaut crews to perform on simulated lunar surface under conditions of lunar gravity  
[NASA-CASE-XMS-04798] c11 N71-21474
- LUNAR GRAVITY SIMULATOR**  
Lunar and planetary gravity simulator to test vehicular response to landing  
[NASA-CASE-XLA-00493] c11 N70-34786
- LUNAR LANDING**  
Lunar landing flight research vehicle  
[NASA-CASE-XPR-00929] c31 N70-34966
- LUNAR LOGISTICS**  
Lightweight propulsion unit for movement of personnel and equipment across lunar surface  
[NASA-CASE-MFS-20130] c28 N71-27585
- LUNAR ROCKS**  
Impact bit for cutting, collecting, and storing samples such as lunar rock cuttings  
[NASA-CASE-XNP-01412] c15 N70-42034
- LUNAR SOIL**  
Development of device for separating, collecting, and viewing soil particles  
[NASA-CASE-XNP-09770] c15 N71-20440
- Device which separates and screens particles of soil samples for vidicon viewing in vacuum and reduced gravity environments  
[NASA-CASE-XNP-09770-3] c11 N71-27036
- Portable penetrometer for analyzing soil characteristics  
[NASA-CASE-MFS-20774] c14 N73-19420
- Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c46 N74-13011
- LUNAR SURFACE VEHICLES**  
Resilient vehicle wheel for lunar surface travel  
[NASA-CASE-MFS-20400] c31 N71-18611
- Resilient wheel design with woven wire tire and abrasive treads for lunar surface vehicles  
[NASA-CASE-MFS-13929] c15 N71-27091
- LUNGS**  
Piston device for producing known constant positive pressure within lungs by using thoracic muscles  
[NASA-CASE-XMS-01615] c05 N70-41329

## M

## MACHINE TOOLS

- Potary impact-type rock drill for recovering rock cuttings  
[NASA-CASE-XNP-07478] c14 N69-21923
- Description of protective device for providing safe operating conditions around work piece in machine or metal working tool  
[NASA-CASE-XLE-01092] c15 N71-22797
- Description of device for aligning stacked sheets of paper for repetitive cutting  
[NASA-CASE-XMS-04178] c15 N71-22798
- Development and characteristics of frusto-conical die nib for extrusion of refractory metals  
[NASA-CASE-XLE-06773] c15 N71-23817
- Design and development of layout tool for machine shop use to locate point in precise reference to straight or bowed reference edge  
[NASA-CASE-FRC-10005] c15 N71-26145
- Optical gauging system for monitoring machine tool alignment  
[NASA-CASE-XAC-09489-1] c15 N71-26673
- Caterpillar micropositioner for positioning machine tools adjacent to workpiece  
[NASA-CASE-GSC-10780-1] c14 N72-16283
- Geneva mechanism --- including star wheel and driver  
[NASA-CASE-NPO-13281-1] c37 N75-13266
- Zero torque gear head wrench  
[NASA-CASE-NPO-13059-1] c37 N76-20480
- Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c37 N77-14478
- Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c37 N79-28550
- MACHINERY**  
Design of mechanical device for stirring several test tubes simultaneously  
[NASA-CASE-XAC-06956] c15 N71-21177
- Precipitation detector and mechanism for stopping and restarting machinery at initiation and cessation of rain  
[NASA-CASE-XLA-02619] c10 N71-26334
- Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c31 N74-32917
- MACHINING**  
Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications

- [NASA-CASE-HQN-10541-2] c15 N71-27135  
Lathe tool and holder combination for machining resin impregnated fiberglass cloth laminates
- [NASA-CASE-XLA-10470] c15 N72-21489  
Drilled ball bearing with a one piece anti-tipping cage assembly
- [NASA-CASE-LEW-11925-1] c37 N75-31446  
Method and tool for machining a transverse slot about a bore
- [NASA-CASE-LAR-11855-1] c31 N79-11249
- MAGNESIUM**  
Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications
- [NASA-CASE-LAR-10953-1] c17 N73-27446
- MAGNESIUM ALLOYS**  
Procedure for bonding polytetrafluoroethylene thermal protective sleeves to magnesium alloy conical shell components with different thermal coefficients
- [NASA-CASE-XLA-01262] c15 N71-21404  
Chemical spot test for identifying magnesium or magnesium alloys used in aerospace applications
- [NASA-CASE-LAR-10953-1] c17 N73-27446
- MAGNESIUM OXIDES**  
Method for determining presence and type of OH in MgO
- [NASA-CASE-NPO-10774] c06 N72-17095
- MAGNET COILS**  
Improved alternator with windings of superconducting materials acting as permanent magnet
- [NASA-CASE-XLE-02824] c03 N69-39890  
Relay circuit breaker with magnetic latching to provide conductive and nonconductive paths for current devices
- [NASA-CASE-MSC-11277] c09 N71-29008
- MAGNETIC AMPLIFIERS**  
Low current linearization of magnetic amplifier for dc transformer
- [NASA-CASE-NPO-14617-1] c33 N79-26311
- MAGNETIC CHARGE DENSITY**  
Ion engine with magnetic circuit for optimal discharge
- [NASA-CASE-XLE-01124] c28 N71-14043
- MAGNETIC CIRCUITS**  
Ion engine with magnetic circuit for optimal discharge
- [NASA-CASE-XLE-01124] c28 N71-14043
- MAGNETIC COILS**  
Time division multiplexer with magnetic latching relays
- [NASA-CASE-XNP-00431] c09 N70-38998  
Linear magnetic braking system with nonuniformly wrapped primary coil producing constant braking force on secondary coil
- [NASA-CASE-XLE-05079] c15 N71-17652  
Electroexplosive safe-arm initiator using electric driven electromagnet coils and magnets to align charge
- [NASA-CASE-LAR-10372] c09 N71-18599  
Magnifying image intensifier
- [NASA-CASE-GSC-12010-1] c74 N78-18905
- MAGNETIC CONTROL**  
Magnetically opened diaphragm design with camera shutter and expansion tube applications
- [NASA-CASE-XLA-03660] c15 N71-21060  
Magnetically controlled plasma accelerator capable of ignition in low density gaseous environment
- [NASA-CASE-XLA-00327] c25 N71-29184  
Axially and radially controllable magnetic bearing
- [NASA-CASE-GSC-11551-1] c37 N76-18459  
Magnetic bearing system
- [NASA-CASE-GSC-11978-1] c37 N77-17464
- MAGNETIC CORES**  
Variable frequency magnetic coupled multivibrator with temperature compensated frequency control circuit
- [NASA-CASE-XGS-00458] c09 N70-38604  
Variable frequency magnetic coupled multivibrator with output signal of constant amplitude and waveform
- [NASA-CASE-XGS-00131] c09 N70-38995  
Electronic counter circuit utilizing magnetic core and low power consumption
- [NASA-CASE-XNP-08836] c09 N71-12515  
Pulsed magnetic core memory element with blocking oscillator feedback for interrogation without loss of digital information
- [NASA-CASE-XGS-03303] c08 N71-18595  
Describing magnetic core current switching device for steering bipolar current pulses to memory units
- [NASA-CASE-NPO-10201] c08 N71-18694  
Reliable magnetic core circuit apparatus with application in selection matrices for digital memories
- [NASA-CASE-XNP-01318] c10 N71-23033  
Magnetic current regulator for saturable core transformer
- [NASA-CASE-ERC-10075] c09 N71-24800  
Power switch with transfluxor type magnetic core
- [NASA-CASE-NPO-10242] c09 N71-24803  
Unsaturating magnetic core transformer design with warning signal for electrical power processing equipment
- [NASA-CASE-ERC-10125] c09 N71-24893  
Temperature sensitive magnetometer with pulsating thermally cycled magnetic core
- [NASA-CASE-XAC-03740] c14 N71-26135  
Digital magnetic core memory with sensing amplifier circuits
- [NASA-CASE-XNP-01012] c08 N71-28925  
Saturable magnetic core and signal detection for indicating impending saturation
- [NASA-CASE-ERC-10089] c23 N72-17747  
Commulator for steering precisely controlled bidirectional currents through numerous loads by use of magnetic core shift registers
- [NASA-CASE-NPO-10743] c08 N72-21199  
Banded transformer cores
- [NASA-CASE-NPO-11966-1] c33 N74-17928
- MAGNETIC DIPOLES**  
Torquemeter for determining magnitude of torque generated by interaction of magnetic dipole between test specimen and ambient magnetic field
- [NASA-CASE-XGS-01013] c14 N71-23725
- MAGNETIC DISKS**  
Device for removing plastic dust cover from digital computer disk packs for inspection and cleaning
- [NASA-CASE-LAR-10590-1] c15 N70-26819
- MAGNETIC FIELD CONFIGURATIONS**  
Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump
- [NASA-CASE-NPO-13663-1] c35 N77-14406  
Magnifying image intensifier
- [NASA-CASE-GSC-12010-1] c74 N78-18905
- MAGNETIC FIELDS**  
Magnetically diffused radial electric arc heater
- [NASA-CASE-XLA-00330] c33 N70-34540  
Method and apparatus for communicating through ionized layer of gases surrounding spacecraft during reentry into planetary atmospheres
- [NASA-CASE-XLA-01127] c07 N70-41372  
Venting device for liquid propellant storage tank using magnetic field to separate liquid and gaseous phases
- [NASA-CASE-XLE-01449] c15 N70-41646  
Ion engine with magnetic circuit for optimal discharge
- [NASA-CASE-XLE-01124] c28 N71-14043  
Development of wide range linear fluxgate magnetometer
- [NASA-CASE-XGS-01587] c14 N71-15962  
Magnetic element position sensing device, using misaligned electromagnets
- [NASA-CASE-XGS-07514] c23 N71-16099  
Development of non-magnetic indexing device for orienting magnetic flux sensing instrument in magnetic field without generation of detrimental magnetic fields
- [NASA-CASE-XGS-02422] c15 N71-21529  
Negation of magnetic fields produced by thin waferlike circuit elements in space vehicles
- [NASA-CASE-XGS-03390] c03 N71-23187  
Torquemeter for determining magnitude of torque generated by interaction of magnetic dipole between test specimen and ambient magnetic field
- [NASA-CASE-XGS-01013] c14 N71-23725  
Fluxgate magnetometer for measuring magnetic field along two axes using one sensor
- [NASA-CASE-GSC-10441-1] c14 N71-27325  
Segmented superconducting magnet producing staggered magnetic field and suitable for broadband traveling wave masers
- [NASA-CASE-XGS-10518] c16 N71-28554

- Magnetic method for detection of aircraft position relative to runway  
[NASA-CASE-ARC-10179-1] c21 N72-22619
- Radial magnetic field for ion thruster  
[NASA-CASE-LEW-10770-1] c28 N72-22770
- Automatic shunting of ion thruster magnetic field when thruster is not operating  
[NASA-CASE-LEW-10835-1] c28 N72-22771
- Apparatus for determining distance to lighting strokes from single station by magnetic and electric field sensing antennas  
[NASA-CASE-KSC-10698] c07 N73-20175
- Superconducting magnetic field trapping device for producing magnetic field in air  
[NASA-CASE-XNP-01185] c26 N73-28710
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c35 N76-16390
- Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c33 N77-21315
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c34 N78-17335
- Atomic hydrogen storage method and apparatus --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c72 N78-19907
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c44 N79-18455
- MAGNETIC FILMS**
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c76 N79-16679
- MAGNETIC FLUX**
- Excitation and detection circuitry for flux responsive magnetic head  
[NASA-CASE-XNP-04183] c09 N69-24329
- Cryogenic flux-gated magnetometer using superconductors  
[NASA-CASE-XAC-02407] c14 N69-27423
- Flux gate magnetometer with toroidal gating coil and solenoidal output coil for signal modulation or amplification  
[NASA-CASE-XGS-01881] c09 N70-40123
- Development of hybrid bearing lubrication system with combination of standard type lubrication and magnetic flux field for earth atmosphere and space environment operation  
[NASA-CASE-XNP-01641] c15 N71-22997
- Magnetic current regulator for saturable core transformer  
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Automated ball rebound resilience test equipment for determining viscoelastic properties of polymers  
[NASA-CASE-XLA-08254] c14 N71-26161  
Hermetic sealing device for ends of tubular bodies during materials testing operations  
[NASA-CASE-NPO-10431] c15 N71-29132  
Development of apparatus for testing burning rate and flammability of materials  
[NASA-CASE-XMS-09690] c33 N72-25913  
Multiaxes vibration device for making vibration tests along orthogonal axes of test specimen  
[NASA-CASE-MFS-20282] c14 N73-19421  
Material testing system with load sensor for applying and measuring cyclic tensile and

- compressive loads to test specimens  
[NASA-CASE-MPS-20673] c14 N73-20476
- MATHEMATICAL LOGIC**  
Logical function and circuit generator  
[NASA-CASE-XLA-05099] c09 N73-13209
- MATRICES (CIRCUITS)**  
Fabrication methods for matrices of solar cell submodules  
[NASA-CASE-XNP-05821] c03 N71-11056  
Magnetic matrix memory system for nondestructive reading of information contained in matrix  
[NASA-CASE-XMF-05835] c08 N71-12504  
Conductor for connecting parallel cells into submodules in series to form solar cell matrix  
[NASA-CASE-NPO-10821] c03 N71-19545  
Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
[NASA-CASE-XNP-01313] c10 N71-23033  
Serial digital decoder design with square circuit matrix and serial memory storage units  
[NASA-CASE-NPO-10150] c08 N71-24650  
Electrically connected matrix of discrete solar cell blanks  
[NASA-CASE-NPO-10591] c03 N72-22041
- MCLEOD GAGES**  
Automatic recording McLeod gage with three electrodes and solenoid valve connection  
[NASA-CASE-XLE-03280] c14 N71-23093  
Bakeable McLeod gage  
[NASA-CASE-XGS-01293-1] c35 N79-33450
- MEASURING INSTRUMENTS**  
Capacitance measuring device for determining flare accuracy on tapered tubes  
[NASA-CASE-XKS-03495] c14 N69-39785  
Characteristics and performance of electrical system to determine angular rotation  
[NASA-CASE-XMF-00447] c14 N70-33179  
Two plane balance for simultaneous measurements of multiple forces  
[NASA-CASE-XAC-00073] c14 N70-34813  
Parallel motion suspension device for measuring instruments  
[NASA-CASE-XNP-01567] c15 N70-41310  
Transducer for measuring deflections from vibrating structures  
[NASA-CASE-XLA-03135] c32 N71-16428  
Gage for quality control of sealing surfaces of threaded boss  
[NASA-CASE-XMP-04966] c14 N71-17658  
Equipment for measuring partial water vapor pressure in gas tank  
[NASA-CASE-XNS-01618] c14 N71-20741  
Gauge for measuring quantity of liquid in spherical tank in reduced gravity  
[NASA-CASE-XMS-06236] c14 N71-21007  
Nonreusable energy absorbing device comprising ring member with plurality of recesses, cutting members, and guide member mounted in each recess  
[NASA-CASE-XMP-10040] c15 N71-22877  
Ablation sensor for measuring surface ablation rate of material on vehicles entering earths atmosphere on entry into planetary atmospheres  
[NASA-CASE-XLA-01791] c14 N71-22991  
Test fixture for measuring moment of inertia of irregularly shaped body with multiple axes  
[NASA-CASE-XGS-01023] c14 N71-22992  
Electron beam deflection devices for measuring electric fields  
[NASA-CASE-XMP-10289] c14 N71-23699  
Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790  
Gage for measuring internal angle of flare on end of tube  
[NASA-CASE-XMP-04415] c14 N71-24693  
Device utilizing RC rate generators for continuous slow speed measurement  
[NASA-CASE-XMP-02966] c10 N71-24863  
Solid state force measuring electromechanical transducers made of piezoresistive materials  
[NASA-CASE-ERC-10088] c26 N71-25490  
Design and development of layout tool for machine shop use to locate point in precise reference to straight or bowed reference edge  
[NASA-CASE-PRC-10005] c15 N71-26145
- Volume displacement transducer for leak detection in hermetically sealed semiconductor devices  
[NASA-CASE-ERC-10033] c14 N71-26672  
Deformation measuring apparatus with feedback control for arbitrarily shaped structures  
[NASA-CASE-LAR-10098] c32 N71-26681  
Foam insulation thickness measuring and injection device for spacecraft applications  
[NASA-CASE-MPS-20261] c14 N71-27005  
Resonant infrasonic gauging device for measuring liquid quantity in closed bladderless reservoir  
[NASA-CASE-NSC-11847-1] c14 N72-11363  
Measuring roll alignment of test body with respect to reference body  
[NASA-CASE-GSC-10514-1] c14 N72-20379  
Sensor for detecting and measuring energy, velocity and direction of travel of a cosmic dust particle  
[NASA-CASE-GSC-10503-1] c14 N72-20381  
Pumping and metering dual piston system and monitor for reaction chamber constituents  
[NASA-CASE-GSC-10218-1] c15 N72-21465  
Capacitive tank gaging device for monitoring one constituent of two phase fluid by sensing dielectric constant  
[NASA-CASE-MPS-21629] c14 N72-22442  
Development of mechanical device for measuring distance of point within sphere from surface of sphere  
[NASA-CASE-XLA-06683] c14 N72-28436  
Surface based altitude measuring system for accurately measuring altitude of airborne vehicle  
[NASA-CASE-ERC-10412-1] c09 N73-12211  
Instrument for measuring magnitude and direction of flow velocity in flow field  
[NASA-CASE-LAR-10855-1] c14 N73-13415  
Multiaxes vibration device for making vibration tests along orthogonal axes of test specimen  
[NASA-CASE-MPS-20242] c14 N73-19421  
Material testing system with load sensor for applying and measuring cyclic tensile and compressive loads to test specimens  
[NASA-CASE-MPS-20673] c14 N73-20476  
Development of droplet monitoring probe for use in analysis of droplet propagation in mixed-phase fluid stream  
[NASA-CASE-NPO-10985] c14 N73-20478  
Device for measuring thermoelectric properties of materials under high pressure  
[NASA-CASE-NPO-11749] c14 N73-28486  
Radio frequency source resistance measuring instruments of varied design  
[NASA-CASE-NPO-11291-1] c14 N73-30388  
Absolute pressure measuring device for measuring gas density level in high vacuum range  
[NASA-CASE-LAR-10000] c14 N73-30394  
Thin film analyzer utilizing holographic techniques  
[NASA-CASE-MPS-20823-1] c16 N73-30476  
Three-axis adjustable loading structure  
[NASA-CASE-PRC-10051-1] c35 N74-13129  
Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c35 N74-22095  
Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
[NASA-CASE-MSC-13999-1] c52 N74-26626  
Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c33 N74-27862  
Device for measuring tensile forces  
[NASA-CASE-MPS-21728-1] c35 N74-27865  
Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c35 N74-32877  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MPS-22189-1] c35 N75-19615  
Thrust measurement  
[NASA-CASE-XMS-05731] c35 N75-29382  
Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c38 N77-17495  
Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c74 N77-22950

- Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c35 N77-32455
- Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c04 N78-17031
- Apparatus for handling micron size range  
particulate material  
[NASA-CASE-NPO-10151] c37 N78-17386
- Apparatus for measuring a sorbate dispersed in a  
fluid stream  
[NASA-CASE-ARC-10896-1] c35 N78-19465
- Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c06 N78-25088
- Displacement probes with self-contained exciting  
medium  
[NASA-CASE-LAR-11690-1] c35 N78-31406
- Condition sensor system and method  
[NASA-CASE-MS-14805-1] c54 N78-32720
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337
- Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c33 N79-10333
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c34 N79-12359
- Method and apparatus for measuring minority  
carrier lifetimes and bulk diffusion length in  
P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c44 N79-12541
- Lightning current detector  
[NASA-CASE-KSC-11057-1] c33 N79-14305
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c33 N79-25313
- Contour measurement system  
[NASA-CASE-MPS-23726-1] c43 N79-26439
- Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c02 N79-31139
- MECHANICAL DEVICES**
- Mechanical coordinate converter for use with  
spacecraft tracking antennas  
[NASA-CASE-XNP-00614] c14 N70-36907
- Load cell protection device using spring-loaded  
breakaway mechanism  
[NASA-CASE-XMS-06782] c32 N71-15974
- Design and development of satellite despin device  
[NASA-CASE-XNP-08523] c31 N71-20396
- Development of two force component measuring  
device  
[NASA-CASE-XAC-04886-1] c14 N71-20439
- Design, development, and characteristics of  
latching mechanism for operation in limited  
access areas  
[NASA-CASE-XMS-03745] c15 N71-21076
- Design of mechanical device for stirring several  
test tubes simultaneously  
[NASA-CASE-XAC-06956] c15 N71-21177
- Design and development of random function tracer  
for obtaining coordinates of points on contour  
maps  
[NASA-CASE-XLA-01401] c15 N71-21179
- Design and characteristics of device for closing  
canisters under high vacuum conditions  
[NASA-CASE-XLA-01446] c15 N71-21528
- Development of non-magnetic indexing device for  
orienting magnetic flux sensing instrument in  
magnetic field without generation of  
detrimental magnetic fields  
[NASA-CASE-XGS-02422] c15 N71-21529
- Design and development of module joint clamping  
device for application to solar array  
construction  
[NASA-CASE-XNP-02341] c15 N71-21531
- Hand controller operable about three  
respectively perpendicular axes and capable of  
actuating signal generators for attitude  
control devices  
[NASA-CASE-XMS-07487] c15 N71-23255
- Metal alloy bearing materials for space  
applications  
[NASA-CASE-XLE-05033] c15 N71-23810
- Mechanical actuator wherein linear motion  
changes to rotational motion  
[NASA-CASE-XGS-04548] c15 N71-24045
- Design and characteristics of device for showing  
amount of cable payed out from winch and load  
imposed  
[NASA-CASE-MS-12052-1] c15 N71-24599
- Design and development of release mechanism for  
spacecraft components, releasable despin  
weights, and extensible gravity booms  
[NASA-CASE-XGS-08718] c15 N71-24600
- Apparatus for mechanically dispersing ultrafine  
metal powders subjected to shock waves  
[NASA-CASE-XLE-04946] c17 N71-24911
- Self lubricating gears and other mechanical  
parts having surface adapted to frictional  
contact  
[NASA-CASE-MPS-14971] c15 N71-24984
- Design and development of layout tool for  
machine shop use to locate point in precise  
reference to straight or bowed reference edge  
[NASA-CASE-FPC-10005] c15 N71-26145
- Design and development of linear actuator based  
on bimetallic spring expansion  
[NASA-CASE-NPO-10637] c15 N72-12409
- Characteristics of lightweight actuator for  
imparting linear motion using elongated output  
shaft  
[NASA-CASE-NPO-11222] c15 N72-25456
- Development of mechanical device for measuring  
distance of point within sphere from surface  
of sphere  
[NASA-CASE-XLA-06683] c14 N72-28436
- Development of thermal compensating structure  
which maintains uniform length with changes in  
temperature  
[NASA-CASE-MPS-20433] c15 N72-28496
- Development of mating flat surfaces to inhibit  
leakage of fluid around shafts  
[NASA-CASE-XLE-10326-2] c15 N72-29488
- Development of solar energy powered heliostole  
assembly to orient solar array toward sun  
[NASA-CASE-GSC-10945-1] c21 N72-31637
- Design and construction of mechanical probe for  
determining if object is properly secured  
[NASA-CASE-MPS-20760] c14 N72-33377
- Development and characteristics of rotary  
actuator for use on spacecraft to deploy and  
support pivotal structures such as solar panels  
[NASA-CASE-NPO-10680] c31 N73-14855
- Collapsible support for antenna reflector,  
applied to installation of spacecraft antennas  
[NASA-CASE-NPO-11751] c07 N73-24176
- Pneumatic foot pedal operated fluidic exercising  
device  
[NASA-CASE-MS-11561-1] c05 N73-32014
- Mechanical exposure interlock device for  
preventing film overexposure in oscilloscope  
camera  
[NASA-CASE-LAR-10319-1] c14 N73-32322
- Peefing system  
[NASA-CASE-LAR-10129-2] c37 N74-20063
- Sprag solenoid brake --- development and  
operations of electrically controlled brake  
[NASA-CASE-MPS-21946-1] c37 N74-26976
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c44 N74-33379
- Automatic inoculating apparatus --- including  
movable carriage, drive motor, and swabbing  
motor  
[NASA-CASE-LAR-11074-1] c51 N75-13502
- Clock setter  
[NASA-CASE-LAR-11458-1] c35 N76-16392
- Apparatus for positioning modular components on  
a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c37 N76-21554
- Feel safety brake  
[NASA-CASE-GSC-11950-1] c37 N77-14479
- Mechanical sequencer  
[NASA-CASE-MS-19536-1] c37 N77-22482
- Combined docking and grasping device  
[NASA-CASE-MPS-23089-1] c37 N77-23483
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c52 N77-27694
- Wrist joint assembly  
[NASA-CASE-MPS-23311-1] c54 N78-17676
- Tetherline system for orbiting satellites  
[NASA-CASE-MPS-23564-1] c15 N78-25119
- Actuator mechanism  
[NASA-CASE-GSC-11883-2] c37 N78-31426
- A coupling device for moving vehicles  
[NASA-CASE-GSC-12429-1] c37 N79-19364
- MECHANICAL DRIVES**
- Hydraulic drive mechanism for leveling isolation  
platforms  
[NASA-CASE-XMS-03252] c15 N71-10658
- Antibacklash circuit for hydraulic drive system  
[NASA-CASE-XNP-01020] c03 N71-12260
- Precision stepping drive device using cam disk  
[NASA-CASE-MPS-14772] c15 N71-17692

- Incremental motion drive system applied to interferometer components  
[NASA-CASE-XNP-08897] c15 N71-17694
- Ratchet mechanism for high speed operation at reduced backlash  
[NASA-CASE-MPS-12805] c15 N71-17805
- Development of apparatus for automatically changing carriage speed of welding machine to obtain constant speed of torch along work surface  
[NASA-CASE-XMP-07069] c15 N71-23815
- Drive system for parabolic tracking antenna with reversible motion and minimal backlash  
[NASA-CASE-NPO-10173] c15 N71-24696
- Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136
- Energy absorption device in high precision gear train for protection against damage to components caused by stop loads  
[NASA-CASE-XMP-01848] c15 N71-28959
- Automatic controlled drive mechanism for portable boring bar  
[NASA-CASE-XLA-03661] c15 N71-33518
- Rotary actuator for use in environments with no rolling and sliding friction  
[NASA-CASE-NPO-10244] c15 N72-26371
- Development and characteristics of rotary actuator for use on spacecraft to deploy and support pivotal structures such as solar panels  
[NASA-CASE-NPO-10680] c31 N73-14855
- Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c37 N74-21060
- Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MPS-20645-1] c37 N74-23070
- Concentric differential gearing arrangement  
[NASA-CASE-ARC-10462-1] c37 N74-27901
- Geneva mechanism --- including star wheel and driver  
[NASA-CASE-NPO-13281-1] c37 N75-13266
- Mechanical thermal motor  
[NASA-CASE-MPS-23062-1] c37 N77-12402
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MPS-23267-1] c35 N77-20401
- Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c37 N77-22479
- Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c37 N77-22482
- Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c07 N78-17056
- Wobble gear drive mechanism --- for aerospace environments  
[NASA-CASE-WOO-00625] c37 N78-17385
- Redundant motor drive system  
[NASA-CASE-MPS-23777-1] c37 N78-28460
- Belt for coupling driven members  
[NASA-CASE-GSC-12276-1] c37 N78-32429
- Belt for transmitting power from a driving member to a driven member  
[NASA-CASE-GSC-12289-1] c37 N78-32435
- Antenna deployment mechanism --- retractable spacecraft antennas  
[NASA-CASE-GSC-12331-1] c37 N78-32436
- Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c37 N79-28550
- MECHANICAL ENGINEERING**
- Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MPS-21481-1] c37 N74-18127
- Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c37 N79-22475
- A heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c34 N79-23383
- MECHANICAL MEASUREMENT**
- Strain gage for detecting and measuring mechanical strain in thermally strained specimens  
[NASA-CASE-FRC-10053] c14 N70-35587
- Air brake device for absorbing and measuring power from rotating shafts  
[NASA-CASE-XLE-00720] c14 N70-40201
- Water cooled gage for strain measurements in high temperature environments  
[NASA-CASE-XNP-09205] c14 N71-17657
- Development of apparatus for measuring successive increments of strain on elastomers  
[NASA-CASE-XMP-04680] c15 N71-19489
- Development of Hall effect transducer for converting mechanical shaft rotations into proportional electrical signals  
[NASA-CASE-LAR-10620-1] c09 N72-25255
- Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c35 N76-14430
- MECHANICAL PROPERTIES**
- Test apparatus for determining mechanical properties of refractory materials at high temperatures in vacuum or inert atmospheres  
[NASA-CASE-XLE-00335] c14 N70-35368
- Electric resistance spot welding and brazing for producing metal bonds with superior mechanical and structural characteristics  
[NASA-CASE-LAR-11072-1] c15 N73-20535
- MECHANICS (PHYSICS)**
- Hovering type flying vehicle design and principle mechanisms for manned or unmanned use  
[NASA-CASE-MSC-12111-1] c02 N71-11039
- MECHANIZATION**
- Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c39 N78-10493
- MEDICAL ELECTRONICS**
- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c54 N75-13531
- MEDICAL EQUIPMENT**
- Electromedical garment, applying vectorcardiologic type electrodes to human torsos for data recording during physical activity  
[NASA-CASE-XPR-10856] c05 N71-11189
- Respiration analyzing method and apparatus for determining subjects oxygen consumption in aerospace environments  
[NASA-CASE-XPR-08403] c05 N71-11202
- Laser machining device with dielectric functioning as beam waveguide for mechanical and medical applications  
[NASA-CASE-HQN-10541-2] c15 N71-27135
- Zero power telenetry actuated switch for biomedical equipment  
[NASA-CASE-ARC-10105] c09 N72-17153
- Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices  
[NASA-CASE-MPS-21010-1] c05 N73-30078
- Automatic device for assaying urine on bacterial adenosine triphosphate content  
[NASA-CASE-GSC-11169-2] c05 N73-32011
- Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c54 N75-27761
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14190-1] c52 N76-14757
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22914
- Leadout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- A cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c52 N77-26796
- Corneal seal device  
[NASA-CASE-LEW-12258-1] c52 N77-28716
- Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c52 N77-28717
- Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c52 N78-14773
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c34 N78-25351
- Apparatus for endoscopic examination  
[NASA-CASE-NPO-14092-1] c52 N79-19678
- Spine immobilization method and apparatus --- rigid bladder  
[NASA-CASE-ARC-11167-1] c52 N79-30921
- MELTING POINTS**
- Mixed dianines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c27 N79-33316

**MELTS (CRYSTAL GROWTH)**

A method and means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c76 N79-10917

An improved apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c76 N79-10918

Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798

**MEMBRANE STRUCTURES**

Liquid junction for glass electrode or pH meters  
[NASA-CASE-NPO-10682] c15 N70-34699

Expulsion and measuring device for determining quantity of liquid in tank under conditions of weightlessness  
[NASA-CASE-XMS-01546] c14 N70-40233

Flexible composite membrane structure impervious to extremely reactive chemicals in rocket propellants  
[NASA-CASE-XNP-08837] c18 N71-16210

Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747

Meteoroid capture cell construction  
[NASA-CASE-MSC-12423-1] c91 N76-30131

**MEMBRANES**

Apparatus for measuring polymer membrane expansion in electrochemical cells  
[NASA-CASE-XGS-03865] c14 N69-21363

Separation cell with permeable membranes for fluid mixture component separation  
[NASA-CASE-XMS-02952] c18 N71-20742

Water insoluble, cationic permselective membrane  
[NASA-CASE-NPO-11091] c18 N72-22567

A reverse osmosis membrane of high urea rejection properties  
[NASA-CASE-ARC-10980-1] c27 N77-18265

Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c44 N79-10513

Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c25 N79-14169

**MEMORY**

Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c24 N75-13032

**MERCURY (METAL)**

Interrupter switching device utilizing electrodes and mercury filled capillary tubes in which current flow vaporizes mercury as circuit breaker  
[NASA-CASE-XNP-02251] c12 N71-20896

Method of forming ceramic to metal seals impervious to gaseous and liquid mercury at high temperature  
[NASA-CASE-XNP-01263-2] c15 N71-26312

Development of system for delivering vaporized mercury to electron bombardment ion engine  
[NASA-CASE-NPO-10737] c28 N72-11709

**MERCURY VAPOR**

Interrupter switching device utilizing electrodes and mercury filled capillary tubes in which current flow vaporizes mercury as circuit breaker  
[NASA-CASE-XNP-02251] c12 N71-20896

Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-XNP-02862-1] c15 N71-26294

**METABOLIC WASTES**

Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721

**METABOLISM**

Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c25 N75-12086

Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769

Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750

**METAL BONDING**

Bonding method for improving contact between lead telluride thermoelectric elements and tungsten electrodes

[NASA-CASE-XGS-04554] c15 N69-39786

Plasma spraying gun for forming diffusion bonded metal or ceramic coatings on substrates  
[NASA-CASE-XLE-01604-2] c15 N71-15610

Describing metal valve pintle with encapsulated elastomeric body  
[NASA-CASE-MSC-12116-1] c15 N71-17648

Apparatus for determining quality of bond between high density material and low density material  
[NASA-CASE-MPS-13686] c15 N71-18132

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 [NASA-CASE-XLA-04556] c14 N69-27484
- MICROORGANISMS**  
 Development of bacteriostatic conformal coating and methods of application  
 [NASA-CASE-GSC-10007] c18 N71-16046  
 Portable vacuum probe surface sampler for sampling large surface areas with relatively light loading densities of microorganisms  
 [NASA-CASE-LAR-10623-1] c14 N73-30395  
 Measurement of gas production of microorganisms --- using pressure sensors  
 [NASA-CASE-LAR-11326-1] c35 N75-33368  
 Biocontamination and particulate detection system  
 [NASA-CASE-NPO-13953-1] c35 N79-28527
- MICROPARTICLES**  
 Micropacked column for rapid chromatographic analysis using low gas flow rates  
 [NASA-CASE-XNP-04816] c06 N69-39936
- MICROPHONES**  
 Audio signal processing system for noise surge elimination at low amplitude audio input  
 [NASA-CASE-MS-C-12223-1] c07 N71-26181  
 Vibrophonocardiograph comprising low weight and small volume piezoelectric microphone with amplifier having high input impedance for high sensitivity and low frequency response  
 [NASA-CASE-XP-07172] c05 N71-27234  
 Development of wind tunnel microphone structure to minimize effects of vibrations and eliminate unwanted signals in microphone output  
 [NASA-CASE-XNP-00250] c11 N71-28779  
 Adjustable frequency response microphone  
 [NASA-CASE-LAR-11170-1] c32 N74-12843  
 High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
 [NASA-CASE-LAR-12375-1] c32 N79-24203
- MICROPROCESSORS**  
 Microcomputerized electric field meter diagnostic and calibration system  
 [NASA-CASE-KSC-11035-1] c35 N78-28411
- MICROSCOPES**  
 Absolute focus locking device for microscopes to maintain set focus for extended time period  
 [NASA-CASE-LAR-10184] c14 N72-22445  
 Hand-held, lightweight, portable photomicroscope  
 [NASA-CASE-ARC-10468-1] c14 N73-33361
- MICROSTRIP TRANSMISSION LINES**  
 Thin conformal antenna array for microwave power conversions  
 [NASA-CASE-NPO-13886-1] c32 N78-24391
- MICROSTRUCTURE**  
 Production of high strength refractory compounds and microconstituents into refractory metal matrix  
 [NASA-CASE-XLE-03940] c18 N71-26153  
 Development of procedure for improved distribution of refractory compounds and micro-constituents in refractory metal matrix  
 [NASA-CASE-YLE-03940-2] c17 N72-28536  
 Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
 [NASA-CASE-LFW-11388-2] c37 N74-21055  
 Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
 [NASA-CASE-MPS-21931-1] c37 N75-26372  
 Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
 [NASA-CASE-MPS-23816-1] c26 N79-16943
- MICROTHRUST**  
 Electrostatic microthrust propulsion system with annular slit colloid thruster.  
 [NASA-CASE-GSC-10709-1] c28 N71-25213  
 Heated porous plug microthruster for spacecraft reaction jet controlled systems such as fuel flow regulation, propellant disassociation, and heat transfer augmentation  
 [NASA-CASE-GSC-10640-1] c28 N72-18766
- MICROWAVE AMPLIFIERS**  
 Thermally sensitive tuning probe for nullifying detuning effects in microwave cavity resonator of amplifier  
 [NASA-CASE-XNP-00449] c14 N70-35220
- MICROWAVE ANTENNAS**  
 Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
 [NASA-CASE-MPS-20333] c09 N71-13486  
 Development and characteristics of low-noise multimode monopulse antenna feed system for use with microwave communication equipment  
 [NASA-CASE-XNP-01735] c07 N71-22750  
 Microwave omnidirectional antenna for use on spacecraft  
 [NASA-CASE-XLA-03114] c09 N71-22888  
 Portable equipment for validating C band launch pad antennas and transmission lines used for spacecraft checkout  
 [NASA-CASE-XKS-10543] c07 N71-26292  
 Multipurpose microwave antenna, employing dish reflector with plural coaxial horn feeds  
 [NASA-CASE-NPO-11264] c07 N72-25174  
 Omnidirectional antenna array with circumferential slots for mounting on cylindrical space vehicle  
 [NASA-CASE-LAR-10163-1] c09 N72-25247  
 Characteristics of microwave antenna with conical reflectors to generate plane wave front  
 [NASA-CASE-NPO-11661] c07 N73-14130  
 Dual frequency circularly polarized microwave integrated antenna  
 [NASA-CASE-MS-C-16100-1] c32 N77-15233  
 Thin conformal antenna array for microwave power conversions  
 [NASA-CASE-NPO-13886-1] c32 N78-24391
- MICROWAVE CIRCUITS**  
 Quasi-optical microwave circuit with dielectric body for use with oversize waveguides  
 [NASA-CASE-ERC-10011] c07 N71-29065  
 Microwave integrated circuit for Josephson voltage standards  
 [NASA-CASE-MPS-23845-1] c33 N78-32347
- MICROWAVE COUPLING**  
 Microwave waveguide switch with rotor position control  
 [NASA-CASE-XNP-06507] c09 N71-23548
- MICROWAVE EQUIPMENT**  
 Apparatus for generating microwave signals at progressively related phase angles for driving antenna array  
 [NASA-CASE-ERC-10046] c10 N71-18722  
 Broadband microwave waveguide window to compensate dielectric material filling  
 [NASA-CASE-XNP-08880] c09 N71-24808  
 Dual frequency feed systems for Cassegrainian antennas  
 [NASA-CASE-NPO-13091-1] c09 N73-12214  
 Resonant waveguide stark cell --- using microwave spectrometers

- [NASA-CASE-LAR-11352-1] c33 N75-26245  
Refrigerated coaxial coupling --- for microwave equipment
- [NASA-CASE-NPO-13504-1] c33 N75-30430  
Microwave dichroic plate
- [NASA-CASE-GSC-12171-1] c33 N79-28416
- MICROWAVE FILTERS**  
Microwave power divider for providing variable output power to output waveguide in fixed waveguide system  
[NASA-CASE-NPO-11031] c07 N71-33606  
Selective bandpass resonators using bandstop resonator pairs for microwave frequency operation  
[NASA-CASE-GSC-10990-1] c09 N73-26195
- MICROWAVE FREQUENCIES**  
Varactor microwave frequency mixing circuit  
[NASA-CASE-XGS-02171] c09 N69-24324  
Voltage tunable Gunn effect semiconductor for microwave generation  
[NASA-CASE-XEP-07894] c09 N71-18721  
Multimode antenna feed system for microwave and broadband communication  
[NASA-CASE-GSC-11046-1] c07 N73-28013
- MICROWAVE OSCILLATORS**  
Microwave generator using Gunn effect for magnetic tuning  
[NASA-CASE-NPO-12106] c09 N73-15235  
Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c33 N74-10195
- MICROWAVE RADIOMETERS**  
Input radio frequency circuit for switching type absolute temperature measuring radiometer for noise sources  
[NASA-CASE-EPC-11020] c14 N71-26774  
Microwave limb sounder --- to measure trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c74 N79-34014
- MICROWAVE REFLECTOMETERS**  
Reflectometer for receiver input impedance match measurement  
[NASA-CASE-XNP-10843] c07 N71-11267  
Surface defect detection by reflected microwave radiation pattern  
[NASA-CASE-ARC-10009-1] c15 N71-17822
- MICROWAVE RESONANCE**  
Microwave double resonance spectroscopy absorption cell for gas analysis  
[NASA-CASE-LAR-10305] c14 N71-26137
- MICROWAVE SENSORS**  
Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c32 N79-10271
- MICROWAVE SWITCHING**  
Design of gyrator circuit using operational amplifiers to replace ungrounded inductors  
[NASA-CASE-XAC-10608-1] c09 N71-12517
- MICROWAVE TRANSMISSION**  
Microwave power converter  
[NASA-CASE-NPO-14068-1] c44 N78-19609  
Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c32 N79-10271
- MICROWAVE TUBES**  
Electrostatic charged particle collector containing stacked electrodes for microwave tube  
[NASA-CASE-LEW-11192-1] c09 N73-13208
- MICROWAVES**  
Radio frequency noise generator having microwave slow-wave structure in gas discharge plasma  
[NASA-CASE-XER-11019] c09 N71-23598  
Method and apparatus for optically modulating light or microwave beam  
[NASA-CASE-GSC-10216-1] c23 N71-26722  
Microwave waveguide mixer  
[NASA-CASE-ERC-10179] c07 N72-20141  
Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-NFS-21470-1] c44 N74-19870  
Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c33 N78-32340
- MIDAIR COLLISIONS**  
Economical satellite aided vehicle avoidance system for preventing midair collisions  
[NASA-CASE-ERC-10419] c21 N72-21631  
Development and characteristics of electronic signalling system and data processing equipment for warning systems to avoid midair collisions between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641
- MILLIMETER WAVES**  
Millimeter wave antenna system for spacecraft use  
[NASA-CASE-GSC-10949-1] c07 N71-28965  
Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c33 N74-32660
- MILLING (MACHINING)**  
Rotary spindle lathe attachments for machining geometrical cones  
[NASA-CASE-XMS-04292] c15 N71-22722
- MILLING MACHINES**  
Electro-optical system for maintaining two-axis alignment during milling operations on large tank-sections  
[NASA-CASE-XMF-00908] c14 N70-40238  
Description of portable milling tool for milling tube or pipe ends to desired shape and thickness  
[NASA-CASE-XMF-03511] c15 N71-22799  
Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c37 N74-27905
- MINERAL DEPOSITS**  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c31 N78-24387
- MINERAL METABOLISM**  
Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MS-14276-1] c52 N77-14737
- MINIATURE ELECTRONIC EQUIPMENT**  
Miniature solid state, direction sensitive, stress transducer design with bonded semiconductive piezoresistive element for sensing residual stresses  
[NASA-CASE-XNP-02983] c14 N71-21091  
Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597  
Solid state television camera system consisting of monolithic semiconductor mosaic sensor and molecular digital readout systems  
[NASA-CASE-XMF-06092] c07 N71-24612  
Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c52 N76-29894  
Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407
- MINIATURIZATION**  
Miniature vibration isolator utilizing elastic tubing material  
[NASA-CASE-XLA-01019] c15 N70-40156  
Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897  
Fast response miniature carbon dioxide detector with no moving parts for measuring concentration in any atmosphere  
[NASA-CASE-MS-13332-1] c14 N72-21408  
Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c35 N78-32397
- MINING**  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c31 N78-24387
- MIRRORS**  
Pneumatic control of telescopic mirror support system  
[NASA-CASE-XLA-03271] c11 N69-24321  
Oscillatory electromagnetic mirror drive system for horizon scanners  
[NASA-CASE-XLA-03724] c14 N69-27461  
Servo system for retroreflector of Michelson interferometer  
[NASA-CASE-NPO-10300] c14 N71-17662  
Gas laser frequency stabilized by position of mirrors in resonant cavity  
[NASA-CASE-XGS-03644] c16 N71-19614  
Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-ERC-10001] c23 N71-24868  
Adjustable rigid mount for trihedral mirror formed of alloy with small coefficient of thermal expansion supporting screws and spring-biased plates  
[NASA-CASE-XNP-08907] c23 N71-29123

- Optical range finder using reflective first surfaces mirror and transmitting beam splitter  
[NASA-CASE-MSC-12105-1] c14 N72-21409
- Optical mirror support system  
[NASA-CASE-XER-07896-2] c23 N72-22673
- Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MPS-20506-1] c35 N75-12273
- Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c12 N76-15189
- Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MPS-22409-2] c74 N78-15880
- Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c35 N79-18391
- Anastigmatic three-mirror telescope  
[NASA-CASE-MPS-23675-1] c89 N79-10969
- MISSILE CONTROL**  
Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c32 N74-20864
- MISSILE LAUNCHERS**  
Launch pad missile release system with bending moment change rate reduction in thrust distribution structure at liftoff  
[NASA-CASE-XMP-03198] c30 N70-40353
- Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
[NASA-CASE-XKS-03509] c14 N71-23175
- Controlled release device for use in launching rockets or missiles  
[NASA-CASE-XKS-03338] c15 N71-24043
- MISSILES**  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c15 N78-32168
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100
- MITOSIS**  
Process for control of cell division  
[NASA-CASE-LAR-10773-3] c51 N77-25769
- MIXERS**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067
- MIXING CIRCUITS**  
Varactor microwave frequency mixing circuit  
[NASA-CASE-XGS-02171] c09 N69-24324
- Microwave waveguide mixer  
[NASA-CASE-PRC-10179] c07 N72-20141
- MIXTURES**  
Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c35 N78-12390
- MOBILITY**  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c33 N75-27251
- MODE TRANSFORMERS**  
Silicon controlled rectifier inverter with compensation of transients to avoid false gating  
[NASA-CASE-XLA-08507] c09 N69-39984
- Dual waveguide mode source for controlling amplitudes of two modes  
[NASA-CASE-XMP-03134] c07 N71-10676
- Direct current transformer  
[NASA-CASE-MPS-23659-1] c33 N79-17133
- MODEMS**  
Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c33 N77-21314
- MODULATION**  
Demodulator for carrier transducers  
[NASA-CASE-MUC-10107-1] c33 N74-17530
- MODULATORS**  
Fabry-Perot interferometer retrodirective reflector modulator for optical communication  
[NASA-CASE-XGS-04480] c16 N69-27491
- Optical retrodirective modulator with focus spoiling reflector driven by modulation signal  
[NASA-CASE-GSC-10062] c14 N71-15605
- Calibrator for measuring and modulating or demodulating laser outputs  
[NASA-CASE-XLA-03410] c16 N71-25914
- Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-PRC-10072-1] c33 N74-14939
- Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c33 N77-21314
- MODULES**  
Biorthogonal encoder with modular design  
[NASA-CASE-NPO-10629] c08 N72-18184
- Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c35 N78-22347
- Method of fabricating a photovoltaic of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c44 N78-28626
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447
- MOISTURE**  
Gas purged dry box glove reducing permeation of air or moisture into dry box or isolator by diffusion through glove  
[NASA-CASE-XLE-02531] c05 N71-23080
- MOISTURE METERS**  
Method of evaluating moisture barrier properties of materials used in electronics encapsulation  
[NASA-CASE-NPO-10051] c18 N71-24934
- MOLDING MATERIALS**  
Vacuum method for molding thermosetting compounds used as ablative materials  
[NASA-CASE-XLA-01091] c15 N71-10672
- Method of making molded electric connector for use with flat conductor cables  
[NASA-CASE-XMP-03498] c15 N71-15986
- Hydraulic apparatus for casting and molding of liquid polymers  
[NASA-CASE-XMP-07659] c06 N71-22975
- Cold metal hydroforming techniques using epoxy molds for counteracting creep or stretch  
[NASA-CASE-XLE-05641-1] c15 N71-26346
- Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c31 N74-13177
- Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c31 N74-14133
- Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275
- Method of making a rocket nozzle  
[NASA-CASE-XMP-06884-1] c20 N79-21123
- MOLDS**  
Forming mold for polishing and machining curved solar magnesium reflector with reinforcing ribs  
[NASA-CASE-XLE-08917-2] c15 N71-24836
- Using molds for fabricating individual fluid circuit components  
[NASA-CASE-XLA-07829] c15 N72-16329
- Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c31 N74-14133
- Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c31 N74-32920
- Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c31 N75-13111
- Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c37 N76-23570
- MOLECULAR BEAMS**  
Selector mechanism for mechanical separation and discrimination of high velocity molecular particles  
[NASA-CASE-XLE-01533] c11 N71-10777
- Sputtering holes with ion beams  
[NASA-CASE-LEW-11646-1] c20 N74-31269
- MOLECULAR GASES**  
Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c35 N74-15127
- MOLECULAR PUMPS**  
Omnidirectional anisotropic molecular trap, used with vacuum pump to simulate space environments for testing spacecraft components  
[NASA-CASE-XGS-00783] c30 N71-17788
- Liquid-vapor interface seal design for turbine rotating shafts including helical and molecular pumps and liquid cooling of mercury vapor  
[NASA-CASE-XMP-02862-1] c15 N71-26294
- MOLECULAR RELAXATION**  
Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c74 N79-17683

## MOLECULAR ROTATION

Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c36 N75-31426

**MOLECULAR SPECTROSCOPY**  
Microwave double resonance spectroscopy absorption cell for gas analysis  
[NASA-CASE-LAR-10305] c14 N71-26137

**MOLECULES**  
Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13926

**MOLTEN SALT ELECTROLYTES**  
Operation method for combined electrolysis device and fuel cell using molten salt to produce power by thermoelectric regeneration mechanism  
[NASA-CASE-XLE-01645] c03 N71-20904  
Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c44 N76-18643

**MOLYBDENUM**  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c35 N79-14346

**MOLYBDENUM CARBIDES**  
Plasma or plasma spraying for molybdenum coating of carbon or graphite surfaces to prevent oxidative corrosion  
[NASA-CASE-XLA-00302] c15 N71-16077

**MOMENTS OF INERTIA**  
Test fixture for measuring moment of inertia of irregularly shaped body with multiple axes  
[NASA-CASE-XGS-01023] c14 N71-22992

**MOMENTUM**  
Utilization of momentum devices for forming attitude control and damping system for spacecraft  
[NASA-CASE-XLA-02551] c21 N71-21708  
Momentum-velocity analyzer for measuring minute space particles  
[NASA-CASE-XMS-04201] c14 N71-22990

**MONATOMIC GASES**  
Atomic hydrogen storage method and apparatus --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c72 N78-19907

**MONITORS**  
Fluid leakage detection system with automatic monitoring capability  
[NASA-CASE-LAR-10323-1] c12 N71-17573  
Monitoring circuit design for sampling circuit control and reduction of time-bandwidth in video communication systems  
[NASA-CASE-XNP-02791] c07 N71-23026  
Optical monitor panel consisting of translucent screen with test or meter information projected onto it from rear for application in control rooms of missile launching and tracking stations  
[NASA-CASE-XKS-03509] c14 N71-23175  
Peak polarity selector for monitoring waveforms  
[NASA-CASE-PRC-10010] c10 N71-24862  
Circuit for monitoring power supply by ripple current indication  
[NASA-CASE-KSC-10162] c09 N72-11225  
Development of droplet monitoring probe for use in analysis of droplet propagation in mixed-phase fluid stream  
[NASA-CASE-NPO-10985] c14 N73-20478  
Monitoring and recording lightning strokes in predetermined area  
[NASA-CASE-KSC-10728-1] c14 N73-32319  
Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c33 N79-11315  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193

**MONOCHROMATIC RADIATION**  
Apparatus for producing monochromatic light from continuous plasma source  
[NASA-CASE-XNP-04167-2] c25 N72-24753  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c36 N78-14380

## MONOCHROMATORS

Analytical photoionization mass spectrometer with argon gas filter between light source and monochromator  
[NASA-CASE-LAP-10180-1] c06 N71-13461  
Color television system for allowing monochrome television camera to produce color pictures  
[NASA-CASE-MSC-12146-1] c07 N72-17109

**MONOMERS**  
Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c35 N78-17359

**MONOPOLE ANTENNAS**  
Monopole antenna system for maximum omnidirectional efficiency for use on satellites  
[NASA-CASE-XLA-00414] c07 N70-38200  
Flexible monopole antenna with broad bandwidth and low voltage standing wave ratio  
[NASA-CASE-MSC-12101] c09 N71-18720

**MONOPROPELLANTS**  
Ignition system for monopropellant combustion devices  
[NASA-CASE-XNP-00249] c28 N70-38249  
Catalyst bed ignition system for hydrazine propellants  
[NASA-CASE-XNP-00876] c28 N70-41311  
Low thrust monopropellant engine --- low temperature environments  
[NASA-CASE-GSC-12194-2] c20 N79-15151

**MONOPULSE ANTENNAS**  
Electronic and mechanical scanning control system for monopulse tracking antenna  
[NASA-CASE-XGS-05582] c07 N69-27460  
Development and characteristics of low-noise multimode monopulse antenna feed system for use with microwave communication equipment  
[NASA-CASE-XNP-01735] c07 N71-22750  
Monopulse scanning network for scanning volumetric antenna pattern  
[NASA-CASE-GSC-10299-1] c09 N71-24804  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c33 N76-27472

**MONOPULSE RADAR**  
Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-YGS-03501] c09 N71-20864  
Monopulse tracking system with antenna array of three radiators for deriving azimuth and elevation indications  
[NASA-CASE-XGS-01155] c10 N71-21483

**MONOSTABLE MULTIVIBRATORS**  
Development and characteristics of resettable monostable pulse generator with charge rundown-timing circuit  
[NASA-CASE-GSC-11139] c09 N71-27016  
Monostable multivibrator for producing output pulse widths with positive feedback NOR gates  
[NASA-CASE-MSC-13492-1] c10 N71-28860

**MOSSBAUER EFFECT**  
Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c35 N74-15091  
Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XNP-05882] c35 N75-27329

**MOTION**  
Quick attach mechanism for moving or stationary wires, ropes, or cables  
[NASA-CASE-YFR-05421] c15 N71-22994  
Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c54 N79-25761

**MOTION PICTURES**  
Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c35 N74-17153  
Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c35 N75-27328

**MOTION SIMULATORS**  
Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c09 N75-15662

**MOTION STABILITY**  
Hydraulic drive mechanism for leveling isolation platforms  
[NASA-CASE-XMS-03252] c15 N71-10658

**MOTORS**  
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[NASA-CASE-MFS-23303-1] c32 N77-18307
- NOZZLE DESIGN**  
High thrust annular liquid propellant rocket engine and exhaust nozzle design  
[NASA-CASE-XLE-00078] c28 N70-33284  
Penshaped, supersonic exhaust nozzle design  
[NASA-CASE-XLE-00057] c28 N70-38711  
Telescoping-spike supersonic nozzle for turbojet or ramjet engines  
[NASA-CASE-XLE-00005] c28 N70-39899  
Automatically deploying nozzle exit cone extension  
[NASA-CASE-XLE-01640] c31 N71-15637  
Propellant injection assembly having individually removable and replaceable nozzles for liquid fueled rocket engines  
[NASA-CASE-XMP-00968] c28 N71-15660  
Development of collapsible nozzle extension for rocket engines  
[NASA-CASE-MFS-11497] c28 N71-16224  
Design and development of gas turbine combustion unit with nozzle guide vanes for introducing diluent air into combustion gases  
[NASA-CASE-XLE-103477-1] c28 N71-20330  
Prestressed rocket nozzle with ceramic inner rings and refractory metal outer rings  
[NASA-CASE-XNP-02888] c18 N71-21068  
Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c31 N74-23065  
Improved nozzle for use with abrasive and/or corrosive materials  
[NASA-CASE-NPO-13823-1] c37 N77-17466  
Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055  
Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c07 N79-14097  
Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N79-23971
- NOZZLE FLOW**  
System for aerodynamic control of rocket vehicles by secondary injection of fluid into nozzle exhaust stream  
[NASA-CASE-XLA-01163] c21 N71-15582  
Constructing fluid spike nozzle to eliminate heat transfer and high temperature problems inherent in physical spikes  
[NASA-CASE-XGS-01143] c31 N71-15647  
Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339  
Tertiary flow injection system for thrust vectoring of propulsive nozzle flow  
[NASA-CASE-MFS-20831] c28 N71-29153  
Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c09 N78-31129
- NOZZLE GEOMETRY**  
Method of making a rocket nozzle  
[NASA-CASE-XMP-06884-1] c20 N79-21123
- NOZZLE INSERTS**  
Flexible rocket motor nozzle closure device to aid ignition and protect rocket chamber from foreign objects  
[NASA-CASE-XLA-02651] c28 N70-41967

## NUCLEAR DEVICES

Large volume multiple path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c36 N79-26385

## NUCLEAR EXPLOSION EFFECT

Development of method for protecting large and oddly shaped areas from radiant and convective heat  
[NASA-CASE-INP-01310] c33 N71-28852

## NUCLEAR FUEL ELEMENTS

Tungsten-coated tungsten-uranium dioxide nuclear fuel plates  
[NASA-CASE-XLE-00209] c22 N73-32528

## NUCLEAR MAGNETIC RESONANCE

Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-INP-09830] c14 N71-26266

## NUCLEAR POWER PLANTS

Development and characteristics of natural circulation radiator for use with nuclear power plants installed in lunar space stations  
[NASA-CASE-XHQ-03673] c33 N71-29046

## NUCLEAR PUMPED LASERS

Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c36 N79-18307

## NUCLEAR REACTOR CONTROL

Absorbing gas reactivity control system for minimizing power distribution and perturbation in nuclear reactors  
[NASA-CASE-XLE-04599] c22 N72-20597  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c73 N78-28913

## NUCLEAR REACTORS

Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c73 N77-18891

## NUCLEATE BOILING

Method for improving heat transfer characteristics in nucleate boiling process  
[NASA-CASE-XMS-04268] c33 N71-16277

## NULL ZONES

Manual control mechanism for adjusting control rod to null position  
[NASA-CASE-XLA-01808] c15 N71-20740

## NUMBER THEORY

Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c60 N76-23850

## NUMERICAL CONTROL

Digital sensor for counting fringes produced by interferometers with improved sensitivity and one photomultiplier tube to eliminate alignment problem  
[NASA-CASE-LAR-10204] c14 N71-27215  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c33 N79-17138  
Controller for computer control of brushless DC motors  
[NASA-CASE-NPO-13970-1] c33 N79-20315

## NUMERICAL INTEGRATION

Apparatus for computing square roots  
[NASA-CASE-XGS-04768] c08 N71-19437

## NUTATION

Flexible turnstile antenna system for reducing nutation in spin-oriented satellites  
[NASA-CASE-XMP-00442] c31 N71-10747  
Nutation damper for use on spinning body  
[NASA-CASE-GSC-11205-1] c15 N73-25513

## NUTATION DAMPERS

Active nutation controller  
[NASA-CASE-GSC-12273-1] c18 N78-23141

## NUTS (FASTENERS)

Contamination free separation nut eliminating combustion products from ambient surroundings generated by squib firing  
[NASA-CASE-XGS-01971] c15 N71-15922  
Split nut and bolt separation device  
[NASA-CASE-XNP-06914] c15 N71-21489  
Device for securing together structural members with axially stretched bolt and nut  
[NASA-CASE-GSC-11149-1] c15 N73-30457  
A floating nut retention system  
[NASA-CASE-MSC-16938-1] c37 N78-32431  
High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c37 N79-14383

## O RING SEALS

High pressure four-way valve with O ring adapted

to pass across inlet port  
[NASA-CASE-XNP-00214] c15 N70-36908

Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c37 N79-12445

## OBLIQUE WINGS

Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c05 N76-29217

## OCEAN SURFACE

High visibility air sea rescue panel  
[NASA-CASE-MSC-12564-1] c54 N76-15792  
Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391  
Oceanic wave measurement system  
[NASA-CASE-MPS-23862-1] c48 N79-10689

## OCEAN THERMAL ENERGY CONVERSION

Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c44 N78-32542

## OFFSHORE PLATFORMS

Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c44 N78-32542

## OHMMETERS

Development of electrical system for indicating optimum contact between electrode and metal surface to permit improved soldering operation  
[NASA-CASE-KSC-10242] c15 N72-23497

## OIL EXPLORATION

Underwater seismic source --- for petroleum exploration.  
[NASA-CASE-NPO-14255-1] c46 N79-23555

## OIL RECOVERY

Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c27 N77-31308  
In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c43 N78-14452

## OILS

Color photointerpretation of interference colors reflected from thin film oil-coated components in moving gases for gas flow visualization  
[NASA-CASE-XMP-01779] c12 N71-20815  
Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c27 N77-31308

## OMNIDIRECTIONAL ANTENNAS

Microwave omnidirectional antenna for use on spacecraft  
[NASA-CASE-XLA-03114] c09 N71-22888  
Vertically stacked collinear array of independently fed omnidirectional antennas for use in collision warning systems on commercial aircraft  
[NASA-CASE-LAR-10545-1] c09 N72-21244  
Omnidirectional antenna array with circumferential slots for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c09 N72-25247

## ONBOARD EQUIPMENT

Survival couch for aircraft or spacecraft crews  
[NASA-CASE-XLA-00118] c05 N70-33285  
Cryogenic storage system for gases onboard spacecraft  
[NASA-CASE-XMS-04390] c31 N70-41871  
Fiber optic transducers for monitoring and analysis of vibration in aerospace vehicles and onboard equipment  
[NASA-CASE-XMP-02433] c14 N71-10616  
Design and construction of satellite appendage tie-down cord  
[NASA-CASE-XGS-02554] c31 N71-21064  
Satellite aided aircraft collision avoidance system effective for large number of aircraft  
[NASA-CASE-ERC-10090] c21 N71-24948  
Closed loop servosystem for variable speed tape recorders onboard spacecraft  
[NASA-CASE-NPO-10700] c07 N71-33613  
Collapsible couch system for manned space vehicles  
[NASA-CASE-MSC-13140] c05 N72-11085  
Monostable multivibrator for conserving power in spacecraft systems  
[NASA-CASE-GSC-10082-1] c10 N72-20221  
Delayed simultaneous appendage release mechanism for use on spacecraft equipped with despin mechanisms and releasable components  
[NASA-CASE-GSC-10814-1] c03 N73-20039  
Electronic strain level counter on in-flight aircraft  
[NASA-CASE-LAR-10756-1] c32 N73-26910  
Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c04 N76-20114

## OPERATIONAL AMPLIFIERS

Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c33 N79-22373

**OPHTHALMOLOGY**  
Ultrasonic device for ophthalmic eye surgery with safe removal of macerated material  
[NASA-CASE-LEW-11669-1] c05 N73-27062  
Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c52 N75-33640

**OPTICAL COMMUNICATION**  
Fabry-Perot interferometer retrodirective reflector modulator for optical communication  
[NASA-CASE-YGS-04480] c16 N69-27491  
Specifications and drawings for semipassive optical communication system  
[NASA-CASE-XLA-01090] c07 N71-12389  
Optical communication system with gas filled waveguide for laser beam transmission  
[NASA-CASE-HQN-10541-4] c16 N71-27183  
Development and characteristics of optical communications system based on modulation of light beams  
[NASA-CASE-XLA-01090] c16 N71-2P963  
High resolution radar transmitting system for transmitting optical pulses to targets  
[NASA-CASE-NPO-11426] c07 N73-26119  
Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c74 N76-18913  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c36 N76-24553  
Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c74 N76-30053  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c32 N77-28346  
Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c74 N78-14889

**OPTICAL COUPLING**  
Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MPS-21660-1] c35 N74-21017

**OPTICAL DATA PROCESSING**  
Optical data processing system using paraboloidal reflecting surfaces  
[NASA-CASE-GSC-11296-1] c23 N73-30666  
Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c35 N74-15831  
An interleaving device --- for computer logic circuits used in optical data processing  
[NASA-CASE-GSC-12111-2] c60 N77-31800  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c32 N79-19195

**OPTICAL EMISSION SPECTROSCOPY**  
Maksutov spectrograph for low light level research  
[NASA-CASE-XLA-10402] c14 N71-29041

**OPTICAL EQUIPMENT**  
Detection instrument for light emitted from ATP biochemical reaction  
[NASA-CASE-YGS-05534] c23 N71-16355  
Optical characteristics measuring apparatus  
[NASA-CASE-XNP-08840] c23 N71-16365  
Combined optical attitude and altitude indicating instrument for use in aircraft or spacecraft  
[NASA-CASE-XLA-01907] c14 N71-23268  
Design and development of optical interferometer with laser light source for application to schlieren systems  
[NASA-CASE-XLA-04295] c16 N71-24170  
Highly stable optical mirror assembly optimizing image quality of light diffraction patterns  
[NASA-CASE-ERC-10001] c23 N71-24968  
Optical device containing rotatable prism and reflecting mirror for generating precise angles  
[NASA-CASE-YGS-04173] c19 N71-26674  
Development and characteristics of Petzval type objective including field shaping lens for focusing light of specified wavelength band on curved photoreceptor  
[NASA-CASE-GSC-10700] c23 N71-30027  
Development and characteristics of spectroradiometer with wedge filters to

eliminate adverse effect of pinholes in filters  
[NASA-CASE-HQN-10683] c14 N71-34389  
Slotted fine-adjustment support for optical devices  
[NASA-CASE-MPS-20249] c15 N72-11386  
Development of process for constructing protective covers for solar cells  
[NASA-CASE-GSC-11514-1] c03 N72-24037  
Development of light sensing system for controlled orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11311] c14 N72-25414  
Borescope with adjustable hinged telescoping optical system  
[NASA-CASE-MPS-15162] c14 N72-32452  
Development and characteristics of cyclically operable, optical shutter for use as focal plane shutter for transmitting single radiation pulses  
[NASA-CASE-NPO-10758] c14 N73-14427  
Method for producing reticles for use in outer space  
[NASA-CASE-GSC-11188-2] c21 N73-19630  
Method and equipment for locating earth infrared horizon from space, independent of season and latitude  
[NASA-CASE-LAR-10726-1] c14 N73-20475  
Optical imaging system for increasing light absorption efficiency of imaging detector  
[NASA-CASE-ARC-10194-1] c23 N73-20741  
Development of optical system for detecting defective components in rotating machinery with emphasis on bearing assemblies  
[NASA-CASE-KSC-10752-1] c15 N73-27407  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089  
Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c74 N74-20008  
Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304  
Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040  
Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MPS-20506-1] c35 N75-12273  
Optical alignment device  
[NASA-CASE-ARC-10932-1] c74 N76-22993  
Visual examination apparatus  
[US-PATENT-RE-28,921] c52 N76-30793  
Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c74 N77-22950  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c74 N77-28932  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c27 N77-32308  
Method of forming a sharp edge on an optical device --- beam splitters for Solar Maximum Missions spectropolarimeter  
[NASA-CASE-GSC-12348-1] c74 N78-29902  
Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c74 N78-32854  
Water system virus detection  
[NASA-CASE-HSC-16098-1] c51 N79-10693  
Apparatus for endoscopic examination  
[NASA-CASE-NPO-14092-1] c52 N79-19678

**OPTICAL FILTERS**  
Lens assembly for solar furnace or solar simulator  
[NASA-CASE-XNP-04111] c14 N71-15622  
Noise elimination in coherent imaging system by axial rotation of optical lens for spectral distribution of degrading affects  
[NASA-CASE-GSC-11133-1] c23 N72-11568  
Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-HSC-12640-1] c74 N76-31998  
System for producing chroma signals  
[NASA-CASE-HSC-14683-1] c74 N77-18893

- Optical conversion method --- for spacecraft television  
[NASA-CASE-MSC-12618-1] c74 N78-17865
- Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c74 N79-14891
- OPTICAL HETERODYNING**
- Computerized optical system for producing multiple images of a scene simultaneously  
[NASA-CASE-MSC-12404-1] c23 N73-13661
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942
- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c32 N77-28346
- OPTICAL MEASUREMENT**
- Passive optical wind and turbulence remote detection system  
[NASA-CASE-XMP-14032] c20 N71-16340
- Ellipsoidal mirror reflector for measuring reflectance  
[NASA-CASE-XGS-05291] c23 N71-16341
- Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040
- Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c38 N78-32447
- Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c74 N78-33913
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c74 N79-17683
- Rotary target V-block --- aligning wind tunnel apparatus for optical measurement  
[NASA-CASE-LAR-12007-2] c74 N79-25876
- OPTICAL MEASURING INSTRUMENTS**
- Design and development of optically pumped resonance magnetometer for determining vectoral components in spatial coordinate system  
[NASA-CASE-XGS-04879] c14 N71-20428
- Optical gauging system for monitoring machine tool alignment  
[NASA-CASE-XAC-09489-1] c15 N71-26673
- Optical system for selecting particular wavelength light beams from multiple wavelength light source  
[NASA-CASE-ERC-10248] c14 N72-17323
- Optical sensing of supersonic flows by correlating deflections in laser beams through flow  
[NASA-CASE-MFS-20642] c14 N72-21407
- Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c54 N75-27759
- Visible and infrared polarization ratio spectroradiometer  
[NASA-CASE-LAR-12285-1] c35 N78-32398
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c74 N79-11866
- Interferometer  
[NASA-CASE-NPO-14502-1] c35 N79-19317
- OPTICAL PATHS**
- Optical instruments  
[NASA-CASE-MSC-14096-1] c74 N74-15095
- OPTICAL PROPERTIES**
- Remote-reading torque meter for use where high horsepower are transmitted at high rotative speeds  
[NASA-CASE-XLE-00503] c14 N70-34918
- Quasi-optical microwave circuit with dielectric body for use with oversize waveguides  
[NASA-CASE-ERC-10011] c07 N71-29065
- Development of light sensing system for controlled orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11311] c14 N72-25414
- Design and development of light sensing device for controlling orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11201] c14 N72-27409
- Device and method for determining X ray reflection efficiency, scattering properties, and surface finish of optical surfaces  
[NASA-CASE-MFS-20243] c23 N73-13662
- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c74 N74-20008
- Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c37 N74-21060
- Modification of the electrical and optical properties of polymers --- ion irradiation  
[NASA-CASE-LEW-13027-1] c27 N79-11216
- OPTICAL PUMPING**
- Xenon flashlamp driver system for optical laser pumping  
[NASA-CASE-ERC-10293] c16 N72-25485
- Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c36 N75-19655
- Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13826
- OPTICAL PYROMETERS**
- Filter arrangement for controlling light intensity in motion picture camera used in optical pyrometry  
[NASA-CASE-XLA-00062] c14 N70-33254
- OPTICAL RADAR**
- Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c16 N72-13437
- OPTICAL RANGE FINDER**
- Electro-optical attitude sensing device for landing approach of flight vehicle  
[NASA-CASE-XMS-01994-1] c14 N72-17326
- Optical range finder using reflective first surfaces mirror and transmitting beam splitter  
[NASA-CASE-MSC-12105-1] c14 N72-21409
- OPTICAL REFLECTION**
- Hybrid holographic system using reference, transmitted, and reflected beams simultaneously  
[NASA-CASE-MFS-20074] c16 N71-15565
- Optical device containing rotatable prism and reflecting mirror for generating precise angles  
[NASA-CASE-XGS-04173] c19 N71-26674
- Illumination system design for use as sunlight simulator in space environment simulators with multiple light sources reflected to single virtual source  
[NASA-CASE-HQN-10781] c23 N71-30292
- Composition of diffuse reflective coating containing sodium chloride in combination with diol solvent and organic wetting and drying agents  
[NASA-CASE-GSC-11214-1] c06 N73-13128
- Schlieren system employing antiparallel reflector in the forward direction  
[NASA-CASE-ARC-10971-1] c09 N76-26224
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942
- Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28933
- Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c73 N78-32848
- OPTICAL RESONANCE**
- Design and development of optically pumped resonance magnetometer for determining vectoral components in spatial coordinate system  
[NASA-CASE-XGS-04879] c14 N71-20428
- Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c36 N75-19653
- OPTICAL SCANNERS**
- Optical scanner mounted on rotating support structure with method of compensating for image or satellite rotation  
[NASA-CASE-XGS-02401] c14 N69-27485
- Optical apparatus for visual detection of roundness and regularity of cone surfaces  
[NASA-CASE-XMP-00462] c14 N70-34298
- Electro-optical system with scan-in illuminator and scan-out photosensor for scanning variable transmittance objects  
[NASA-CASE-NPO-11106] c14 N70-34697
- Multi-lobe scan horizon sensor  
[NASA-CASE-XGS-00809] c21 N70-35427
- Optical scanner with linear housing and rotating camera  
[NASA-CASE-NPO-11002] c14 N72-22441
- Spacecraft attitude sensing system design with narrow field of view sensor rotating about spacecraft x-y axis  
[NASA-CASE-GSC-10890-1] c21 N73-30640
- Optical instruments  
[NASA-CASE-MSC-14096-1] c74 N74-15095

- Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c33 N75-30431
- Traffic survey system --- using optical scanners  
[NASA-CASE-MPS-22631-1] c66 N76-19888
- Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c74 N78-17866
- A method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c76 N78-24952
- Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c74 N78-27904
- OPTICAL TRACKING**
- Sun tracker with rotatable plane-parallel plate and two photocells  
[NASA-CASE-XGS-01159] c21 N71-10678
- Optical tracker with pair of PM reticles having patterns 90 deg out of phase  
[NASA-CASE-XGS-05715] c23 N71-16100
- Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
[NASA-CASE-MFS-14017] c14 N71-26627
- OPTICAL TRANSFER FUNCTION**
- Electronic optical transfer function analyzer  
[NASA-CASE-MPS-21672-1] c74 N76-19935
- OPTIMIZATION**
- Power point tracker for maintaining optimal output voltage of power source  
[NASA-CASE-GSC-10376-1] c14 N71-27407
- An improved solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N78-13556
- ORBITAL ASSEMBLY**
- Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c18 N78-22146
- ORBITAL MECHANICS**
- Design and development of space shuttle system for delivering payload to earth orbit or celestial orbit  
[NASA-CASE-MSC-12391] c30 N73-12884
- ORBITAL SPACE STATIONS**
- Radial module manned space station with artificial gravity environment  
[NASA-CASE-XMS-01906] c31 N70-41373
- Internal and external serpentine devices for performing physical operations around orbital space stations  
[NASA-CASE-MXP-05344] c31 N71-16345
- Describing apparatus for manufacturing operations in low and zero gravity environments of orbital space flight  
[NASA-CASE-MFS-20410] c15 N71-19214
- ORGANIC CHEMISTRY**
- Process for interfacial polymerization of pyromellitic dianhydride and tetraamino benzene  
[NASA-CASE-XLA-03104] c06 N71-11235
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c25 N75-14844
- ORGANIC COMPOUNDS**
- Synthesis of high purity dianilinosilanes  
[NASA-CASE-MXP-06409] c06 N71-23230
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 [NASA-CASE-XGS-07801] c09 N71-12513  
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 [NASA-CASE-XLA-00138] c31 N70-37981  
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particulate material  
[NASA-CASE-NPO-10151] c37 N78-17386
- Process for preparation of large-particle size  
nonodisperse latexes  
[NASA-CASE-MPS-25000-1] c25 N79-14171

## PARTICLE TRAJECTORIES

- Micrometeoroid velocity and trajectory analyzer  
[NASA-CASE-GSC-11892-1] c35 N76-15433
- Direction sensitive laser velocimeter ---  
determining the direction of particle motion  
using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c36 N79-28532
- PARTICLES**
- Development of device for separating,  
collecting, and viewing soil particles  
[NASA-CASE-XNP-09770] c15 N71-20440
- Development of apparatus for producing metal  
powder particles of controlled size  
[NASA-CASE-XLE-06461-2] c17 N72-28535
- Particle parameter analyzing system --- x-y  
plotter circuits and display  
[NASA-CASE-XLE-06094] c33 N79-17293
- Surfactant-assisted liquefaction of particulate  
carbonaceous substances  
[NASA-CASE-NPO-13904-1] c25 N79-11152
- PARTICULATE SAMPLING**
- Design and development of device to prevent  
clogging in hoppers containing particulate  
materials  
[NASA-CASE-LAR-10961-1] c15 N73-12496
- Development and operation of apparatus for  
sampling particulates in gases in upper  
atmosphere  
[NASA-CASE-HQN-10037-1] c14 N73-27376
- Electrophoretic sample insertion --- device for  
uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c25 N74-26948
- Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c35 N76-18401
- Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c35 N79-17192
- Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c35 N79-28527
- PASSAGEWAYS**
- Space expandable tether device for use as  
passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936
- PASSIVE SATELLITES**
- Erectable, inflatable, radio signal reflecting  
passive communication satellite  
[NASA-CASE-XLA-00210] c30 N70-40309
- Apparatus for measuring backscatter and  
transmission characteristics of sample segment  
of large spherical passive satellites  
[NASA-CASE-XGS-02608] c07 N70-41678
- Forming inflatable panels erectable in space for  
passive communication satellite  
[NASA-CASE-XLA-03497] c15 N71-23052
- PATIENTS**
- Stretcher with rigid head and neck support with  
capability of supporting immobilized person in  
vertical position for removal from vehicle  
hatch to exterior also useful as splint  
stretcher  
[NASA-CASE-XNP-06589] c05 N71-23159
- PATTERN RECOGNITION**
- Roughness detector for recording surface pattern  
of irregularities  
[NASA-CASE-XLA-00203] c14 N70-34161
- Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c71 N74-21014
- PAYLOAD RETRIEVAL (STS)**
- Simulator method and apparatus for practicing  
the mating of an observer-controlled object  
with a target  
[NASA-CASE-MFS-23052-2] c74 N79-13855
- PAYLOADS**
- Plastic foam generator for space vehicle  
instrument payload package flotation in water  
landing  
[NASA-CASE-XLA-00838] c03 N70-36778
- Stage separation system for spinning vehicles  
and payloads  
[NASA-CASE-XLA-02132] c31 N71-10582
- Payload/spent rocket engine case separation system  
[NASA-CASE-XLA-05369] c31 N71-15687
- High velocity guidance and spin stabilization  
gyro controlled jet reaction system for launch  
vehicle payloads  
[NASA-CASE-XLA-01339] c31 N71-15692
- Payload soft landing system using stowable gas bag  
[NASA-CASE-XLA-09881] c31 N71-16085
- Zero gravity apparatus utilizing pneumatic  
decelerating means to create payload subjected  
to zero gravity conditions by dropping its  
height  
[NASA-CASE-XNP-06515] c14 N71-23227
- PCM TELEMETRY**
- Variable time constant, wide frequency range  
smoothing network for noise removal from pulse  
chains  
[NASA-CASE-XGS-01983] c10 N70-41964
- Data acquisition and processing system with  
buffer storage and timing device for magnetic  
tape recording of PCM data and timing  
information  
[NASA-CASE-NPO-12107] c08 N71-27255
- High speed direct binary to binary coded decimal  
converter for use in PCM telemetry systems  
[NASA-CASE-KSC-10326] c08 N72-21197
- PEELING**
- Wire stripper  
[NASA-CASE-FRC-10111-1] c37 N79-10419
- PELLETS**
- Supporting structure for simultaneous exposure  
of pellets to X rays  
[NASA-CASE-XNP-06031] c15 N71-15606
- PELLIER EFFECTS**
- Use of silicon controlled rectifier shorting  
circuit to protect thermoelectric generator  
source from thermal destruction  
[NASA-CASE-XGS-04808] c03 N69-25146
- PENETRANTS**
- Dye penetrant and technique for nondestructive  
tests of solid surfaces contacted by liquid  
oxygen  
[NASA-CASE-XNP-02221] c18 N71-27170
- PENETRATION**
- Method and device for detection of surface  
discontinuities or defects  
[NASA-CASE-MS-C-14187-1] c35 N74-32879
- PENETROMETERS**
- Development and characteristics of penetrometer  
for measuring physical properties of lunar  
surface  
[NASA-CASE-XLA-00934] c14 N71-22765
- Portable penetrometer for analyzing soil  
characteristics  
[NASA-CASE-MFS-20774] c14 N73-19420
- Auger-type soil penetrometer for burrowing into  
soil formations  
[NASA-CASE-XNP-05530] c14 N73-32321
- Penetrometer --- for determining load bearing  
characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c35 N77-27367
- Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c43 N79-25443
- PERCEPTION**
- Measuring method for cutaneous perception using  
instrument with elongated tubular housing  
[NASA-CASE-MS-C-13609-1] c05 N72-25122
- PERFLUORO COMPOUNDS**
- Chemical synthesis of hydroxy terminated  
perfluoro ethers as intermediates for highly  
fluorinated polyurethane resins  
[NASA-CASE-NPO-10768] c06 N71-27254
- Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c06 N72-20121
- Reaction of polyperfluoropolyenes with fluorine  
to produce saturated polymer chain or create  
reactive sites on chain  
[NASA-CASE-NPO-10862] c06 N72-22107
- Silphenylenesiloxane polymer with in-chain  
perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c06 N72-25151
- Polymerization of perfluorobutadiene  
[NASA-CASE-NPO-10863-2] c06 N72-25152
- Formation of polyurethane resins from hydroxy  
terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c06 N72-27144
- Process for preparing disilanolis with in-chain  
perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c06 N73-32030
- Perfluoro alkylene dioxy-bis-(4-phthalic  
anhydrides and  
oxy-bis-(perfluoroalkyleneoxyphthalic  
anhydrides  
[NASA-CASE-MFS-22356-1] c23 N75-30256
- PERFLUOROALKANE**
- Preparation of heterocyclic block copolymer  
omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300

- PERFORATED PLATES**  
Helium outgassing process for fused glass coating on ion accelerator grid  
[NASA-CASE-LEW-10278-1] c15 N71-28582
- PERFORATED SHELLS**  
Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c31 N74-18089
- PERFORMANCE PREDICTION**  
Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-NPS-23551-1] c04 N76-26175
- PERFORMANCE TESTS**  
Flexible, frangible electrochemical cell and package for operation in low temperature environment  
[NASA-CASE-XGS-10010] c03 N72-15985  
Test method and equipment for identifying faulty cells or connections in solar cell assemblies  
[NASA-CASE-NPO-10401] c03 N72-20033  
Development of apparatus for detonating explosive devices in order to determine forces generated and detonation propagation rate  
[NASA-CASE-LAR-10800-1] c33 N72-27959
- PERIODIC VARIATIONS**  
Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MPS-23267-1] c35 N77-20401
- PERMEABILITY**  
Water insoluble, cationic permselective membrane  
[NASA-CASE-NPO-11091] c18 N72-22567
- PEROXIDES**  
Low pressure perfluorobutadiene polymerization with peroxide catalysts  
[NASA-CASE-NPO-10447] c06 N70-11252
- PERSPIRATION**  
Manufacturing process for making perspiration resistant-stress resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120
- PERTURBATION**  
Absorbing gas reactivity control system for minimizing power distribution and perturbation in nuclear reactors  
[NASA-CASE-XLB-04599] c22 N72-20597
- PERTURBATION THEORY**  
Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c35 N75-16783
- PHASE COHERENCE**  
Apparatus for estimating amplitude and sign of phase difference or time lag between two signals  
[NASA-CASE-NPO-11203] c10 N72-20224  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c32 N74-30523
- PHASE CONTROL**  
System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
[NASA-CASE-NPO-10214] c10 N71-26577  
Wideband voltage controlled oscillator with high phase stability  
[NASA-CASE-XLA-03893] c10 N71-27271  
Voltage controlled oscillator circuit for two-phase induction motor control  
[NASA-CASE-MPS-21465-1] c10 N73-32145  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c33 N75-19519  
Precise PP timing signal distribution to remote stations  
[NASA-CASE-NPO-14749-1] c74 N79-34013
- PHASE DEMODULATORS**  
Development of phase demodulation system with two phase locked loops  
[NASA-CASE-XNP-00777] c10 N71-19469  
Receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-1] c32 N77-12248  
Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c33 N77-14334
- PHASE DETECTORS**  
Detector assembly for discriminating first signal with respect to presence or absence of second signal at time of occurrence of first signal  
[NASA-CASE-XNP-00701] c09 N70-40272
- Bipolar phase detector and corrector for split phase PCM data signals  
[NASA-CASE-XGS-01590] c07 N71-12392  
High speed phase detector design indicating phase relationship between two square wave input signals  
[NASA-CASE-XNP-01306-2] c09 N71-24596  
Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c33 N74-14956  
Low distortion automatic phase control circuit --- voltage controlled phase shifter  
[NASA-CASE-MPS-21671-1] c33 N74-22885  
Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c33 N75-26243  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c33 N77-13315  
Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c33 N77-30365  
Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c33 N79-11313
- PHASE DEVIATION**  
System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c33 N74-17927
- PHASE LOCK DEMODULATORS**  
Phase locked demodulator with bandwidth switching amplifier circuit  
[NASA-CASE-XNP-01107] c10 N71-28859
- PHASE LOCKED SYSTEMS**  
System for phase locking onto carrier frequency signal located within receiver bandpass  
[NASA-CASE-XGS-04994] c09 N69-21543  
Phase locked loop with sideband rejecting properties in continuous wave tracking radar  
[NASA-CASE-XNP-02723] c07 N70-41680  
Development of automatic frequency discriminators and control for phase lock loop providing frequency preset capabilities  
[NASA-CASE-XNP-08665] c10 N71-19467  
Development and characteristics of burst synchronization detection system  
[NASA-CASE-XMS-05605-1] c10 N71-19468  
Development of phase demodulation system with two phase locked loops  
[NASA-CASE-XNP-00777] c10 N71-19469  
Diversity receiving system with diversity phase lock  
[NASA-CASE-XGS-01222] c10 N71-20841  
Phase locked phase modulation system with voltage controlled oscillator for final phase linearity  
[NASA-CASE-XNP-05382] c10 N71-23544  
Video sync processor with phase locked system  
[NASA-CASE-KSC-10002] c10 F71-25865  
Characteristics of data-aided carrier tracking loop used for tracking carrier in angle modulated communications system  
[NASA-CASE-NPO-11282] c10 N73-16205  
Filter for third order phase locked loops in signal receivers  
[NASA-CASE-NPO-11941-1] c10 N73-27171  
Improved phase lock loop for receiver in multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c07 N73-28012  
Automatic carrier acquisition system for phase locked loop receiver  
[NASA-CASE-NPO-11628-1] c07 N73-30113  
Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MPS-22073-1] c33 N75-13139  
Low speed phaselock speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c09 N75-24758  
Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c33 N75-25040  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c17 N76-22245  
Receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-1] c32 N77-12248  
Discriminator aided phase lock acquisition for suppressed carrier signals

- [NASA-CASE-NPO-14311-1] c32 N79-14276  
PN lock indicator for dithered PN code tracking loop
- [NASA-CASE-NPO-14435-1] c33 N79-18224
- PHASE MODULATION**
- Plural channel data transmission system with quadrature modulation and complementary demodulation
- [NASA-CASE-XAC-06302] c08 N71-19763  
Adaptive notch filter, using modulation techniques for reversed phase noise signal
- [NASA-CASE-XMP-01892] c10 N71-22986  
Phase locked phase modulation system with voltage controlled oscillator for final phase linearity
- [NASA-CASE-XNP-05382] c10 N71-23544  
Scanning signal phase and amplitude electronic control device with hybrid T waveguide junction
- [NASA-CASE-NPO-10302] c10 N71-26142  
Phase modulator with tuned variable length electrical lines including coupling and varactor diode circuits
- [NASA-CASE-MSC-13201-1] c07 N71-28429  
Multicarrier communications system for transmitting modulated signals from single transmitter
- [NASA-CASE-NPO-11548] c07 N73-26118  
Decision feedback loop for tracking a polyphase modulated carrier
- [NASA-CASE-NPO-13103-1] c32 N74-20811  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems
- [NASA-CASE-GSC-11743-1] c32 N75-24981  
Phase modulating with odd and even finite power series of a modulating signal
- [NASA-CASE-LAR-11607-1] c32 N77-14292  
Swept group delay measurement
- [NASA-CASE-NPO-13909-1] c33 N78-25319  
Quadrature demodulation
- [NASA-CASE-GSC-12137-1] c33 N78-32338  
Method and apparatus for quadriphase-shift-key and linear phase modulation
- [NASA-CASE-NPO-14444-1] c32 N79-18155  
Closed Loop solar array-ion thruster system with power control circuitry
- [NASA-CASE-LFW-12780-1] c20 N79-20179
- PHASE SHIFT**
- Bipolar phase detector and corrector for split phase PCM data signals
- [NASA-CASE-XGS-01590] c07 N71-12392  
Left and right hand circular electromagnetic polarization excitation by phase shifter and hybrid networks
- [NASA-CASE-GSC-10021-1] c09 N71-24595  
Pulse code modulated data from frequency multiplex communications by digital phase shift or carrier
- [NASA-CASE-NPO-11338] c08 N72-25208  
Power control for hot gas engines
- [NASA-CASE-NPO-14220-1] c37 N78-25430  
Time domain phase measuring apparatus
- [NASA-CASE-GSC-12228-1] c33 N79-10338  
A phase-angle controller for stirling engines
- [NASA-CASE-NPO-14388-1] c37 N79-17217
- PHASE SHIFT CIRCUITS**
- Design of gyrator circuit using operational amplifiers to replace ungrounded inductors
- [NASA-CASE-XAC-10608-1] c09 N71-12517  
Phase shifting circuit for selecting phase of input signal
- [NASA-CASE-ARC-10269-1] c10 N72-16172  
Continuously variable, voltage-controlled phase shifter
- [NASA-CASE-NPO-11129] c09 N72-33204  
Voltage controlled oscillator circuit for two-phase induction motor control
- [NASA-CASE-MFS-21465-1] c10 N73-32145  
Low distortion automatic phase control circuit --- voltage controlled phase shifter
- [NASA-CASE-MFS-21671-1] c33 N74-22885  
Frequency translating phase conjugation circuit for active retrodirective antenna array
- [NASA-CASE-NPO-14536-1] c32 N79-14277
- PHASE SHIFT KEYING**
- Decision feedback loop for tracking a polyphase modulated carrier
- [NASA-CASE-NPO-13103-1] c32 N74-20811
- Differential phase shift keyed communication system
- [NASA-CASE-MSC-14065-1] c32 N74-26654  
Differential phase shift keyed signal resolver
- [NASA-CASE-MSC-14066-1] c33 N74-27705  
Unbalanced quadriphase demodulator
- [NASA-CASE-MSC-14840-1] c32 N77-24331
- PHASE SWITCHING INTERFEROMETERS**
- Interferometric tuning acquisition and tracking radar antenna system
- [NASA-CASE-IHS-09610] c07 N71-24625
- PHASE TRANSFORMATIONS**
- Magnetohydrodynamic generator for mixing nonconductive gas and liquid metal mist to form slugs
- [NASA-CASE-XLE-02083] c03 N69-39983  
Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment
- [NASA-CASE-XLE-01182] c27 N71-15635
- PHASE VELOCITY**
- Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity
- [NASA-CASE-LAR-11435-1] c35 N76-15432
- PHASED ARRAYS**
- Development of phase control coupling for use with phased array antenna
- [NASA-CASE-ERC-10285] c10 N73-16206  
Phased array antenna control
- [NASA-CASE-MSC-14939-1] c32 N79-11264  
Coaxial phased array antenna --- spacecraft antenna
- [NASA-CASE-MSC-16800-1] c32 N79-19194  
Phase conjugation method and apparatus for an active retrodirective antenna array
- [NASA-CASE-NPO-13641-1] c32 N79-24210
- PHASED LOCKED SYSTEMS**
- Bit synchronization system using digital data transition tracking phased locked loop
- [NASA-CASE-NPO-10844] c07 N72-20140  
Digital second-order phase-locked loop
- [NASA-CASE-NPO-11905-1] c33 N74-12887  
Linear phase demodulator including a phase locked loop with auxiliary feedback loop
- [NASA-CASE-GSC-12018-1] c33 N77-14334
- PHENOLIC RESINS**
- Bonding method in the manufacture of continuous regression rate sensor devices
- [NASA-CASE-LAR-10337-1] c24 N75-30260
- PHENOLS**
- Utilization of lithium p-lithiophenoxide to prepare star polymers
- [NASA-CASE-NPO-10998-1] c06 N73-32029  
Method and device for the detection of phenol and related compounds --- in an electrochemical cell
- [NASA-CASE-LFW-12513-1] c25 N79-22235
- PHONOCARDIOGRAPHY**
- Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds
- [NASA-CASE-XKS-10804] c05 N71-24606  
Vibrophonocardiograph comprising low weight and small volume piezoelectric microphone with amplifier having high input impedance for high sensitivity and low frequency response
- [NASA-CASE-XPR-07172] c05 N71-27234
- PHOSPHATES**
- Low concentration alkaline solution treatment of aluminum with metal phosphate surface coatings to improve chemical bonding and reduce coating weight
- [NASA-CASE-XLA-01995] c18 N71-23047
- PHOSPHINES**
- Heat resistant polymers of oxidized styrylphosphine
- [NASA-CASE-MSC-14903-3] c27 N78-25217  
Heat resistant polymers of oxidized styrylphosphine
- [NASA-CASE-MSC-14903-1] c27 N78-32256
- PHOSPHONITRILES**
- Chemical synthesis of thermally stable organometallic polymers with divalent metal ion and tetraphenylphosphonitrilic units
- [NASA-CASE-RQN-10364] c06 N71-27363
- PHOSPHORS**
- Cathode ray tube with coating of phosphor and cobalt oxides

- [NASA-CASE-ERC-10468] c09 N72-20206
- PHOTOABSORPTION**  
 Photomechanical transducer --- using thin strips of photoabsorptive metal or polymeric film with strain gages  
 [NASA-CASE-NPO-14363-1] c76 N79-14908
- PHOTOCATHODES**  
 Spectrometer using photoelectric effect to obtain spectral data  
 [NASA-CASE-XNP-04161] c14 N71-15599  
 III-V photocathode with nitrogen doping for increased quantum efficiency  
 [NASA-CASE-NPO-12134-1] c33 N76-31409
- PHOTOCHEMICAL REACTIONS**  
 Process for producing flame resistant polyamides and products produced thereby  
 [NASA-CASE-MSC-16074-1] c27 N77-14262  
 Apparatus for photon excited catalysis  
 [NASA-CASE-NPO-13566-1] c25 N77-32255  
 Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
 [NASA-CASE-LEW-12465-1] c25 N78-25148
- PHOTOCONDUCTIVE CELLS**  
 Two-dimensional radiant energy array computers and computing devices  
 [NASA-CASE-GSC-11839-1] c60 N77-14751  
 Plural output optometric sample cell and analysis system  
 [NASA-CASE-NPO-10233-1] c74 N78-33913
- PHOTOCONDUCTIVITY**  
 Photofabrication techniques for selective removal of conductive metals oxide coatings from nonconductive substrates  
 [NASA-CASE-ERC-10108] c06 N72-21094  
 Method for applying photographic resists to otherwise incompatible substrates  
 [NASA-CASE-MSC-18107-1] c35 N79-19319
- PHOTOCONDUCTORS**  
 Electronic divider and multiplier for analog electric signals  
 [NASA-CASE-XPR-05637] c09 N71-19480
- PHOTODIODES**  
 Shock isolator for operating a diode laser on a closed-cycle refrigerator  
 [NASA-CASE-GSC-12297-1] c37 N79-28549
- PHOTODISSOCIATION**  
 Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
 [NASA-CASE-LEW-12465-1] c25 N78-25148
- PHOTOELECTRIC CELLS**  
 Sun tracker with rotatable plane-parallel plate and two photocells  
 [NASA-CASE-XGS-01159] c21 N71-10678  
 Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
 [NASA-CASE-NPO-12127-1] c91 N74-13130
- PHOTOELECTRIC EFFECT**  
 Spectrometer using photoelectric effect to obtain spectral data  
 [NASA-CASE-XNP-04161] c14 N71-15599
- PHOTOELECTRIC EMISSION**  
 High resolution threshold photoelectron spectroscopy by electron attachment  
 [NASA-CASE-NPO-14078-1] c76 N78-13917
- PHOTOELECTRIC MATERIALS**  
 Light radiation direction indicator with baffle of two parallel grids  
 [NASA-CASE-XNP-03930] c14 N69-24331  
 Use of thin film light detector  
 [NASA-CASE-NPO-11432-2] c35 N74-15090
- PHOTOELECTRON SPECTROSCOPY**  
 Photoelectron spectrometer with means for stabilizing sample surface potential  
 [NASA-CASE-NPO-13772-1] c35 N78-10429
- PHOTOELECTRONS**  
 High resolution threshold photoelectron spectroscopy by electron attachment  
 [NASA-CASE-NPO-14078-1] c76 N78-13917
- PHOTOGRAPHIC EQUIPMENT**  
 Camera protecting device for use in photographing rocket engine nozzles or other engine components  
 [NASA-CASE-NPO-10174] c14 N71-18465
- Method of treating the surface of a glass member  
 [NASA-CASE-GSC-12110-1] c27 N77-32308  
 System for forming a quadrifid image comprising angularly related fields of view of a three dimensional object  
 [NASA-CASE-NPO-14219-1] c35 N78-22348
- PHOTOGRAPHIC FILM**  
 Longitudinalfilm gate and lock mechanism for securing film in motion picture cameras under vibration and high acceleration loads  
 [NASA-CASE-LAR-10696] c14 N71-28935  
 Photographic film restoration system using Fourier transformation lenses and spatial filter  
 [NASA-CASE-MSC-12448-1] c14 N72-20394  
 Mechanical exposure interlock device for preventing film overexposure in oscilloscope camera  
 [NASA-CASE-LAR-10319-1] c14 N73-32322  
 Optical noise suppression device and method --- laser light exposing film  
 [NASA-CASE-MSC-12640-1] c74 N76-31998  
 Selective image area control of X-ray film exposure density  
 [NASA-CASE-NPO-13808-1] c35 N78-15461
- PHOTOGRAPHIC MEASUREMENT**  
 Photographic method for measuring viscoelastic strain in solid propellants and other materials  
 [NASA-CASE-XNP-01153] c32 N71-17645  
 Impact measuring technique for determining size of hypervelocity projectiles  
 [NASA-CASE-LAR-10913] c14 N72-16282  
 TV fatigue crack monitoring system  
 [NASA-CASE-LAP-11490-1] c39 N78-16387
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 [NASA-CASE-MFS-23461-1] c35 N79-10389
- PHOTOGRAPHIC PROCESSING EQUIPMENT**  
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- PHOTOGRAPHIC RECORDING**  
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 [NASA-CASE-XLA-01353] c14 N70-41366  
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 [NASA-CASE-ERC-10019] c16 N71-15551  
 Recording and reconstructing focused image holograms  
 [NASA-CASE-ERC-10017] c16 N71-15567  
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 [NASA-CASE-ERC-10020] c16 N71-26154  
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 Phototropic composition of matter with sensitivity to ultraviolet light and usable for producing positive photographic images  
 [NASA-CASE-XGS-03736] c14 N72-22443  
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 [NASA-CASE-LAR-11053-1] c25 N74-18551
- PHOTOGRAPHS**  
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 [NASA-CASE-NPO-14219-1] c35 N78-22348
- PHOTOIONIZATION**  
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 [NASA-CASE-ERC-10044-1] c14 N71-27090  
 High resolution threshold photoelectron spectroscopy by electron attachment  
 [NASA-CASE-NPO-14078-1] c76 N78-13917
- PHOTOLYSIS**  
 Solar photolysis of water  
 [NASA-CASE-NPO-13675-1] c44 N77-32580  
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## PHOTOMAPPING

- Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c74 N77-10899
- PHOTOMETERS**
- Michelson interferometer with photodetector for optical direction sensing  
[NASA-CASE-NPO-10320] c14 N71-17655
- Indicator device for monitoring charge of wet cell battery, using semiconductor light emitter and photodetector  
[NASA-CASE-NPO-10194] c03 N71-20407
- Electro-optical detector for determining position of light source  
[NASA-CASE-XFP-01059] c23 N71-21821
- Photometric flow meter with comparator reference means  
[NASA-CASE-XGS-01331] c14 N71-22996
- Development of radiant energy sensor to detect the radiant energy wavelength bands from portions of radiating body  
[NASA-CASE-ERC-10174] c14 N72-25409
- Characteristics of infrared photodetectors manufactured from semiconductor material irradiated by electron beam  
[NASA-CASE-LAR-10728-1] c14 N73-12445
- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c25 N74-26947
- The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c74 N78-13874
- Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c35 N78-29421
- PHOTOMICROGRAPHY**
- Stereo photomicrography system with stereo microscope for viewing specimen at various magnifications  
[NASA-CASE-LAR-10176-1] c14 N72-20380
- Device for displaying and recording angled views of samples to be viewed by microscope  
[NASA-CASE-GSC-11690-1] c14 N73-28499
- Hand-held, lightweight, portable photomicroscope  
[NASA-CASE-ARC-10468-1] c14 N73-33361
- PHOTOMULTIPLIER TUBES**
- Photomultiplier detector of Canopus for spacecraft attitude control  
[NASA-CASE-XNP-03914] c21 N71-10771
- Electronic divider and multiplier for analog electric signals  
[NASA-CASE-XPR-05637] c09 N71-19480
- Apparatus for detecting particle emission lower than noise level of multiplier tube  
[NASA-CASE-XLA-07813] c14 N72-17328
- Scan oscilloscope for mapping surface sensitivity of photomultiplier tube  
[NASA-CASE-LAR-10320-1] c09 N72-23172
- Design and development of light sensing device for controlling orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11201] c14 N72-27409
- Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c33 N74-27682
- PHOTON BEAMS**
- Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c25 N77-32255
- PHOTONS**
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c44 N78-25527
- PHOTOSENSITIVITY**
- Photosensitive light source device for detecting unmanned spacecraft deviation from reference attitude  
[NASA-CASE-XNP-00438] c21 N70-35089
- Light sensitive control system for automatically opening and closing dome of solar optical telescope  
[NASA-CASE-MSC-10966] c14 N71-19568
- Scan oscilloscope for mapping surface sensitivity of photomultiplier tube  
[NASA-CASE-LAR-10320-1] c09 N72-23172
- Holography utilizing surface plasmon resonances  
[NASA-CASE-MPS-22040-1] c35 N74-26946
- Apparatus for calibrating an image dissector tube  
[NASA-CASE-MPS-22208-1] c33 N75-26244

## PHOTOTRANSISTORS

- Phototransistor imaging system with mosaic of phototransistors on semiconductor substrate  
[NASA-CASE-MPS-20809] c23 N73-13660
- Phototransistor with base collector junction diode for integration into photo sensor arrays  
[NASA-CASE-MPS-20407] c09 N73-19235

## PHOTOTROPISM

- Phototropic composition of matter with sensitivity to ultraviolet light and usable for producing positive photographic images  
[NASA-CASE-XGS-03736] c14 N72-22443

## PHOTOVISCOELASTICITY

- Photographic method for measuring viscoelastic strain in solid propellants and other materials  
[NASA-CASE-XNP-01153] c32 N71-17645

## PHOTOVOLTAIC CELLS

- Sensor consisting of photocells mounted on pyramidal base for improved pointing accuracy of planetary trackers  
[NASA-CASE-XNP-04180] c07 N69-39736
- Light sensitive digital aspect sensor for attitude control of earth satellites or space probes  
[NASA-CASE-XGS-00359] c14 N70-34158
- Method of producing output voltage from photovoltaic cell using poly-N-vinyl carbazole complexed with iodine  
[NASA-CASE-NPO-10373] c03 N71-18698
- Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c35 N74-15090
- Photovoltaic cell array  
[NASA-CASE-MPS-22458-1] c44 N77-10635
- Method of fabricating a photovoltaic of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c44 N78-28626
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c44 N79-11467
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c44 N79-25482
- Copper doped polycrystalline silicon  
[NASA-CASE-NPO-14670-1] c44 N79-25512
- Method of construction of a multi-cell solar array  
[NASA-CASE-MPS-23540-1] c44 N79-26475
- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c44 N79-31752

## PHOTOVOLTAIC EFFECT

- Semiconductor in resonant cavity for improving signal to noise ratio of communication receiver  
[NASA-CASE-MSC-12259-1] c07 N70-12616
- Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c35 N74-15090

## PHYSICAL EXERCISE

- Development of restraint system for securing personnel to ergometer while exercising under weightless conditions  
[NASA-CASE-MPS-21046-1] c14 N73-27377
- Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices  
[NASA-CASE-MPS-21010-1] c05 N73-30078
- Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MPS-21481-1] c37 N74-18127
- Therapeutic hand exerciser  
[NASA-CASE-LAR-11667-1] c52 N76-19785

## PHYSICAL PROPERTIES

- Chemical and physical properties of synthetic polyurethane polymer prepared by reacting hydroxy carbonate with organic diisocyanate  
[NASA-CASE-MPS-10512] c06 N73-30099

## PHYSIOLOGICAL EFFECTS

- Restraint torso for increased mobility and reduced physiological effects while wearing pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119

## PHYSIOLOGICAL TESTS

- Vibrophonocardiograph comprising low weight and small volume piezoelectric microphone with amplifier having high input impedance for high sensitivity and low frequency response  
[NASA-CASE-XPR-07172] c05 N71-27234
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757

## PHYSIOLOGY

- Piezoelectric transducer for monitoring sound waves of physiological origin

## SUBJECT INDEX

## PIPES (TUBES)

[NASA-CASE-XMS-05365] c14 N71-22993  
 Method of detecting and counting bacteria  
 [NASA-CASE-GSC-11917-2] c51 N76-29891

**PIERCING**  
 Pressurized cell micrometeoroid detector  
 [NASA-CASE-XLA-00936] c14 N71-14996

**PIEZOELECTRIC CRYSTALS**  
 Miniature solid state, direction sensitive,  
 stress transducer design with bonded  
 semiconductive piezoresistive element for  
 sensing residual stresses  
 [NASA-CASE-XNP-02983] c14 N71-21091  
 Ultra-stable oscillator with complementary  
 transistors  
 [NASA-CASE-GSC-11513-1] c33 N74-20862  
 A phase insensitive ultrasonic transducer ---  
 annealing cadmium sulfide crystals  
 [NASA-CASE-LAR-12304-1] c71 N78-29871

**PIEZOELECTRIC TRANSDUCERS**  
 Piezoelectric transducer for detecting and  
 measuring micrometeoroids  
 [NASA-CASE-XAC-01101] c14 W70-41957  
 Describing crystal oscillator instrument for  
 detecting condensable gas contaminants in  
 vacuum apparatus  
 [NASA-CASE-NPO-10144] c14 N71-17701  
 Piezoelectric transducer for monitoring sound  
 waves of physiological origin  
 [NASA-CASE-XMS-05365] c14 N71-22993  
 Miniature piezoelectric semiconductor transducer  
 with in situ stress coupling  
 [NASA-CASE-ERC-10087-2] c14 N72-31446  
 Length mode piezoelectric ultrasonic transducer  
 for inspection of solid objects  
 [NASA-CASE-NSC-19672-1] c38 N79-14398

**PIEZOELECTRICITY**  
 Piezoelectric means for missile stage separation  
 indication and stage initiation  
 [NASA-CASE-XLA-00791] c03 N70-39930  
 Piezoelectric pump for supplying fluid at high  
 frequencies to gyroscope fluid suspension system  
 [NASA-CASE-XNP-05429] c26 N71-21824  
 Miniature electromechanical junction transducer  
 operating on piezoelectric effect and  
 utilizing epoxy for stress coupling component  
 [NASA-CASE-ERC-10087] c14 N71-27334

**PIEZORESISTIVE TRANSDUCERS**  
 Miniature solid state, direction sensitive,  
 stress transducer design with bonded  
 semiconductive piezoresistive element for  
 sensing residual stresses  
 [NASA-CASE-XNP-02983] c14 N71-21091  
 Solid state force measuring electromechanical  
 transducers made of piezoresistive materials  
 [NASA-CASE-ERC-10088] c26 N71-25490

**PIGMENTS**  
 Binder stabilized zinc oxide pigmented coating  
 for spacecraft thermal control  
 [NASA-CASE-XMP-07770-2] c18 N71-26772

**PILOT ERROR**  
 Spectrally balanced chromatic landing approach  
 lighting system  
 [NASA-CASE-ARC-10990-1] c04 N77-12031

**PILOT TRAINING**  
 Controlled visibility device for simulating poor  
 visibility conditions in training pilots in  
 instrument landing and flight procedures  
 [NASA-CASE-XPR-04147] c11 N71-10748  
 Kinesthetic control simulator --- for pilot  
 training  
 [NASA-CASE-LAR-10276-1] c09 N75-15662

**PILOTS (PERSONNEL)**  
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 aircraft  
 [NASA-CASE-ERC-10226-1] c14 N73-16483

**PINCH EFFECT**  
 Toggle mechanism for pinching metal tubes  
 [NASA-CASE-GSC-12274-1] c37 N79-28550

**PINS**  
 Fatigue resistant shear pin with hollow shaft  
 and two plugs  
 [NASA-CASE-XLA-09122] c15 N69-27505  
 Blade vibration damping pins for turbomachinery  
 [NASA-CASE-XLE-00155] c28 N71-29154  
 Design of quick release locking pin for joining  
 two or more load-carrying structural members  
 [NASA-CASE-NPS-18495] c15 N72-11385

**PINTLES**  
 Describing metal valve pintle with encapsulated  
 elastomeric body  
 [NASA-CASE-NSC-12116-1] c15 N71-17648

**PIPE FLOW**  
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 [NASA-CASE-GSC-11998-1] c34 N77-32413

**PIPELINES**  
 Flexible bellows joint shielding sleeve for  
 propellant transfer pipelines  
 [NASA-CASE-XNP-01855] c15 N71-28937

**PIPES (TUBES)**  
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 flare accuracy on tapered tubes  
 [NASA-CASE-XKS-03495] c14 N69-39785  
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 cryogenic media through double chamber structure  
 [NASA-CASE-XNP-08882] c15 N69-39935  
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 [NASA-CASE-XLE-00620] c32 N70-41579  
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 [NASA-CASE-NPO-10158] c33 N71-16356  
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 [NASA-CASE-XMP-05114] c15 N71-17650  
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 tube  
 [NASA-CASE-NPO-10064] c15 N71-17693  
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 of deformable nonconductive tubing also used  
 for leveling  
 [NASA-CASE-NPO-10037] c09 N71-19610  
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 portion of tubes  
 [NASA-CASE-XMS-06876] c15 N71-21536  
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 thruster  
 [NASA-CASE-XLE-02902] c25 N71-21694  
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 and close tolerances  
 [NASA-CASE-XMP-01083] c15 N71-22723  
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 tube or pipe ends to desired shape and thickness  
 [NASA-CASE-XMP-03511] c15 N71-22799  
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 end of tube  
 [NASA-CASE-XMP-04415] c14 N71-24693  
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 magnetomotive bulging, constricting, and  
 joining of large diameter metal tubes  
 [NASA-CASE-XMP-05114-3] c15 N71-24865  
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 preparation  
 [NASA-CASE-XKS-07953] c15 N71-26134  
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 joining of large diameter tubes by bulging or  
 constricting overlapping ends  
 [NASA-CASE-XMP-05114-2] c15 N71-26148  
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 transmission line having inflatable inner tube  
 [NASA-CASE-NPS-20068] c07 N71-27191  
 Process for developing filament reinforced  
 plastic tubes used in research and development  
 programs  
 [NASA-CASE-LAR-10203-1] c15 N72-16330  
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 coupling distal ends of fluid conduits  
 [NASA-CASE-NPO-10704] c15 N72-20445  
 Open type urine receptacle with tubular housing  
 [NASA-CASE-NSC-12324-1] c05 N72-22093  
 Measuring method for cutaneous perception using  
 instrument with elongated tubular housing  
 [NASA-CASE-NSC-13609-1] c05 N72-25122  
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 thin-walled tubular segments  
 [NASA-CASE-LAR-10546-1] c11 N72-25287  
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 tubule layers  
 [NASA-CASE-ERC-10364] c18 N72-25540  
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 tubule sections  
 [NASA-CASE-ERC-10363] c18 N72-25541  
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 purification of liquid metals  
 [NASA-CASE-XNP-08124-2] c06 N73-13129

- Cable guide and restraint device for reefing tubes in uniform manner  
[NASA-CASE-LAR-10129-1] c15 N73-25512
- Twisted wire or tube superconductor for filament windings  
[NASA-CASE-LEW-11015] c26 N73-32571
- Open tube guideway for high speed air cushioned vehicles  
[NASA-CASE-LAR-10256-1] c85 N74-34672
- Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c35 N77-24455
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- Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c37 N76-29590
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[NASA-CASE-LAR-12148-1] c44 N79-29608
- PISTONS**
- Automatically reciprocating, high pressure pump for use in spacecraft cryogenic propellants  
[NASA-CASE-XNP-04731] c15 N71-24042
- Pumping and metering dual piston system and monitor for reaction chamber constituents  
[NASA-CASE-GSC-10218-1] c15 N72-21465
- Collapsible piston for hypervelocity gun  
[NASA-CASE-MS-C-13789-1] c11 N73-32152
- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c02 N74-20646
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c37 N79-10426
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[NASA-CASE-NPO-14597-1] c37 N79-23431
- PITCH (INCLINATION)**
- Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c07 N77-17059
- A pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c08 N79-20135
- PIVOTS**
- Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
[NASA-CASE-XMS-04545] c15 N71-22878
- PLANAR STRUCTURES**
- Window defect planar mapping technique  
[NASA-CASE-MS-C-19442-1] c74 N77-10899
- Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-NFS-10946-1] c31 N79-21226
- PLANE WAVES**
- Characteristics of microwave antenna with conical reflectors to generate plane wave front  
[NASA-CASE-NPO-11661] c07 N73-14130
- PLANETARY ATMOSPHERES**
- Planetary atmospheric investigation using split trajectory dual flyby mode  
[NASA-CASE-XAC-08494] c30 N71-15990
- Wind tunnel method for simulating flow fields around blunt vehicles entering planetary atmospheres without involving high temperatures  
[NASA-CASE-LAR-11138] c12 N71-20436
- Ablation sensor for measuring surface ablation rate of material on vehicles entering earths atmosphere on entry into planetary atmospheres  
[NASA-CASE-XLA-01791] c14 N71-22991
- PLANETARY GRAVITATION**
- Lunar and planetary gravity simulator to test vehicular response to landing  
[NASA-CASE-XLA-00493] c11 N70-34786
- Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury  
[NASA-CASE-XNP-00708] c14 N70-35394
- PLANETARY LANDING**
- Multiple parachute system for landing control of Apollo type spacecraft  
[NASA-CASE-XLA-00898] c02 N70-36804
- Payload soft landing system using stowable gas bag  
[NASA-CASE-XLA-09881] c31 N71-16085
- PLANETARY ORBITS**
- Self-erectable space structures of flexible foam for application in planetary orbits  
[NASA-CASE-XLA-00886] c31 N70-34135
- Manned space station collapsible for launching and self-erectable in orbit  
[NASA-CASE-XLA-00678] c31 N70-34296
- PLANETARY RADIATION**
- Attitude sensor with scanning mirrors for detecting orientation of space vehicle with respect to planet  
[NASA-CASE-XLA-00793] c21 N71-22880
- PLANETARY SURFACES**
- Spacecraft transponder and ground station radar system for mapping planetary surfaces  
[NASA-CASE-NPO-11001] c07 N72-21118
- Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c05 N79-24979
- PLANTS (BOTANY)**
- Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c51 N75-25503
- PLASMA ACCELERATION**
- Increasing available power per unit area in ion rocket engine by increasing beam density  
[NASA-CASE-XLE-00519] c28 N70-41576
- Coaxial, high density, hypervelocity plasma generator and accelerator using electrodes  
[NASA-CASE-NFS-20589] c25 N72-32688
- PLASMA ACCELERATORS**
- Crossed-field plasma accelerator for laboratory simulation of atmospheric reentry conditions  
[NASA-CASE-XLA-00675] c25 N70-33267
- Continuous operation, single phased, induction plasma accelerator producing supersonic speeds  
[NASA-CASE-XLA-01354] c25 N70-36946
- Crossed field MHD plasma generator-accelerator  
[NASA-CASE-XLA-03374] c25 N71-15562
- Direct current powered self repeating plasma accelerator with interconnected annular and linear discharge channels  
[NASA-CASE-XLA-03103] c25 N71-21693
- Magnetically controlled plasma accelerator capable of ignition in low density gaseous environment  
[NASA-CASE-XLA-00327] c25 N71-29184
- Two stage light gas-plasma projectile accelerator  
[NASA-CASE-NFS-22287-1] c75 N76-14931
- PLASMA CONTROL**
- Superconducting magnetic field trapping device for producing magnetic field in air  
[NASA-CASE-XNP-01185] c26 N73-28710
- Self-energized plasma compressor --- for compressing plasma discharged from coaxial plasma generator  
[NASA-CASE-NFS-22145-1] c75 N75-13625
- PLASMA CYLINDERS**
- Plasma-fluidic hybrid display system combining high brightness and memory characteristics  
[NASA-CASE-ERC-10100] c09 N71-33519
- PLASMA DENSITY**
- Apertured electrode focusing system for ion sources with nonuniform plasma density  
[NASA-CASE-XNP-03332] c09 N71-10618
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156
- PLASMA DIAGNOSTICS**
- Plasma probes having guard ring and primary sensor at same potential to prevent stray wall current collection in ionized gases  
[NASA-CASE-XLE-00690] c25 N69-39884
- Apparatus for measuring conductivity and velocity of plasma with multiple sensing coils positioned in plasma  
[NASA-CASE-XAC-05695] c25 N71-16073
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156
- PLASMA DYNAMICS**
- Apparatus for measuring conductivity and velocity of plasma with multiple sensing coils positioned in plasma  
[NASA-CASE-XAC-05695] c25 N71-16073
- Self-energized plasma compressor --- for compressing plasma discharged from coaxial plasma generator  
[NASA-CASE-NFS-22145-1] c75 N75-13625
- PLASMA ENGINES**
- Nonconductive tube as feed system for plasma thruster  
[NASA-CASE-XLE-02902] c25 N71-21694
- PLASMA GENERATORS**
- Apparatus for producing highly conductive, high temperature electron plasma with homogenous

- temperature and pressure distribution  
[NASA-CASE-XLA-00147] c25 N70-34661
- Crossed field MHD plasma generator-accelerator  
[NASA-CASE-XLA-03374] c25 N71-15562
- Coaxial, high density, hypervelocity plasma generator and accelerator using electrodes  
[NASA-CASE-MFS-20589] c25 N72-32688
- Self-energized plasma compressor --- for compressing plasma discharged from coaxial plasma generator.  
[NASA-CASE-MFS-22145-1] c75 N75-13625
- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c75 N76-17951
- Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c36 N77-19416
- PLASMA GUNS**  
Plasma spraying gun for forming diffusion bonded metal or ceramic coatings on substrates  
[NASA-CASE-XLE-01604-2] c15 N71-15610
- PLASMA JETS**  
Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c25 N75-12087
- Combination automatic-starting electrical plasma torch and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c37 N75-29426
- Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c75 N78-27913
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Electrostatic modulator for communicating through plasma sheath formed around spacecraft during reentry  
[NASA-CASE-XLA-01400] c07 N70-41331
- Method and apparatus for communicating through ionized layer of gases surrounding spacecraft during reentry into planetary atmospheres  
[NASA-CASE-XLA-01127] c07 N70-41372
- Reentry communication by injection of water droplets into plasma layer surrounding space vehicle  
[NASA-CASE-XLA-01552] c07 N71-11284
- PLASMA POTENTIALS**  
Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c33 N77-10429
- PLASMA PROBES**  
Plasma probes having guard ring and primary sensor at same potential to prevent stray wall current collection in ionized gases  
[NASA-CASE-XLE-00690] c25 N69-39884
- Small plasma probe using tungsten wire collector in tubular shield  
[NASA-CASE-XLE-02578] c25 N71-20747
- PLASMA PROPULSION**  
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[NASA-CASE-LEW-11694-1] c20 N75-18310
- PLASMA RADIATION**  
Development of method for measuring electron density gradients of plasma sheath around space vehicle during atmospheric entry  
[NASA-CASE-XLA-06232] c25 N71-20563
- Apparatus for producing monochromatic light from continuous plasma source  
[NASA-CASE-XNP-04167-2] c25 N72-24753
- PLASMA SHEATHS**  
Space environment simulation system for measuring spacecraft electric field strength in plasma sheath  
[NASA-CASE-XLE-02038] c09 N71-16086
- Development of method for measuring electron density gradients of plasma sheath around space vehicle during atmospheric entry  
[NASA-CASE-XLA-06232] c25 N71-20563
- PLASMA SPRAYING**  
Plane or plasma spraying for molybdenum coating of carbon or graphite surfaces to prevent oxidative corrosion  
[NASA-CASE-XLA-00302] c15 N71-16077
- PLASMA TEMPERATURE**  
Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c75 N74-30156
- PLASMA-ELECTROMAGNETIC INTERACTION**  
Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c37 N79-11405
- PLASMA GUIDES**  
Support assembly for cryogenically coolable low-noise choked waveguide  
[NASA-CASE-NPO-14253-1] c31 N79-10246
- PLASMAS (PHYSICS)**  
Apparatus for measuring conductivity and velocity of plasma with multiple sensing coils positioned in plasma  
[NASA-CASE-XAC-05695] c25 N71-16073
- PLASTIC COATINGS**  
Process permitting application of synthetic resin coating to irregular-shaped objects at ambient temperature  
[NASA-CASE-XNP-06508] c18 N69-39895
- Development and characteristics of system for skin packaging articles using thermoplastic film heating and vacuum operated equipment  
[NASA-CASE-MFS-20855] c15 N73-27405
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c44 N77-14580
- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c27 N79-18052
- PLASTIC DEFORMATION**  
Process for analysis of strain field of structures subjected to large deformations involving low modulus substrate with thin coating  
[NASA-CASE-LAR-10765-1] c32 N73-20740
- PLASTIC TAPES**  
Development of flexible thermocouple in form of tape for adaptation to special temperature measuring conditions  
[NASA-CASE-LEW-11072-1] c14 N73-24472
- PLASTICIZERS**  
Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c44 N78-25530
- PLASTICS**  
Hot forming of plastic sheets  
[NASA-CASE-XMS-05516] c15 N71-17803
- Technique for making foldable, inflatable, plastic honeycomb core panels for use in building and bridge structures, light and radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713
- Electrode sealing and insulation for fuel cells containing caustic liquid electrolytes using powdered plastic and metal  
[NASA-CASE-XMS-01625] c15 N71-23022
- Dielectric apparatus for heating, fusing, and hardening of organic matrix to form plastic material into shaped product  
[NASA-CASE-LAR-10121-1] c15 N71-26721
- Plastic sphere for radar tracking and calibration  
[NASA-CASE-XLA-11154] c07 N72-21117
- Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c31 N74-32920
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315
- Abrasion resistant coatings for plastic surfaces  
[NASA-CASE-ARC-10915-3] c24 N77-24200
- PLATES (STRUCTURAL MEMBERS)**  
Foil seal between parts moving relative to each other  
[NASA-CASE-XLE-05130] c15 N69-21362
- Fifth wheel  
[NASA-CASE-PRC-10081-1] c37 N77-14477
- A floating nut retention system  
[NASA-CASE-MSC-16938-1] c37 N78-32431
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c33 N79-28416
- PLATING**  
Selective plating of etched circuits without removing previous plating  
[NASA-CASE-XGS-03120] c15 N71-24047
- Metal plating process employing spraying of metallic powder/peening particle mixture  
[NASA-CASE-GSC-11163-1] c15 N73-32360
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c31 N74-23065
- PLATINUM**  
Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c33 N75-27252

- Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c35 N77-27368
- PLAYBACKS**  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c35 N77-17426  
Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c35 N79-16246
- PLENUM CHAMBERS**  
Platform with several ground effect pads and plenum chambers  
[NASA-CASE-MFS-14685] c31 N71-15689  
Development of filter apparatus for gas separation and characteristics of filter cell support frame for improved operation  
[NASA-CASE-MSC-12297] c14 N72-23457
- PLETHYSMOGRAPHY**  
Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c35 N76-24525
- PLOTTERS**  
Plotter device for automatically drawing equipotential lines on sheet of resistance paper  
[NASA-CASE-NPO-11134] c09 N72-21246
- PLOTTING**  
Instrument for measuring potentials on two dimensional electric field plot  
[NASA-CASE-XLA-08493] c10 N71-19421  
A system for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c46 N79-20555
- PLUG NOZZLES**  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c07 N76-18117
- PLUGS**  
Rocket chamber leak test fixture using tubular plug  
[NASA-CASE-XPR-09479] c14 N69-27503  
Fatigue resistant shear pin with hollow shaft and two plugs  
[NASA-CASE-XLA-09122] c15 N69-27505  
Control of gas flow from pressurized vessel by thermal expansion of metal plug  
[NASA-CASE-NPO-10298] c12 N71-17661  
Heated porous plug microthrustor for spacecraft reaction jet controlled systems such as fuel flow regulation, propellant disassociation, and heat transfer augmentation  
[NASA-CASE-GSC-10640-1] c28 N72-18766
- PNEUMATIC CONTROL**  
Pneumatic system for cyclic control of fluid flow in pneumatic device  
[NASA-CASE-XMS-04843] c03 N69-21469  
Pneumatic control of telescopic mirror support system  
[NASA-CASE-XLA-03271] c11 N69-24321  
Actuator using compressed gas as driving force to control valve handling large liquid flows  
[NASA-CASE-XHQ-01208] c15 N70-35409  
Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975  
Pneumatic foot pedal operated fluidic exercising device  
[NASA-CASE-MSC-11561-1] c05 N73-32014  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c37 N75-32465  
Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c54 N78-32724
- PNEUMATIC EQUIPMENT**  
Development and characteristics of high pressure control valve  
[NASA-CASE-MSC-11010] c15 N71-19485  
Pneumatic cantilever beams and platform for space erectable structure  
[NASA-CASE-XLA-01731] c32 N71-21045  
Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention  
[NASA-CASE-XMS-01905] c12 N71-21089  
Zero gravity apparatus utilizing pneumatic decelerating means to create payload subjected to zero gravity conditions by dropping its height  
[NASA-CASE-XMP-06515] c14 N71-23227  
Pneumatic servoamplifier for controlling flow regulation  
[NASA-CASE-MSC-12121-1] c15 N71-27147  
Inflatable stabilizing system for use on life raft to reduce rocking and preclude capsizing  
[NASA-CASE-MSC-12393-1] c02 N73-26006
- Airlock**  
[NASA-CASE-MFS-20922-1] c18 N74-22136  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c37 N75-32465  
Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c54 N78-32724
- POINT SOURCES**  
Electronic background suppression field scanning sensor for detecting point source targets  
[NASA-CASE-XGS-05211] c07 N69-39980  
X ray collimating structure for focusing radiation directly onto detector  
[NASA-CASE-XHQ-04106] c14 N70-40240
- POINTING CONTROL SYSTEMS**  
Development of reflector system for application to line-of-sight pointing and tracking telescopes  
[NASA-CASE-NPO-10468] c23 N71-33229  
All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c35 N77-20399  
Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c37 N78-27424  
Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c35 N79-26372  
Solar tracking system --- with pointing control circuits  
[NASA-CASE-MFS-23999-1] c44 N79-28667
- POLAR ORBITS**  
Spin phase synchronization of cartwheel satellite in polar orbit  
[NASA-CASE-XGS-05579] c31 N71-15676
- POLARIMETERS**  
Automatic polarimeter capable of measuring transient birefringence changes in electro-optic materials  
[NASA-CASE-XWP-08883] c23 N71-16101  
Two beam interferometer-polarimeter  
[NASA-CASE-NPO-11239] c14 N73-12446  
Forward-scatter polarimeter for determining the gaseous depolarization factor in the presence of polluting polydispersed particles  
[NASA-CASE-NPO-13756-1] c35 N76-14434  
Method of forming a sharp edge on an optical device --- beam splitters for Solar Maximum Missions spectropolarimeter  
[NASA-CASE-GSC-12348-1] c74 N78-29902
- POLARITY**  
Converting output of positive dc voltage source to negative dc voltage across load with common reference point  
[NASA-CASE-XMP-08217] c03 N71-23239  
Peak polarity selector for monitoring waveforms  
[NASA-CASE-PRC-10010] c10 N71-24862  
Precision full wave rectifier circuit for rectifying incoming electrical signals having positive or negative polarity with only positive output signals  
[NASA-CASE-ARC-10101-1] c09 N71-33109
- POLARIZATION (CHARGE SEPARATION)**  
Charge injection method and apparatus of producing large area electrets  
[NASA-CASE-MFS-23186-2] c24 N78-25137
- POLARIZATION (WAVES)**  
System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c32 N75-24982
- POLARIZATION CHARACTERISTICS**  
Multifrequency broadband horn antenna  
[NASA-CASE-NPO-14588-1] c32 N79-17067
- POLARIZED ELECTROMAGNETIC RADIATION**  
Device for improving efficiency of parabolic horn antenna system for linearly polarized signals  
[NASA-CASE-XNP-00611] c09 N70-35219  
Device for improving efficiency of parabolic reflector horn for linearly or circularly polarized waves  
[NASA-CASE-XNP-00540] c09 N70-35382
- POLARIZED LIGHT**  
Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c74 N76-30053
- POLARIZERS**  
Partial polarizer filter

- [NASA-CASE-GSC-12225-1] c74 N79-14891
- POLISHING**  
 Conforming polisher for aspheric surfaces of revolution with inflatable tube  
 [NASA-CASE-XGS-02884] c15 N71-22705  
 Method of forming a sharp edge on an optical device --- beam splitters for Solar Maximum Missions spectropolarimeter  
 [NASA-CASE-GSC-12348-1] c74 N78-29902
- POLLUTION CONTROL**  
 System for minimizing internal combustion engine pollution emission  
 [NASA-CASE-NPO-13402-1] c37 N76-18457  
 Combustion engine --- for air pollution control  
 [NASA-CASE-NPO-13671-1] c37 N77-31497  
 Supercritical fuel injection system  
 [NASA-CASE-LEW-12990-1] c07 N78-27122
- POLLUTION MONITORING**  
 Fluorescence detector for monitoring atmospheric pollutants  
 [NASA-CASE-NPO-13231-1] c45 N75-27585  
 Stack plume visualization system  
 [NASA-CASE-LAR-11675-1] c45 N76-17656  
 Indicator providing continuous indication of the presence of a specific pollutant in air  
 [NASA-CASE-NPO-13674-1] c45 N76-21742  
 Method for detecting pollutants --- through chemical reactions and heat treatment  
 [NASA-CASE-LAR-11405-1] c45 N76-31714  
 Method and apparatus for continuous measurement of bacterial content of aqueous samples  
 [NASA-CASE-MSC-16779-1] c51 N78-22586  
 Water quality monitoring system  
 [NASA-CASE-MSC-16778-1] c51 N78-22589
- POLYAMIDE RESINS**  
 Process for producing flame resistant polyamides and products produced thereby  
 [NASA-CASE-MSC-16074-1] c27 N77-14262
- POLYBENZIMIDAZOLE**  
 Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
 [NASA-CASE-ARC-11009-1] c27 N78-31232
- POLYBUTADIENE**  
 Synthesis of polyfluorobutadiene by polymerization of perfluorobutadiene with diisopropyl peroxydicarbonate  
 [NASA-CASE-NPO-10863] c06 N70-11251  
 Low pressure perfluorobutadiene polymerization with peroxide catalysts  
 [NASA-CASE-NPO-10447] c06 N70-11252  
 Inhibited solid propellant composition containing beryllium hydride  
 [NASA-CASE-NPO-10866-1] c28 N79-14228
- POLYCARBONATES**  
 Transparent polycarbonate resin, shell helmet and latch design for high altitude and space flight  
 [NASA-CASE-XMS-04935] c05 N71-11190
- POLYCRYSTALS**  
 Fabrication of polycrystalline solar cells on low-cost substrates  
 [NASA-CASE-GSC-12022-1] c44 N76-28635  
 Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
 [NASA-CASE-GSC-12022-2] c44 N78-24609  
 Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
 [NASA-CASE-XLE-02545-1] c76 N79-21910
- POLYESTERS**  
 Carboxyl terminated polyester prepolymers and foams produced from prepolymers and materials  
 [NASA-CASE-NPO-10596] c06 N71-25929  
 Apparatus for forming drive belts  
 [NASA-CASE-NPO-13205-1] c31 N74-32917
- POLYETHER RESINS**  
 Preparation of stable polyurethane polymer by reacting polymer with diisocyanate  
 [NASA-CASE-MPS-10506] c06 N73-30100  
 Preparation of fluorohydroxy ethers by reacting fluoroalkylene oxides with alkali salt of polyfluoroalkylene diol  
 [NASA-CASE-MPS-10507] c06 N73-30101  
 Preparation of fluorinated polyethers from 2-hydro-perhaloisopropyl alcohols  
 [NASA-CASE-MPS-11492] c06 N73-30102
- POLYIMIDE RESINS**  
 Polyimide adhesives  
 [NASA-CASE-LAR-11397-1] c27 N75-29263
- Polyimide adhesives  
 [NASA-CASE-LAR-12181-1] c27 N78-17205  
 Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
 [NASA-CASE-ARC-11040-2] c24 N78-27184  
 Polyimide prepreg material having improved tack retention --- polyimide-graphite fiber composites  
 [NASA-CASE-LEW-12933-1] c23 N79-24061  
 Mixed diamines for lower melting addition polyimide preparation and utilization  
 [NASA-CASE-LAR-12054-1] c27 N79-33316
- POLYIMIDES**  
 Stable polyimide synthesis from mixtures of monomeric diamines and polycarboxylic acid esters  
 [NASA-CASE-LEW-11325-1] c06 N73-27980  
 Polyimide foam for the thermal insulation and fire protection  
 [NASA-CASE-ARC-10464-1] c27 N74-12812  
 Aromatic polyimide preparation --- with low softening temperatures  
 [NASA-CASE-LAR-11372-1] c27 N74-19772  
 Reinforced structural plastics  
 [NASA-CASE-LEW-10199-1] c27 N74-23125  
 Polyimides of ether-linked aryl tetracarboxylic dianhydrides  
 [NASA-CASE-MPS-22355-1] c23 N76-15268  
 Crystalline polyimides  
 [NASA-CASE-LAR-12099-1] c27 N78-24360  
 Process for preparing thermoplastic aromatic polyimides  
 [NASA-CASE-LAR-11828-1] c27 N78-32261  
 Ambient cure polyimide foams --- thermal resistant foams  
 [NASA-CASE-ARC-11170-1] c27 N79-11215  
 Mixed diamines for lower melting addition polyimide preparation and utilization  
 [NASA-CASE-LAR-12054-2] c27 N79-19160
- POLYISOBUTYLENE**  
 Chemical process for production of polyisobutylene compounds and application as solid rocket propellant binder  
 [NASA-CASE-NPO-10893] c27 N73-22710
- POLYMER CHEMISTRY**  
 New trifunctional alcohol derived from trimer acid and novel method of preparation  
 [NASA-CASE-NPO-10714] c06 N69-31244  
 Synthesis of siloxane containing epoxy polymers with low dielectric properties  
 [NASA-CASE-MPS-13994-1] c06 N71-11240  
 Apparatus for determining volatile condensable material present in polymeric products  
 [NASA-CASE-XNP-09699] c06 N71-24607  
 Polyimide adhesives  
 [NASA-CASE-LAR-11397-1] c27 N75-29263  
 Trimerization of aromatic nitriles  
 [NASA-CASE-LEW-12053-1] c27 N78-15276  
 Polyimide adhesives  
 [NASA-CASE-LAR-12181-1] c27 N78-17205  
 Catalysts for imide formation from aromatic isocyanates and aromatic dianhydrides  
 [NASA-CASE-ARC-11107-1] c23 N78-22156  
 Infusible silazane polymer and process for producing same --- protective coatings  
 [NASA-CASE-XMP-02526-1] c27 N79-21190  
 Fluorine-containing polyformals  
 [NASA-CASE-XMP-06900-1] c27 N79-21191  
 In situ self cross-linking of polyvinyl alcohol battery separators  
 [NASA-CASE-LEW-12972-1] c44 N79-25481
- POLYMER MATRIX COMPOSITE MATERIALS**  
 Intumescent-ablator coatings using endothermic fillers  
 [NASA-CASE-ARC-11043-1] c24 N78-27180
- POLYMERIC FILMS**  
 Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
 [NASA-CASE-XNP-09763] c14 N71-20461  
 Hydraulic apparatus for casting and molding of liquid polymers  
 [NASA-CASE-XNP-07659] c06 N71-22975  
 Thermodielectric radiometer using polymer film as capacitor  
 [NASA-CASE-ARC-10138-1] c14 N72-24477  
 Development and characteristics of system for skin packaging articles using thermoplastic

- film heating and vacuum operated equipment  
[NASA-CASE-HFS-20855] c15 N73-27405
- Covered silicon solar cells and method of  
manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c44 N76-14600
- A reverse osmosis membrane of high urea  
rejection properties  
[NASA-CASE-ARC-10980-1] c27 N77-18265
- Strong thin membrane structure  
[NASA-CASE-NPO-14021-1] c27 N77-32313
- Cross-linked polyvinyl alcohol and method of  
making same --- separator for alkaline batteries  
[NASA-CASE-LEW-13101-1] c25 N79-14173
- In-situ cross-linking of polyvinyl alcohol ---  
polymeric films for separators in alkaline  
batteries  
[NASA-CASE-LEW-13135-1] c25 N79-14174
- Preparation of dielectric coating of variable  
dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c27 N79-14214
- Photomechanical transducer --- using thin strips  
of photoabsorptive metal or polymeric film  
with strain gages  
[NASA-CASE-NPO-14363-1] c76 N79-14908
- Surface finishing --- adhesive bonding of  
plastic film to metal airfoil surfaces  
[NASA-CASE-MSC-12631-3] c26 N79-21183
- POLYMERIZATION**
- Synthesis of polyfluorobutadiene by  
polymerization of perfluorobutadiene with  
diisopropyl peroxydicarbonate  
[NASA-CASE-NPO-10863] c06 N70-11251
- Low pressure perfluorobutadiene polymerization  
with peroxide catalysts  
[NASA-CASE-NPO-10847] c06 N70-11252
- Process for interfacial polymerization of  
pyromellitic dianhydride and tetraamino benzene  
[NASA-CASE-XLA-03104] c06 N71-11235
- Synthesis and chemical properties of  
imidazopyrrolone/amide copolymers  
[NASA-CASE-XLA-08802] c06 N71-11238
- Direct synthesis of polymeric schiff bases from  
two amines and two aldehydes  
[NASA-CASE-XMP-08655] c06 N71-11239
- Synthesis of azine polymers for heat shields by  
azine-aromatic aldehyde reaction  
[NASA-CASE-XMP-08656] c06 N71-11242
- Synthesis of schiff bases for heat shields by  
acetal amine reactions  
[NASA-CASE-XMP-08652] c06 N71-11243
- Preparation of elastomeric diamine silazane  
polymers  
[NASA-CASE-XMP-04133] c06 N71-20717
- Reaction of polyperfluoropolyenes with fluorine  
to produce saturated polymer chain or create  
reactive sites on chain  
[NASA-CASE-NPO-10862] c06 N72-22107
- Silphenylenesiloxane polymer with in-chain  
perfluoroalkyl groups  
[NASA-CASE-HFS-20979] c06 N72-25151
- Polymerization of perfluorobutadiene  
[NASA-CASE-NPO-10863-2] c06 N72-25152
- Preparation of fluorohydroxy ethers by reacting  
fluoroalkylene oxides with alkali salt of  
polyfluoroalkylene diol  
[NASA-CASE-HFS-10507] c06 N73-30101
- Preparation of fluorinated polyethers from  
2-hydro-perhaloisopropyl alcohols  
[NASA-CASE-HFS-11492] c06 N73-30102
- Method of preparing water purification membranes  
--- polymerization of allyl amine as thin  
films in plasma discharge  
[NASA-CASE-ARC-10643-1] c25 N75-12087
- Utilization of oxygen difluoride for syntheses  
of fluoropolymers  
[NASA-CASE-NPO-12061-1] c27 N76-16228
- Nuclear alkylated pyridine aldehyde polymers and  
conductive compositions thereof  
[NASA-CASE-NPO-10557] c27 N78-17214
- Polymeric foams from cross-linkable  
poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232
- Ambient cure polyimide foams --- thermal  
resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215
- Preparation of heterocyclic block copolymer  
omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300
- Process for the preparation of new elastomeric  
polytriazines  
[NASA-CASE-ARC-11248-1] c27 N79-22301
- New perfluoroalkyl polytriazines containing  
pendent iododifluoromethyl groups --- sealers  
for aircraft structures  
[NASA-CASE-ARC-11241-1] c27 N79-24153
- Catalytic trimerization of aromatic nitriles and  
triaryl-s-triazine ring cross-linked high  
temperature resistant polymers and copolymers  
made thereby  
[NASA-CASE-LEW-12053-2] c27 N79-28307
- An improved synthesis of 2, 4, 8,  
10-tetroxaspiro (5.5)undecane  
[NASA-CASE-ARC-11243-1] c27 N79-30375
- Improved synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c27 N79-30376
- Mixed dianines for lower melting addition  
polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c27 N79-33316
- POLYMERS**
- Preparation of ordered poly/arylenesiloxane/  
polymers  
[NASA-CASE-XMP-10753] c06 N71-11237
- Synthesis of aromatic diamines and dialdehyde  
polymers using Schiff base  
[NASA-CASE-XMP-03074] c06 N71-24740
- Automated ball rebound resilience test equipment  
for determining viscoelastic properties of  
polymers  
[NASA-CASE-XLA-08254] c14 N71-26161
- Infusible polymer production from reaction of  
polyfunctional epoxy resins with  
polyfunctional aziridine compounds  
[NASA-CASE-NPO-10701] c06 N71-28620
- Development of solid state polymer coating for  
obtaining thermal balance in spacecraft  
components  
[NASA-CASE-XLA-01745] c33 N71-28903
- Mercaptan terminated polymer containing sulfonic  
acid salts of nitrosubstituted aromatic amines  
for heat and moisture resistant coatings  
[NASA-CASE-ARC-10325] c06 N72-25147
- Solid propellant containing hydrazinium  
nitroformate oxidizer and polymeric  
hydrocarbon binder  
[NASA-CASE-NPO-12015] c27 N73-16764
- Chemical process for production of  
polyisobutylene compounds and application as  
solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710
- Utilization of lithium p-lithiphenoxide to  
prepare star polymers  
[NASA-CASE-NPO-10998-1] c06 N73-32029
- Ultraviolet and thermally stable polymer  
compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156
- Ultraviolet and thermally stable polymer  
compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315
- Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c27 N77-31308
- Chelate-modified polymers for atmospheric gas  
chromatography  
[NASA-CASE-ARC-11154-1] c27 N78-27275
- Modification of the electrical and optical  
properties of polymers --- ion irradiation  
[NASA-CASE-LEW-13027-1] c27 N79-11216
- POLYMETHYL METHACRYLATE**
- Durable antistatic coating for  
polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c27 N78-14164
- Process for producing a well-adhered durable  
optical coating on an optical plastic substrate  
--- abrasion resistant polymethyl methacrylate  
lenses  
[NASA-CASE-ARC-11039-1] c74 N78-32854
- POLYSACCHARIDES**
- Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c27 N77-30236
- POLYTETRAFLUOROETHYLENE**
- Procedure for bonding polytetrafluoroethylene  
thermal protective sleeves to magnesium alloy  
conical shell components with different  
thermal coefficients  
[NASA-CASE-XLA-01262] c15 N71-21404
- POLYURETHANE FOAM**
- Self-erectable space structures of flexible foam  
for application in planetary orbits

## SUBJECT INDEX

## POSITION (LOCATION)

[NASA-CASE-XLA-00696] c31 N70-34135  
Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control

[NASA-CASE-ARC-10098-1] c06 N71-24739  
Lightweight fire resistant plastic foam for thermal protection of reentry vehicles and aircraft structures

[NASA-CASE-ARC-10180-1] c29 N72-20767  
Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices

[NASA-CASE-ARC-10180-1] c27 N74-12814  
Fiber modified polyurethane foam for ballistic protection

[NASA-CASE-ARC-10714-1] c27 N76-15310  
Mixing insert for foam dispensing apparatus

[NASA-CASE-MPS-20607-1] c37 N76-19436

**POLYURETHANE RESINS**  
Chemical synthesis of hydroxy terminated perfluoro ethers as intermediates for highly fluorinated polyurethane resins  
[NASA-CASE-NPO-10768] c05 N71-27254  
Formation of polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c06 N72-27144  
Fluorinated polyurethanes produced by reacting hydroxy terminated perfluoro polyether with diisocyanate  
[NASA-CASE-NPO-10767-2] c06 N72-27151  
Chemical and physical properties of synthetic polyurethane polymer prepared by reacting hydroxy carbonate with organic diisocyanate  
[NASA-CASE-MPS-10512] c06 N73-30099  
Preparation of stable polyurethane polymer by reacting polymer with diisocyanate  
[NASA-CASE-MPS-10506] c06 N73-30100  
Preparation of polyurethane polymer by reacting hydroxy polyformal with organic diisocyanate  
[NASA-CASE-MPS-10509] c06 N73-30103  
Chemical and elastic properties of fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c06 N73-33076  
Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c27 N78-17213

**POLYVINYL ALCOHOL**  
Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c25 N79-14172  
Cross-linked polyvinyl alcohol and method of making same --- separator for alkaline batteries  
[NASA-CASE-LEW-13101-1] c25 N79-14173  
In-situ cross-linking of polyvinyl alcohol --- polymeric films for separators in alkaline batteries  
[NASA-CASE-LEW-13135-1] c25 N79-14174  
In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c44 N79-25481

**PORCELAIN**  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MPS-22324-1] c27 N75-27160

**POROSITY**  
Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c37 N75-26371

**POROUS MATERIALS**  
Production of refractory bodies with controlled porosity by pressing and heating mixtures of refractory and inert metal powders  
[NASA-CASE-LEW-10393-1] c17 N71-15468  
Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
[NASA-CASE-XNP-04338] c17 N71-23046  
Lubrication for bearings by capillary action from oil reservoir of porous material  
[NASA-CASE-XNP-03972] c15 N71-23048  
Method and photodetector device for locating abnormal voids in low density materials  
[NASA-CASE-MPS-20044] c14 N71-28993  
Production method for manufacturing porous tungsten bodies from tungsten powder particles  
[NASA-CASE-XNP-04339] c17 N71-29137  
Compressible electrolyte saturated sponge electrode for biomedical applications  
[NASA-CASE-MSC-13648] c05 N72-27103

Porous electrode for use in electrochemical cells  
[NASA-CASE-GSC-11368-1] c09 N73-32108  
Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c44 N74-19692  
Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c37 N79-25426  
Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c34 N79-13289  
A heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c34 N79-21313

**POROUS PLATES**  
Method for producing porous tungsten plates for ionizing cesium compounds for propulsion of ion engines  
[NASA-CASE-XLE-00455] c28 N70-38197

**PORPHYRINS**  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c51 N78-18674

**PORTABLE EQUIPMENT**  
Portable electron beam welding chamber  
[NASA-CASE-LEW-11531] c15 N71-14932  
Portable apparatus producing high velocity annular air column surrounding low velocity, filtered, superclean air central core for industrial clean room environmental control  
[NASA-CASE-XMP-03212] c15 N71-22721  
Portable cutting machine for piping weld preparation  
[NASA-CASE-XKS-07953] c15 N71-26134  
Method and apparatus for precision sizing and joining of large diameter tubes by bulging or constricting overlapping ends  
[NASA-CASE-XMP-05114-2] c15 N71-26148  
Portable cryogenic cooling system design including turbine pump, cooling chamber, and atomizer  
[NASA-CASE-NPO-10467] c23 N71-26654  
Automatic controlled drive mechanism for portable boring bar  
[NASA-CASE-XLA-03661] c15 N71-33518  
One hand backpack harness  
[NASA-CASE-LAR-10102-1] c05 N72-23085  
Portable tester for monitoring bacterial contamination by adenosine triphosphate light reaction  
[NASA-CASE-GSC-10879-1] c14 N72-25413  
Portable penetrometer for analyzing soil characteristics  
[NASA-CASE-MPS-20774] c14 N73-19420  
Hand-held, lightweight, portable photomicroscope  
[NASA-CASE-ARC-10468-1] c14 N73-33361  
System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MPS-22283-1] c37 N75-33395  
Method of peening and portable peening gun  
[NASA-CASE-MPS-23047-1] c37 N76-18454  
A portable device particularly suited for use in starting air-start units for aircraft  
[NASA-CASE-FRC-10113-1] c09 N78-19166  
Portable heatable container  
[NASA-CASE-NPO-14237-1] c37 N78-24554  
Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c25 N79-10163  
Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c33 N79-13261

**PORTS (OPENINGS)**  
Sealing evacuation port and evacuating vacuum container such as space jackets  
[NASA-CASE-XMP-03290] c15 N71-23256

**POSITION (LOCATION)**  
Position locating system for remote aircraft using voice communication and digital signals  
[NASA-CASE-GSC-10097-2] c21 N71-13958  
Development of telemetry system for position location and data acquisition  
[NASA-CASE-GSC-10083-1] c30 N71-16090  
Automatic braking device for rapidly transferring humans or materials from elevated location  
[NASA-CASE-XKS-07814] c15 N71-27067  
System and method for position locating for air traffic control involving supersonic transports  
[NASA-CASE-GSC-10087-3] c07 N72-12080

## POSITION INDICATORS

## SUBJECT INDEX

Location identification system with ground based transmitter and aircraft borne receiver/decoder  
[NASA-CASE-ERC-10324] c07 N72-25173

System for detecting impact position of cosmic dust on detector surface  
[NASA-CASE-GSC-11291-1] c25 N72-33696

Collimator for analyzing spatial location of near and distant sources of radiation  
[NASA-CASE-MFS-20546-2] c14 N73-30389

Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c35 N74-32877

Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c32 N75-26194

Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c35 N75-27331

Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c03 N76-32140

Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c33 N77-31404

**POSITION INDICATORS**

Rocket-borne aspect sensor consisting of radiation sensor, apertured disk, commutator, and counting circuits  
[NASA-CASE-XGS-08266] c14 N69-27432

Characteristics and performance of electrical system to determine angular rotation  
[NASA-CASE-XMP-00447] c14 N70-33179

Magnetic element position sensing device, using misaligned electromagnets  
[NASA-CASE-XGS-07514] c23 N71-16099

Describing angular position and velocity sensing apparatus  
[NASA-CASE-XGS-05680] c14 N71-17585

Mosaic semiconductor radiation detector and position indicator systems engineering for low energy particles  
[NASA-CASE-XGS-03230] c14 N71-23401

Doppler compensated communication system for locating supersonic transport position  
[NASA-CASE-GSC-10087-4] c07 N73-20174

Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c35 N75-33367

Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c17 N76-21250

Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c35 N78-18394

Radiation shadow indicator  
[NASA-CASE-MFS-23546-2] c74 N79-29037

**POSITIONING**

Centering device with ultrafine adjustment for use with roundness measuring apparatus  
[NASA-CASE-XMP-00480] c14 N70-39898

Portable device for aligning surfaces of two adjacent wall or sheet sections for joining at point of junction  
[NASA-CASE-XMP-01452] c15 N70-41371

Electro-optical/computer system for aligning large structural members and maintaining correct position  
[NASA-CASE-XNP-02029] c14 N70-41955

Manual control mechanism for adjusting control rod to null position  
[NASA-CASE-XLA-01808] c15 N71-20740

Rotating raster generator  
[NASA-CASE-PRC-10071-1] c32 N74-20813

**POSITIONING DEVICES (MACHINERY)**

Swivel support for gas bearing for position adjustment between ball and supporting cup  
[NASA-CASE-XMP-07808] c15 N71-23812

Caterpillar micropositioner for positioning machine tools adjacent to workpiece  
[NASA-CASE-GSC-10780-1] c14 N72-16283

Positioning mechanism for converting translatory motion into rotary motion  
[NASA-CASE-NPO-10679] c15 N72-21462

Design and development of test stand system for supporting test items in vacuum chamber  
[NASA-CASE-MFS-21362] c11 N73-20267

Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304

Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c35 N75-15014

Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c54 N75-27760

Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c37 N77-27400

**POSITIVE FEEDBACK**

Complementary regenerative transistorized switch circuit employing positive and negative feedback  
[NASA-CASE-XGS-02751] c09 N71-23015

**POTABLE WATER**

Potable water reclamation from human wastes in zero-G environment  
[NASA-CASE-XLA-03213] c05 N71-11207

Utilization of solar radiation by solar still for converting salt and brackish water into potable water  
[NASA-CASE-XMS-04533] c15 N71-23086

Chlorine generator for purifying water in life support systems of manned spacecraft  
[NASA-CASE-XLA-08913] c14 N71-28933

Potable water dispenser  
[NASA-CASE-MFS-21115-1] c54 N74-12779

Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c54 N74-17853

Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c54 N78-14784

**POTASSIUM SILICATES**

Fireproof potassium silicate coating composition, insoluble in water after application  
[NASA-CASE-GSC-10072] c18 N71-14014

**POTENTIOMETERS**

Angle detector  
[NASA-CASE-ARC-11036-1] c35 N78-32395

**POTENTIOMETERS (INSTRUMENTS)**

Two axis flight controller with potentiometer control shafts directly coupled to rotatable ball members  
[NASA-CASE-XPR-04104] c03 N70-42073

Device for controlling rotary potentiometer mounted on aircraft steering wheel or aileron control  
[NASA-CASE-XAC-10019] c15 N71-23809

Mechanical function generators with potentiometer as sensing element  
[NASA-CASE-XAC-00001] c15 N71-28952

**POTTING COMPOUNDS**

Removable potting compound for instrument shock protection  
[NASA-CASE-XLA-00482] c15 N70-36409

Flexible, repairable, pottable composition for encapsulating electric connectors  
[NASA-CASE-XGS-05180] c18 N71-25881

Thermally conductive polymer for potting electrical components  
[NASA-CASE-GSC-11304-1] c06 N72-21105

**POWDER (PARTICLES)**

A system for concurrently delivering a stream of powdered fuel and a stream of powdered oxidizer to a combustion chamber for a reaction motor  
[NASA-CASE-MFS-23904-1] c20 N79-13077

**POWDER METALLURGY**

Freeze casting of metal ceramic and refractory compound powders into plastic slips  
[NASA-CASE-XLE-00106] c15 N71-16076

Production method for manufacturing porous tungsten bodies from tungsten powder particles  
[NASA-CASE-XNP-04339] c17 N71-29137

Dry electrode manufacture, using silver powder with cement  
[NASA-CASE-PRC-10029-2] c05 N72-25121

Grinding mixtures of powdered metals and inert fillers for conversion to halide  
[NASA-CASE-LEW-10450-1] c15 N72-25448

Superalloys from prealloyed powders at high temperatures  
[NASA-CASE-LEW-10805-1] c15 N73-13465

Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c26 N74-10521

Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c37 N74-13179

Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c27 N76-15311

## POWER AMPLIFIERS

Characteristics of high power, low distortion, alternating current power amplifier  
[NASA-CASE-LAP-10218-1] c09 N70-34559  
Power supply with automatic power factor conversion system  
[NASA-CASE-XNS-02159] c10 N71-22961  
Solid state broadband stable power amplifier  
[NASA-CASE-XNP-10854] c10 N71-26331  
High efficiency transformerless amplitude modulator coupled to PP power amplifier  
[NASA-CASE-GSC-10668-1] c07 N71-28430  
Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MPS-21616-1] c33 N75-30429

## POWER CONDITIONING

Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254

## POWER EFFICIENCY

Low power drain transistor feedback circuit  
[NASA-CASE-XGS-04999] c09 N69-24317  
Excitation and detection circuitry for flux responsive magnetic head  
[NASA-CASE-XNP-04183] c09 N69-24329  
Increasing available power per unit area in ion rocket engine by increasing beam density  
[NASA-CASE-XLE-00519] c28 N70-41576  
Absorbing gas reactivity control system for minimizing power distribution and perturbation in nuclear reactors  
[NASA-CASE-XLE-04599] c22 N72-20597  
Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c15 N75-13007  
Improved power factor control system for ac induction motors  
[NASA-CASE-MPS-23988-1] c33 N79-25315

## POWER GAIN

Serrodyne traveling wave tube reentrant amplifier for synchronous communication satellites operating at microwave frequencies  
[NASA-CASE-XGS-01022] c07 N71-16088  
Switching circuit for control of cathode ray tube beam with fast rise time for output signal  
[NASA-CASE-KSC-10647-1] c10 N72-31273

## POWER LIMITERS

Monostable multivibrator for conserving power in spacecraft systems  
[NASA-CASE-GSC-10082-1] c10 N72-20221

## POWER LINES

Patent data on terminal insert connector for flat electric cables  
[NASA-CASE-XNP-00324] c09 N70-34596  
Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c33 N75-19524  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193

## POWER SERIES

Describing circuit for obtaining sum of squares of numbers  
[NASA-CASE-XGS-04765] c08 N71-18693  
Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c32 N77-14292

## POWER SPECTRA

Method and apparatus for high resolution power spectrum analysis  
[NASA-CASE-NPO-10748] c08 N72-20177

## POWER SUPPLIES

Tape recorder designed for low power consumption and resistance to operational failure under high stress conditions  
[NASA-CASE-XGS-08259] c14 N71-23698  
Current dependent variable inductance for input filter chokes of ac or dc power supplies  
[NASA-CASE-ERC-10139] c09 N72-17154  
Performance of ac power supply developed for CO<sub>2</sub> laser system  
[NASA-CASE-GSC-11222-1] c16 N73-32391  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c33 N76-16332  
Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c03 N69-21330  
Power control switching circuit using low voltage semiconductor controlled rectifiers

for high voltage isolation  
[NASA-CASE-XNP-02713] c10 N69-39888  
Increasing power conversion efficiency of electronic amplifiers by power supply switching  
[NASA-CASE-XNS-00945] c09 N71-10798  
Electric power system utilizing thermionic plasma diodes in parallel and heat pipes as cathodes  
[NASA-CASE-XMP-05843] c03 N71-11055  
Pulsed energy power system for application of combustible gases to turbine controlling ac voltage generator  
[NASA-CASE-MSC-13112] c03 N71-11057  
Data processor having multiple sections activated at different times by selective power coupling to sections  
[NASA-CASE-XGS-04767] c08 N71-12494  
Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
[NASA-CASE-MPS-20333] c09 N71-13486  
Design, development, and operating principles of power supply with starting circuit which is independent of voltage regulator  
[NASA-CASE-XNS-01991] c09 N71-21449  
Power supply with automatic power factor conversion system  
[NASA-CASE-XNS-02159] c10 N71-22961  
Electric circuit for reversing direction of current flow  
[NASA-CASE-XNP-00952] c10 N71-23271  
Power supply with overload protection for series stage transistor  
[NASA-CASE-XNS-00913] c10 N71-23543  
Automatic power supply circuit design for driving inductive loads and minimizing power consumption including solenoid example  
[NASA-CASE-NPO-10716] c09 N71-24892  
Unsaturating magnetic core transformer design with warning signal for electrical power processing equipment  
[NASA-CASE-ERC-10125] c09 N71-24893  
Device for monitoring voltage by generating signal when voltages drop below predetermined value  
[NASA-CASE-KSC-10020] c10 N71-27338  
Power point tracker for maintaining optimal output voltage of power source  
[NASA-CASE-GSC-10376-1] c14 N71-27407  
Microwave power divider for providing variable output power to output waveguide in fixed waveguide system  
[NASA-CASE-NPO-11031] c07 N71-33606  
Circuit for monitoring power supply by ripple current indication  
[NASA-CASE-KSC-10162] c09 N72-11225  
Dc to ac to dc converter with transistor driven synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c09 N72-25253  
LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MPS-21698-1] c33 N74-26732  
Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MPS-22342-1] c33 N75-30428  
The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c33 N77-10428  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c73 N78-28913  
Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179

## PRECESSION

Dynamic precession damping of spin-stabilized vehicles by using rate gyroscope and angular accelerometer  
[NASA-CASE-XLA-01989] c21 N70-34295

## PRECIPITATION (CHEMISTRY)

Production of pure metals  
[NASA-CASE-LEW-10906-1] c25 N74-30502

## PRECISION

Precision stepping drive device using cam disk  
[NASA-CASE-MPS-14772] c15 N71-17692  
Method and apparatus for precision sizing and joining of large diameter tubes by bulging or constricting overlapping ends

- [ NASA-CASE-XMP-05114-2 ] c15 N71-26148
- PREFLIGHT OPERATIONS**  
Automatic balancing device for use on frictionless supported attitude-controlled test platforms  
[ NASA-CASE-LAR-10774 ] c10 N71-13545
- PRELAUNCH TESTS**  
Low loss parasitic probe antenna for prelaunch tests of spacecraft antennas  
[ NASA-CASE-XKS-09348 ] c09 N71-13521  
Digital computer system for automatic prelaunch checkout of spacecraft  
[ NASA-CASE-XKS-08012-2 ] c31 N71-15566
- PREPOLYMERS**  
Carboxyl terminated polyester prepolymers and foams produced from prepolymers and materials  
[ NASA-CASE-NPO-10596 ] c06 N71-25929  
Structural wood panels with improved fire resistance --- using prepolymers and hexamethylenetetramine  
[ NASA-CASE-ARC-11174-1 ] c24 N78-28178  
Polyimide prepreg material having improved tack retention --- polyimide-graphite fiber composites  
[ NASA-CASE-LEW-12933-1 ] c23 N79-24061
- PRESSES**  
Hydrostatic extrusion of refractory materials using simple press  
[ NASA-CASE-NPO-10811 ] c15 N71-34425
- PRESSURE**  
Strain gage mounting assembly  
[ NASA-CASE-NPO-13170-1 ] c35 N76-14430  
Thermal barrier pressure seal  
[ NASA-CASE-MSC-18134-1 ] c37 N79-17225
- PRESSURE CHAMBERS**  
Triggering system for electric arc driven impulse wind tunnel  
[ NASA-CASE-XMP-00411 ] c11 N70-36913  
Whole body measurement systems --- for weightlessness simulation  
[ NASA-CASE-MSC-13972-1 ] c52 N74-10975  
Accumulator  
[ NASA-CASE-MFS-19287-1 ] c34 N77-30399  
Safety shield for vacuum/pressure chamber viewing port  
[ NASA-CASE-GSC-12513-1 ] c09 N79-32217
- PRESSURE DISTRIBUTION**  
Piston device for producing known constant positive pressure within lungs by using thoracic muscles  
[ NASA-CASE-XMS-01615 ] c05 N70-41329  
Preventing pressure buildup in electrochemical cells by reacting palladium oxide with evolved hydrogen  
[ NASA-CASE-XGS-01419 ] c03 N70-41864  
Accumulator  
[ NASA-CASE-MFS-19287-1 ] c34 N77-30399
- PRESSURE DROP**  
Leak detector  
[ NASA-CASE-MFS-21761-1 ] c35 N75-15931
- PRESSURE EFFECTS**  
System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[ NASA-CASE-NPO-13138-1 ] c33 N74-17927  
Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[ NASA-CASE-LAR-10782-2 ] c31 N75-13111  
Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[ NASA-CASE-MFS-19193-1 ] c37 N75-19686  
Fluid pressure balanced seal  
[ NASA-CASE-XGS-01286-1 ] c37 N79-33469
- PRESSURE GAGES**  
Differential pressure cell insensitive to changes in ambient temperature and extreme overload  
[ NASA-CASE-XAC-00042 ] c14 N70-34816  
Blood pressure measuring system for separately recording dc and ac pressure signals of Korotkoff sounds  
[ NASA-CASE-XMS-06061 ] c05 N71-23317  
Control system for pressure balance device used in calibrating pressure gages  
[ NASA-CASE-XMP-04134 ] c14 N71-23755  
Improved McLeod gage for pressure measurement  
[ NASA-CASE-XAC-04458 ] c14 N71-24232  
Ultrahigh vacuum gauge with two collector electrodes  
[ NASA-CASE-LAR-02743 ] c14 N73-32324  
Gas ion laser construction for electrically isolating the pressure gauge thereof  
[ NASA-CASE-MFS-22597 ] c36 N78-17366
- PRESSURE GRADIENTS**  
Positive displacement flowmeter for measuring extremely low flows of fluid with self calibrating features  
[ NASA-CASE-XMP-02822 ] c14 N70-41994
- PRESSURE MEASUREMENTS**  
Design and development of inertia diaphragm pressure transducer  
[ NASA-CASE-XAC-02981 ] c14 N71-21072  
Design and development of pressure sensor for measuring differential pressures of few pounds per square inch  
[ NASA-CASE-XMP-01974 ] c14 N71-22752  
Improved McLeod gage for pressure measurement  
[ NASA-CASE-XAC-04458 ] c14 N71-24232  
Coherent light beam device and method for measuring gas density in vacuum chambers  
[ NASA-CASE-XER-11203 ] c14 N71-28994  
Design, development, and characteristics of pressure and temperature sensor operating immersed in fluid flow  
[ NASA-CASE-LEW-10281-1 ] c14 N72-17327  
Calibration of vacuum gauges for measuring total and partial pressures in ultrahigh vacuum region  
[ NASA-CASE-XGS-07752 ] c14 N73-30390  
Absolute pressure measuring device for measuring gas density level in high vacuum range  
[ NASA-CASE-LAR-10000 ] c14 N73-30394  
Wind tunnel model and method  
[ NASA-CASE-LAR-10812-1 ] c09 N74-17955  
Static pressure orifice system testing and apparatus  
[ NASA-CASE-LAR-12269-1 ] c09 N78-33123  
Indicated mean-effective pressure instrument  
[ NASA-CASE-LEW-12661-1 ] c35 N79-14345  
An improved system for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[ NASA-CASE-FRC-11024-1 ] c02 N79-17797  
High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
[ NASA-CASE-LAR-12375-1 ] c32 N79-24203
- PRESSURE REDUCTION**  
Relief valve to permit slow and fast bleeding rates at difference pressure levels  
[ NASA-CASE-XMS-05894-1 ] c15 N69-21924  
Sealed electric storage battery with gas manifold interconnecting each cell  
[ NASA-CASE-XNP-03378 ] c03 N71-11051  
Depressurization of arc lamps  
[ NASA-CASE-NPO-10790-1 ] c33 N77-21316  
A method of prepurifying metallurgical grade silicon employing reduced pressure atmospheric control  
[ NASA-CASE-NPO-14474-1 ] c26 N78-27255
- PRESSURE REGULATORS**  
Pressure regulating system with high pressure fluid source, adapted to maintain constant downstream pressure  
[ NASA-CASE-XNP-00450 ] c15 N70-38603  
Pulmonary resuscitation method and apparatus with adjustable pressure regulator  
[ NASA-CASE-XMS-01115 ] c05 N70-39922  
Structural design of high pressure regulator valve  
[ NASA-CASE-XNP-00710 ] c15 N71-10778  
Space suit with pressure-volume compensator system  
[ NASA-CASE-XLA-05332 ] c05 N71-11194  
Portable environmental control and life support system for astronaut in and out of spacecraft  
[ NASA-CASE-XMS-09632-1 ] c05 N71-11203  
Antibacklash circuit for hydraulic drive system  
[ NASA-CASE-XNP-01020 ] c03 N71-12260  
High impact pressure regulator having minimum number of lightweight movable elements  
[ NASA-CASE-NPO-10175 ] c14 N71-18625  
Pressure regulator for space suit worn underwater to simulate space environment for testing and experimentation  
[ NASA-CASE-MFS-20332 ] c05 N72-20097  
Underwater space suit pressure control regulator  
[ NASA-CASE-MFS-20332-2 ] c05 N73-25125  
Combined pressure regulator and shutoff valve  
[ NASA-CASE-NPO-13201-1 ] c37 N75-15050

Pressure modulating valve  
[NASA-CASE-WSC-14905-1] c37 N77-28487

Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c34 N78-25351

Pressure control valve --- connecting pressure vessel and pressure source  
[NASA-CASE-ARC-11251-1] c37 N79-30553

Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c37 N79-33468

**PRESSURE SENSORS**

Fabrication of pressure-telemetry transducers  
[NASA-CASE-XP-09752] c14 N69-21541

Pressure probe for sensing ambient static air pressures  
[NASA-CASE-XLA-00481] c14 N70-36824

Ambient atmospheric pressure sensing device for determining altitude of flight vehicles  
[NASA-CASE-XLA-00128] c15 N70-37925

Dynamic sensor for gas pressure or density measurement  
[NASA-CASE-XAC-02877] c14 N70-41681

Design and development of inertia diaphragm pressure transducer  
[NASA-CASE-XAC-02981] c14 N71-21072

Design and development of pressure sensor for measuring differential pressures of few pounds per square inch  
[NASA-CASE-XMF-01974] c14 N71-22752

Combination pressure transducer-calibrator assembly for measuring fluid  
[NASA-CASE-XP-01660] c14 N71-23036

Pressure sensor network for measuring liquid dynamic response in flight including fuel tank acceleration, liquid slosh amplitude, and fuel depth monitoring  
[NASA-CASE-XLA-05541] c12 N71-26387

Miniature electromechanical junction transducer operating on piezoelectric effect and utilizing epoxy for stress coupling component  
[NASA-CASE-ERC-10087] c14 N71-27334

Method for making pressurized meteoroid penetration detector panels  
[NASA-CASE-XLA-08916] c15 N71-29018

Design, development, and characteristics of pressure and temperature sensor operating immersed in fluid flow  
[NASA-CASE-LEW-10281-1] c14 N72-17327

Pressure transducer for systems for measuring forces of compression  
[NASA-CASE-NPO-10832] c14 N72-21405

Pressure operated electrical switch responsive to pressure decrease after pressure increase  
[NASA-CASE-LAR-10137-1] c09 N72-22204

Wide range dynamic pressure sensor with vibrating diaphragm for measuring density and pressure of gaseous environment  
[NASA-CASE-ARC-10263-1] c14 N72-22438

Development of differential pressure control system using motion of mechanical diaphragms to operate electric switch  
[NASA-CASE-MFS-14216] c14 N73-13418

Pressurized panel meteoroid detector  
[NASA-CASE-XLA-08916-2] c14 N73-28487

System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c35 N74-13132

Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c35 N74-32878

Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c54 N75-13531

Leak detector  
[NASA-CASE-MFS-21761-1] c35 N75-15931

Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c35 N75-33368

Static pressure probe  
[NASA-CASE-LAR-11552-1] c35 N76-14429

Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c33 N76-21390

Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c52 N76-29896

Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407

Pressure transducer --- using a nonomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c35 N78-17359

Electronically scanned pressure sensor module with in SITU calibration capability  
[NASA-CASE-LAR-12230-1] c35 N79-14347

**PRESSURE SUITS**

Helmet and torso tiedown mechanism for shortening pressure suits upon inflation  
[NASA-CASE-XMS-00784] c05 N71-12335

Design and development of flexible joint for pressure suits  
[NASA-CASE-XMS-09636] c05 N71-12344

Cord restraint system for pressure suit joints  
[NASA-CASE-XMS-09635] c05 N71-24623

Development of improved convolute section for pressurized suits to provide high degree of mobility in response to minimum of applied torque  
[NASA-CASE-XMS-09637-1] c05 N71-24730

Fabrication of root cord restrained fabric suit sections from sheets of fabric  
[NASA-CASE-MSC-12398] c05 N72-20098

Restraint torso for increased mobility and reduced physiological effects while wearing pressurized suits  
[NASA-CASE-MSC-12397-1] c05 N72-25119

Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c54 N74-32546

Walking boot assembly  
[NASA-CASE-ARC-11101-1] c54 N78-17675

**PRESSURE SWITCHES**

Reinforcing beam system for highly flexible diaphragms in valves or pressure switches  
[NASA-CASE-XP-01962] c32 N70-41370

Calibrating pressure switch  
[NASA-CASE-XMF-04494-1] c33 N79-33392

**PRESSURE VESSELS**

Liquid rocket systems for propulsion and control of spacecraft  
[NASA-CASE-XP-00610] c28 N70-36910

Thin walled pressure test vessel using low-melting alloy-filled joint to attach shell to heads  
[NASA-CASE-XLE-04677] c15 N71-10577

Control of gas flow from pressurized vessel by thermal expansion of metal plug  
[NASA-CASE-NPO-10298] c12 N71-17661

Method and apparatus for inducing compressive stresses in pressure vessel to prevent stress corrosion  
[NASA-CASE-XLA-07390] c15 N71-18616

Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093

Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c38 N76-28563

Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c35 N78-10428

Pressure control valve --- connecting pressure vessel and pressure source  
[NASA-CASE-ARC-11251-1] c37 N79-30553

**PRESSURE WELDING**

Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c37 N74-21055

**PRESSURIZING**

Restraining mechanism  
[NASA-CASE-MSC-13054] c54 N78-17677

**PRESTRESSING**

Prestressed rocket nozzle with ceramic inner rings and refractory metal outer rings  
[NASA-CASE-XP-02888] c18 N71-21068

**PRETREATMENT**

Anti-wettable materials brazing processes using titanium and zirconium for surface pretreatment  
[NASA-CASE-XMS-03537] c15 N69-21471

**PRINTED CIRCUITS**

Electrical feedthrough connection for printed circuit boards  
[NASA-CASE-XMF-01483] c14 N69-27431

Electric connector for printed cable to printed cable or to printed board  
[NASA-CASE-XMF-00369] c09 N70-36494

Electrical connection for printed circuits on common board, using bellows principle in rivet  
[NASA-CASE-XP-05082] c15 N70-41960

Electrical spot terminal assembly for printed circuit boards  
[NASA-CASE-NPO-10034] c15 N71-17685

- Solder coating process for printed copper circuit protection  
[NASA-CASE-XMP-01599] c09 N71-20705
- Handling tool for printed circuit cards  
[NASA-CASE-MFS-20453] c15 N71-29133
- Development and characteristics of polyimide impregnated laminates with fiberglass cloth backing for application as printed circuit boards  
[NASA-CASE-MFS-20408] c18 N73-12604
- Techniques for packaging and mounting printed circuit boards  
[NASA-CASE-MFS-21919-1] c10 N73-25243
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c33 N74-26977
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
[NASA-CASE-LAR-11709-1] c37 N76-27567
- Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c37 N77-27400
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c44 N79-17314
- PRINTING**  
Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LBW-12775-1] c44 N79-11468
- PRINTOUTS**  
Handling tool for printed circuit cards  
[NASA-CASE-MFS-20453] c15 N71-29133
- PRISMS**  
Interferometer prism and control system for precisely determining direction to remote light source  
[NASA-CASE-ARC-10278-1] c14 N73-25463
- Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c73 N78-32848
- PROBES**  
Method and apparatus for connecting two spacecraft with probe of one inserted in rocket engine nozzle of other spacecraft  
[NASA-CASE-MFS-11133] c31 N71-16222
- Development of droplet monitoring probe for use in analysis of droplet propagation in mixed-phase fluid stream  
[NASA-CASE-NPO-10985] c14 N73-20478
- Subcutaneous channeling probe  
[NASA-CASE-ARC-11091-1] c52 N79-11684
- PRODUCT DEVELOPMENT**  
Using molds for fabricating individual fluid circuit components  
[NASA-CASE-XLA-07829] c15 N72-16329
- Process for developing filament reinforced plastic tubes used in research and development programs  
[NASA-CASE-LAR-10203-1] c15 N72-16330
- Simplified technique and device for producing industrial grade synthetic diamonds  
[NASA-CASE-MFS-20698-2] c15 N73-19457
- High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c36 N75-27364
- Ceramic fiber insulating material and methods of producing same --- product development of foams for thermal insulation  
[NASA-CASE-NSC-14795-1] c27 N76-15314
- Method and apparatus for producing concentric hollow spheres  
[NASA-CASE-NPO-14596-1] c31 N79-24197
- PRODUCTION ENGINEERING**  
Standard coupling design for mass production  
[NASA-CASE-XMS-02532] c15 N70-41808
- Fabrication of curved reflector segments for solar mirror  
[NASA-CASE-XLE-08917] c15 N71-15597
- Production of barium fluoride-calcium fluoride composite lubricant for bearings or seals  
[NASA-CASE-XLE-08511-2] c18 N71-16105
- Fabrication of sintered impurity semiconductor brushes for electrical energy transfer  
[NASA-CASE-XMP-01016] c26 N71-17818
- Technique for making foldable, inflatable, plastic honeycomb core panels for use in building and bridge structures, light and radio wave reflectors, and spacecraft  
[NASA-CASE-XLA-03492] c15 N71-22713
- Multilayer porous refractory metal ionizer design with thick, porous, large-grain substrates and thin, porous micron-grain substrates  
[NASA-CASE-XNP-04338] c17 N71-23046
- Permanently magnetized ion engine casing construction for use in spacecraft propulsion systems  
[NASA-CASE-XNP-06942] c28 N71-23293
- Dry electrode design with wire sandwiched between two flexible conductive discs for monitoring physiological responses  
[NASA-CASE-PRC-10029] c09 N71-24618
- Production method of star tracking reticles for transmitting in visible and near ultraviolet regions  
[NASA-CASE-GSC-11188-1] c14 N73-32320
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c37 N75-26371
- Strong thin membrane structure  
[NASA-CASE-NPO-14021-1] c27 N77-32313
- A method and means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c76 N79-10917
- An improved apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c76 N79-10918
- Solar cell collector and method for producing same  
[NASA-CASE-LBW-12552-2] c44 N79-11472
- Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c76 N79-14906
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c44 N79-17314
- PROJECTILES**  
Self-obturator gas-operated launcher for launching projectiles in decontaminated medium  
[NASA-CASE-NPO-11013] c11 N72-22247
- Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c75 N76-14931
- PROJECTION**  
Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- PROJECTIVE GEOMETRY**  
Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c35 N78-17357
- PROJECTORS**  
Optical projector system for establishing optimum arrangement of instrument displays in aircraft, spacecraft, other vehicles, and industrial instrument consoles  
[NASA-CASE-XNP-03853] c23 N71-21882
- System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c74 N79-20856
- PROPAGATION MODES**  
Dual waveguide mode source for controlling amplitudes of two modes  
[NASA-CASE-XNP-03134] c07 N71-10676
- PROPELLANT ACTUATED INSTRUMENTS**  
A pressure limiting propellant actuating system  
[NASA-CASE-NSC-18179-1] c20 N78-31162
- PROPELLANT ADDITIVES**  
Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c28 N79-14228
- PROPELLANT BINDERS**  
Chemical process for production of polyisobutylene compounds and application as solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710
- PROPELLANT CASTING**  
Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c28 N77-10213
- Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c20 N77-17143
- PROPELLANT CHEMISTRY**  
Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c28 N78-31255
- PROPELLANT COMBUSTION**  
Spherical solid propellant rocket engine having abrupt burnout

- [NASA-CASE-XHQ-01897] c28 N70-35381  
 Rocket combustion chamber stability by  
 controlling transverse instability during  
 propellant combustion  
 [NASA-CASE-XLE-04603] c33 N71-21507
- PROPELLANT DECOMPOSITION**  
 Unit for generating thrust from catalytic  
 decomposition of hydrogen peroxide, for high  
 altitude aircraft or spacecraft reaction control  
 [NASA-CASE-XMS-00583] c28 N70-38504
- PROPELLANT GRAINS**  
 Grain configuration for solid propellant rocket  
 engines  
 [NASA-CASE-XGS-03556] c27 N70-35534
- PROPELLANT TANKS**  
 Liquid rocket systems for propulsion and control  
 of spacecraft  
 [NASA-CASE-XNP-00610] c28 N70-36910  
 Slosh damping method for liquid rocket  
 propellant tanks  
 [NASA-CASE-XMP-00658] c12 N70-38997  
 Expulsion and measuring device for determining  
 quantity of liquid in tank under conditions of  
 weightlessness  
 [NASA-CASE-XMS-01546] c14 N70-40233  
 Collapsible auxiliary tank for restarting liquid  
 propellant rocket motors under zero gravity  
 [NASA-CASE-XNP-01390] c28 N70-41275  
 Liquid propellant tank design with semitoroidal  
 bulkhead  
 [NASA-CASE-XMP-01899] c31 N70-41948  
 Microleak detector mounted on weld seam of  
 propellant tank of launch vehicle  
 [NASA-CASE-XMP-02307] c14 N71-10779  
 Fabrication of filament wound propellant tank  
 for cryogenic storage  
 [NASA-CASE-XLE-03803-2] c15 N71-17651  
 Slosh and swirl alleviator for liquid propellant  
 tanks during transport and flight  
 [NASA-CASE-XLA-05749] c15 N71-19569  
 Two phase fluid pressurization system for  
 propellant tank  
 [NASA-CASE-MSC-12390] c27 N71-29155  
 Space vehicle system  
 [NASA-CASE-MSC-12561-1] c18 N76-17185  
 Passive propellant system  
 [NASA-CASE-MFS-23642-2] c20 N78-27176
- PROPELLANT TRANSFER**  
 Two component valve assembly for cryogenic  
 liquid transfer regulation  
 [NASA-CASE-XLE-00397] c15 N70-36492  
 Apparatus for cryogenic liquid storage with heat  
 transfer reduction and for liquid transfer at  
 zero gravity conditions  
 [NASA-CASE-XLE-00345] c15 N70-38020  
 Continuous variation of propellant flow and  
 thrust by application of liquid foam flow  
 theory to injection orifice  
 [NASA-CASE-XLE-00177] c28 N70-40367  
 Method and feed system for separating and  
 orienting liquid and vapor phases of liquid  
 propellants in zero gravity environment  
 [NASA-CASE-XLE-01182] c27 N71-15635  
 Electron bombardment ion rocket engine with  
 improved propellant introduction system  
 [NASA-CASE-XLE-02066] c28 N71-15661  
 Rocket combustion chamber stability by  
 controlling transverse instability during  
 propellant combustion  
 [NASA-CASE-XLE-04603] c33 N71-21507  
 Vapor-liquid separator design with vapor driven  
 pump for separated liquid pumping for  
 application in propellant transfer  
 [NASA-CASE-XMP-04042] c15 N71-23023  
 Filler valve design for supplying liquid  
 propellants at high pressure to space vehicles  
 [NASA-CASE-XNP-01747] c15 N71-23024  
 Internal labyrinth and shield structure to  
 improve electrical isolation of propellant  
 feed source from ion thruster  
 [NASA-CASE-LEW-10210-1] c28 N71-26781  
 Flexible bellows joint shielding sleeve for  
 propellant transfer pipelines  
 [NASA-CASE-XNP-01855] c15 N71-28937  
 Passive propellant system  
 [NASA-CASE-MFS-23642-2] c20 N78-27176  
 A system for concurrently delivering a stream of  
 powdered fuel and a stream of powdered  
 oxidizer to a combustion chamber for a  
 reaction motor  
 [NASA-CASE-MFS-23904-1] c20 N79-13077
- PROPELLER BLADES**  
 Directed fluid stream for propeller blade  
 loading control  
 [NASA-CASE-XAC-00139] c02 N70-34856
- PROPELLER DRIVE**  
 Method for observing the features characterizing  
 the surface of a land mass  
 [NASA-CASE-PRC-11013-1] c05 N79-24979
- PROPORTIONAL CONTROL**  
 Proportional controller for regulating aircraft  
 or spacecraft motion about three axes  
 [NASA-CASE-XAC-03392] c03 N70-41954
- PROPULSION**  
 A speed control device for a heavy duty shaft  
 [NASA-CASE-NPO-14170] c37 N78-17391
- PROPULSION SYSTEM CONFIGURATIONS**  
 Electrothermal rocket engine using resistance  
 heated heat exchanger  
 [NASA-CASE-XLE-00267] c28 N70-33356  
 Grain configuration for solid propellant rocket  
 engines  
 [NASA-CASE-XGS-03556] c27 N70-35534  
 Shrouded composite propulsion system configuration  
 [NASA-CASE-XLA-01043] c28 N71-10780  
 Electrostatic microthrust propulsion system with  
 annular slit colloid thruster  
 [NASA-CASE-GSC-10709-1] c28 N71-25213  
 Method and apparatus for pressurizing propellant  
 tanks used in propulsion motor feed system  
 [NASA-CASE-XNP-00650] c27 N71-28929  
 A system for concurrently delivering a stream of  
 powdered fuel and a stream of powdered  
 oxidizer to a combustion chamber for a  
 reaction motor  
 [NASA-CASE-MFS-23904-1] c20 N79-13077
- PROPULSION SYSTEM PERFORMANCE**  
 Variable mixer propulsion cycle  
 [NASA-CASE-LEW-12917-1] c07 N78-18067
- PROSTHETIC DEVICES**  
 Prosthetic limb with tactile sensing device  
 [NASA-CASE-MFS-16570-1] c05 N73-32013  
 Orthotic arm joint --- for use in mechanical arms  
 [NASA-CASE-MFS-21611-1] c54 N75-12616  
 Actuator device for artificial leg  
 [NASA-CASE-MFS-23225-1] c52 N77-14735  
 Aldehyde-containing urea-adsorbing polysaccharides  
 [NASA-CASE-NPO-13620-1] c27 N77-30236  
 Potational joint assembly for the prosthetic leg  
 [NASA-CASE-KSC-11004-1] c54 N77-30749  
 Mechanical energy storage device for hip  
 disarticulation  
 [NASA-CASE-ARC-10916-1] c52 N78-10686  
 Method of adhering bone to a rigid substrate  
 using a graphite fiber reinforced bone cement  
 [NASA-CASE-NPO-13764-1] c27 N78-17215  
 Drop foot corrective device  
 [NASA-CASE-LAR-12259-1] c54 N78-18762  
 Prosthetic urinary sphincter  
 [NASA-CASE-MFS-23717-1] c52 N79-14756  
 Compact artificial hand  
 [NASA-CASE-NPO-13906-1] c54 N79-24652  
 Prosthesis coupling  
 [NASA-CASE-KSC-11069-1] c52 N79-26772
- PROTECTION**  
 Camera protecting device for use in  
 photographing rocket engine nozzles or other  
 engine components  
 [NASA-CASE-NPO-10174] c14 N71-18465  
 Fiber modified polyurethane foam for ballistic  
 protection  
 [NASA-CASE-ARC-10714-1] c27 N76-15310
- PROTECTIVE CLOTHING**  
 Conditioning tanned sharkskin for use as  
 abrasive resistant clothing  
 [NASA-CASE-XMS-09691-1] c18 N71-15545  
 One piece human garment for use as contamination  
 proof garment  
 [NASA-CASE-MSC-12206-1] c05 N71-17599  
 Thermoregulating with cooling flow pipe network  
 for humans  
 [NASA-CASE-XMS-10269] c05 N71-24147  
 Development of improved convolute section for  
 pressurized suits to provide high degree of  
 mobility in response to minimum of applied  
 torque  
 [NASA-CASE-XMS-09637-1] c05 N71-24730

- Voice operated receiving and transmitting system for use in protective suits  
[NASA-CASE-KSC-10164] c07 N71-33108
- Protective garment ventilation system  
[NASA-CASE-XMS-04928] c54 N78-17679
- PROTECTIVE COATINGS**
- Process permitting application of synthetic resin coating to irregular-shaped objects at ambient temperature  
[NASA-CASE-XNP-06508] c18 N69-39895
- Ultraviolet radiation resistant alkali-metal silicate coatings for temperature control of spacecraft  
[NASA-CASE-XGS-04119] c18 N69-39979
- Application techniques for protecting materials during salt bath brazing  
[NASA-CASE-XLE-00046] c15 N70-33311
- Removable potting compound for instrument shock protection  
[NASA-CASE-XLA-00482] c15 N70-36409
- Passive thermal control coating on aluminum foil laminate for inflatable spacecraft surfaces  
[NASA-CASE-XLA-01291] c33 N70-36617
- Using ethylene oxide in preparation of sterilized solid rocket propellants and encapsulating materials  
[NASA-CASE-XNP-01749] c27 N70-41897
- Fireproof potassium silicate coating composition, insoluble in water after application  
[NASA-CASE-GSC-10072] c18 N71-14014
- Development of bacteriostatic conformal coating and methods of application  
[NASA-CASE-GSC-10007] c18 N71-16046
- Vapor deposited laminated nitride-silicon coating for corrosion prevention of carbonaceous surfaces  
[NASA-CASE-XLA-00284] c15 N71-16075
- Flame or plasma spraying for molybdenum coating of carbon or graphite surfaces to prevent oxidative corrosion  
[NASA-CASE-XLA-00302] c15 N71-16077
- Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XNP-02507] c31 N71-17679
- Development of thermal insulation system for wing and control surfaces of hypersonic aircraft and reentry vehicles  
[NASA-CASE-XLA-00892] c33 N71-17897
- Bismuth and lead spraying coatings for gas bearings in aerospace engineering  
[NASA-CASE-XGS-02011] c15 N71-20739
- Composition and production method of alkali metal silicate paint with ultraviolet reflection properties  
[NASA-CASE-XGS-04799] c18 N71-24183
- Method for treating metal surfaces to prevent secondary electron transmission  
[NASA-CASE-XNP-09469] c24 N71-25555
- Development of solid state polymer coating for obtaining thermal balance in spacecraft components  
[NASA-CASE-XLA-01745] c33 N71-28903
- Method for coating through-holes in ceramic substrates used in fabricating miniaturized electronic circuits  
[NASA-CASE-XMP-05999] c15 N71-29032
- Zinc dust formulation for abrasion resistant steel coatings  
[NASA-CASE-GSC-10361-1] c18 N72-23581
- Development of process for constructing protective covers for solar cells  
[NASA-CASE-GSC-11514-1] c03 N72-24037
- Resin for protecting p-n semiconductor junction surface  
[NASA-CASE-BRC-10339-1] c18 N73-30532
- Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c27 N74-17283
- Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c27 N76-16229
- High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c27 N77-13217
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170
- Abrasion resistant coatings for plastic surfaces  
[NASA-CASE-ARC-10915-3] c24 N77-24200
- Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c24 N78-14096
- Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c24 N78-24290
- Flame retardant formulations and products produced therefrom  
[NASA-CASE-MSC-16307-1] c25 N78-27232
- Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c27 N78-32260
- Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c37 N78-32434
- Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMP-02526-1] c27 N79-21190
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100
- PROTECTORS**
- Load cell protection device using spring-loaded breakaway mechanism  
[NASA-CASE-XMS-06782] c32 N71-15974
- Payload soft landing system using stowable gas bag  
[NASA-CASE-XLA-09881] c31 N71-16085
- PROTEINS**
- Protein sterilization of firefly luciferase without denaturation  
[NASA-CASE-GSC-10225-1] c06 N73-27086
- PROTON FLUX DENSITY**
- Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410
- PSEUDONOISE**
- System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
[NASA-CASE-NPO-10214] c10 N71-26577
- Linear shift register with feedback logic for generating pseudonoise linear recurring binary sequences  
[NASA-CASE-NPO-11406] c08 N73-12175
- Multicarrier communications system for transmitting modulated signals from single transmitter  
[NASA-CASE-NPO-11548] c07 N73-26118
- Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c35 N75-21582
- PULLEYS**
- Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
[NASA-CASE-XMS-04545] c15 N71-22878
- Tensile strength testing device having pulley guides for exerting multiple forces on test specimen  
[NASA-CASE-INP-05634] c15 N71-24834
- Belt for coupling driven members  
[NASA-CASE-GSC-12276-1] c37 N78-32429
- PULMONARY CIRCULATION**
- Pulmonary resuscitation method and apparatus with adjustable pressure regulator  
[NASA-CASE-XMS-01115] c05 N70-39922
- PULMONARY FUNCTIONS**
- Piston device for producing known constant positive pressure within lungs by using thoracic muscles  
[NASA-CASE-XMS-01615] c05 N70-41329
- PULSE AMPLITUDE**
- Monitoring system for signal amplitude ranges over predetermined time interval  
[NASA-CASE-XMS-04061-1] c09 N69-39885
- Analog to digital converter for converting pulses to frequencies  
[NASA-CASE-XLA-00670] c08 N71-12501
- Electrical testing apparatus for detecting amplitude and width of transient pulse  
[NASA-CASE-XMP-06519] c09 N71-12519
- Analog to digital converter circuit for pulse height analysis  
[NASA-CASE-XNP-00477] c08 N73-28045
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c33 N77-26387

- Speech analyzer  
[NASA-CASE-GSC-11899-1] c32 N77-30309
- PULSE AMPLITUDE MODULATION**  
Voltage controlled oscillators and pulse amplitude modulation for signal ratio system  
[NASA-CASE-XMF-04367] c09 N71-23545  
Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c36 N79-21336
- PULSE CODE MODULATION**  
Adaptive compression signal processor for PCM communication systems  
[NASA-CASE-XLA-03076] c07 N71-11266  
Bipolar phase detector and corrector for split phase PCM data signals  
[NASA-CASE-XGS-01590] c07 N71-12392  
System for recording and reproducing PCM data from data stored on magnetic tape  
[NASA-CASE-XGS-01021] c08 N71-21042  
Frequency shift keying apparatus for use with pulse code modulation data transmission system  
[NASA-CASE-XGS-01537] c07 N71-23405  
Data reduction and transmission system for TV PCM data  
[NASA-CASE-NPO-11243] c07 N72-20154  
Pulse code modulated data from frequency multiplex communications by digital phase shift or carrier  
[NASA-CASE-NPO-11338] c09 N72-25208  
Bit synchronization of PCM communications signal, without separate synchronization channel by digital correlation  
[NASA-CASE-NPO-11302-1] c07 N73-13149  
Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c32 N74-10132  
Multifunction audio digitizer --- producing direct delta and pulse code modulation  
[NASA-CASE-MSC-13855-1] c35 N74-17885  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c32 N74-20809  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c32 N74-20810  
Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c32 N75-21486  
Compact-bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c33 N76-14371  
Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c32 N76-16249  
Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239
- PULSE COMMUNICATION**  
Phase shift data transmission system with pseudo-noise synchronization code modulated with digital data into single channel for spacecraft communication  
[NASA-CASE-XNP-00911] c08 N70-41961  
Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c32 N77-12239
- PULSE DURATION**  
Frequency to analog converters with unipolar field effect transistor for determining potential charge by pulse duration of input signal  
[NASA-CASE-XNP-07040] c08 N71-12500  
Electrical testing apparatus for detecting amplitude and width of transient pulse  
[NASA-CASE-XMF-06519] c09 N71-12519  
Design and development of variable pulse width multiplier  
[NASA-CASE-XLA-02850] c09 N71-20447  
Device for voltage conversion using controlled pulse widths and arrangements to generate ac output voltage  
[NASA-CASE-MFS-10068] c10 N71-25139  
One shot multivibrator circuit for producing long duration output pulses  
[NASA-CASE-ARC-10137-1] c09 N71-28468  
Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c33 N74-32711
- PULSE DURATION MODULATION**  
Pulse duration modulation multiplier system  
[NASA-CASE-XER-09213] c07 N71-12390  
Variable duration pulse integrator design for integrating pulse duration modulated pulses with elimination of ripple content  
[NASA-CASE-YLA-01219] c10 N71-23084  
Electric motor control system with pulse width modulation for providing automatic null seeking servo  
[NASA-CASE-XMF-05195] c10 N71-24861  
Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418  
Monostable multivibrator for producing output pulse widths with positive feedback NOR gates  
[NASA-CASE-MSC-13492-1] c10 N71-28860  
Load current sensor for series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c09 N72-25249  
Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c33 N79-27394
- PULSE FREQUENCY MODULATION**  
Electric current measuring apparatus design including saturable core transformer and energy storage device to avoid magnetizing current errors from transformer output winding  
[NASA-CASE-XGS-02439] c14 N71-19431  
Digitally controlled frequency synthesizer for pulse frequency modulation telemetry systems  
[NASA-CASE-XGS-02317] c09 N71-23525  
Noninterruptable digital counter circuit design with display device for pulse frequency modulation  
[NASA-CASE-XNP-09759] c08 N71-24891  
Threshold extension device for improving operating performance of frequency modulation demodulators by eliminating click-type noise impulses  
[NASA-CASE-MSC-12165-1] c07 N71-33696  
Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c35 N79-14349
- PULSE GENERATORS**  
High voltage pulse generator for testing flash and ignition limits of nonmetallic materials in controlled atmospheres  
[NASA-CASE-MSC-12178-1] c09 N71-13518  
Interrogator and current driver circuit for combination with transistor flip-flop circuit  
[NASA-CASE-XGS-03058] c10 N71-19547  
Electric circuit for producing high current pulse having fast rise and fall time  
[NASA-CASE-XMS-04919] c09 N71-23270  
Pulse generator for synchronizing or resetting electronic signals without requiring separate external source  
[NASA-CASE-IGS-03632] c09 N71-23311  
Development and characteristics of resettable monostable pulse generator with charge rundown-timing circuit  
[NASA-CASE-GSC-11139] c09 N71-27016  
Pulse generating circuit for operation at very high duty cycles and repetition rates  
[NASA-CASE-XNP-00745] c10 N71-28960  
Pulse coupling circuit with switch between generator and winding  
[NASA-CASE-LEW-10433-1] c09 N72-22197  
Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c38 N74-15395  
Random pulse generator  
[NASA-CASE-MSC-14131-1] c33 N75-19515
- PULSE RADAR**  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c32 N79-26253
- PULSE RATE**  
Circuit for measuring wide range of pulse rates by utilizing high capacity counter  
[NASA-CASE-XNP-06234] c10 N71-27137  
Peak holding circuit for extremely narrow pulses  
[NASA-CASE-MSC-14129-1] c33 N75-18479  
A signal attenuator --- pulse rate sensor circuits  
[NASA-CASE-PRC-11012-1] c33 N78-28339
- PULSED LASERS**  
Repetitively pulsed wavelength selective carbon dioxide laser  
[NASA-CASE-ERC-10178] c16 N71-24832  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c36 N75-19654  
Two wavelength double pulse tunable dye laser  
[NASA-CASE-LAR-12012-1] c36 N77-10517  
Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c36 N77-26477

- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c74 N79-17683
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c36 N79-21336
- PULSED RADIATION**  
Development and characteristics of cyclically operable, optical shutter for use as focal plane shutter for transmitting single radiation pulses  
[NASA-CASE-NPO-10758] c14 N73-14427
- PULSES**  
High resolution radar transmitting system for transmitting optical pulses to targets  
[NASA-CASE-NPO-11426] c07 N73-26119
- PUMP SEALS**  
Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747
- Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c37 N74-10474
- PUMPS**  
Piezoelectric pump for supplying fluid at high frequencies to gyroscope fluid suspension system  
[NASA-CASE-XNP-05429] c26 N71-21824
- Vapor-liquid separator design with vapor driven pump for separated liquid pumping for application in propellant transfer  
[NASA-CASE-XNF-04042] c15 N71-23023
- Automatically reciprocating, high pressure pump for use in spacecraft cryogenic propellants  
[NASA-CASE-XNP-04731] c15 N71-24042
- Development and characteristics of variable displacement fluid pump for transforming hydraulic pressures  
[NASA-CASE-MFS-20830] c15 N71-30028
- Pumping and metering dual piston system and monitor for reaction chamber constituents  
[NASA-CASE-GSC-10218-1] c15 N72-21465
- Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c37 N74-27904
- PUNCHED CARDS**  
Describing device for flagging punched business cards  
[NASA-CASE-XLA-02705] c08 N71-15908
- Handling tool for printed circuit cards  
[NASA-CASE-MFS-20453] c15 N71-29133
- PUNCHES**  
Punch and die device for forming convolution series in thin gage metal hemispheres  
[NASA-CASE-XNP-05297] c15 N71-23811
- PURGING**  
Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015
- Developing high pressure gas purification and filtration system for use in test operations of space vehicles  
[NASA-CASE-MFS-12806] c14 N71-17588
- Fluid transferring system design for purging toxic, corrosive, or noxious fluids and fumes from materials handling equipment for cleansing and accident prevention  
[NASA-CASE-XMS-01905] c12 N71-21089
- Device for back purging thrust engines  
[NASA-CASE-XMS-04826] c28 N71-28849
- Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c31 N78-17238
- PURIFICATION**  
Apparatus and method capable of receiving large quantity of high pressure helium, removing impurities, and discharging at received pressure  
[NASA-CASE-XNF-06888] c15 N71-24044
- Purification apparatus for vaporization and fractional distillation of liquids  
[NASA-CASE-XNP-08124] c15 N71-27184
- Water purification process  
[NASA-CASE-ARC-10643-2] c51 N75-13506
- Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c25 N78-27226
- A method of prepurifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c26 N78-27255
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747
- PURITY**  
Synthesis of high purity dianilinosilanes  
[NASA-CASE-XNF-06409] c06 N71-23230
- PUSH-PULL AMPLIFIERS**  
Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c33 N77-17351
- PYRIDINES**  
Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c27 N78-17214
- PYROGEN**  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275
- PYROLYSIS**  
Pyrolysis system and process --- recovering energy from solid wastes containing hydrocarbons  
[NASA-CASE-MSC-12669-1] c44 N76-16621
- PYROLYTIC GRAPHITE**  
Multislit film cooled pyrolytic graphite rocket nozzle  
[NASA-CASE-XNP-04389] c28 N71-20942
- PYROLYTIC MATERIALS**  
Design, development, and characteristics of ablation structures  
[NASA-CASE-XMS-01816] c33 N71-15623
- PYROMETERS**  
Sensor device with switches for measuring surface recession of charring and noncharring ablators  
[NASA-CASE-XLA-01781] c14 N69-39975
- PYROTECHNICS**  
Energy source with tantalum capacitors in parallel and miniature silver oxide button cells for initiating pyrotechnic devices on spacecraft and rocket vehicles  
[NASA-CASE-LAR-10367-1] c03 N70-26817
- Development and characteristics of squib actuated explosive disconnect for spacecraft release from launch vehicle  
[NASA-CASE-NPO-11330] c33 N73-26958

## Q

- Q SWITCHED LASERS**  
Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 N74-27425
- Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c36 N77-32478
- Q VALUES**  
Design of active RC network capable of operating at high Q values with reduced sensitivity to gain amplification and number of passive components  
[NASA-CASE-ARC-10042-2] c10 N72-11256
- QUADRATIC PROGRAMMING**  
Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c33 N78-32338
- QUADRATURES**  
Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c35 N74-21017
- QUALITATIVE ANALYSIS**  
Ultraviolet chromatographic detector for quantitative and qualitative analysis of compounds  
[NASA-CASE-HQN-10756-1] c14 N72-25428
- Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c23 N77-17161
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c34 N79-24285
- QUALITY CONTROL**  
Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c44 N78-28625
- QUANTITATIVE ANALYSIS**  
Mixed liquid and vapor phase analyzer design with thermocouples for relative heat transfer measurement  
[NASA-CASE-NPO-10691] c14 N71-26199
- Quantitative liquid measurements in container by resonant frequencies  
[NASA-CASE-XNP-02500] c18 N71-27397

Ultraviolet chromatographic detector for quantitative and qualitative analysis of compounds  
[NASA-CASE-HQN-10756-1] c14 N72-25428

Nondispersive gas analysis using radiation detection for quantitative analysis  
[NASA-CASE-ARC-10308-1] c06 N72-31141

Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-10428-1] c23 N77-17161

Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c25 N79-23167

**QUANTUM THEORY**  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c33 N76-31409

**QUARTZ**  
Ultraviolet filter of thorium fluoride and cryolite on quartz base  
[NASA-CASE-XNP-02340] c23 N69-24332

Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MPS-23405-1] c26 N77-29260

A quartz ball valve  
[NASA-CASE-NPO-14473-1] c37 N79-10427

**QUARTZ LAMPS**  
High intensity heat and light unit containing quartz lamp elements protectively positioned to withstand severe environmental stress  
[NASA-CASE-XLA-00141] c09 N70-33312

Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c34 N74-23066

**R**

**RACKS (FRAMES)**  
Design and development of test stand system for supporting test items in vacuum chamber  
[NASA-CASE-MPS-21362] c11 N73-20267

Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MPS-21680-1] c18 N74-27397

**RADAR ANTENNAS**  
Interferometric tuning acquisition and tracking radar antenna system  
[NASA-CASE-XMS-09610] c07 N71-24625

Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c32 N76-18295

Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c32 N76-21365

**RADAR ATTENUATION**  
FM/CW radar system  
[NASA-CASE-MPS-22234-1] c32 N79-10264

**RADAR DATA**  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c32 N77-32342

**RADAR ECHOES**  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c32 N77-32342

**RADAR EQUIPMENT**  
Spacecraft transponder and ground station radar system for mapping planetary surfaces  
[NASA-CASE-NPO-11001] c07 N72-21118

FM/CW radar system  
[NASA-CASE-MPS-22234-1] c32 N79-10264

**RADAR IMAGERY**  
Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c32 N77-21267

Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c32 N78-18266

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c32 N79-19195

**RADAR MEASUREMENT**  
Thickness measurement system  
[NASA-CASE-MPS-23721-1] c31 N79-28370

**RADAR RANGE**  
Radar signal receiver arrangement for extending range and increasing signal to noise ratio  
[NASA-CASE-XNP-00748] c07 N70-36911

**RADAR RECEIVERS**  
Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-IGS-03501] c09 N71-20864

**RADAR RECEPTION**  
Radar signal receiver arrangement for extending range and increasing signal to noise ratio  
[NASA-CASE-XNP-00748] c07 N70-36911

**RADAR REFLECTORS**  
Inflatable radar reflector unit - lightweight, highly reflective to electromagnetic radiation, and adaptable for erection and deployment with minimum effort and time  
[NASA-CASE-XMS-00893] c07 N70-40063

Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c32 N77-21267

**RADAR TARGETS**  
Radar target remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N78-33511

**RADAR TRACKING**  
Tracking antenna system with array for synchronous satellite or ground based radar  
[NASA-CASE-GSC-10553-1] c07 N71-19854

Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-IGS-03501] c09 N71-20864

Monopulse tracking system with antenna array of three radiators for deriving azimuth and elevation indications  
[NASA-CASE-IGS-01155] c10 N71-21483

Plastic sphere for radar tracking and calibration  
[NASA-CASE-XLA-11154] c07 N72-21117

Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c32 N79-26253

**RADAR TRANSMITTERS**  
High resolution radar transmitting system for transmitting optical pulses to targets  
[NASA-CASE-NPO-11426] c07 N73-26119

**RADIAL FLOW**  
Radial heat flux transformer for use in heating and cooling processes  
[NASA-CASE-NPO-10828] c33 N72-17948

Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c37 N76-18459

**RADIANCE**  
Method and apparatus for measuring shock layer radiation distribution about high velocity objects  
[NASA-CASE-XAC-02970] c14 N69-39896

**RADIANT COOLING**  
Direct radiation cooling of linear beam collector tubes  
[NASA-CASE-XNP-09227] c15 N69-24319

High thermal emittance black surface coatings and process for applying to metal and metal alloy surfaces used in radiative cooling of spacecraft  
[NASA-CASE-XLA-06199] c15 N71-24875

Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MPS-23405-1] c26 N77-29260

**RADIANT FLUX DENSITY**  
High intensity radiant energy pulse source for calibrating heat transfer gages with thermoluminescent shutter activation  
[NASA-CASE-ARC-10178-1] c09 N72-17152

**RADIANT HEATING**  
High intensity heat and light unit containing quartz lamp elements protectively positioned to withstand severe environmental stress  
[NASA-CASE-XLA-00141] c09 N70-33312

High temperature source of thermal radiation  
[NASA-CASE-XLE-00490] c33 N70-34545

Pefactory filament series circuitry for radiant heater  
[NASA-CASE-XLE-00387] c33 N70-34812

Unfired ceramic insulation for protection from radiant heating environments  
[NASA-CASE-MPS-14253] c33 N71-24858

Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c44 N78-10554

**RADIATION**  
Development of radiant energy sensor to detect the radiant energy wavelength bands from portions of radiating body  
[NASA-CASE-ERC-10174] c14 N72-25409

- Development of thermopile with sensor surface to receive radiant energy and to provide measurement of energy quantity  
[NASA-CASE-NPO-11493] c14 N73-12447
- Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-31] c60 N77-32731
- Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c60 N78-10709
- RADIATION ABSORPTION**
- NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c35 N75-30502
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-NFS-23518-1] c44 N79-11469
- RADIATION COUNTERS**
- Particle detector for indicating incidence and energy of minute space particles  
[NASA-CASE-XLA-00135] c14 N70-33322
- Sensing method and device for determining orientation of space vehicle or satellite by using particle traps  
[NASA-CASE-XGS-00466] c21 N70-34297
- Particle beam power density detection and measurement apparatus  
[NASA-CASE-XLE-00243] c14 N70-38602
- Automatic baseline stabilization for ionization detector used in gas chromatograph  
[NASA-CASE-XMP-03128] c10 N70-41991
- Method of forming thin window drifted silicon charged particle detector  
[NASA-CASE-XLE-00808] c24 N71-10560
- Development of dosimeter for measuring absorbed dose of high energy ionizing radiation  
[NASA-CASE-XLA-03645] c14 N71-20430
- Apparatus for detecting particle emission lower than noise level of multiplier tube  
[NASA-CASE-XLA-07813] c14 N72-17328
- Radiation or charged particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c14 N73-32317
- Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c35 N74-26949
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[NASA-CASE-MSC-12564-1] c54 N76-15792  
Method of locating persons in distress --- by using radar imagery from radar reflectors

[NASA-CASE-LAR-11390-1] c32 N77-21267  
High visibility air sea rescue panel

[NASA-CASE-MSC-12564-2] c03 N78-25070  
**RESEARCH AND DEVELOPMENT**  
Process for developing filament reinforced plastic tubes used in research and development programs

[NASA-CASE-LAR-10203-1] c15 N72-16330  
**RESEARCH PROJECTS**  
Driver for solar cell I-V characteristic plots

[NASA-CASE-NPO-14096-1] c44 N78-28625  
**RESEARCH VEHICLES**  
Lunar landing flight research vehicle

[NASA-CASE-XPR-00929] c31 N70-34966  
Velocity limiting safety system for motor driven research vehicle

[NASA-CASE-XLA-07473] c15 N71-24895  
**RESIDUAL STRESS**  
Miniature solid state, direction sensitive, stress transducer design with bonded semiconductive piezoresistive element for sensing residual stresses

[NASA-CASE-XNP-02983] c14 N71-21091  
Manufacturing process for making perspiration resistant-stress resistant biopotential electrode

[NASA-CASE-MSC-90153-2] c05 N72-25120  
**RESILIENCE**  
Automated ball rebound resilience test equipment for determining viscoelastic properties of polymers

[NASA-CASE-XLA-08254] c14 N71-26161

## RESIN BONDING

- Procedure for bonding polytetrafluoroethylene thermal protective sleeves to magnesium alloy conical shell components with different thermal coefficients  
[NASA-CASE-XLA-01262] c15 N71-21404
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c44 N76-14600

## RESINS

- Modification of polyurethanes with alkyl halide resins, inorganic salts, and encapsulated volatile and reactive halogen for fuel fire control  
[NASA-CASE-ARC-10098-1] c06 N71-24739
- Development of process for bonding resinous body in cavities of honeycomb structures  
[NASA-CASE-MS-C-12357] c15 N73-12489
- Resin for protecting p-n semiconductor junction surface  
[NASA-CASE-ERC-10339-1] c18 N73-30532
- Composite lamination method  
[NASA-CASE-LAR-12019-1] c24 N78-17150
- Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c25 N79-14172

## RESISTANCE

- Manufacturing process for making perspiration resistant-stress resistant biopotential electrode  
[NASA-CASE-MS-C-90153-2] c05 N72-25120
- Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper  
[NASA-CASE-KSC-10723-1] c37 N75-13265

## RESISTANCE HEATING

- High resistance cross flow heat exchangers for electrothermal rocket engines  
[NASA-CASE-XLE-01783] c28 N70-34175

## RESISTORS

- High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c33 N74-22814
- Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c33 N76-27473

## RESOLUTION

- Conversion system for increasing resolution of analog to digital converters  
[NASA-CASE-XAC-00404] c08 N70-40125
- Cylindrical reflector for resolving wide angle light beam from telescope into narrow beam for spectroscopic analysis  
[NASA-CASE-XGS-08269] c23 N71-26206
- Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c71 N79-23753

## RESOLVERS

- Differential phase shift keyed signal resolver  
[NASA-CASE-MS-C-14066-1] c33 N74-27705

## RESONANCE

- Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c35 N78-13400

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- Vibrating element electrometer producing high conversion gain by input current control of elements resonant frequency displacement amplitude  
[NASA-CASE-XAC-02807] c09 N71-23021
- Quantitative liquid measurements in container by resonant frequencies  
[NASA-CASE-XNP-02500] c18 N71-27397
- Development of electrical circuit for suppressing oscillations across inductor operating in resonant mode  
[NASA-CASE-ERC-10403-1] c10 N73-26228
- CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512
- Microbalance --- for measuring particle mass  
[NASA-CASE-MS-C-11242] c35 N78-17358

## RESONATORS

- Selective bandpass resonators using bandstop resonator pairs for microwave frequency operation  
[NASA-CASE-GSC-10990-1] c09 N73-26195

## RESPIRATION

- Respiration analyzing method and apparatus for determining subjects oxygen consumption in aerospace environments  
[NASA-CASE-IXP-08403] c05 N71-11202

## RESPIRATORS

- Transducer for monitoring oxygen flow in respirator  
[NASA-CASE-FRC-10012] c14 N72-17329
- Micro-fluid exchange coupling apparatus --- a microrespirator to allow surgery on rats or mice  
[NASA-CASE-ARC-11114-1] c52 N78-33717

## RESPIRATORY RATE

- Flowmeters for sensing low fluid flow rate and pressure for application to respiration rate studies  
[NASA-CASE-FRC-10022] c12 N71-26546
- Respiratory analysis system to determine gas flow rate and frequency of respiration and expiration cycles in real time  
[NASA-CASE-MS-C-13436-1] c05 N73-32015
- Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c52 N74-20728

## RESPIROMETERS

- Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c52 N74-20728

## RESPONSES

- System for monitoring condition responsive devices by using frequency division multiplex technique  
[NASA-CASE-KSC-10521] c07 N73-20176

## RESTARTABLE ROCKET ENGINES

- Collapsible auxiliary tank for restarting liquid propellant rocket motors under zero gravity  
[NASA-CASE-XNP-01390] c28 N70-41275
- Regenerative cooling system for small rocket engine having restart capability and using noncryogenic hypergolic propellants  
[NASA-CASE-XLE-00685] c28 N70-41992

## RESUSCITATION

- Pulmonary resuscitation method and apparatus with adjustable pressure regulator  
[NASA-CASE-XMS-01115] c05 N70-39922

## RETAINING

- A floating nut retention system  
[NASA-CASE-MS-C-16938-1] c37 N78-32431

## RETRARDING

- Ablative resins used for retarding regression in ablative material  
[NASA-CASE-XLE-05913] c33 N71-14032

## RETICLES

- Optical tracker with pair of PM reticles having patterns 90 deg out of phase  
[NASA-CASE-XGS-05715] c23 N71-16100
- Method for producing reticles for use in outer space  
[NASA-CASE-GSC-11188-2] c21 N73-19630
- Production method of star tracking reticles for transmitting in visible and near ultraviolet regions  
[NASA-CASE-GSC-11188-1] c14 N73-32320
- Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c74 N74-20008
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[NASA-CASE-GSC-11569-1] c89 N74-30886

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- Support for flexible conductor cable between drawers or racks holding electronic equipment and cabinet assembly housing drawers or racks  
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[NASA-CASE-GSC-12331-1] c37 N78-32436
- Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c37 N79-22474

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- Visual target luminaires for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c31 N69-27499
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[NASA-CASE-XMS-03792] c14 N70-41812

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[NASA-CASE-NPO-10300] c14 N71-17662
- Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c35 N78-18395

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[NASA-CASE-NPO-14448-1] c74 N79-23777
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[NASA-CASE-XLA-05966] c15 N72-12408  
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[NASA-CASE-XNP-01307] c21 N70-41856
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[NASA-CASE-ARC-10807-1] c05 N77-17029
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[NASA-CASE-ARC-11106-1] c05 N77-31130
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[NASA-CASE-LAR-11797-1] c08 N79-15057
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[NASA-CASE-XGS-02401] c14 N69-27485
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[NASA-CASE-MPS-22073-1] c33 N75-13139
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[NASA-CASE-LAR-11051-1] c15 N76-14158
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[NASA-CASE-MPS-20855-1] c15 N77-10112
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[NASA-CASE-MPS-23051-1] c37 N79-10422
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[NASA-CASE-NPO-14005-1] c71 N79-20827
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[NASA-CASE-LAR-12007-2] c74 N79-25876
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 [NASA-CASE-XMS-04300] c09 N71-19479  
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 [NASA-CASE-IGS-05290] c09 N71-25999  
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 [NASA-CASE-LAR-11551-1] c44 N78-22468  
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 [NASA-CASE-GSC-10062] c14 N71-15605  
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 [NASA-CASE-XGS-04173] c19 N71-26674  
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 [NASA-CASE-XNP-05224] c14 N71-23726  
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Adjustable support device with jacket screw for altering distance between base and supported member  
[NASA-CASE-NPO-10721] c15 N72-27484

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Developing high pressure gas purification and filtration system for use in test operations of space vehicles  
[NASA-CASE-MFS-12806] c14 N71-17588  
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Laser technique for breaking ice in ship path  
[NASA-CASE-LAR-10815-1] c16 N72-22520

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Design and development of flexible joint for pressure suits  
[NASA-CASE-XMS-09636] c05 N71-12344  
Epoxy resin sealing device for electrochemical cells in high vacuum environments  
[NASA-CASE-XGS-02630] c03 N71-22974  
Leak resistant bonded elastomeric seal for secondary electrochemical cells  
[NASA-CASE-XGS-02631] c03 N71-23006  
Self lubricating fluoride-metal composite materials for outer space applications  
[NASA-CASE-XLE-08511] c18 N71-23710  
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[NASA-CASE-MFS-22355-1] c23 N76-15268  
New perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups --- sealers for aircraft structures  
[NASA-CASE-ARC-11241-1] c27 N79-24153

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Foil seal between parts moving relative to each other  
[NASA-CASE-XLE-05130] c15 N69-21362  
Sealed electric storage battery with gas manifold interconnecting each cell  
[NASA-CASE-XNP-03378] c03 N71-11051  
Epoxy resin sealing device for electrochemical cells in high vacuum environments  
[NASA-CASE-XGS-02630] c03 N71-22974  
Electrode sealing and insulation for fuel cells containing caustic liquid electrolytes using powdered plastic and metal  
[NASA-CASE-XMS-01625] c15 N71-23022

Sealing evacuation port and evacuating vacuum container such as space jackets  
[NASA-CASE-XMP-03290] c15 N71-23256  
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[NASA-CASE-NPO-10606] c15 N72-25451  
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[NASA-CASE-MSC-16934-1] c24 N79-16923  
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[NASA-CASE-XLE-00101] c15 N70-33376  
Shrink-fit vacuum system gas valve  
[NASA-CASE-XGS-00587] c15 N70-35087  
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[NASA-CASE-XLE-04677] c15 N71-10577  
Fluid seal formed by flexible disk on rotating shaft to retain lubricating oils around shaft  
[NASA-CASE-XLE-05130-2] c15 N71-19570  
Sealed storage container for channel carriers with mounted miniature electronic components  
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Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c37 N74-21063  
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[NASA-CASE-LEW-11274-1] c37 N75-21631  
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[NASA-CASE-LEW-12119-1] c37 N76-20488  
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[NASA-CASE-LEW-11855-1] c07 N78-25090  
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[NASA-CASE-MSC-18134-1] c37 N79-17225  
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[NASA-CASE-MFS-23646-1] c37 N79-22474  
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[NASA-CASE-XGS-01286-1] c37 N79-33469

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Cord restraint system for pressure suit joints  
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Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c37 N74-11301

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[NASA-CASE-XLE-08511] c18 N71-23710  
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[NASA-CASE-XNP-06032] c09 N69-21926  
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[NASA-CASE-ERC-10072] c09 N70-11148  
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[NASA-CASE-XLE-00808] c24 N71-10560  
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[NASA-CASE-ERC-10138] c26 N71-14354  
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[NASA-CASE-XER-07894] c09 N71-18721  
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[NASA-CASE-XLE-03061-1] c10 N71-24798  
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[NASA-CASE-XLA-04555-1] c14 N71-25892  
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[NASA-CASE-LEW-10345-1] c10 N71-25899  
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[NASA-CASE-ERC-10033] c14 N71-26672  
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[NASA-CASE-LEW-10233] c10 N71-27126  
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[NASA-CASE-ERC-10150] c14 N71-28992  
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[NASA-CASE-ERC-10222] c09 N72-22199  
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[NASA-CASE-ERC-10087-2] c14 N72-31446  
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[NASA-CASE-LEW-12094-1] c76 N76-25049  
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[NASA-CASE-XNP-01960] c09 N71-23027  
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[NASA-CASE-ERC-10087] c14 N71-27334  
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[NASA-CASE-ERC-10339-1] c18 N73-30532  
Microvave integrated circuit for Josephson voltage standards  
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[NASA-CASE-XKS-04614] c15 N69-21460

- Semiconductor in resonant cavity for improving signal to noise ratio of communication receiver  
[NASA-CASE-MSC-12259-1] c07 N70-12616
- Improved semiconductor multivibrator circuit which approaches 100 percent efficiency  
[NASA-CASE-XAC-00942] c10 N71-16042
- Fabrication of sintered impurity semiconductor brushes for electrical energy transfer  
[NASA-CASE-XMP-01016] c26 N71-17818
- Binding layer of semiconductor particles by electrodeposition  
[NASA-CASE-XNP-01959] c26 N71-23043
- Gadolinium or samarium doped-silicon semiconductor material with resistance to radiation damage for use in solar cells  
[NASA-CASE-XLE-10715] c26 N71-23292
- Characteristics of infrared photodetectors manufactured from semiconductor material irradiated by electron beam  
[NASA-CASE-LAR-10728-1] c14 N73-12445
- Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c33 N75-27251
- Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HQN-10462] c25 N75-29192
- Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c33 N78-17297
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 N79-11468
- Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c76 N79-21910
- SENSITIVITY**
- Design of active RC network capable of operating at high Q values with reduced sensitivity to gain amplification and number of passive components  
[NASA-CASE-ARC-10042-2] c10 N72-11256
- A phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c71 N78-29871
- SENSITOMETRY**
- Condition sensor system and method  
[NASA-CASE-MSC-14805-1] c54 N78-32720
- SENSORS**
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c24 N75-30260
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c52 N76-14757
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- Prosthetic limb with tactile sensing device  
[NASA-CASE-MFS-16570-1] c05 N73-32013
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- Thrust vector control by secondary injection of fluid into rocket nozzle flow field to separate exhaust flow  
[NASA-CASE-XLE-00208] c28 N70-34294
- Double hinged flap for boundary layer control over trailing edges of wings  
[NASA-CASE-XLA-01290] c02 N70-42016
- Separation cell with permeable membranes for fluid mixture component separation  
[NASA-CASE-XMS-02952] c18 N71-20742
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[NASA-CASE-ARC-11046-1] c35 N78-14364
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- A method for separating biological cells  
[NASA-CASE-MFS-23883-1] c51 N79-21743
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- Condenser-separator for dehumidifying air utilizing sintered metal surface  
[NASA-CASE-XLA-08645] c15 N69-21465
- Umbilical separator for rockets  
[NASA-CASE-XNP-00425] c11 N70-38202
- Liquid-gas separator adapted for use in zero gravity environment - drawings  
[NASA-CASE-XMS-01624] c15 N70-40052
- Describing apparatus for separating gas from cryogenic liquid under zero gravity and for venting gas from fuel tank  
[NASA-CASE-XLE-00596] c15 N71-15968
- Liquid-gaseous centrifugal separator for weightlessness environment  
[NASA-CASE-XLA-00415] c15 N71-16079
- Development of liquid separating system using capillary device connected to flexible bladder storage chamber  
[NASA-CASE-XMS-13052] c14 N71-20427
- Vapor-liquid separator design with vapor driven pump for separated liquid pumping for application in propellant transfer  
[NASA-CASE-XMP-04042] c15 N71-23023
- Device for removing air from water for use in life support systems in manned space flight  
[NASA-CASE-XLA-8914] c15 N73-12492
- Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c34 N74-30608
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c34 N75-26282
- Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c37 N76-18456
- Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c44 N77-22606
- Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c35 N78-12390
- Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c25 N78-14104
- Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c24 N78-22162
- Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c07 N78-25090
- Formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c25 N78-25149
- Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c44 N78-25530
- Cross-linked polyvinyl alcohol and method of making same --- separator for alkaline batteries  
[NASA-CASE-LEW-13101-1] c25 N79-14173
- In-situ cross-linking of polyvinyl alcohol --- polymeric films for separators in alkaline batteries  
[NASA-CASE-LEW-13135-1] c25 N79-14174
- Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313
- Water separator  
[NASA-CASE-XMS-01295-1] c37 N79-21345
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c44 N79-25481
- SEQUENCING**
- Synchronous counter design incorporating cascaded binary stages driven by previous stages and inputs through NAND gates  
[NASA-CASE-XGS-02440] c08 N71-19432
- Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage  
[NASA-CASE-XGS-04224] c10 N71-26418
- Digital function generator for generating any arbitrary single valued function  
[NASA-CASE-NPO-11104] c08 N72-22165
- MOD 2 sequential function generator for multibit sequence, with two-bit shift register for each pair of bits  
[NASA-CASE-NPO-10636] c08 N72-25210
- Linear shift register with feedback logic for generating pseudonoise linear recurring binary sequences  
[NASA-CASE-NPO-11406] c08 N73-12175
- Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c37 N77-22482
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- Binary coded sequential acquisition ranging system for distance measurements  
[NASA-CASE-NPO-11194] c08 N72-25209
- Event sequence detector with several input and shift register responsive to clock pulses  
[NASA-CASE-NPO-11703-1] c10 N73-32144
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SEQUENTIAL CONTROL

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SEQUENTIAL CONTROL

Linear three-tap feedback shift register  
[NASA-CASE-NPO-10351] c08 N71-12503

Binary sequence detector with few memory elements and minimized logic circuit complexity  
[NASA-CASE-XNP-05415] c08 N71-12505

Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c37 N79-20377

**SERUMS**

Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c52 N75-15270

**SERVICE LIFE**

Service life of electromechanical device for generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248

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[NASA-CASE-GSC-12289-1] c37 N78-32435

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Pneumatic servoamplifier for controlling flow regulation  
[NASA-CASE-MSC-12121-1] c15 N71-27147

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[NASA-CASE-XGS-05582] c07 N69-27460

Proportional controller for regulating aircraft or spacecraft motion about three axes  
[NASA-CASE-XAC-03392] c03 N70-41954

Modulating and controlling intensity of light beam from high temperature source by servocontrolled rotating cylinders  
[NASA-CASE-XMS-04300] c09 N71-19479

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[NASA-CASE-XLA-08530] c32 N71-25360

System to control speed of hydraulically movable members by limiting energy applied to actuators with hydraulic servo loop  
[NASA-CASE-ARC-10131-1] c15 N71-27754

Digital servo controller --- for rotating antenna shaft  
[NASA-CASE-KSC-10769-1] c33 N74-29556

Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c71 N74-31148

Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MPS-22073-1] c33 N75-13139

Servo-controlled intravitral microscope system  
[NASA-CASE-NPO-12214-1] c35 N75-25123

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[NASA-CASE-NPO-10300] c14 N71-17662

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[NASA-CASE-XAC-00001] c15 N71-28952

Closed loop servosystem for variable speed tape recorders onboard spacecraft  
[NASA-CASE-NPO-10700] c07 N71-33613

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[NASA-CASE-NPO-11222] c15 N72-25456

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[NASA-CASE-NPO-10680] c31 N73-14855

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[NASA-CASE-NPO-10316-1] c37 N77-22479

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[NASA-CASE-GSC-11883-2] c37 N78-31426

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[NASA-CASE-NPO-13569-2] c35 N79-14348

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[NASA-CASE-MPS-13046] c07 N71-19433

Electric motor control system with pulse width modulation for providing automatic null seeking servo  
[NASA-CASE-XNP-05195] c10 N71-24861

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[NASA-CASE-NPO-10758] c14 N73-14427

Development and characteristics of rotary actuator for use on spacecraft to deploy and support pivotal structures such as solar panels  
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[NASA-CASE-NPO-14093-1] c74 N78-22891

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[NASA-CASE-XNP-00416] c15 N70-36947

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[NASA-CASE-MPS-12805] c15 N71-17805

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[NASA-CASE-NPO-10646] c15 N71-28467

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[NASA-CASE-LEW-11152-1] c15 N73-32359

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[NASA-CASE-MPS-22649-1] c37 N75-25186

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[NASA-CASE-MSC-19546-1] c37 N77-25536

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[NASA-CASE-ARC-10897-1] c33 N77-31404

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[NASA-CASE-NPO-14170] c37 N78-17391

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[NASA-CASE-LEW-11855-1] c07 N78-25090

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[NASA-CASE-MSC-19514-1] c37 N79-20377

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[NASA-CASE-LEW-11873-1] c37 N79-22475

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[NASA-CASE-XLA-00189] c33 N70-36886

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[NASA-CASE-XLA-04804] c31 N71-23008

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[NASA-CASE-XLA-00304] c27 N70-34783

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[NASA-CASE-XMS-06876] c15 N71-21536

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[NASA-CASE-LAR-10121-1] c15 N71-26721

**SHARKS**

Conditioning tanned sharkskin for use as abrasive resistant clothing  
[XMS-CASE-XMS-09691-1] c18 N71-15545

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Method of forming a sharp edge on an optical device --- beam splitters for Solar Maximum

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## SHOCK WAVES

Missions spectropolarimeter  
[NASA-CASE-GSC-12348-1] c74 N78-29902

**SHEAR CREEP**  
Measuring shear-creep compliance of solid and liquid materials used in spacecraft components  
[NASA-CASE-XLE-01481] c14 N71-10781

**SHEAR FLOW**  
Shear modulated fluid amplifier of high pressure hydraulic vortex amplifier type  
[NASA-CASE-MPS-10412] c12 N71-17578

**SHEAR PROPERTIES**  
Describing instrument capable of measuring true shear viscosity of liquids and viscoelastic materials  
[NASA-CASE-XNP-09462] c14 N71-17584

**SHEAR STRESS**  
Fatigue resistant shear pin with hollow shaft and two plugs  
[NASA-CASE-XLA-09122] c15 F69-27505  
Development of combined velocimeter and accelerometer based on color changes in liquid crystalline material subjected to shear stresses  
[NASA-CASE-ERC-10292] c14 N72-25410  
Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c37 N74-23064

**SHELLS (STRUCTURAL FORMS)**  
Channel-type shell construction for rocket engines and related configurations  
[NASA-CASE-XLE-00144] c28 N70-34860

**SHIELDING**  
Flexible bellows joint shielding sleeve for propellant transfer pipelines  
[NASA-CASE-XNP-01855] c15 N71-28937  
Shielded flat conductor cable of ribbonlike wires laminates in thin flexible insulation  
[NASA-CASE-MPS-13687-2] c09 N72-22198  
System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MPS-23513-1] c74 N79-11865

**SHIFT REGISTERS**  
Binary to binary-coded decimal converter using single set of logic circuits notwithstanding number of shift register decades  
[NASA-CASE-XNP-00432] c08 N70-35423  
Linear three-tap feedback shift register  
[NASA-CASE-NPO-10351] c08 N71-12503  
Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897  
Commutator for steering precisely controlled bidirectional currents through numerous loads by use of magnetic core shift registers  
[NASA-CASE-NPO-10743] c08 N72-21199  
Multistage feedback shift register with states decomposable into cycles of equal length  
[NASA-CASE-NPO-11082] c08 N72-22167  
MOD 2 sequential function generator for multibit sequence, with two-bit shift register for each pair of bits  
[NASA-CASE-NPO-10636] c08 N72-25210  
Linear shift register with feedback logic for generating pseudonoise linear recurring binary sequences  
[NASA-CASE-NPO-11406] c08 N73-12175  
Family of m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c10 N73-20254  
Nonrecursive counting digital filter containing shift register  
[NASA-CASE-NPO-11821-1] c08 N73-26175  
Event sequence detector with several input and shift register responsive to clock pulses  
[NASA-CASE-NPO-11703-1] c10 N73-32144  
Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c32 N74-32598  
Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c33 N76-14373  
Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ARC-10899-1] c60 N77-19760  
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[NASA-CASE-NPO-13676-1] c60 N79-20751

**SHOCK ABSORBERS**  
Pivotal shock absorbing assembly for use as load distributing portion in landing gear systems of space vehicles  
[NASA-CASE-XNP-03856] c31 N70-34159  
Energy dissipating shock absorbing system for land payload recovery or vehicle braking  
[NASA-CASE-XLA-00754] c15 N70-34850  
Shock absorbing couch for body support under high acceleration or deceleration forces  
[NASA-CASE-XMS-01240] c05 N70-35152  
Low onset rate energy absorber in form of strut assembly for crew couch of Apollo command module  
[NASA-CASE-MSC-12279-1] c15 N70-35679  
Landing pad assembly for aerospace vehicles  
[NASA-CASE-XNP-02853] c31 N70-36654  
Spacecraft shock absorbing system for soft landings  
[NASA-CASE-XNP-02108] c31 N70-36845  
Shock absorber for landing gear of lunar or planetary landing modules  
[NASA-CASE-XNP-01045] c15 N70-40354  
Shock absorbing articulated multiple couch assembly  
[NASA-CASE-MSC-11253] c05 N71-12343  
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[NASA-CASE-XMS-03722] c15 N71-21530  
Impact energy absorber with decreasing absorption rate  
[NASA-CASE-XLA-01530] c14 N71-23092  
Energy absorbing crew couch strut for Apollo command module  
[NASA-CASE-MSC-12279] c15 N72-17450  
Shock absorber for use as protective barrier in impact energy absorbing system  
[NASA-CASE-NPO-10671] c15 N72-20443  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MPS-22905-1] c19 N76-22284  
Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c37 N79-10420

**SHOCK LOADS**  
Damper system for alleviating air flow shock loads on wind tunnel models  
[NASA-CASE-XLA-09480] c11 N71-33612

**SHOCK MEASURING INSTRUMENTS**  
Semiconductor projectile impact detector  
[NASA-CASE-MPS-23008-1] c35 N78-18390

**SHOCK RESISTANCE**  
Removable potting compound for instrument shock protection  
[NASA-CASE-XLA-00482] c15 N70-36409  
Thermal shock resistant hafnia ceramic materials  
[NASA-CASE-LAR-10894-1] c18 N73-14584  
Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206

**SHOCK TUBES**  
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[NASA-CASE-XAC-00731] c11 N71-15960  
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[NASA-CASE-NPO-12109] c11 N72-22245  
Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c09 N77-10071

**SHOCK WAVE INTERACTION**  
Absorptive, nonreflecting barrier mounted between closely spaced jet engines on supersonic aircraft, for preventing shock wave interference  
[NASA-CASE-XLA-02865] c28 N71-15563

**SHOCK WAVE LUMINESCENCE**  
Method and apparatus for measuring shock layer radiation distribution about high velocity objects  
[NASA-CASE-XAC-02970] c14 N69-39896

**SHOCK WAVE PROFILES**  
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[NASA-CASE-XAC-02970] c14 N69-39896

**SHOCK WAVES**  
Apparatus for mechanically dispersing ultrafine metal powders subjected to shock waves  
[NASA-CASE-XLE-04946] c17 N71-24911  
Electrical device for developing converging spherical shock waves  
[NASA-CASE-MPS-20890] c14 N72-22439  
Production of intermetallic compounds by effect of shock waves from explosions and compaction

- of powder  
[NASA-CASE-NFS-20861-1] c18 N73-32437
- Shock position sensor for supersonic inlets ---  
measuring pressure in the throat of a  
supersonic inlet  
[NASA-CASE-LEW-11915-1] c35 N76-14431
- SHOES**  
Jet shoes for space locomotion  
[NASA-CASE-XLA-08491] c05 N69-21380
- SHORT CIRCUITS**  
Use of silicon controlled rectifier shorting  
circuit to protect thermoelectric generator  
source from thermal destruction  
[NASA-CASE-XGS-04808] c03 N69-25146
- Vacuum thermionic converter with short-circuited  
triodes and increased electron transmission  
and conversion efficiency  
[NASA-CASE-XLE-01015] c03 N69-39898
- Apparatus for automatically testing analog to  
digital converters for open and short circuits  
[NASA-CASE-XLA-06713] c14 N71-28991
- Apparatus including a plurality of spaced  
transformers for locating short circuits in  
cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193
- Electrical short locator --- identifying shorts  
occurring while an electrical system is being  
wired  
[NASA-CASE-ARC-11116-1] c33 N79-31498
- SHOT PEENING**  
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[NASA-CASE-NFS-23047-1] c37 N76-18454
- SHROUDED NOZZLES**  
Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c07 N78-27121
- SHROUDED TURBINES**  
Composite seal for turbomachinery --- backings  
for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c37 N79-18318
- SHROUDS**  
Shrouded composite propulsion system configuration  
[NASA-CASE-XLA-01043] c28 N71-10780
- Composite seal for turbomachinery --- backings  
for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c37 N79-18318
- SHUTTERS**  
High speed shutter --- electrically actuated  
ribbon loop for shuttering optical or fluid  
passageways  
[NASA-CASE-ARC-10516-1] c70 N74-21300
- SIDEBANDS**  
Phase locked loop with sideband rejecting  
properties in continuous wave tracking radar  
[NASA-CASE-XNP-02723] c07 N70-41680
- SIDELobe REDUCTION**  
Multiple mode horn antenna with radiation  
pattern of equal beamwidths and suppressed  
sidelobes  
[NASA-CASE-XNP-01057] c07 N71-15907
- SIGNAL ANALYSIS**  
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tracking apparatus  
[NASA-CASE-XGS-03502] c10 N71-20852
- Method and apparatus for a single channel  
digital communications system ---  
synchronization of received PCM signal by  
digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c32 N74-10132
- Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c33 N74-27705
- Correlation type phase detector --- with time  
correlation integrator for frequency  
multiplexed signals  
[NASA-CASE-GSC-11744-1] c33 N75-26243
- Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c32 N76-31372
- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c62 N76-31946
- Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c32 N79-28383
- SIGNAL ANALYZERS**  
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over predetermined time interval  
[NASA-CASE-XMS-04061-1] c09 N69-39885
- Feedback controller for sampling error signals  
within single control formulation time interval  
[NASA-CASE-GSC-10554-1] c08 N71-29033
- Development of family of frequency to amplitude  
converters for frequency analysis of complex  
input signal waveforms  
[NASA-CASE-MSC-12395] c09 N72-25257
- Device for performing statistical time-series  
analysis of complex electrical signal waveforms  
[NASA-CASE-MSC-12428-1] c10 N73-25240
- Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c33 N74-32711
- Electronic optical transfer function analyzer  
[NASA-CASE-NFS-21672-1] c74 N76-19935
- Speech analyzer  
[NASA-CASE-GSC-11898-1] c32 N77-30309
- SIGNAL DETECTION**  
Position locating system for remote aircraft  
using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958
- Saturable magnetic core and signal detection for  
indicating impending saturation  
[NASA-CASE-ERC-10089] c23 N72-17747
- Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c32 N77-10392
- Multiple rate digital command detection system  
with range clean-up capability  
[NASA-CASE-NPO-13753-1] c32 N77-20289
- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c32 N79-10262
- Apparatus and method for stabilized phase  
detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c33 N79-11313
- SIGNAL DETECTORS**  
Roughness detector for recording surface pattern  
of irregularities  
[NASA-CASE-XLA-00203] c14 N70-34161
- Electrical testing apparatus for detecting  
amplitude and width of transient pulse  
[NASA-CASE-XNP-06519] c09 N71-12519
- System for monitoring presence of neutrals in  
streams of ions - ion engine control  
[NASA-CASE-XNP-02592] c24 N71-20518
- Development of apparatus for generating output  
signal commensurate with information contained  
in input signal  
[NASA-CASE-ERC-10041] c08 N71-29138
- A signal attenuator --- pulse rate sensor circuits  
[NASA-CASE-FRC-11012-1] c33 N78-28339
- SIGNAL DISTORTION**  
Low distortion receiver for bi-level baseband  
PCM waveforms  
[NASA-CASE-MSC-14557-1] c32 N76-16249
- SIGNAL ENCODING**  
Adaptive compression signal processor for PCM  
communication systems  
[NASA-CASE-XLA-03076] c07 N71-11266
- Secure communication system  
[NASA-CASE-MSC-16462-1] c32 N78-25274
- SIGNAL GENERATORS**  
Plural recorder system which limits signal  
recording to signals of sufficient interest  
[NASA-CASE-XMS-06949] c09 N69-21467
- Alternating current signal generator providing  
plurality of amplitude modulated output signals  
[NASA-CASE-XNP-05612] c09 N69-21468
- Circuitry for generating sync signals in FM  
communication systems including video  
information  
[NASA-CASE-XNP-10830] c07 N71-11281
- Apparatus for generating microwave signals at  
progressively related phase angles for driving  
antenna array  
[NASA-CASE-ERC-10046] c10 N71-18722
- System generating sidereal frequency signals  
from signals of standard solar frequency  
without use of mixing operations or feedback  
loops  
[NASA-CASE-XGS-02610] c14 N71-23174
- Hand controller operable about three  
respectively perpendicular axes and capable of  
actuating signal generators for attitude  
control devices  
[NASA-CASE-XMS-07487] c15 N71-23255
- Voltage controlled oscillators and pulse  
amplitude modulation for signal ratio system  
[NASA-CASE-INP-04367] c09 N71-23545
- Sampling circuit for signal processing in  
multiplex transmission by Fourier analysis  
[NASA-CASE-NPO-10388] c07 N71-24622
- Signaling summary alarm circuit with  
semiconductor switch for faulty contact  
indications  
[NASA-CASE-XLB-03061-1] c10 N71-24798

- Adaptive signal generating system and logic circuits for satellite television systems  
[NASA-CASE-GSC-11367] c10 N71-26374
- Device for monitoring voltage by generating signal when voltages drop below predetermined value  
[NASA-CASE-KSC-10020] c10 N71-27338
- System for control of variable signal generator  
[NASA-CASE-NPO-11064] c07 N72-11150
- Digital function generator for generating any arbitrary single valued function,  
[NASA-CASE-NPO-11104] c08 N72-22165
- Development of Hall effect transducer for converting mechanical shaft rotations into proportional electrical signals  
[NASA-CASE-LAR-10620-1] c09 N72-25255
- Multiterminal Gunn-type semiconductor microwave generator for producing stable signals  
[NASA-CASE-XEP-07895] c26 N72-25679
- Audio frequency analysis circuit for determining, displaying, and recording frequency of sweeping audio frequency signal  
[NASA-CASE-NPO-11147] c14 N72-27408
- Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c71 N74-31148
- Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c35 N75-12270
- System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c33 N75-19519
- Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MPS-22671-1] c35 N75-21582
- NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c35 N75-30502
- Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-APC-10897-1] c33 N77-31404
- Frequency translating phase conjugation circuit for active retrodirective antenna array  
[NASA-CASE-NPO-14536-1] c32 N79-14277
- Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c35 N79-14348
- Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c35 N79-14349
- Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c46 N79-23555
- SIGNAL MIXING**
- Impedance transformation device for signal mixing  
[NASA-CASE-XGS-01110] c07 N69-24334
- Baseband signal combiner for antenna array  
[NASA-CASE-NPO-14641-1] c32 N79-32408
- SIGNAL PROCESSING**
- Adaptive compression signal processor for PCM communication systems  
[NASA-CASE-XLA-03076] c07 N71-11266
- Conversion system for transforming slow scan rate of Apollo TV camera on moon to fast scan of commercial TV  
[NASA-CASE-XMS-07168] c07 N71-11300
- Difference indicating circuit used in conjunction with device measuring gravitational fields  
[NASA-CASE-XNP-08274] c10 N71-13537
- Circuitry for developing autocorrelation function continuously within signal receiving period  
[NASA-CASE-XNP-00786] c07 N71-21476
- System generating sidereal frequency signals from signals of standard solar frequency without use of mixing operations or feedback loops  
[NASA-CASE-XGS-02610] c14 N71-23174
- Feedback integrating circuit with grounded capacitor for signal processing  
[NASA-CASE-XAC-10607] c10 N71-23669
- Sampling circuit for signal processing in multiplex transmission by Fourier analysis  
[NASA-CASE-NPO-10388] c07 N71-24622
- Video signal processing system for sampling video brightness levels  
[NASA-CASE-NPO-10140] c07 N71-24742
- Monopulse scanning network for scanning volumetric antenna pattern  
[NASA-CASE-GSC-10299-1] c09 N71-24804
- Apparatus for filtering input signals  
[NASA-CASE-NPO-10198] c09 N71-24806
- Video sync processor with phase locked system  
[NASA-CASE-KSC-10002] c10 N71-25865
- Transient video signal tape recorder with expanded playback  
[NASA-CASE-ARC-10003-1] c09 N71-25866
- Scanning signal phase and amplitude electronic control device with hybrid T waveguide junction  
[NASA-CASE-NPO-10302] c10 N71-26142
- Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266
- Development of apparatus for generating output signal commensurate with information contained in input signal  
[NASA-CASE-ERC-10041] c08 N71-29138
- Development of electric circuit for production of different pulse width signals  
[NASA-CASE-XLA-07788] c09 N71-29139
- Phase shifting circuit for selecting phase of input signal  
[NASA-CASE-ARC-10269-1] c10 N72-16172
- Processing system for semiperiodic electrical signals to produce real time contoured display  
[NASA-CASE-MSC-13407-1] c10 N72-20225
- Design and characteristics of recording system for selective reprocessing and filtering of data to obtain optimum signal to noise ratios  
[NASA-CASE-ERC-10112] c07 N72-21119
- Technique for deriving logarithm of input signal using exponentially varying electric signal inversely  
[NASA-CASE-ERC-10267] c09 N72-23173
- Development and characteristics of telemetry system using computer-accessed circuits and remotely controlled from ground station  
[NASA-CASE-NPO-11358] c07 N72-25172
- Characteristics of digital data processor using pulse from clock source to derive binary singles to show state of various indicators in processor  
[NASA-CASE-GSC-10975-1] c08 N73-13187
- Characteristics of two channel telemetry system with two data rate channels for high and low data rate communication  
[NASA-CASE-NPO-11572] c07 N73-16121
- Measurement system for physical quantity represented by or converted to variable frequency signal  
[NASA-CASE-MPS-20658-1] c14 N73-30386
- Digital to analog converter for sampled signal reconstruction  
[NASA-CASE-MSC-12458-1] c08 N73-32081
- Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c33 N74-11050
- Low level signal limiter  
[NASA-CASE-XLE-04791] c32 N74-22096
- Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c52 N74-26625
- Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
[NASA-CASE-MSC-13999-1] c52 N74-26626
- Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c33 N74-32711
- Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c60 N75-13539
- Signal conditioning circuit apparatus --- with constant input impedance  
[NASA-CASE-ARC-10348-1] c33 N75-19518
- Television noise reduction device  
[NASA-CASE-MSC-12607-1] c32 N75-21485
- Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MPS-21616-1] c33 N75-30429
- Compact bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c33 N76-14371
- Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MPS-22729-1] c32 N76-21366
- System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c34 N76-27517
- Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c33 N77-26386

## SIGNAL RECEPTION

Apparatus for determining thermophysical properties of test specimens  
 [NASA-CASE-LAP-11883-1] c09 N77-27131  
 An interleaving device --- for computer logic circuits used in optical data processing  
 [NASA-CASE-GSC-12111-2] c60 N77-31800  
 Analog to digital converter for two-dimensional radiant energy array computers  
 [NASA-CASE-GSC-11839-3] c60 N77-32731  
 Hearing aid malfunction detection system  
 [NASA-CASE-MSC-14916-1] c33 N78-10375  
 Swept group delay measurement  
 [NASA-CASE-NPO-13909-1] c33 N78-25319  
 Quadrature demodulation  
 [NASA-CASE-GSC-12137-1] c33 N78-32338  
 Bit error rate measurement above and below bit rate tracking threshold  
 [NASA-CASE-MSC-12743-1] c32 N79-10263  
 Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
 [NASA-CASE-NPO-14525-1] c32 N79-19195  
 Electrochemical detection device --- for use in microbiology  
 [NASA-CASE-LAR-11922-1] c25 N79-24073  
 A scannable beam-forming interferometer antenna array system  
 [NASA-CASE-GSC-12365-1] c32 N79-26252  
 Serial data correlator/code translator  
 [NASA-CASE-KSC-11025-1] c32 N79-28383  
 Baseband signal combiner for antenna array  
 [NASA-CASE-NPO-14641-1] c32 N79-32408

## SIGNAL RECEPTION

Radar signal receiver arrangement for extending range and increasing signal to noise ratio  
 [NASA-CASE-XNP-00748] c07 N70-36911  
 Reflectometer for receiver input impedance match measurement  
 [NASA-CASE-XNP-10843] c07 N71-11267  
 Diversity receiving system with diversity phase lock  
 [NASA-CASE-XGS-01222] c10 N71-20841  
 Design and development of signal detection and tracking apparatus  
 [NASA-CASE-XGS-03502] c10 N71-20852  
 Development of optimum pre-detection diversity combining receiving system adapted for use with amplitude modulation, phase modulation, and frequency modulation systems  
 [NASA-CASE-XGS-00740] c07 N71-23098  
 Binary data decoding device for use at receiving end of communication channel  
 [NASA-CASE-NPO-10118] c07 N71-24741  
 Development of electronic circuit for combining input signals on two separate antennas to form two processed signals  
 [NASA-CASE-MSC-12205-1] c07 N71-27056  
 Input signal measurement using liquid crystalline elements  
 [NASA-CASE-ERC-10275] c26 N72-25680  
 Filter for third order phase locked loops in signal receivers  
 [NASA-CASE-NPO-11941-1] c10 N73-27171  
 Electromechanical actuator for producing mechanical force and/or motion in response to electrical signals  
 [NASA-CASE-NPO-11738-1] c09 N73-30185  
 Scan converting video tape recorder  
 [NASA-CASE-NPO-10166-2] c35 N76-16391

## SIGNAL REFLECTION

Reflectometer for receiver input impedance match measurement  
 [NASA-CASE-XNP-10843] c07 N71-11267  
 Reflex feed system for dual frequency antenna with frequency cutoff means  
 [NASA-CASE-NPO-14022-1] c32 N78-31321

## SIGNAL STABILIZATION

Linear accelerator frequency control system  
 [NASA-CASE-XGS-05441] c10 N71-22962  
 Development of apparatus for generating output signal commensurate with information contained in input signal  
 [NASA-CASE-ERC-10041] c08 N71-29138  
 System for interference signal nulling by polarization adjustment  
 [NASA-CASE-NPO-13140-1] c32 N75-24982

## SIGNAL TO NOISE RATIOS

Semiconductor in resonant cavity for improving signal to noise ratio of communication receiver

## SUBJECT INDEX

[NASA-CASE-MSC-12259-1] c07 N70-12616  
 Radar signal receiver arrangement for extending range and increasing signal to noise ratio  
 [NASA-CASE-XNP-00748] c07 N70-36911  
 Detector assembly for discriminating first signal with respect to presence or absence of second signal at time of occurrence of first signal  
 [NASA-CASE-XMP-00701] c09 N70-40272  
 Automatic estimation of signal to noise ratio and other parameters in signal communication systems  
 [NASA-CASE-XNP-05254] c07 N71-20791  
 Voltage controlled oscillators and pulse amplitude modulation for signal ratio system  
 [NASA-CASE-XMP-04367] c09 N71-23545  
 Design and characteristics of recording system for selective reprocessing and filtering of data to obtain optimum signal to noise ratios  
 [NASA-CASE-ERC-10112] c07 N72-21119  
 Development of idler feedback system to reduce electronic noise problem in two parametric amplifiers  
 [NASA-CASE-LAR-10253-1] c09 N72-25258  
 Superconductive resonant cavity for improved signal to noise ratio in communication signal  
 [NASA-CASE-MSC-12259-2] c07 N72-33146  
 Signal to noise ratio determination circuit using bandpass limiter  
 [NASA-CASE-GSC-11239-1] c10 N73-25241  
 Gated compressor, distortionless signal limiter  
 [NASA-CASE-NPO-11820-1] c32 N74-19788

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Synchronizing apparatus for multi-access satellite time division multiplex system  
 [NASA-CASE-XGS-05918] c07 N69-39974  
 Electro-mechanical circuit for converting floating intelligence signal to common electrically grounded intelligence recorder  
 [NASA-CASE-XAC-00086] c09 N70-33182  
 Demodulator for simultaneous demodulation of two modulating ac signal carriers close in frequency  
 [NASA-CASE-XMP-01160] c07 N71-11298  
 Bipolar phase detector and corrector for split phase PCM data signals  
 [NASA-CASE-XGS-01590] c07 N71-12392  
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 [NASA-CASE-XNP-05254] c07 N71-20791  
 Multiplexed communication system design including automatic correction of transmission errors introduced by frequency spectrum shifts  
 [NASA-CASE-XNP-01306] c07 N71-20814  
 Adaptive notch filter, using modulation techniques for reversed phase noise signal  
 [NASA-CASE-XMP-01892] c10 N71-22986  
 Pulse generator for synchronizing or resetting electronic signals without requiring separate external source  
 [NASA-CASE-XGS-03632] c09 N71-23311  
 Device for locating electrically nonlinear objects and determining distance to object by FM signal transmission  
 [NASA-CASE-KSC-10108] c14 N73-25461  
 Television multiplexing system, using single crystal controlled clock for signal synchronization  
 [NASA-CASE-KSC-10654-1] c07 N73-30115  
 Controlled oscillator system with a time dependent output frequency  
 [NASA-CASE-NPO-11962-1] c33 N74-10194  
 Pulse code modulated signal synchronizer  
 [NASA-CASE-MSC-12462-1] c32 N74-20809  
 Pulse code modulated signal synchronizer  
 [NASA-CASE-MSC-12494-1] c32 N74-20810  
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 [NASA-CASE-MSC-14558-1] c32 N75-21486  
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 [NASA-CASE-GSC-11743-1] c32 N75-24981  
 Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
 [NASA-CASE-NPO-13683-1] c35 N77-14411  
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[NASA-CASE-KSC-11047-1] c74 N78-14889  
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[NASA-CASE-KSC-11065-1] c60 N79-27865
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[NASA-CASE-XMP-08674] c06 N71-28807  
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[NASA-CASE-LEW-12364-1] c44 N77-22606
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[NASA-CASE-GSC-12303-1] c24 N79-31347
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[NASA-CASE-XLE-10910] c18 N71-29040  
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[NASA-CASE-LEW-11179-1] c27 N76-16229
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[NASA-CASE-XLE-00808] c24 N71-10560  
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[NASA-CASE-XLE-08569] c03 N71-23449  
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[NASA-CASE-NPO-14474-1] c26 N78-27255  
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[NASA-CASE-NPO-14297-1] c76 N79-10918  
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[NASA-CASE-NPO-14482-1] c44 N79-25511  
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[NASA-CASE-NPO-13969-1] c76 F79-23798
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[NASA-CASE-XLE-02792] c26 N71-10607  
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[NASA-CASE-NPS-20979-2] c06 N73-32030  
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[NASA-CASE-XMP-02526-1] c27 N79-21190
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[NASA-CASE-XGS-04808] c03 N69-25146  
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[NASA-CASE-XLA-08507] c09 N69-39984  
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[NASA-CASE-XGS-01473] c09 N71-10673  
Silicon controlled rectifier pulse gate amplifier for blocking false gating caused by negative transient voltages  
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- SILICON DIOXIDE**  
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[NASA-CASE-XMP-00920] c15 N71-15906  
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[NASA-CASE-INS-04312] c07 N71-22984  
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[NASA-CASE-ERC-10073-1] c24 N74-19769  
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[NASA-CASE-ARC-10721-1] c27 N76-22376  
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[NASA-CASE-HSC-14270-1] c27 N76-22377  
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[NASA-CASE-LAR-10385-3] c74 N78-15879  
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[NASA-CASE-ARC-11169-1] c24 N79-24062
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[NASA-CASE-ERC-10120] c26 N69-33482
- SILICON JUNCTIONS**  
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[NASA-CASE-XGS-07801] c09 N71-12513
- SILICON NITRIDES**  
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[NASA-CASE-ERC-10073-1] c24 N74-19769  
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- SILICON POLYMERS**  
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[NASA-CASE-ARC-10915-2] c27 N79-18052
- SILICON RADIATION DETECTORS**  
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[NASA-CASE-XLE-10529] c14 N69-23191  
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- SILICON TRANSISTORS**  
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[NASA-CASE-GSC-10695-1] c09 N72-25259  
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- SILICONE RESINS**  
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[NASA-CASE-LAR-10073-1] c37 N76-24575
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[NASA-CASE-NPO-14477-1] c28 N79-10224
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[NASA-CASE-XLA-00284] c15 N71-16075
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[NASA-CASE-MFS-13994-1] c06 N71-11240  
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[NASA-CASE-XMP-02584] c06 N71-20905  
Synthesis of siloxane containing epoxide and diamine polymers  
[NASA-CASE-MFS-13994-2] c06 N72-25148  
Silphenylenesiloxane polymer with in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c06 N72-25151  
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[NASA-CASE-GSC-11358-1] c06 N73-26100
- SILVER**  
Dry electrode manufacture, using silver powder with cement  
[NASA-CASE-FRC-10029-2] c05 N72-25121
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[NASA-CASE-XMP-06053] c26 N75-27126
- SILVER CHLORIDES**  
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[NASA-CASE-XMS-02872] c05 N69-21925  
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[NASA-CASE-XGS-00963] c15 N69-39735
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[NASA-CASE-HSC-10960-1] c03 N71-24718
- SILVER ZINC BATTERIES**  
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[NASA-CASE-XGS-01674] c03 N71-29129
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[NASA-CASE-MFS-12750] c27 N71-16223  
Phonocardiogram simulator producing electrical voltage waves to control amplitude and duration between simulated sounds  
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Sign wave generation simulator for variable amplitude, frequency, damping, and phase pulses for oscilloscope display  
[NASA-CASE-NPO-10251] c10 N71-27365
- Laser Doppler velocity simulator  
[NASA-CASE-LAR-12176-1] c36 N78-29435
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Service life of electromechanical device for generating sine/cosine functions  
[NASA-CASE-LAR-10503-1] c09 N72-21248  
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[NASA-CASE-LAR-10310-1] c10 N73-20253
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Sign wave generation simulator for variable amplitude, frequency, damping, and phase pulses for oscilloscope display  
[NASA-CASE-NPO-10251] c10 N71-27365  
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[NASA-CASE-NPO-11133] c10 N72-20223  
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[NASA-CASE-LAR-11302-1] c25 N75-13054  
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[NASA-CASE-XLA-08645] c15 N69-21465  
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[NASA-CASE-LEW-10393-1] c17 N71-15468
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[NASA-CASE-XLE-06461-2] c17 N72-28535
- SIZE DETERMINATION**  
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[NASA-CASE-LAR-10913] c14 N72-16282
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Method and apparatus for precision sizing and joining of large diameter tubes by bulging or constricting overlapping ends  
[NASA-CASE-XMP-05114-2] c15 N71-26148  
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[NASA-CASE-XNP-09770-3] c11 N71-27036
- SIZING (SHAPING)**  
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[NASA-CASE-XMP-05114] c15 N71-17650
- SIZING SCREENS**  
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Screen particle separator for soil samples  
[NASA-CASE-XNP-09770-2] c15 N72-22483
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[NASA-CASE-XNP-09453] c08 N71-19420  
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 [NASA-CASE-KSC-10849-1] c52 N77-14738

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 [NASA-CASE-PRC-11029-1] c02 N79-31139

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- Metal strip mounting arrangement for solar cell arrays on spacecraft  
[NASA-CASE-XGS-01475] c03 N71-11058
- Conductor for connecting parallel cells into submodules in series to form solar cell matrix  
[NASA-CASE-NPO-10821] c03 N71-19545
- Space erectable rollup solar array of arcuate solar panels furled on tapered drum for spacecraft storage during launch.  
[NASA-CASE-NPO-10188] c03 N71-20273
- Electrode connection for n-on-p silicon solar cell  
[NASA-CASE-XLE-04787] c03 N71-20492
- Fabrication of solar cell banks for attaching solar cells to base members or substrates  
[NASA-CASE-XNP-00826] c03 N71-20895
- Gallium arsenide solar cell preparation by surface deposition of cuprous iodide on thin n-type polycrystalline layers and heating in iodine vapor  
[NASA-CASE-XNP-01960] c09 N71-23027
- Gadolinium or samarium doped-silicon semiconductor material with resistance to radiation damage for use in solar cells  
[NASA-CASE-XLE-10715] c26 N71-23292
- Maintaining current flow through solar cells with open connection using shunting diode  
[NASA-CASE-XLE-04535] c03 N71-23354
- Metal pattern bonding technique for cover glass attachment to silicon solar cells for space applications  
[NASA-CASE-XLE-08569] c03 N71-23449
- Addition of group 3 elements to silicon semiconductor material for increased resistance to radiation damage in solar cells  
[NASA-CASE-XLE-02798] c26 N71-23654
- Method of attaching cover glass to silicon solar cell without using adhesive  
[NASA-CASE-XLE-08569-2] c03 N71-24681
- Method and apparatus for fabricating solar cell panels  
[NASA-CASE-XNP-03413] c03 N71-26726
- Development and characteristics of solar cells with phosphors in cover glass to improve response to solar ultraviolet radiation  
[NASA-CASE-ARC-10050] c02 N71-33409
- Electrically coupled individually encapsulated solar cell matrix  
[NASA-CASE-NPO-11190] c03 N71-34044
- Recovering efficiency of solar cells damaged by environmental radiation through thermal annealing  
[NASA-CASE-XGS-04047-2] c03 N72-11062
- Spacecraft solar cell system with switching circuit to provide compensation for environmental changes  
[NASA-CASE-GSC-10669-1] c03 N72-20031
- Test method and equipment for identifying faulty cells or connections in solar cell assemblies  
[NASA-CASE-NPO-10401] c03 N72-20033
- Electrically connected matrix of discrete solar cell blanks  
[NASA-CASE-NPO-10591] c03 N72-22041
- Solar cell panel with light transmitting cover plate  
[NASA-CASE-NPO-10747] c03 N72-22042
- Development of process for constructing protective covers for solar cells  
[NASA-CASE-GSC-11514-1] c03 N72-24037
- Apparatus for applying thin glass slides to solar cells  
[NASA-CASE-NPO-10575] c03 N72-25019
- Electrical interconnection of unilluminated solar cells in solar battery array  
[NASA-CASE-GSC-10344-1] c03 N72-27053
- Rectangular solar cell stacked panels to generate electrical power aboard spacecraft  
[NASA-CASE-NPO-11771] c03 N73-20040
- Method of making silicon solar cell array --- and mounting on flexible substrate  
[NASA-CASE-LEW-11069-1] c44 N74-14784
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c44 N76-14600
- Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c44 N76-28635
- Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c44 N76-31666
- Photovoltaic cell array  
[NASA-CASE-MFS-22458-1] c44 N77-10635
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c44 N77-14580
- Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c44 N77-19571
- High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c44 N78-13526
- An improved solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N78-13556
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c33 N78-17296
- Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c35 N78-18394
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c44 N78-24609
- Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c44 N78-25528
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529
- Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-1] c44 N78-25553

- A solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-3] c44 N78-25560
- Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c44 N78-27515
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N78-27520
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c44 N78-28625
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 N79-11468
- Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c44 N79-12541
- Back wall solar cell  
[NASA-CASE-LEW-12236-2] c44 N79-14528
- Method of mitigating titanium impurities effects in P-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c44 N79-17315
- Method for fabricating solar cells having integrated collector grids  
[NASA-CASE-LEW-12819-2] c44 N79-18444
- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c44 N79-18446
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c44 N79-19447
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c44 N79-25482
- Copper doped polycrystalline silicon  
[NASA-CASE-NPO-14670-1] c44 N79-25512
- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c44 N79-31752
- Solar cell module  
[NASA-CASE-NPO-14467-1] c44 N79-31753
- SOLAR COLLECTORS**
- Expanding and contracting connector strip for solar cell array of Nimbus satellite  
[NASA-CASE-XGS-01395] c03 N69-21539
- Concentrator device for controlling direction of solar energy onto energy converters  
[NASA-CASE-XLP-01716] c09 N70-40234
- Space erectable rollup solar array of arcuate solar panels furled on tapered drum for spacecraft storage during launch  
[NASA-CASE-NPO-10188] c03 N71-20273
- Storage stable, thermally activated foaming compositions for erecting and rigidizing mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155
- Development and characteristics of solar cells with phosphors in cover glass to improve response to solar ultraviolet radiation  
[NASA-CASE-ARC-10050] c03 N71-33409
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c35 N77-20401
- Solar cell shingle  
[NASA-CASE-LEW-12587-1] c44 N77-31601
- Stainless steel panel for selective absorption of solar energy and the method of producing said panel  
[NASA-CASE-MFS-23518-2] c44 N77-31611
- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c44 N77-32582
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c44 N77-32583
- Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c44 N78-10554
- Solar heating system  
[NASA-CASE-LAR-12009-1] c44 N78-15560
- Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c44 N78-17460
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c44 N78-19599
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N78-23567
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c44 N78-25527
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c44 N78-31526
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c44 N79-11467
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c44 N79-11469
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13817-1] c44 N79-11471
- Solar cell collector and method for producing same  
[NASA-CASE-LEW-12552-2] c44 N79-11472
- An improved solar panel and method for fabricating the same  
[NASA-CASE-NPO-14490-1] c44 N79-18445
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186
- An improved solar energy receiver for a stirling engine  
[NASA-CASE-NPO-14619-1] c44 N79-20513
- Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c44 N79-23481
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c44 N79-24432
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433
- Schottky barrier cell and method of fabricating it  
[NASA-CASE-NPO-13689A] c33 N79-25311
- Solar tracking system --- with pointing control circuits  
[NASA-CASE-MFS-23999-1] c44 N79-28667
- SOLAR ELECTRIC PROPULSION**
- Closed loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c20 N79-20179
- SOLAR ENERGY**
- Rectangular solar cell stacked panels to generate electrical power aboard spacecraft  
[NASA-CASE-NPO-11771] c03 N73-20040
- Solar energy power system --- using Freon  
[NASA-CASE-MFS-21628-1] c44 N75-32581
- Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c44 N76-14602
- Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c44 N77-32580
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c44 N77-32583
- Solar heating system  
[NASA-CASE-LAR-12009-1] c44 N78-15560
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c44 N79-11469
- Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c44 N79-14529
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c44 N79-26475
- Solar cell module  
[NASA-CASE-NPO-14467-1] c44 N79-31753
- SOLAR ENERGY ABSORBERS**
- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c44 N76-14595
- Solar energy absorber  
[NASA-CASE-MFS-22743-1] c44 N76-22657
- Solar energy trap  
[NASA-CASE-MFS-22744-1] c44 N76-24696
- Solar cell shingle  
[NASA-CASE-LEW-12587-1] c44 N77-31601
- Stainless steel panel for selective absorption of solar energy and the method of producing said panel  
[NASA-CASE-MFS-23518-2] c44 N77-31611
- Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c44 N78-17460
- Stainless steel panel for selective absorption of solar energy and the method of producing said panel  
[NASA-CASE-MFS-23518-3] c44 N78-25557
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection

- [NASA-CASE-WOO-00428-1] c32 N79-19186
- SOLAR ENERGY CONVERSION**
- Solar energy power system  
[NASA-CASE-MFS-21628-2] c44 N76-23675
- High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c44 N78-13526
- An improved solar concentrator  
[NASA-CASE-MFS-23727-1] c44 N78-13556
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c44 N78-24609
- Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c44 N79-11470
- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c44 N79-18443
- Radiation shadow indicator  
[NASA-CASE-MFS-23546-2] c74 N79-29037
- Solar engine --- Flat plate type  
[NASA-CASE-LAR-12148-1] c44 N79-29608
- SOLAR FLOW**
- A solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-3] c44 N78-25560
- SOLAR FURNACES**
- Lens assembly for solar furnace or solar simulator  
[NASA-CASE-XNP-04111] c14 N71-15622
- SOLAR GENERATORS**
- Describing method for vapor deposition of gallium arsenide films to manganese substrates to provide semiconductor devices with low resistance substrates  
[NASA-CASE-XNP-01328] c26 N71-18064
- Microwave power converter  
[NASA-CASE-NPO-14068-1] c44 N78-19609
- SOLAR GRAVITATION**
- Table structure and rotating magnet system simulating gravitational forces on spacecraft and displaying trajectories between Earth, Venus, and Mercury  
[NASA-CASE-XNP-00708] c14 N70-35394
- SOLAR HEATING**
- Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c44 N78-10554
- Solar heating system  
[NASA-CASE-LAR-12009-1] c44 N78-15560
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c44 N78-23567
- SOLAR OBSERVATORIES**
- Light sensitive control system for automatically opening and closing dome of solar optical telescope  
[NASA-CASE-MSC-10966] c14 N71-19568
- SOLAR PONDS (HEAT STORAGE)**
- Solar pond  
[NASA-CASE-NPO-13581-2] c44 N78-31525
- SOLAR POSITION**
- Sun angle calculator  
[NASA-CASE-MSC-12617-1] c35 N76-29552
- SOLAR RADIATION**
- Space simulator with uniform test region radiation distribution, adapted to simulate Venus solar radiations  
[NASA-CASE-XNP-00459] c11 N70-38675
- Design and characteristics of device for sensing solar radiation and providing spacecraft attitude control to maintain direction with respect to incident radiation  
[NASA-CASE-XNP-05535] c14 N71-23040
- Utilization of solar radiation by solar still for converting salt and brackish water into potable water  
[NASA-CASE-XMS-04533] c15 N71-23086
- Wide angle sun sensor --- consisting of cylinder, insulation and pair of detectors  
[NASA-CASE-NPO-13327-1] c35 N75-23910
- Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c34 N77-18382
- Radiation shadow indicator  
[NASA-CASE-MFS-23546-2] c74 N79-29037
- SOLAR RADIO EMISSION**
- System generating sidereal frequency signals from signals of standard solar frequency without use of mixing operations or feedback loops  
[NASA-CASE-XGS-02610] c14 N71-23174
- SOLAR REFLECTORS**
- Foldable, double cone and parabolic reflector system for solar ray concentration  
[NASA-CASE-XLA-04622] c03 N70-41580
- Modifying existing solar cells for temperature control  
[NASA-CASE-NPO-10109] c03 N71-11049
- Fabrication of curved reflector segments for solar mirror  
[NASA-CASE-XLE-08917] c15 N71-15597
- Thermal pump-compressor for converting solar energy  
[NASA-CASE-XLA-00377] c33 N71-17610
- Forming mold for polishing and machining curved solar magnesium reflector with reinforcing ribs  
[NASA-CASE-XLE-08917-2] c15 N71-24836
- Inorganic thermal control and solar reflector coatings  
[NASA-CASE-MFS-20011] c18 N72-22566
- Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c74 N77-28933
- Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c44 N79-14529
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c44 N79-24432
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c44 N79-24433
- SOLAR SAILS**
- Strong thin membrane structure  
[NASA-CASE-NPO-14021-1] c27 N77-32313
- SOLAR SENSORS**
- Sensor consisting of photocells mounted on pyramidal base for improved pointing accuracy of planetary trackers  
[NASA-CASE-XNP-04180] c07 N69-39736
- Spacecraft attitude control system using solar and earth sensors, gyroscopes, and jet actuators  
[NASA-CASE-XNP-00465] c21 N70-35395
- Sun tracker with rotatable plane-parallel plate and two photocells  
[NASA-CASE-XGS-01159] c21 N71-10678
- Solar sensor with coarse and fine sensing elements for matching preirradiated cells on degradation rates  
[NASA-CASE-XLA-01584] c14 N71-23269
- Sun direction detection system  
[NASA-CASE-NPO-13722-1] c74 N77-22951
- Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c44 N79-14526
- Solar tracking system --- with pointing control circuits  
[NASA-CASE-MFS-23999-1] c44 N79-28667
- SOLAR SIMULATORS**
- Lens assembly for solar furnace or solar simulator  
[NASA-CASE-XNP-04111] c14 N71-15622
- High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c33 N74-12913
- SOLDERED JOINTS**
- Soldering device particularly suited to making high quality wiring joints for aerospace engineering utilizing capillary attraction to regulate flow of solder  
[NASA-CASE-XLA-08911] c15 N71-27214
- SOLDERING**
- Hydrazine monoperfluoro alkanooate solder flux leaving corrosion resistant coating, for metals such as copper  
[NASA-CASE-XNP-03459-2] c18 N71-15688
- Metal soldering with hydrazine monoperfluoro alkanooate for corrosion resistant coatings  
[NASA-CASE-XNP-03459] c15 N71-21078
- Method of plating copper on aluminum to permit conventional soldering of structural aluminum bodies  
[NASA-CASE-XLA-08966-1] c17 N71-25903
- Device for resistance soldering electrical leads to solder cups of multiple terminal block  
[NASA-CASE-GSC-10913] c15 N72-22491
- Development of electrical system for indicating optimum contact between electrode and metal surface to permit improved soldering operation  
[NASA-CASE-KSC-10242] c15 N72-23497
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c44 N79-24431
- SOLDERS**
- Solder coating process for printed copper

- circuit protection  
[NASA-CASE-XMP-01599] c09 N71-20705
- Method for attaching a fused-quartz mirror to a  
conductive metal substrate  
[NASA-CASE-MPS-23405-1] c26 N77-29260
- SOLENOID VALVES**
- Solenoid two-step valve for bipropellant flow  
rate control to rocket engine  
[NASA-CASE-XMS-04890-1] c15 N70-22192
- Automatic recording McLeod gage with three  
electrodes and solenoid valve connection  
[NASA-CASE-XLP-03280] c14 N71-23093
- Solenoid valve including guide for armature and  
valve member  
[NASA-CASE-GSC-10607-1] c15 N72-20482
- Remote fire stack igniter --- with  
solenoid-controlled valve  
[NASA-CASE-MPS-21675-1] c25 N74-33378
- Automatically operable self-leveling load table  
[NASA-CASE-MPS-22039-1] c09 N75-12968
- SOLENOIDS**
- Water cooled solenoid capable of producing  
magnetic field intensities up to 100 kilogauss  
[NASA-CASE-XNP-01951] c09 N70-41929
- Automatic power supply circuit design for  
driving inductive loads and minimizing power  
consumption including solenoid example  
[NASA-CASE-NPO-10716] c09 N71-24892
- Rotary solenoid shutter drive assembly and  
rotary inertia damper and stop plate assembly  
--- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c33 N74-20861
- Sprag solenoid brake --- development and  
operations of electrically controlled brake  
[NASA-CASE-MPS-21846-1] c37 N74-26976
- SOLID ELECTRODES**
- Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c35 N78-25391
- SOLID LUBRICANTS**
- Bonded solid lubricant coatings of calcium  
fluoride and binder for high temperature  
stability  
[NASA-CASE-XMS-00259] c18 N70-36400
- Solid lubricant applied to porous roller  
bearings prior to use in ultrahigh vacuum  
[NASA-CASE-XLE-09527] c15 N71-17688
- Preparation of inorganic solid film lubricants  
with long wear life and stability in aerospace  
environments  
[NASA-CASE-XMP-03988] c15 N71-21403
- Development of rolling element bearing for  
operation in ultrahigh vacuum environment  
[NASA-CASE-XLE-09527-2] c15 N71-26189
- Method of making bearing materials ---  
self-lubricating, oxidation resistant  
composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c24 N79-17916
- SOLID PROPELLANT IGNITION**
- Solid propellant ignition with hypergolic fluid  
injected to predetermined portions of propellant  
[NASA-CASE-XLP-00207] c28 N70-33375
- Method for igniting solid propellant rocket  
motors by injecting hypergolic fluids  
[NASA-CASE-XLE-01988] c27 N71-15634
- Molded composite pyrogen igniter for rocket motors  
--- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275
- SOLID PROPELLANT ROCKET ENGINES**
- Spherical solid propellant rocket engine design  
[NASA-CASE-XLA-00105] c28 N70-33331
- Mandrel for shaping solid propellant rocket fuel  
into engine casing  
[NASA-CASE-XLA-00304] c27 N70-34783
- Spherical solid propellant rocket engine having  
abrupt burnout  
[NASA-CASE-XHQ-01897] c28 N70-35381
- Grain configuration for solid propellant rocket  
engines  
[NASA-CASE-XGS-03556] c27 N70-35534
- Solid propellant rocket vehicle thrust control  
method and apparatus  
[NASA-CASE-XNP-00217] c28 N70-38181
- Steerable solid propellant rocket motor adapted  
to effect payload orientation as multistage  
rocket stage or reduce velocity as retrorocket  
[NASA-CASE-XNP-00234] c28 N70-38645
- Method of making solid propellant rocket motor  
having reliable high altitude capabilities,  
long shelf life, and capable of firing with  
nozzle closure with foamed plastic permanent  
mandrel  
[NASA-CASE-XLA-04126] c28 N71-26779
- Electrical failure detector in solid rocket  
propellant motor insulation against thermal  
degradation by fuel grain  
[NASA-CASE-XMP-03968] c14 N71-27186
- Solid propellant rocket engine with venting  
system to control effective nozzle throat area  
[NASA-CASE-XNP-03282] c28 N72-20758
- Thin walled nozzle with insulative nonablative  
coating for solid propellant rocket engines  
[NASA-CASE-NPO-11458] c28 N72-23810
- Characteristics of solid propellant rocket  
engine with controlled rate of thrust buildup  
operating in vacuum environment  
[NASA-CASE-NPO-11559] c28 N73-24784
- Space vehicle  
[NASA-CASE-MPS-22734-1] c18 N75-19329
- Solid propellant rocket motor and method of  
making same  
[NASA-CASE-XLA-1349] c20 N77-17143
- Molded composite pyrogen igniter for rocket motors  
--- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c20 N78-24275
- Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179
- SOLID PROPELLANTS**
- Variable thrust ion engine using thermal  
decomposition of solid cesium compound to  
produce propulsive vapor  
[NASA-CASE-XMP-00923] c28 N70-36802
- Photographic method for measuring viscoelastic  
strain in solid propellants and other materials  
[NASA-CASE-XNP-01153] c32 N71-17645
- Ethylene oxide sterilization and encapsulating  
process for sterile preservation of  
instruments and solid propellants  
[NASA-CASE-XNP-09763] c14 N71-20461
- Chemical process for production of  
polyisobutylene compounds and application as  
solid rocket propellant binder  
[NASA-CASE-NPO-10893] c27 N73-22710
- Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c28 N79-10224
- A system for concurrently delivering a stream of  
powdered fuel and a stream of powdered  
oxidizer to a combustion chamber for a  
reaction motor  
[NASA-CASE-MPS-23904-1] c20 N79-13077
- SOLID ROCKET BINDERS**
- Liner for hybrid solid propellants to bind  
propellant to rocket motor case  
[NASA-CASE-XNP-09744] c27 N71-16392
- SOLID ROCKET PROPELLANTS**
- Using ethylene oxide in preparation of  
sterilized solid rocket propellants and  
encapsulating materials  
[NASA-CASE-XNP-01749] c27 N70-41897
- Pressurized gas injection for burning rate  
control of solid propellants  
[NASA-CASE-XLE-03494] c27 N71-21819
- Solid propellant stabilizer containing  
nitroguanidine  
[NASA-CASE-NPO-12000] c27 N72-25699
- Solid propellant containing hydrazinium  
nitroformate oxidizer and polymeric  
hydrocarbon binder  
[NASA-CASE-NPO-12015] c27 N73-16764
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c28 N74-33209
- Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c28 N77-10213
- Solid propellant rocket motor and method of  
making same  
[NASA-CASE-XLA-1349] c20 N77-17143
- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c28 N79-28342
- SOLID STATE**
- Solid state chemical source for ammonia beam  
masers  
[NASA-CASE-IGS-01504] c16 N70-41578
- SOLID STATE DEVICES**
- Solid state switching circuit design to increase  
current capacity of low rated relay contacts  
[NASA-CASE-XNP-09228] c09 N69-27500
- Temperature compensated solid state differential  
amplifier with application in  
bioinstrumentation circuits

- [NASA-CASE-XAC-00435] c09 N70-35440  
Solid state operational integrator  
[NASA-CASE-NPO-10230] c09 N71-12520  
Microwave power receiving antenna solving heat dissipation problems by construction of elements as heat pipe devices  
[NASA-CASE-MPS-20333] c09 N71-13486  
Computer circuit performing both counting and shifting logic operations also capable of miniaturization and integration in basic circuits  
[NASA-CASE-XNP-01753] c08 N71-22897  
Solid state television camera system consisting of monolithic semiconductor mosaic sensor and molecular digital readout systems  
[NASA-CASE-XMF-06092] c07 N71-24612  
Solid state circuit for switching alternating current input signal as function of direct current gating transistor  
[NASA-CASE-XNP-06505] c10 N71-24799  
Solid state force measuring electromechanical transducers made of piezoresistive materials  
[NASA-CASE-ERC-10088] c26 N71-25490  
Development and characteristics of solid state acoustic variable time delay line using direct current voltage and radio frequency pulses  
[NASA-CASE-ERC-10032] c10 N71-25900  
Solid state broadband stable power amplifier  
[NASA-CASE-XNP-10854] c10 N71-26331  
Solid state remote circuit selector switching circuit  
[NASA-CASE-LEW-10387] c09 N72-22201  
Radio frequency controlled solid state switch  
[NASA-CASE-ARC-10136-1] c09 N72-22202  
Development of thermal to electric power conversion system using solid state switches of electrical currents to load for Seebeck effect compensation  
[NASA-CASE-NPO-11388] c03 N72-23048  
Solid state switch for variable circuit switching  
[NASA-CASE-NPO-10817-1] c08 N73-30135  
Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c33 N74-14939  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c33 N75-27251  
Dual mode solid state power switch  
[NASA-CASE-MPS-22880-1] c33 N76-31410  
Solid-state current transformer  
[NASA-CASE-MPS-22560-1] c33 N77-14335  
Space-charge-limited solid-state triode  
[NASA-CASE-NPO-13064-1] c33 N79-11314
- SOLID SURFACES**  
Dye penetrant and technique for nondestructive tests of solid surfaces contacted by liquid oxygen  
[NASA-CASE-XMF-02221] c18 N71-27170
- SOLID WASTES**  
Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14831-1] c25 N78-10225
- SOLID-SOLID INTERFACES**  
Schottky barrier cell and method of fabricating it  
[NASA-CASE-NPO-13689A] c33 N79-25311  
Coal-shale interface detection  
[NASA-CASE-MPS-23720-3] c43 N79-25443  
Coal-rock interface detector  
[NASA-CASE-MPS-23725-1] c43 N79-31706
- SOLIDIFICATION**  
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MPS-23816-1] c26 N79-16943
- SOLUBILITY**  
Fireproof potassium silicate coating composition, insoluble in water after application  
[NASA-CASE-GSC-10072] c18 N71-14014  
Formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c25 N78-25149
- SOLUTES**  
Specific wavelength colorimeter --- for measuring given solute concentration in test sample
- [NASA-CASE-MSC-14081-1] c35 N74-27860
- SONAR**  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c32 N79-26253
- SONIC BOOMS**  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c35 N75-19614  
Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c07 N76-27232
- SORBATES**  
Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c35 N78-19465
- SORET COEFFICIENT**  
Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MPS-22926-1] c24 N77-27187
- SOUND GENERATORS**  
Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c35 N74-16135
- SOUND LOCALIZATION**  
Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c71 N79-23753
- SOUND PRESSURE**  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c35 N75-19614  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c71 N78-14867
- SOUND TRANSDUCERS**  
Method and transducer device for detecting presence of hydrogen gas  
[NASA-CASE-XMF-03873] c06 N69-39733  
Sensor for detecting and measuring energy, velocity and direction of travel of a cosmic dust particle  
[NASA-CASE-GSC-10503-1] c14 N72-20381  
Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c71 N79-23753
- SOUND WAVES**  
Piezoelectric transducer for monitoring sound waves of physiological origin  
[NASA-CASE-XNS-05365] c14 N71-22993  
Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c12 N75-24774  
Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c05 N77-31130  
Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c71 N78-10837  
Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c71 N79-20827  
Method and apparatus for shaping and enhancing acoustical levitation forces --- ultrasonic transducer for generating a radiation pressure field  
[NASA-CASE-MPS-25050-1] c71 N79-29956
- SOUNDING ROCKETS**  
Development of attitude control system for sounding rocket stabilization during ballistic phase of flight  
[NASA-CASE-XGS-01654] c31 N71-24750  
System for deploying and ejecting releasable clamshell fairing sections from spinning sounding rockets  
[NASA-CASE-GSC-10590-1] c31 N73-14853
- SPACE BASES**  
Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c18 N78-22146
- SPACE CAPSULES**  
Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery  
[NASA-CASE-XMF-00641] c31 N70-36410  
Design and configuration of manned space capsule  
[NASA-CASE-ILA-01332] c31 N71-15664  
Describing assembly for opening stabilizing and decelerating flaps of flight capsules used in space research  
[NASA-CASE-XMF-03169] c31 N71-15675
- SPACE CHARGE**  
Space-charge-limited solid-state triode  
[NASA-CASE-NPO-13064-1] c33 N79-11314

## SPACE COMMUNICATION

Radio receiver with array of independently steerable antennas for deep space communication [NASA-CASE-XLA-00901] c07 N71-10775

Design and development of tracking receiver for tracking satellites and receiving radio signal transmissions under adverse noise conditions [NASA-CASE-XGS-08679] c10 N71-21473

Development of antenna system for spin stabilized communication satellite for simultaneous reception and transmission of data [NASA-CASE-XGS-02607] c31 N71-23009

Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel [NASA-CASE-NPO-13545-1] c32 N77-12240

Redundant RF system for space application [NASA-CASE-NPO-13955-1] c32 N79-22347

## SPACE ENVIRONMENT SIMULATION

Simulating voltage-current characteristic curves of solar cell panel with different operational parameters [NASA-CASE-XMS-01554] c10 N71-10578

Method and feed system for separating and orienting liquid and vapor phases of liquid propellants in zero gravity environment [NASA-CASE-XLE-01182] c27 N71-15635

Cable suspension and inclined walkway system for simulating reduced or zero gravity environments [NASA-CASE-XLA-01787] c11 N71-16028

Space environment simulation system for measuring spacecraft electric field strength in plasma sheath [NASA-CASE-XLE-02038] c09 N71-16086

Optical characteristics measuring apparatus [NASA-CASE-XNP-08840] c23 N71-16365

Omnidirectional anisotropic molecular trap, used with vacuum pump to simulate space environments for testing spacecraft components [NASA-CASE-XGS-00783] c30 N71-17788

Space environmental work simulator with portions of space suit mounted to vacuum chamber wall [NASA-CASE-XMP-07488] c11 N71-18773

Low and zero gravity simulator for astronaut training [NASA-CASE-MFS-10555] c11 N71-19494

Self lubricating fluoride-metal composite materials for outer space applications [NASA-CASE-XLE-08511] c18 N71-23710

Test chamber for determining decomposition and autoignition of materials used in spacecraft under controlled environmental conditions [NASA-CASE-KSC-10198] c11 N71-28629

Illumination system design for use as sunlight simulator in space environment simulators with multiple light sources reflected to single virtual source [NASA-CASE-HQN-10781] c23 N71-30292

Pressure regulator for space suit worn underwater to simulate space environment for testing and experimentation [NASA-CASE-MFS-20332] c05 N72-20097

## SPACE ERECTABLE STRUCTURES

Self-erectable space structures of flexible foam for application in planetary orbits [NASA-CASE-XLA-00686] c31 N70-34135

Manned space station collapsible for launching and self-erectable in orbit [NASA-CASE-XLA-00678] c31 N70-34296

Manned space station launched in packaged condition and self erecting in orbit [NASA-CASE-XLA-00258] c31 N70-38676

Collapsible, space erectable loop antenna system for space vehicle [NASA-CASE-XNP-00437] c07 N70-40202

Erectable, inflatable, radio signal reflecting passive communication satellite [NASA-CASE-XLA-00210] c30 N70-40309

Deployment system for flexible wing with rigid superstructure [NASA-CASE-XLA-01220] c02 N70-41863

Capillary radiator for carrying heat transfer liquid in planetary spacecraft structures [NASA-CASE-XLE-03307] c33 N71-14035

Describing apparatus for manufacturing operations in low and zero gravity environments of orbital space flight [NASA-CASE-MFS-20410] c15 N71-19214

Space erectable rollup solar array of arcuate solar panels furled on tapered drum for spacecraft storage during launch [NASA-CASE-NPO-10188] c03 N71-20273

Self erecting parabolic reflector design for use in space [NASA-CASE-XMS-03454] c09 N71-20658

Pneumatic cantilever beams and platform for space erectable structure [NASA-CASE-XLA-01731] c32 N71-21045

Hydraulic actuator design for space deployment of heat radiators [NASA-CASE-MSC-11817-1] c15 N71-26611

Space expandable tether device for use as passageway between two docked spacecraft [NASA-CASE-XMS-10993] c15 N71-28936

Expandable space frames with high expansion to collapse ratio [NASA-CASE-EPC-10365-1] c31 N73-32749

Telescoping columns --- parabolic antenna support [NASA-CASE-LAR-12195-1] c37 N78-33446

Apparatus for assembling space structure [NASA-CASE-MFS-23579-1] c18 N79-11108

## SPACE EXPLORATION

Self-propelled vehicle with wheel, track laying, and walking capability for exploratory expolaration [NASA-CASE-NPO-11366] c11 N73-26238

## SPACE FLIGHT

Portable environmental control and life support system for astronaut in and out of spacecraft [NASA-CASE-XMS-09632-1] c05 N71-11203

Television simulation for aircraft and space flight [NASA-CASE-XPR-03107] c09 N71-19449

## SPACE FLIGHT FEEDING

Helmet feedport [NASA-CASE-XMS-09653] c54 N78-17680

## SPACE INDUSTRIALIZATION

Apparatus for assembling space structure [NASA-CASE-MFS-23579-1] c18 N79-11108

## SPACE MAINTENANCE

System for removing and repairing spacecraft control thrusters by use of portable air locks [NASA-CASE-MFS-20325] c28 N71-27095

## SPACE MANUFACTURING

Material suspension within an acoustically excited resonant chamber --- at near weightless conditions [NASA-CASE-NPO-13263-1] c12 N75-24774

Method for manufacturing mirrors in zero gravity environment [NASA-CASE-MSC-12611-1] c12 N76-15189

Apparatus for assembling space structure [NASA-CASE-MFS-23579-1] c18 N79-11108

## SPACE MISSIONS

Planetary atmospheric investigation using split trajectory dual flyby mode [NASA-CASE-XAC-08494] c30 N71-15990

Elimination of tracking occultation problems occurring during continuous monitoring of interplanetary missions by using Earth orbiting communications satellite [NASA-CASE-XAC-06029-1] c31 N71-24813

Design and development of space shuttle system for delivering payload to earth orbit or celestial orbit [NASA-CASE-MSC-12391] c30 N73-12884

## SPACE NAVIGATION

Electrical and electromechanical trigonometric computation assembly and space vehicle guidance system for aligning perpendicular axes of two sets of three-axes coordinate references [NASA-CASE-XMP-00684] c21 N71-21688

Momentum wheel design for spacecraft attitude control and magnetic drum and head system for data storage [NASA-CASE-NPO-11481] c21 N73-13644

Method for producing reticles for use in outer space [NASA-CASE-GSC-11188-2] c21 N73-19630

## SPACE ORIENTATION

Sensing method and device for determining orientation of space vehicle or satellite by using particle traps [NASA-CASE-XGS-00466] c21 N70-34297

## SPACE RENDEZVOUS

Method and apparatus for connecting two

- spacecraft with probe of one inserted in rocket engine nozzle of other spacecraft  
[NASA-CASE-MFS-11133] c31 N71-16222
- SPACE SHUTTLE ORBITERS**
- Thermal insulation attaching means  
[NASA-CASE-MSC-12619-1] c39 N75-21671
- Variable dihedral shuttle orbiter  
[NASA-CASE-LAR-10706-2] c05 N77-31132
- SPACE SHUTTLES**
- Designing spacecraft for flight into space, atmospheric reentry, and landing at selected sites  
[NASA-CASE-XAC-02058] c02 N71-16087
- Design and development of space shuttle system for delivering payload to earth orbit or celestial orbit  
[NASA-CASE-MSC-12391] c30 N73-12884
- Spacecraft configurations and aerodynamic characteristics of space shuttle systems with two reusable stages  
[NASA-CASE-MSC-12433] c31 N73-14854
- Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c18 N75-27041
- Pused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LBW-11179-1] c27 N76-16229
- Small air breathing launch vehicle  
[NASA-CASE-LAR-12250-1] c15 N78-25120
- A system for sterilizing objects --- such as water systems on the space shuttle using ethylene oxide  
[NASA-CASE-KSC-11085-1] c54 N79-33848
- SPACE SIMULATORS**
- Space simulator with uniform test region radiation distribution, adapted to simulate Venus solar radiations  
[NASA-CASE-XNP-00459] c11 N70-38675
- Variable geometry manned orbital vehicle having high aerodynamic efficiency over wide speed range and incorporating auxiliary pivotal wings  
[NASA-CASE-XLA-03691] c31 N71-15674
- Development of method and equipment for testing heat radiative properties of material under controlled environmental conditions  
[NASA-CASE-MPS-20096] c14 N71-30026
- SPACE STATIONS**
- Manned space station launched in packaged condition and self erecting in orbit  
[NASA-CASE-XLA-00258] c31 N70-38676
- Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c35 N75-33367
- Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MPS-20855-1] c15 N77-10112
- SPACE SUITS**
- Astronaut restraint suit for high acceleration protection  
[NASA-CASE-XAC-00405] c05 N70-41819
- Space suit with pressure-volume compensator system  
[NASA-CASE-XLA-05332] c05 N71-11194
- Equipotential space suits utilizing mechanical aids to minimize astronaut energy at bending joints  
[NASA-CASE-LAR-10007-1] c05 N71-11195
- One piece human garment for use as contamination proof garment  
[NASA-CASE-MSC-12206-1] c05 N71-17599
- Space environmental work simulator with portions of space suit mounted to vacuum chamber wall  
[NASA-CASE-XNP-07488] c11 N71-18773
- Space suit body heat exchanger design composed of thermal conductance yarn and liquid coolant loops  
[NASA-CASE-XMS-09571] c05 N71-19439
- Conditioning suit for normal function of astronaut cardiovascular system in gravity environment  
[NASA-CASE-XLA-02898] c05 N71-20268
- Space suit using nonflexible material with low leakage and providing protection against thermal extremes, physical punctures, and radiation with high mobility articulation  
[NASA-CASE-XAC-07043] c05 N71-23161
- Sealing evacuation port and evacuating vacuum container such as space jackets  
[NASA-CASE-XNP-03290] c15 N71-23256
- Structure of fabric layers for micrometeoroid protection garment with capability for eliminating heat shorts for use in manufacturing space suits  
[NASA-CASE-MSC-12109] c18 N71-26285
- Venting device for pressurized space suit helmet to eliminate vomit expelled by crewmen  
[NASA-CASE-XMS-09652-1] c05 N71-26333
- Automatic control device for regulating inlet water temperature of liquid cooled spacesuit  
[NASA-CASE-MSC-13917-1] c05 N72-15098
- Pressure regulator for space suit worn underwater to simulate space environment for testing and experimentation  
[NASA-CASE-MFS-20332] c05 N72-20097
- Space suit with improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c05 N72-22092
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c05 N73-25125
- Automatic temperature control for liquid cooled space suit  
[NASA-CASE-ARC-10599-1] c05 N73-26071
- Intra- and extravehicular life support space suite for Apollo astronauts  
[NASA-CASE-MSC-12609-1] c05 N73-32012
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405
- Protective garment ventilation system  
[NASA-CASE-XMS-04928] c54 N78-17679
- Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c54 N78-18761
- Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c54 N78-31735
- Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c54 N78-31736
- Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c54 N78-32721
- Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c54 N79-24651
- SPACE VEHICLE CHECKOUT PROGRAM**
- Hydraulic support apparatus for dynamic testing of space vehicles under near-free flight conditions  
[NASA-CASE-XNP-03248] c11 N71-10604
- Digital computer system for automatic prelaunch checkout of spacecraft  
[NASA-CASE-XKS-08012-2] c31 N71-15566
- Developing high pressure gas purification and filtration system for use in test operations of space vehicles  
[NASA-CASE-MPS-12806] c14 N71-17588
- SPACEBORNE PHOTOGRAPHY**
- Camera arrangement --- for satellite scanning of earth or sky  
[NASA-CASE-GSC-12032-2] c35 N76-19408
- SPACEBORNE TELESCOPES**
- Anastigmatic three-mirror telescope  
[NASA-CASE-MPS-23675-1] c89 N79-10969
- SPACECRAFT**
- Metal strip mounting arrangement for solar cell arrays on spacecraft  
[NASA-CASE-XGS-01475] c03 N71-11058
- Attitude sensor with scanning mirrors for detecting orientation of space vehicle with respect to planet  
[NASA-CASE-XLA-00793] c21 N71-22880
- Regation of magnetic fields produced by thin waferlike circuit elements in space vehicles  
[NASA-CASE-XGS-03390] c03 N71-23187
- Low mass ionizing device for use in electric thrust spacecraft engines  
[NASA-CASE-XNP-01954] c28 N71-28850
- Vacuum chamber with scale model of rocket engine base area of space vehicle  
[NASA-CASE-MPS-20620] c11 N72-27262
- SPACECRAFT ANTENNAS**
- Low loss parasitic probe antenna for prelaunch tests of spacecraft antennas  
[NASA-CASE-XRS-09348] c09 N71-13521
- Millimeter wave antenna system for spacecraft use  
[NASA-CASE-GSC-10949-1] c07 N71-28965
- Low weight, integrated thermoelectric generator/antenna combination for spacecraft

- [ NASA-CASE-XEP-09521 ] c09 N72-12136  
 Omnidirectional antenna array with circumferential slots for mounting on cylindrical space vehicle  
 [ NASA-CASE-LAR-10163-1 ] c09 N72-25247  
 Purlable antenna for spacecraft  
 [ NASA-CASE-NPO-11361 ] c07 N72-32169  
 Collapsible support for antenna reflector applied to installation of spacecraft antennas  
 [ NASA-CASE-NPO-11751 ] c07 N73-24176  
 Antenna deployment mechanism --- retractable spacecraft antennas  
 [ NASA-CASE-GSC-12331-1 ] c37 N78-32436  
 Coaxial phased array antenna --- spacecraft antenna  
 [ NASA-CASE-MS-C-16800-1 ] c32 N79-19194  
 Multi-channel rotating optical interface for data transmission  
 [ NASA-CASE-NPO-14066-1 ] c74 N79-34011
- SPACECRAFT CABIN ATMOSPHERES**  
 Thermal control wall panel with application to spacecraft cabins  
 [ NASA-CASE-XLA-01243 ] c33 N71-22792  
 Nonflammable coating compositions --- for use in high oxygen environments  
 [ NASA-CASE-MPS-20486-2 ] c27 N74-17283  
 Regenerable device for scrubbing breathable air of CO2 and moisture without special heat exchanger equipment  
 [ NASA-CASE-MSC-14771-1 ] c54 N77-32722
- SPACECRAFT COMMUNICATION**  
 Synchronizing apparatus for multi-access satellite time division multiplex system  
 [ NASA-CASE-XGS-05918 ] c07 N69-39974  
 Phase shift data transmission system with pseudo-noise synchronization code modulated with digital data into single channel for spacecraft communication  
 [ NASA-CASE-XNP-00911 ] c08 N70-41961  
 Design and development of tracking receiver for tracking satellites and receiving radio signal transmissions under adverse noise conditions  
 [ NASA-CASE-XGS-08679 ] c10 N71-21473  
 Microwave omnidirectional antenna for use on spacecraft  
 [ NASA-CASE-XLA-03114 ] c09 N71-22888  
 VHF/UHF parasitic probe antenna for spacecraft communication  
 [ NASA-CASE-XKS-09340 ] c07 N71-24614  
 System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
 [ NASA-CASE-NPO-10214 ] c10 N71-26577  
 Turnstile slot antenna  
 [ NASA-CASE-GSC-11428-1 ] c32 N74-20864  
 Switchable beamwidth monopulse method and system  
 [ NASA-CASE-GSC-11924-1 ] c33 N76-27472
- SPACECRAFT COMPONENTS**  
 Rectangular electric conductors for conductor cables to withstand spacecraft vibration and controlled atmosphere  
 [ NASA-CASE-MPS-14741 ] c09 N70-20737  
 Vibration damping system operating in low vacuum environment for spacecraft mechanisms  
 [ NASA-CASE-XMS-01620 ] c23 N71-15673  
 Intermittent type silica gel adsorption refrigerator for providing temperature control for spacecraft components  
 [ NASA-CASE-XNP-00920 ] c15 N71-15906  
 Omnidirectional anisotropic molecular trap, used with vacuum pump to simulate space environments for testing spacecraft components  
 [ NASA-CASE-XGS-00783 ] c30 N71-17788  
 Spacecraft air lock system to provide ingress and egress of astronaut without subjecting vehicular environment to vacuum of space  
 [ NASA-CASE-XLA-02050 ] c31 N71-22968  
 Development and characteristics of docking structure and apparatus for spacecraft docking  
 [ NASA-CASE-XNP-05941 ] c31 N71-23912  
 Design and development of release mechanism for spacecraft components, releasable despin weights, and extensible gravity booms  
 [ NASA-CASE-XGS-08718 ] c15 N71-24600  
 Space environment simulator for testing spacecraft components under aerospace conditions  
 [ NASA-CASE-NPO-10141 ] c11 N71-24964
- Design and development of spacecraft with outer shell structure heat shielding and built-in, removable excursion module  
 [ NASA-CASE-MS-C-13047-1 ] c31 N71-25434  
 Electronic detection system for peak acceleration limits in vibrational testing of spacecraft components  
 [ NASA-CASE-NPO-10556 ] c14 N71-27185  
 Development of solid state polymer coating for obtaining thermal balance in spacecraft components  
 [ NASA-CASE-XLA-01745 ] c33 N71-28903  
 Development of apparatus for mounting scientific experiments in spacecraft to permit utilization without maneuvering spacecraft  
 [ NASA-CASE-MS-C-12372-1 ] c31 N72-25842  
 Airlock  
 [ NASA-CASE-MPS-20922-1 ] c18 N74-22136  
 Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
 [ NASA-CASE-MPS-21680-1 ] c18 N74-27397  
 Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
 [ NASA-CASE-MS-C-14245-1 ] c18 N75-27041
- SPACECRAFT CONFIGURATIONS**  
 Inflatable honeycomb panel element for lightweight structures usable in space stations and other construction  
 [ NASA-CASE-XLA-00204 ] c32 N70-36536  
 Lenticular vehicle with foldable aerodynamic control flaps and reaction jets for operation above and within earth's atmosphere  
 [ NASA-CASE-XGS-00260 ] c31 N70-37924  
 Stage separation system for spinning vehicles and payloads  
 [ NASA-CASE-XLA-02132 ] c31 N71-10582  
 Spacecraft configurations and aerodynamic characteristics of space shuttle systems with two reusable stages  
 [ NASA-CASE-MS-C-12433 ] c31 N73-14854  
 Space vehicle  
 [ NASA-CASE-MPS-22734-1 ] c18 N75-19329  
 Variable dihedral shuttle orbiter  
 [ NASA-CASE-LAR-10706-2 ] c05 N77-31132
- SPACECRAFT CONSTRUCTION MATERIALS**  
 Pressurized cell micrometeoroid detector  
 [ NASA-CASE-XLA-00936 ] c14 N71-14996  
 Flexible barrier membrane comprising porous substrate and incorporating liquid gallium or indium metal used as sealant barriers for spacecraft walls and pumping liquid propellants  
 [ NASA-CASE-XNP-09881 ] c17 N71-28747  
 Method of making a composite sandwich lattice structure  
 [ NASA-CASE-LAR-11898-2 ] c24 N78-17149
- SPACECRAFT CONTROL**  
 Light sensitive digital aspect sensor for attitude control of earth satellites or space probes  
 [ NASA-CASE-XGS-00359 ] c14 N70-34158  
 Spacecraft attitude control system using solar and earth sensors, gyroscopes, and jet actuators  
 [ NASA-CASE-XNP-00465 ] c21 N70-35395  
 Multiple parachute system for landing control of Apollo type spacecraft  
 [ NASA-CASE-XLA-00898 ] c02 N70-36804  
 Attitude control device for space vehicles  
 [ NASA-CASE-XNP-00294 ] c21 N70-36938  
 Attitude orientation control of spin stabilized final stage space vehicles, using horizon scanners  
 [ NASA-CASE-XLA-00281 ] c21 N70-36943  
 Aerodynamic configuration of reentry vehicle heat shield to provide longitudinal and directional stability at hypersonic velocities  
 [ NASA-CASE-XMS-04142 ] c31 N70-41631  
 Star sensor system for roll attitude control of spacecraft  
 [ NASA-CASE-XNP-01307 ] c21 N70-41856  
 Photomultiplier detector of Canopus for spacecraft attitude control  
 [ NASA-CASE-XNP-03914 ] c21 N71-10771  
 Development of spacecraft experiment pointing and attitude control system  
 [ NASA-CASE-XLA-05464 ] c21 N71-14132  
 Development of attitude control system for spacecraft orientation  
 [ NASA-CASE-XGS-04393 ] c21 N71-14159

- Drive mechanism for operating reactance attitude control system for aerospace bodies  
[NASA-CASE-XMP-01598] c21 N71-15583
- Attitude detection system using stellar references for three-axis control and spin stabilized spacecraft  
[NASA-CASE-XGS-03431] c21 N71-15642
- Large amplitude, linear inertial reference system of vibrating string type for spacecraft reference plane  
[NASA-CASE-XAC-03107] c23 N71-16098
- Construction and method of arranging plurality of ion engines to form cluster thereby increasing efficiency and control by decreasing heat radiated to space  
[NASA-CASE-XNP-02923] c28 N71-23081
- Ion beam deflector system for electronic thrust vector control for ion propulsion yaw, pitch, and roll forces  
[NASA-CASE-LEW-10689-1] c28 N71-26173
- Heated porous plug microthrustor for spacecraft reaction jet controlled systems such as fuel flow regulation, propellant disassociation, and heat transfer augmentation  
[NASA-CASE-GSC-10640-1] c28 N72-18766
- Development of thrust control system for application to control of aircraft and spacecraft  
[NASA-CASE-MSC-13397-1] c21 N72-25595
- All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c35 N77-20399
- SPACECRAFT DESIGN**
- Lunar landing flight research vehicle  
[NASA-CASE-XFR-00929] c31 N70-34966
- Design and configuration of manned space capsule  
[NASA-CASE-XLA-01332] c31 N71-15664
- Development of spacecraft radiator cover  
[NASA-CASE-MSC-12049] c31 N71-16080
- Method and apparatus for connecting two spacecraft with probe of one inserted in rocket engine nozzle of other spacecraft  
[NASA-CASE-NFS-11133] c31 N71-16222
- Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XNP-02507] c31 N71-17679
- Development and characteristics of self supporting space vehicle  
[NASA-CASE-XLA-00117] c31 N71-17680
- Multi-mission space vehicle module stage design  
[NASA-CASE-XMP-01543] c31 N71-17730
- Development and characteristics of docking structure and apparatus for spacecraft docking  
[NASA-CASE-XMP-05941] c31 N71-23912
- Design and development of spacecraft with outer shell structure heat shielding and built-in, removable excursion module  
[NASA-CASE-MSC-13047-1] c31 N71-25434
- Spacecraft design with single point aerodynamic and hydrodynamic stability for emergency transport of men from space station to splashdown  
[NASA-CASE-MSC-13281] c31 N72-18859
- Space vehicle  
[NASA-CASE-NFS-22734-1] c18 N75-19329
- Space vehicle system  
[NASA-CASE-MSC-12561-1] c18 N76-17185
- Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c33 N77-10429
- SPACECRAFT DOCKING**
- Probe and drogue assembly for mechanical linking of two space vehicles  
[NASA-CASE-XMS-03613] c31 N71-16346
- Development and characteristics of docking structure and apparatus for spacecraft docking  
[NASA-CASE-XMP-05941] c31 N71-23912
- Latch for fastening spacecraft docking rings  
[NASA-CASE-MSC-15474-1] c15 N71-26162
- High energy absorption docking system design for docking large spacecraft  
[NASA-CASE-NFS-20863] c31 N73-26876
- Latch mechanism  
[NASA-CASE-MSC-12549-1] c37 N74-27903
- Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c18 N76-14186
- Multiple in-line docking capability for rotating space stations  
[NASA-CASE-NFS-20855-1] c15 N77-10112
- Combined docking and grasping device  
[NASA-CASE-NFS-23088-1] c37 N77-23483
- SPACECRAFT ELECTRONIC EQUIPMENT**
- Equipment for testing of ground station ranging equipment and spacecraft transponders  
[NASA-CASE-XMS-05454-1] c07 N71-12391
- Describing apparatus used in vacuum deposition of thin film inductive windings for spacecraft microcircuitry  
[NASA-CASE-XMP-01667] c15 N71-17647
- Nose cone mounted heat resistant antenna comprising plurality of adjacent layers of silica not introducing paths of high thermal conductivity through ablative shield  
[NASA-CASE-XMS-04312] c07 N71-22984
- SPACECRAFT ENVIRONMENTS**
- Portable environmental control and life support system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-09632-1] c05 N71-11203
- Quick disconnect latch and handle combination for mounting articles on walls or supporting bases in spacecraft under zero gravity conditions  
[NASA-CASE-NFS-11132] c15 N71-17649
- Dual solid cryogenics for spacecraft refrigeration insuring low temperature cooling for extended periods  
[NASA-CASE-GSC-10189-1] c23 N71-24725
- Dual stage check valve for cryogenic supply systems used in space flight environmental control system  
[NASA-CASE-MSC-13587-1] c15 N73-30459
- Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-NFS-21163-1] c54 N74-17853
- Zero gravity separator  
[NASA-CASE-LAR-10344-1] c35 N76-33470
- Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c33 N78-17297
- SPACECRAFT GUIDANCE**
- Automatic ejection valve for attitude control and midcourse guidance of space vehicles  
[NASA-CASE-XNP-00676] c15 N70-38996
- Electrical and electromechanical trigonometric computation assembly and space vehicle guidance system for aligning perpendicular axes of two sets of three-axes coordinate references  
[NASA-CASE-XMP-00684] c21 N71-21688
- Design and characteristics of device for sensing solar radiation and providing spacecraft attitude control to maintain direction with respect to incident radiation  
[NASA-CASE-XNP-05535] c14 N71-23040
- Inertial gimbals alignment system for spacecraft guidance  
[NASA-CASE-XMP-01669] c21 N71-23289
- Hermetically sealed vibration damper design for use in gimbal assembly of spacecraft inertial guidance system  
[NASA-CASE-MSC-10959] c15 N71-26243
- SPACECRAFT INSTRUMENTS**
- Mechanical coordinate converter for use with spacecraft tracking antennas  
[NASA-CASE-XNP-00614] c14 N70-36907
- Air bearings for spacecraft gyros  
[NASA-CASE-XMP-00339] c15 N70-39896
- Unfolding boom assembly with knuckle joints for positioning equipment for spacecraft  
[NASA-CASE-XGS-00938] c32 N70-41367
- Pressurized cell micrometeoroid detector  
[NASA-CASE-XLA-00936] c14 N71-14996
- Guidance analyzer having suspended spacecraft simulating sphere for astronavigation  
[NASA-CASE-XNP-09572] c14 N71-15621
- Inertial component clamping assembly design for spacecraft guidance and control system mounting  
[NASA-CASE-XMS-02184] c15 N71-20813
- Optical projector system for establishing optimum arrangement of instrument displays in aircraft, spacecraft, other vehicles, and industrial instrument consoles  
[NASA-CASE-XNP-03853] c23 N71-21882
- Combined optical attitude and altitude indicating instrument for use in aircraft or spacecraft  
[NASA-CASE-XLA-01907] c14 N71-23268

- Spacecraft transponder and ground station radar system for mapping planetary surfaces  
[NASA-CASE-NPO-11001] c07 N72-21118
- Method and apparatus for providing active attitude control for spacecraft by converting any attitude motion of vehicle into simple rotational motion  
[NASA-CASE-HQN-10439] c21 N72-21624
- Design and development of thermomechanical pump for transmitting warming fluid through fluid circuit to control temperature of spacecraft instrumentation  
[NASA-CASE-NPO-11417] c15 N73-24513
- Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c35 N74-21062
- Distributed-switch diode radiometer  
[NASA-CASE-GSC-12219-1] c43 N78-22436
- SPACECRAFT LANDING**
- Non-reusable kinetic energy absorber for application in soft landing of space vehicles  
[NASA-CASE-XLE-00910] c15 N70-34861
- Plastic foam generator for space vehicle instrument payload package flotation in water landing  
[NASA-CASE-XLA-00838] c03 N70-36778
- Device for use in descending spacecraft as altitude sensor for actuating deceleration retrorockets  
[NASA-CASE-XMS-03792] c14 N70-41812
- SPACECRAFT LAUNCHING**
- Three stage motion restraining mechanism for restraining and damping three dimensional vibrational movement of gimballed package during launch of spacecraft  
[NASA-CASE-GSC-10306-1] c15 N71-24694
- Development and characteristics of squib actuated explosive disconnect for spacecraft release from launch vehicle  
[NASA-CASE-NPO-11330] c33 N73-26958
- SPACECRAFT MODELS**
- Space environment simulation system for measuring spacecraft electric field strength in plasma sheath  
[NASA-CASE-XLE-02038] c09 N71-16086
- SPACECRAFT MODULES**
- Radial module manned space station with artificial gravity environment  
[NASA-CASE-XMS-01906] c31 N70-41373
- Multi-mission space vehicle module stage design  
[NASA-CASE-XMP-01543] c31 N71-17730
- Design and development of spacecraft with outer shell structure heat shielding and built-in, removable excursion module  
[NASA-CASE-MSC-13047-1] c31 N71-25434
- Development and characteristics of thermal control system for maintaining constant temperature within spacecraft module with wide variations of component heat transfer  
[NASA-CASE-GSC-11018-1] c31 N73-30829
- SPACECRAFT MOTION**
- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c35 N79-26372
- SPACECRAFT POSITION INDICATORS**
- Device for determining relative angular position of spacecraft and radiating celestial body  
[NASA-CASE-GSC-11444-1] c14 N73-28490
- Spacecraft attitude sensing system design with narrow field of view sensor rotating about spacecraft x-y axis  
[NASA-CASE-GSC-10890-1] c21 N73-30640
- SPACECRAFT POWER SUPPLIES**
- Spacecraft battery seals  
[NASA-CASE-XGS-03864] c15 N69-24320
- Electrical power system for space flight vehicles operating over extended periods  
[NASA-CASE-XMP-00517] c03 N70-34157
- Lightweight, rugged, inexpensive satellite battery for producing electrical power from ionosphere using electrodes with different contact potentials  
[NASA-CASE-XGS-01593] c03 N70-35408
- Design and development of electric generator for space power system  
[NASA-CASE-XLE-04250] c09 N71-20446
- Monostable multivibrator for conserving power in spacecraft systems  
[NASA-CASE-GSC-10082-1] c10 N72-20221
- Rectangular solar cell stacked panels to generate electrical power aboard spacecraft  
[NASA-CASE-NPO-11771] c03 N73-20040
- Thermoelectric power system --- for spacecraft  
[NASA-CASE-MPS-22002-1] c44 N76-16612
- Solar energy power system  
[NASA-CASE-MPS-21628-2] c44 N76-23675
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254
- SPACECRAFT PROPULSION**
- Colloidal particle generator for electrostatic engine for propelling space vehicles  
[NASA-CASE-XLE-00817] c28 N70-33265
- Spacecraft trajectory correction propulsion system  
[NASA-CASE-XNP-01104] c28 N70-39931
- Permanently magnetized ion engine casing construction for use in spacecraft propulsion systems  
[NASA-CASE-XNP-06942] c28 N71-23293
- Development of voice operated controller for controlling reaction jets of spacecraft  
[NASA-CASE-XLA-04063] c31 N71-33160
- Solid propellant motor  
[NASA-CASE-NPO-11458A] c20 N78-32179
- General purpose rocket furnace  
[NASA-CASE-MPS-23460-1] c12 N79-26075
- SPACECRAFT RADIATORS**
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c34 N79-31523
- SPACECRAFT RECOVERY**
- Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery  
[NASA-CASE-XMP-00641] c31 N70-36410
- Method for deployment of flexible wing glider from space vehicle with minimum impact and loading  
[NASA-CASE-XMS-00907] c02 N70-41630
- SPACECRAFT REENTRY**
- Manned space capsule configuration for orbital flight and atmospheric reentry  
[NASA-CASE-XLA-00149] c31 N70-37938
- Event recorder with constant speed motor which rotates recording disk  
[NASA-CASE-XLA-01832] c14 N71-21006
- SPACECRAFT SHIELDING**
- Development and characteristics of protective coatings for spacecraft  
[NASA-CASE-XNP-02507] c31 N71-17679
- Double-wall isothermal cylinder containing heat transfer fluid thermal reservoir as spacecraft insulation cover  
[NASA-CASE-MPS-20355] c33 N71-25353
- Binder stabilized zinc oxide pigmented coating for spacecraft thermal control  
[NASA-CASE-XMP-07770-2] c18 N71-26772
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c24 N79-14156
- Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c24 N79-25142
- SPACECRAFT STABILITY**
- Satellite stabilization reaction wheel scanner  
[NASA-CASE-XGS-02629] c14 N71-21082
- Attitude sensor  
[NASA-CASE-LAR-10586-1] c19 N74-15089
- Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c15 N76-14158
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c18 N78-23141
- Tetherline system for orbiting satellites  
[NASA-CASE-MPS-23564-1] c15 N78-25119
- SPACECRAFT STERILIZATION**
- A system for sterilizing objects --- such as water systems on the space shuttle using ethylene oxide  
[NASA-CASE-KSC-11085-1] c54 N79-33848
- SPACECRAFT STRUCTURES**
- Collapsible, space erectable loop antenna system for space vehicle  
[NASA-CASE-XMP-00437] c07 N70-40202
- Electro-optical system for maintaining two-axis alignment during milling operations on large tank-sections  
[NASA-CASE-XMP-00908] c14 N70-40238
- Development of spacecraft radiator cover  
[NASA-CASE-MSC-12049] c31 N71-16080

- Design and construction of satellite appendage tie-down cord  
[NASA-CASE-XGS-02554] c31 N71-21064
- Development and characteristics of thermal sensitive panel for controlling ratio of solar absorptivity to surface emissivity for space vehicle temperature control  
[NASA-CASE-XLA-07728] c33 N71-22890
- Space expandable tether device for use as passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936
- Delayed simultaneous appendage release mechanism for use on spacecraft equipped with despinn mechanisms and releasable components  
[NASA-CASE-GSC-10814-1] c03 N73-20039
- Development of composite structures for spacecraft to serve as anti-meteoroid device  
[NASA-CASE-LAR-10788-1] c31 N73-20880
- Pressurized panel meteoroid detector  
[NASA-CASE-XLA-08916-2] c14 N73-28487
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c34 N75-12222
- Auger attachment method for insulation --- of spacecraft  
[NASA-CASE-MS-C-12615-1] c37 N76-19437
- Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c34 N77-18382
- Diced tile thermal protection for spacecraft  
[NASA-CASE-MS-C-16366-1] c24 N79-23142
- SPACECRAFT TELEVISION**
- Electrically operated rotary shutter for television camera aboard spacecraft  
[NASA-CASE-XNP-00637] c14 N70-40273
- Conversion system for transforming slow scan rate of Apollo TV camera on moon to fast scan of commercial TV  
[NASA-CASE-XMS-07168] c07 N71-11300
- Optical conversion method --- for spacecraft television  
[NASA-CASE-MS-C-12618-1] c74 N78-17865
- SPACECRAFT TRACKING**
- Spacecraft ranging system  
[NASA-CASE-NPO-10066] c09 N71-18598
- Elimination of tracking occultation problems occurring during continuous monitoring of interplanetary missions by using Earth orbiting communications satellite  
[NASA-CASE-XAC-06029-1] c31 N71-24813
- Tracking mount for laser telescope employed in tracking large rockets and space vehicles to give information regarding azimuth and elevation  
[NASA-CASE-MFS-14017] c14 N71-26627
- Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c19 N74-21015
- Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c32 N79-13214
- SPACECREWS**
- Development and characteristics of inflatable structure to provide escape from orbit for spacecrews under emergency conditions  
[NASA-CASE-XMS-06162] c31 N71-28851
- SPALLATION**
- Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c25 N76-27383
- SPARK GAPS**
- Spark gap type protective circuit for fast sensing and removal of overvoltage conditions  
[NASA-CASE-XAC-08981] c09 N69-39897
- Mechanism for measuring nanosecond time differences between luminous events using streak camera  
[NASA-CASE-XLA-01987] c23 N71-23976
- SPARK IGNITION**
- High temperature spark plug for igniting liquid rocket propellants  
[NASA-CASE-XLE-00660] c28 N70-39925
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c37 N79-11405
- SPARK PLUGS**
- High temperature spark plug for igniting liquid rocket propellants  
[NASA-CASE-XLE-00660] c28 N70-39925
- SPATIAL DISTRIBUTION**
- Electronic recording system for spatial mass distribution of liquid rocket propellant droplets or vapors ejected from high velocity nozzles  
[NASA-CASE-NPO-10185] c10 N71-26339
- SPATIAL FILTERING**
- Photographic film restoration system using Fourier transformation lenses and spatial filter  
[NASA-CASE-MS-C-12448-1] c14 N72-20394
- Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c36 N77-32478
- SPECTRAL REFLECTANCE**
- Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040
- SPECTRAL SIGNATURES**
- Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c43 N79-17288
- SPECTROMETERS**
- Spectrometer using photoelectric effect to obtain spectral data  
[NASA-CASE-XNP-04161] c14 N71-15599
- Variable frequency nuclear magnetic resonance spectrometer providing drive signals over wide frequency range and minimizing noise effects  
[NASA-CASE-XNP-09830] c14 N71-26266
- Maksutov spectrograph for low light level research  
[NASA-CASE-XLA-10402] c14 N71-29041
- Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c14 N73-28491
- Design of gamma ray spectrometer for measurement of intense radiation using Compton scattering effect  
[NASA-CASE-MFS-21441-1] c14 N73-30392
- Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c35 N74-15091
- Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040
- Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c35 N75-19613
- Frequency scanning particle size spectrometer  
[NASA-CASE-NPO-13606-1] c35 N75-19627
- Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c33 N75-26245
- Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c35 N77-10492
- Visible and infrared polarization ratio spectrophotometer  
[NASA-CASE-LAR-12285-1] c35 N78-32398
- Cooled echelle grating spectrometer  
[NASA-CASE-NPO-14372-1] c35 N79-17196
- SPECTROPHOTOMETERS**
- Spectrophotofluorometer with 3-dimensional display to identify fluorescence spectra of carcinogenic and noncarcinogenic hydrocarbons  
[NASA-CASE-XGS-01231] c14 N70-41676
- High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c35 N76-31490
- Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c74 N78-17867
- SPECTORADIOMETERS**
- Development and characteristics of spectroradiometer with wedge filters to eliminate adverse effect of pinholes in filters  
[NASA-CASE-HQN-10683] c14 N71-34389
- SPECTROSCOPIC ANALYSIS**
- Cylindrical reflector for resolving wide angle light beam from telescope into narrow beam for spectroscopic analysis  
[NASA-CASE-XGS-08269] c23 N71-26206
- High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c76 N78-13917
- SPECTRUM ANALYSIS**
- Spectrometer using photoelectric effect to obtain spectral data  
[NASA-CASE-XNP-04161] c14 N71-15599
- Emission spectroscopy method for contamination monitoring of inert gas metal arc welding  
[NASA-CASE-XNP-02039] c15 N71-15871

- Method and apparatus for high resolution power spectrum analysis  
[NASA-CASE-NPO-10748] c08 N72-20177
- Interferometer  
[NASA-CASE-NPO-14502-1] c35 N79-19317
- SPECULAR REFLECTION**  
Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c35 N77-31465
- SPEECH RECOGNITION**  
Speech analyzer  
[NASA-CASE-GSC-11898-1] c32 N77-30309
- SPEED CONTROL**  
System for maintaining motor at predetermined speed using digital pulses  
[NASA-CASE-XMP-06892] c09 N71-24805
- Optimal control system for automatic speed regulation of electric driven motor vehicle  
[NASA-CASE-NPO-11210] c11 N72-20244
- Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c37 N74-23070
- Low speed phaselock speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c09 N75-24758
- A speed control device for a heavy duty shaft  
[NASA-CASE-NPO-14170] c37 N78-17391
- SPEED REGULATORS**  
Feedback control for direct current motor to achieve constant speed under varying loads  
[NASA-CASE-MFS-14610] c09 N71-28886
- SPHERES**  
Guidance analyzer having suspended spacecraft simulating sphere for astronavigation  
[NASA-CASE-XNP-09572] c14 N71-15621
- Plastic sphere for radar tracking and calibration  
[NASA-CASE-XLA-11154] c07 N72-21117
- Method and apparatus for producing concentric hollow spheres  
[NASA-CASE-NPO-14596-1] c31 N79-24197
- SPHERICAL SHELLS**  
Hollow spherical electrode for shielding dielectric junction between high voltage conductor and insulator  
[NASA-CASE-XLE-03778] c09 N69-21542
- Development of mechanical device for measuring distance of point within sphere from surface of sphere  
[NASA-CASE-XLA-06683] c14 N72-22436
- SPHERICAL TANKS**  
Gauge for measuring quantity of liquid in spherical tank in reduced gravity  
[NASA-CASE-XMS-06236] c14 N71-21007
- SPHERICAL WAVES**  
Electrical device for developing converging spherical shock waves  
[NASA-CASE-MFS-20890] c14 N72-22439
- SPHYGMOGRAPHY**  
A logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c52 N76-27839
- SPIKE NOZZLES**  
Constructing fluid spike nozzle to eliminate heat transfer and high temperature problems inherent in physical spikes  
[NASA-CASE-XGS-01143] c31 N71-15647
- SPIN DYNAMICS**  
Nutation damper for use on spinning body  
[NASA-CASE-GSC-11205-1] c15 N73-25513
- Stabilization of He<sub>2</sub>(a 3 Sigma u<sup>+</sup> molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13826
- SPIN REDUCTION**  
Optical scanner mounted on rotating support structure with method of compensating for image or satellite rotation  
[NASA-CASE-XGS-02401] c14 N69-27485
- Bolt-latch mechanism for releasing despin weights from space vehicle  
[NASA-CASE-XLA-00679] c15 N70-38601
- Stretch Yo-Yo mechanism for reducing initial spin rate of space vehicle  
[NASA-CASE-XGS-00619] c30 N70-40016
- Stage separation system for spinning vehicles and payloads  
[NASA-CASE-XLA-02132] c31 N71-10582
- Flexible turnstile antenna system for reducing nutation in spin-oriented satellites  
[NASA-CASE-XMP-00442] c31 N71-10747
- SPIN STABILIZATION**  
Dynamic precession damping of spin-stabilized vehicles by using rate gyroscope and angular accelerometer  
[NASA-CASE-XLA-01989] c21 N70-34295
- Attitude orientation control of spin stabilized final stage space vehicles, using horizon scanners  
[NASA-CASE-XLA-00281] c21 N70-36943
- Attitude detection system using stellar references for three-axis control and spin stabilized spacecraft  
[NASA-CASE-XGS-03431] c21 N71-15642
- Spin phase synchronization of cartwheel satellite in polar orbit  
[NASA-CASE-XGS-05579] c31 N71-15676
- High velocity guidance and spin stabilization gyro controlled jet reaction system for launch vehicle payloads  
[NASA-CASE-XLA-01339] c31 N71-15692
- Passive dual spin misalignment compensators --- gyrostabilized device  
[NASA-CASE-GSC-11479-1] c35 N74-28097
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c08 N74-30421
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c18 N78-23141
- SPINDLES**  
Variable contour securing system  
[NASA-CASE-MSC-16270-1] c37 N78-27423
- SPIRE**  
Spine immobilization method and apparatus --- rigid bladder  
[NASA-CASE-ARC-11167-1] c52 N79-30921
- SPIRAL WRAPPING**  
Adjustable spiral wire winding device  
[NASA-CASE-XMS-02383] c15 N71-15918
- SPIRALS (CONCENTRATORS)**  
Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c37 N74-10474
- SPIROMETERS**  
Compact bellows spirometer for high speed and high altitude space travel  
[NASA-CASE-XAR-01547] c05 N69-21473
- SPLINES**  
Non-floating universal joint  
[NASA-CASE-MSC-19546-1] c37 N77-25536
- SPLINTS**  
Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-XMP-06589] c05 N71-23159
- SPORES**  
Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c37 N74-13178
- SPOT WELDS**  
Controlled arc spot welding method  
[NASA-CASE-XMP-00392] c15 N70-34814
- Automatic closed circuit television arc guidance control for welding joints  
[NASA-CASE-MFS-13046] c07 N71-19433
- Electric resistance spot welding and brazing for producing metal bonds with superior mechanical and structural characteristics  
[NASA-CASE-LAR-11072-1] c15 N73-20535
- SPRAY NOZZLES**  
Penetrator nozzle  
[NASA-CASE-KSC-11064-1] c34 N78-22328
- Pocket injector head  
[NASA-CASE-XMP-04592-1] c20 N79-21125
- SPRAYED COATINGS**  
Plasma spraying gun for forming diffusion bonded metal or ceramic coatings on substrates  
[NASA-CASE-XLE-01604-2] c15 N71-15610
- Production and application of sprayable fiber reinforced ablation material  
[NASA-CASE-XLA-04251] c18 N71-26100
- Metal plating process employing spraying of metallic power/peening particle mixture  
[NASA-CASE-GSC-11163-1] c15 N73-32360
- Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c24 N78-24290
- Spray coating apparatus having a rotatable workpiece holder

[NASA-CASE-ARC-11110-1] c37 N78-32434  
**SPRAYERS**  
 External device for liquid spray cooling of gas turbine blades  
 [NASA-CASE-XLE-00037] c28 N70-33372  
 Adhesive spray process for attaching biomedical skin electrodes  
 [NASA-CASE-XPR-07658-1] c05 N71-26293  
 Apparatus for liquid spray cooling of turbine blades  
 [NASA-CASE-XLE-00027] c33 N71-29152  
 Closed loop spray cooling apparatus --- for particle accelerator targets  
 [NASA-CASE-LEW-11981-1] c31 N78-17237  
 Spray coating apparatus having a rotatable workpiece holder  
 [NASA-CASE-ARC-11110-1] c37 N78-32434  
**SPRAYING**  
 Aircraft wheel spray drag alleviator for dual tandem landing gear  
 [NASA-CASE-XLA-01583] c02 N70-36825  
 Closed loop spray cooling apparatus  
 [NASA-CASE-LEW-11981-2] c34 N79-20336  
**SPREADING**  
 Tool attachment for spreading or moving away loose elements from terminal posts during winding of filamentary elements  
 [NASA-CASE-XMP-02107] c15 N71-10809  
**SPRINGS (ELASTIC)**  
 Belleville spring assembly with elastic guides having low hysteresis  
 [NASA-CASE-XNP-09452] c15 N69-27504  
 Multiple Belleville spring assembly with even load distribution  
 [NASA-CASE-XNP-00840] c15 N70-38225  
 Switching mechanism with energy stored in coil spring  
 [NASA-CASE-XGS-00473] c03 N70-38713  
 Load cell protection device using spring-loaded breakaway mechanism  
 [NASA-CASE-XMS-06782] c32 N71-15974  
 Vibration isolation system, using coaxial helical compression springs  
 [NASA-CASE-NPO-11012] c15 N72-11391  
 Spring operated accelerator and constant force spring mechanism therefor  
 [NASA-CASE-ARC-10898-1] c35 N77-19417  
**SPUTTERING**  
 Deposition method for epitaxial beta SiC films having high degree of crystallographic perfection  
 [NASA-CASE-ERC-10120] c26 N69-33482  
 Development of procedure for producing thin transparent films of zinc oxide on transparent refractory substrate  
 [NASA-CASE-PRC-10019] c15 N73-12487  
 Technique and equipment for sputtering using apertured electrode and pulsed substrate bias  
 [NASA-CASE-LEW-10920-1] c17 N73-24569  
 Sputtering holes with ion beamlets  
 [NASA-CASE-LEW-11646-1] c20 N74-31269  
 Multitarget sequential sputtering apparatus  
 [NASA-CASE-NPO-13345-1] c37 N75-19684  
 A heat exchanger and method of making --- rocket lining  
 [NASA-CASE-LEW-12441-2] c34 N79-21313  
 Ion beam sputter deposition of fluoropolymers  
 [NASA-CASE-LEW-13122-1] c27 N79-24154  
**SQUARE WAVES**  
 High speed phase detector design indicating phase relationship between two square wave input signals  
 [NASA-CASE-XNP-01306-2] c09 N71-24596  
**SQUARES (MATHEMATICS)**  
 Apparatus for computing square roots  
 [NASA-CASE-XGS-04768] c08 N71-19437  
**SQUIBS**  
 Contamination free separation nut eliminating combustion products from ambient surroundings generated by squib firing  
 [NASA-CASE-XGS-01971] c15 N71-15922  
**STABILITY AUGMENTATION**  
 A velocity vector control system augmented with direct lift control --- stability augmentation using manual control  
 [NASA-CASE-LAR-12268-1] c08 N79-20136  
**STABILITY TESTS**  
 Method and apparatus for checking the stability of a setup for making reflection type holograms

[NASA-CASE-NPS-21455-1] c35 N74-15146  
**STABILIZATION**  
 Electro-optical stabilization of calibrated light source  
 [NASA-CASE-MSC-12293-1] c14 N72-27411  
 System for controlling torque buildup in suspension of gondola connected to balloon by parachute shroud lines  
 [NASA-CASE-GSC-11077-1] c02 N73-13008  
 Development of aerodynamic control system to control flutter over large range of oscillatory frequencies using stability augmentation techniques  
 [NASA-CASE-LAR-10682-1] c02 N73-26004  
 Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
 [NASA-CASE-GSC-11425-2] c76 N75-25730  
 Arc control in compact arc lamps  
 [NASA-CASE-NPO-10870-1] c33 N77-22386  
 A pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
 [NASA-CASE-LAR-12562-1] c03 N79-20135  
**STABILIZED PLATFORMS**  
 Hydraulic drive mechanism for leveling isolation platforms  
 [NASA-CASE-XMS-03252] c15 N71-10658  
 Failure detection and control means for improved drift performance of a gimballed platform system  
 [NASA-CASE-NPS-23551-1] c04 N76-26175  
 Rotary leveling base platform  
 [NASA-CASE-ARC-10981-1] c37 N78-27425  
**STABILIZERS**  
 Design and development of satellite despin device  
 [NASA-CASE-XMP-08523] c31 N71-20396  
**STABILIZERS (AGENTS)**  
 Solid propellant stabilizer containing nitroguanidine  
 [NASA-CASE-NPO-12000] c27 N72-25699  
**STABILIZERS (FLUID DYNAMICS)**  
 Assembly for opening flight capsule stabilizing and decelerating flaps with reference to capsule recovery  
 [NASA-CASE-XMP-00641] c31 N70-36410  
 Mechanical stabilization system for VTOL aircraft  
 [NASA-CASE-XLA-06339] c02 N71-13422  
 Attitude stabilizer for nonguided missile or vehicle with respect to trajectory  
 [NASA-CASE-ARC-10134] c30 N72-17873  
 Inflatable stabilizing system for use on life raft to reduce rocking and preclude capsizing  
 [NASA-CASE-MSC-12393-1] c02 N73-26006  
 Externally supported internally stabilized flexible duct joint  
 [NASA-CASE-NPS-19194-1] c37 N76-14460  
**STABLE OSCILLATIONS**  
 Automatic measuring and recording of gain and zero drift characteristics of electronic amplifier  
 [NASA-CASE-XMS-05562-1] c09 N69-39986  
**STACKS**  
 Remote fire stack igniter --- with solenoid-controlled valve  
 [NASA-CASE-NPS-21675-1] c25 N74-33378  
**STAGE SEPARATION**  
 Stage separation using remote control release of joint with explosive insert  
 [NASA-CASE-XLA-02854] c15 N69-27490  
 Piezoelectric means for missile stage separation indication and stage initiation  
 [NASA-CASE-XLA-00791] c03 N70-39930  
 Space vehicle stage coupling and quick release separation mechanism  
 [NASA-CASE-XLA-01441] c15 N70-41679  
 Stage separation system for spinning vehicles and payloads  
 [NASA-CASE-XLA-02132] c31 N71-10582  
 Payload/spent rocket engine case separation system  
 [NASA-CASE-XLA-05369] c31 N71-15687  
 Separation mechanism for use between stages of multistage rocket vehicles  
 [NASA-CASE-XLA-00188] c15 N71-22874  
 Development of remotely controlled shaped charge for lateral displacement of rocket stages after separation  
 [NASA-CASE-XLA-04804] c31 N71-23008  
 Electrical circuit selection device for simulating stage separation of flight vehicle  
 [NASA-CASE-XKS-04531] c10 N71-23663

- Frangible connecting link suitable for rocket stage separation  
[NASA-CASE-MSC-11849-1] c15 N72-22489
- STAGNATION PRESSURE**  
Flow meter for measuring stagnation pressure in boundary layer around high speed flight vehicle  
[NASA-CASE-XPP-02007] c12 N71-24692  
Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c35 N74-32878
- STAGNATION TEMPERATURE**  
Measuring conductive heat flow and thermal conductivity of laminar gas stream in cylindrical plug to simulate atmospheric reentry  
[NASA-CASE-XLE-00266] c14 N70-34156
- STAINING**  
Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c51 N77-27677
- STAINLESS STEELS**  
Joining aluminum to stainless steel by bonding aluminum coatings onto titanium coated stainless steel and brazing aluminum to aluminum/titanium coated steel  
[NASA-CASE-MPS-07369] c15 N71-20443  
Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MPS-20767-1] c38 N74-15130  
Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c34 N76-27515  
Method of making reinforced composite structure  
[NASA-CASE-LW-12619-1] c24 N77-19171  
Stainless steel panel for selective absorption of solar energy and the method of producing said panel  
[NASA-CASE-MPS-23518-2] c44 N77-31611  
Heat treat fixture  
[NASA-CASE-LAR-11821-1] c26 N79-25197
- STANDARDS**  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MPS-23845-1] c33 N78-32347
- STAR TRACKERS**  
Star sensor system for roll attitude control of spacecraft  
[NASA-CASE-XNP-01307] c21 N70-41856  
Sun tracker with rotatable plane-parallel plate and two photocells  
[NASA-CASE-XGS-01159] c21 N71-10678  
Photomultiplier detector of Canopus for spacecraft attitude control  
[NASA-CASE-XNP-03914] c21 N71-10771  
Attitude detection system using stellar references for three-axis control and spin stabilized spacecraft  
[NASA-CASE-XGS-03431] c21 N71-15642  
Relay controlled voltage switching unit for scanning circuitry of star tracker  
[NASA-CASE-NPC-11253] c09 N72-17157  
Method for producing reticles for use in outer space  
[NASA-CASE-GSC-11188-2] c21 N73-19630  
Production method of star tracking reticles for transmitting in visible and near ultraviolet regions  
[NASA-CASE-GSC-11188-1] c14 N73-32320  
Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c74 N74-20008  
Star scanner --- with a reticle with a pair of slits having differing separation  
[NASA-CASE-GSC-11569-1] c89 N74-30886
- STARK EFFECT**  
Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c33 N75-26245  
Stark-effect modulation of CO2 laser with NH2D  
[NASA-CASE-NPO-11945-1] c36 N76-18427
- STARTERS**  
Starting circuit design for initiating and maintaining arcs in vapor lamps  
[NASA-CASE-XNP-01058] c09 N71-12540  
Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c33 N75-19524
- STARTING**  
A portable device particularly suited for use in starting air-start units for aircraft  
[NASA-CASE-FRC-10113-1] c09 N78-19166
- STATIC FRICTION**  
Kinetic and static friction force measurement between magnetic tape and magnetic head surfaces  
[NASA-CASE-XNP-08680] c14 N71-22995  
Static coefficient test method and apparatus  
[NASA-CASE-GSC-11993-1] c35 N76-31489
- STATIC INVERTERS**  
Describing static inverter with single or multiple phase output  
[NASA-CASE-XMP-006631] c08 N71-18752  
Development and characteristics of oscillating static inverter  
[NASA-CASE-XGS-05289] c09 N71-19470
- STATIC LOADS**  
Measuring shear-creep compliance of solid and liquid materials used in spacecraft components  
[NASA-CASE-XLE-01481] c14 N71-10781  
Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
[NASA-CASE-XMS-04545] c15 N71-22878
- STATIC PRESSURE**  
Pressure probe for sensing ambient static air pressures  
[NASA-CASE-XLA-00481] c14 N70-36824  
Ambient atmospheric pressure sensing device for determining altitude of flight vehicles  
[NASA-CASE-XLA-00128] c15 N70-37925  
Static pressure probe  
[NASA-CASE-LAR-11552-1] c35 N76-14429  
Static pressure orifice system testing and apparatus  
[NASA-CASE-LAR-12269-1] c09 N78-33123
- STATIONKEEPING**  
Method of stationkeeping for lenticular gravity gradient satellites  
[NASA-CASE-XLA-03132] c31 N71-22969
- STATISTICAL CORRELATION**  
Optical sensing of supersonic flows by correlating deflections in laser beams through flow  
[NASA-CASE-MPS-20642] c14 N72-21407
- STATOR BLADES**  
Stator rotor tools  
[NASA-CASE-MSC-16000-1] c37 N78-24544
- STATORS**  
Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LW-12270-1] c26 N77-32280  
Liquid metal slip ring  
[NASA-CASE-LW-12277-2] c33 N78-25323
- STEADY STATE**  
Steady state thermal radiometers  
[NASA-CASE-MPS-21109-1] c34 N74-27861
- STEAM TURBINES**  
Vapor generating boiler system for turbine motor  
[NASA-CASE-XLE-00785] c33 N71-16104
- STEELS**  
Zinc dust formulation for abrasion resistant steel coatings  
[NASA-CASE-GSC-10361-1] c18 N72-23581
- STEERABLE ANTENNAS**  
Apparatus for generating microwave signals at progressively related phase angles for driving antenna array  
[NASA-CASE-ERC-10046] c10 N71-18722  
Satellite radio communication system with remote steerable antenna  
[NASA-CASE-XNP-02389] c07 N71-28900  
Amplitude steered array  
[NASA-CASE-GSC-11446-1] c33 N74-20860  
Phased array antenna control  
[NASA-CASE-MSC-14939-1] c32 N79-11264
- STEERING**  
Steerable solid propellant rocket motor adapted to effect payload orientation as multistage rocket stage or reduce velocity as retrorocket  
[NASA-CASE-XNP-00234] c28 N70-38645
- STELLAR LUMINOSITY**  
Development of star intensity measuring system which minimizes effects of outside interference  
[NASA-CASE-XNP-06510] c14 N71-23797
- STELLAR SPECTRA**  
Development of star intensity measuring system which minimizes effects of outside interference  
[NASA-CASE-XNP-06510] c14 N71-23797
- STEREOPHOTOGRAPHY**  
Stereo photomicrography system with stereo microscope for viewing specimen at various magnifications  
[NASA-CASE-LAR-10176-1] c14 N72-20380

## STEREOSCOPIC VISION

Stereoscopic television system, including projecting pair of binocular images  
[NASA-CASE-ARC-10160-1] c23 N72-27728

## STERILIZATION

Using ethylene oxide in preparation of sterilized solid rocket propellants and encapsulating materials  
[NASA-CASE-XNP-01749] c27 N70-41897

Ethylene oxide sterilization and encapsulating process for sterile preservation of instruments and solid propellants  
[NASA-CASE-XNP-09763] c14 N71-20461

Environmentally controlled suit for working in sterile chamber  
[NASA-CASE-LAR-10076-1] c05 N73-20137

Protein sterilization of firefly luciferase without denaturation  
[NASA-CASE-GSC-10225-1] c06 N73-27086

Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c54 N75-27761

Portable heatable container  
[NASA-CASE-NPO-14237-1] c37 N78-24554

## STERILIZATION EFFECTS

Peliability of electrical connectors after heat sterilization  
[NASA-CASE-NPO-10694] c09 N72-20200

## STIFFENING

Spine immobilization method and apparatus --- rigid bladder  
[NASA-CASE-ARC-11167-1] c52 N79-30921

## STIMULATED EMISSION

Repetitively pulsed wavelength selective carbon dioxide laser  
[NASA-CASE-ERC-10178] c16 N71-24832

## STIRLING CYCLE

Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c37 N76-29590

Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c37 N78-25431

A phase-angle controller for stirling engines  
[NASA-CASE-NPO-14388-1] c37 N79-17217

An improved solar energy receiver for a stirling engine  
[NASA-CASE-NPO-14619-1] c44 N79-20513

## STIRRING

Design of mechanical device for stirring several test tubes simultaneously  
[NASA-CASE-XAC-06956] c15 N71-21177

## STOMACH

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N79-14755

## STORAGE

Design and development of fluid sample collector  
[NASA-CASE-XMS-06767-1] c14 N71-20435

## STORAGE BATTERIES

Leak resistant bonded elastomeric seal for secondary electrochemical cells  
[NASA-CASE-XGS-02631] c03 N71-23006

Automatically charging battery of electric storage cells  
[NASA-CASE-XNP-04758] c03 N71-24605

Elimination of two step voltage discharge property of silver zinc batteries by using divalent silver oxide capacity of cell to charge anodes to monovalent silver state  
[NASA-CASE-XGS-01674] c03 N71-29129

Electric storage battery with high impact resistance  
[NASA-CASE-NPO-11021] c03 N72-20032

Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c44 N76-18641

Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-RQN-10862-1] c44 N76-29699

Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c44 N77-14581

Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c44 N79-17313

**STORAGE STABILITY.**

Storage stable, thermally activated foaming compositions for erecting and rigidizing mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155

Gas diffusion liquid storage bag and method of use for storing blood

[NASA-CASE-NPO-13930-1] c52 N79-14749

## STORAGE TANKS

Expulsion bladder equipped storage tank structure  
[NASA-CASE-XNP-00612] c11 N70-38182

Development of apparatus and method for testing leakage of large tanks  
[NASA-CASE-XNP-02392] c32 N71-24285

Apparatus for aligning shadow shields and cryogenic storage tanks in outer space with the sun  
[NASA-CASE-KSC-10622-1] c31 N72-21893

Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c31 N79-18087

A system for sterilizing objects --- such as water systems on the space shuttle using ethylene oxide  
[NASA-CASE-KSC-11085-1] c54 N79-33848

## STRAIN GAGE ACCELEROMETERS

Accelerometer with FM output signals indicative of mechanical strain on it  
[NASA-CASE-XLA-00492] c14 N70-34799

Strain gage accelerometer for angular acceleration measurement  
[NASA-CASE-XMS-05936] c14 N70-41682

## STRAIN GAGE BALANCES

Self-balancing strain gage transducer with bridge circuit  
[NASA-CASE-MPS-12827] c14 N71-17656

## STRAIN GAGES

Semiconductor p-n junction on needle apex to provide stress and strain sensor  
[NASA-CASE-XLA-00490] c09 N69-27422

Apparatus for forming wire grids for electric strain gages  
[NASA-CASE-XLE-00023] c15 N70-33330

Force measuring instrument for structural members, particularly fastening bolts or studs  
[NASA-CASE-XNP-00456] c14 N70-34705

Strain gage for detecting and measuring mechanical strain in thermally strained specimens  
[NASA-CASE-FRC-10053] c14 N70-35587

Difference indicating circuit used in conjunction with device measuring gravitational fields  
[NASA-CASE-XNP-08274] c10 N71-13537

Water cooled gage for strain measurements in high temperature environments  
[NASA-CASE-XNP-09205] c14 N71-17657

Development of apparatus for measuring successive increments of strain on elastomers  
[NASA-CASE-XNP-04680] c15 N71-19489

Strain gage measurement of elongation due to thermally and mechanically induced stresses  
[NASA-CASE-XGS-04478] c14 N71-24233

Method for temperature compensating semiconductor gages by exposure to high energy radiation  
[NASA-CASE-XLA-04555-1] c14 N71-25892

Pulsed excitation voltage circuit for strain gage bridge transducers  
[NASA-CASE-FRC-10036] c09 N72-22200

Method for making semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980-2] c14 N72-28438

Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MPS-21556-1] c35 N74-26945

Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MPS-20506-1] c35 N75-12273

Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c33 N75-31329

Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c35 N75-33369

Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c35 N76-14430

High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523

Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c35 N77-14407

CV ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512

Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c35 N78-18393

Photomechanical transducer --- using thin strips of photoabsorptive metal or polymeric film

- with strain gages  
[NASA-CASE-NPO-14363-1] c76 N79-14908
- STRAIN RATE**  
Process for analysis of strain field of structures subjected to large deformations involving low modulus substrate with thin coating  
[NASA-CASE-LAR-10765-1] c32 N73-20740
- STRAPDOWN INERTIAL GUIDANCE**  
All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c35 N77-20399
- STRAPS**  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c35 N75-19615  
Drop foot corrective device  
[NASA-CASE-LAR-12259-1] c54 N78-18762  
Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c31 N79-18087
- STREAMS**  
Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c35 N78-19465
- STRESS ANALYSIS**  
Nondestructive stress testing of solder joints on printed circuit boards by holographic techniques  
[NASA-CASE-MFS-20697] c16 N72-11415  
Development of system for measuring damping characteristics of structure or system subjected to random forces or influences  
[NASA-CASE-ARC-10154-1] c14 N72-22440  
Process for analysis of strain field of structures subjected to large deformations involving low modulus substrate with thin coating  
[NASA-CASE-LAR-10765-1] c32 N73-20740  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523
- STRESS CONCENTRATION**  
Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c35 N75-33369
- STRESS CORROSION**  
Method to prevent stress corrosion cracking in titanium alloys  
[NASA-CASE-NPO-10271] c17 N71-16393  
Method and apparatus for inducing compressive stresses in pressure vessel to prevent stress corrosion  
[NASA-CASE-XLA-07390] c15 N71-18616
- STRESS MEASUREMENT**  
Semiconductor p-n junction on needle apex to provide stress and strain sensor  
[NASA-CASE-XLA-04980] c09 N69-27422  
Force measuring instrument for structural members, particularly fastening bolts or studs  
[NASA-CASE-XMP-00456] c14 N70-34705  
Self-balancing strain gage transducer with bridge circuit  
[NASA-CASE-MFS-12827] c14 N71-17656  
Servocontrol system for measuring local stresses at geometric discontinuity in stressed material  
[NASA-CASE-XLA-08530] c32 N71-25360  
Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c35 N77-22449  
CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512
- STRESS RELAXATION**  
Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-1] c24 N78-22163
- STRESS RELIEVING**  
Nut and bolt fastener permitting all-directional movement of skin sections with respect to supporting structure  
[NASA-CASE-XLA-01807] c15 N71-10799
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[NASA-CASE-XGS-08259] c14 N71-23698  
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[NASA-CASE-XGS-04478] c14 N71-24233  
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[NASA-CASE-MSC-14182-1] c27 N76-14264
- STRETCHERS**  
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[NASA-CASE-XMS-04170] c05 N71-22748  
Stretcher with rigid head and neck support with capability of supporting immobilized person in vertical position for removal from vehicle hatch to exterior also useful as splint stretcher  
[NASA-CASE-YMP-06589] c05 N71-23159
- STRETCHING**  
Device for securing together structural members with axially stretched bolt and nut  
[NASA-CASE-GSC-11149-1] c15 N73-30457
- STRINGS**  
Cord restraint system for pressure suit joints  
[NASA-CASE-XMS-09635] c05 N71-24623
- STRUCTURAL ANALYSIS**  
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[NASA-CASE-MSC-19442-1] c74 N77-10899
- STRUCTURAL DESIGN**  
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[NASA-CASE-XMS-00863] c05 N70-34857  
Structural design of high pressure regulator valve  
[NASA-CASE-XNP-00710] c15 N71-10778  
Graphic illustration of lifting body design  
[NASA-CASE-PRC-10063] c01 N71-12217  
Design of ring wing vehicle of high drag-to-weight ratio to withstand reentry stress into low density atmosphere  
[NASA-CASE-XLA-04901] c31 N71-24315  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366  
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[NASA-CASE-NPO-13707-1] c74 N77-28933  
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[NASA-CASE-MFS-23349-1] c44 N79-23481
- STRUCTURAL FAILURE**  
Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c38 N76-28563
- STRUCTURAL MEMBERS**  
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[NASA-CASE-XMS-05303] c07 N69-27462  
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[NASA-CASE-XNP-02029] c14 N70-41955  
Nut and bolt fastener permitting all-directional movement of skin sections with respect to supporting structure  
[NASA-CASE-XLA-01807] c15 N71-10799  
Universal joints for connecting two displaced shafts or members  
[NASA-CASE-NPO-10646] c15 N71-28467  
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[NASA-CASE-LAR-11052-1] c32 N73-13929  
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[NASA-CASE-XLA-11028-1] c24 N74-27035  
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[NASA-CASE-MSC-16217-1] c18 N78-22146
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[NASA-CASE-MFS-21606-1] c37 N75-19685  
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[NASA-CASE-MSC-19372-1] c39 N76-31562
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[ NASA-CASE-XMP-00479 ] c14 N70-34794  
Transducer for measuring deflections from  
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**STRUCTURES**  
Deformation measuring apparatus with feedback  
control for arbitrarily shaped structures  
[ NASA-CASE-LAR-10098 ] c32 N71-26681

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[ NASA-CASE-NSC-12279-1 ] c15 N70-35679  
Collapsible support for antenna reflector  
applied to installation of spacecraft antennas  
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two or more load-carrying structural members  
[ NASA-CASE-MFS-18495 ] c15 N72-11385  
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adhesive coated head portion  
[ NASA-CASE-MFS-20299 ] c15 N72-11392  
Insert facing tool --- manually operated cutting  
tool for forming studs in honeycomb material  
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[ NASA-CASE-ARC-10912-1 ] c34 N77-19353

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[ NASA-CASE-ARC-11040-2 ] c24 N78-27184

**SUBMINIATURIZATION**  
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[ NASA-CASE-XLA-00805 ] c31 N70-38010  
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[ NASA-CASE-XLA-01486 ] c01 N71-23497  
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[ NASA-CASE-XNP-00595 ] c15 N70-34967  
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[ NASA-CASE-XNP-00826 ] c03 N71-20895  
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Turn on current transient limiter for controlling peak current flow in high capacity load  
[NASA-CASE-GSC-10413] c10 N71-26531
- SURGICAL INSTRUMENTS**  
Ultrasonic device for ophthalmic eye surgery with safe removal of macerated material  
[NASA-CASE-LEP-11669-1] c05 N73-27062  
Ophthalmic liquifaction pump  
[NASA-CASE-LEW-12051-1] c52 N75-33640
- SURVIVAL EQUIPMENT**  
Survival couch for aircraft or spacecraft crews  
[NASA-CASE-XLA-00118] c05 N70-33285  
Lightweight life preserver without fastening devices  
[NASA-CASE-XMS-00864] c05 N70-36493  
Pliable frame for sunglasses in emergency survival kits  
[NASA-CASE-XMS-06064] c05 N71-23096
- SUSPENDING (HANGING)**  
Parallel motion suspension device for measuring instruments  
[NASA-CASE-XNP-01567] c15 N70-41310  
Cable suspension and inclined walkway system for simulating reduced or zero gravity environments  
[NASA-CASE-XLA-01787] c11 N71-16028  
Suspended mass oscillation damper based on impact energy absorption for damping wind induced oscillations of tall stacks, antennas, and umbilical towers  
[NASA-CASE-LAR-10193-1] c15 N71-27146  
Method and apparatus for shaping and enhancing acoustical levitation forces --- ultrasonic transducer for generating a radiation pressure field  
[NASA-CASE-MFS-25050-1] c71 N79-29956
- SUSPENSION SYSTEMS (VEHICLES)**  
An improved suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c37 N79-12446
- SWEAT**  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c54 N78-22720
- SWEAT COOLING**  
Transpiration cooled turbine blade made from metallic or ceramic wires  
[NASA-CASE-XLE-00020] c15 N70-33226  
Transpirationally cooled heat ablation system for interplanetary spacecraft reentry shielding  
[NASA-CASE-XMS-02677] c31 N70-42075  
Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c20 N74-32919
- SWEEP CIRCUITS**  
Transistorized circuit for producing multiple slope voltage sweep  
[NASA-CASE-XMS-03542] c09 N71-28926
- SWEEP EFFECT**  
Supersonic or hypersonic vehicle control system comprising elevons with hinge line sweep and free of adverse aerodynamic cross coupling  
[NASA-CASE-XLA-08967] c02 N71-27088
- SWEEP FREQUENCY**  
Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c33 N78-25319
- SWELLING**  
Para-benzoquinone dioxime and concentrated mineral acid processed to yield intumescent or fire resistant, heat insulating materials  
[NASA-CASE-ARC-10304-1] c18 N73-26572
- SWEEP WINGS**  
Design of supersonic aircraft with novel fixed, swept wing planform  
[NASA-CASE-XLA-04451] c02 N71-12243  
Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c05 N77-31130
- SWIRLING**  
Slosh and swirl alleviator for liquid propellant tanks during transport and flight  
[NASA-CASE-XLA-05749] c15 N71-19569  
Swirl can, full-annulus combustion chambers for high performance gas turbine engines  
[NASA-CASE-LEW-11326-1] c23 N73-30665
- SWITCHES**  
Switching mechanism with energy stored in coil spring  
[NASA-CASE-IGS-00473] c03 N70-38713  
Digital memory system with multiple switch cores for driving each word location  
[NASA-CASE-XNP-01466] c10 N71-26434  
Radio frequency controlled solid state switch  
[NASA-CASE-ARC-10136-1] c09 N72-22202
- SWITCHING CIRCUITS**  
Solid state switching circuit design to increase current capacity of low rated relay contacts  
[NASA-CASE-XNP-09228] c09 N69-27500  
Power control switching circuit using low voltage semiconductor controlled rectifiers for high voltage isolation  
[NASA-CASE-XNP-02713] c10 N69-39888  
Selective gold diffusion on monolithic silicon chips for switching and nonswitching amplifier devices and circuits and linear and digital logic circuits  
[NASA-CASE-ERC-10072] c09 N70-11148  
Electrical power system for space flight vehicles operating over extended periods  
[NASA-CASE-XNP-00517] c03 N70-34157  
High speed low level voltage commutating switch  
[NASA-CASE-XAC-00060] c09 N70-39915  
Switching circuit with regeneratively connected transistors eliminating power consumption when not in use  
[NASA-CASE-XNP-02654] c10 N70-42032  
Using electron beam switching for brushless motor commutation  
[NASA-CASE-XGS-01451] c09 N71-10677  
Increasing power conversion efficiency of electronic amplifiers by power supply switching  
[NASA-CASE-XMS-00945] c09 N71-10798  
Silicon controlled rectifier pulse gate amplifier for blocking false gating caused by negative transient voltages  
[NASA-CASE-XLA-07497] c09 N71-12514  
Describing magnetic core current switching device for steering bipolar current pulses to memory units  
[NASA-CASE-NPO-10201] c08 N71-18694  
Transistorized dc-coupled multivibrator with noninverted output signal  
[NASA-CASE-XNP-09450] c10 N71-18723  
Reversible current directing circuitry for reversible motor control  
[NASA-CASE-XLA-09371] c10 N71-18724  
Constructing Exclusive-Or digital logic circuit in single module  
[NASA-CASE-XLA-07732] c08 N71-18751  
Polarization diversity monopulse tracking receiver design without radio frequency switches  
[NASA-CASE-XGS-03501] c09 N71-20864  
Sight switch using infrared source and sensor mounted beside eye  
[NASA-CASE-XNP-03934] c09 N71-22985  
Complementary regenerative transistorized switch circuit employing positive and negative feedback  
[NASA-CASE-XGS-02751] c09 N71-23015  
Reliable magnetic core circuit apparatus with application in selection matrices for digital memories  
[NASA-CASE-XNP-01318] c10 N71-23033  
Electric circuit for producing high current pulse having fast rise and fall time  
[NASA-CASE-XMS-04919] c09 N71-23270  
Electric circuit for reversing direction of current flow  
[NASA-CASE-XNP-00952] c10 N71-23271  
Switching series regulator with gating control network  
[NASA-CASE-XMS-09352] c09 N71-23316  
Microwave waveguide switch with rotor position control  
[NASA-CASE-XNP-06507] c09 N71-23548  
Signaling summary alarm circuit with semiconductor switch for faulty contact indications  
[NASA-CASE-XLE-03061-1] c10 N71-24798  
Solid state circuit for switching alternating current input signal as function of direct current gating transistor  
[NASA-CASE-XNP-06505] c10 N71-24799  
Inverters for changing direct current to alternating current

- [NASA-CASE-XGS-06226] c10 N71-25950  
Design and development of multistage current steering switch with inductively coupled magnetic cores
- [NASA-CASE-XNP-08567] c09 N71-26000  
Pulse duration control device for driving slow response time loads in selected sequence including switching and delay circuits and magnetic storage
- [NASA-CASE-XGS-04224] c10 N71-26418  
Turn on current transient limiter for controlling peak current flow in high capacity load
- [NASA-CASE-GSC-10413] c10 N71-26531  
Input radio frequency circuit for switching type absolute temperature measuring radiometer for noise sources
- [NASA-CASE-ERC-11020] c14 N71-26774  
Inverter drive circuit for semiconductor switch
- [NASA-CASE-LEW-10233] c10 N71-27126  
Phase locked demodulator with bandwidth switching amplifier circuit
- [NASA-CASE-XNP-01107] c10 N71-28859  
Monostable multivibrator for producing output pulse widths with positive feedback NOR gates
- [NASA-CASE-MS-C-13492-1] c10 N71-28860  
Digital magnetic core memory with sensing amplifier circuits
- [NASA-CASE-XNP-01012] c08 N71-28925  
Current regulating voltage divider design with load current shunting
- [NASA-CASE-MFS-20935] c09 N71-34212  
Pelay controlled voltage switching unit for scanning circuitry of star tracker
- [NASA-CASE-NPO-11253] c09 N72-17157  
Spacecraft solar cell system with switching circuit to provide compensation for environmental changes
- [NASA-CASE-GSC-10669-1] c03 N72-20031  
Flow rate switch for detecting variations in fluid flow velocity through conduits of pressurized systems
- [NASA-CASE-NPO-10722] c09 N72-20199  
Switching type voltage regulator with relatively simple circuit arrangement
- [NASA-CASE-LEW-11005-1] c09 N72-21243  
Development and characteristics of data multiplexer circuit using field effect transistors arranged in tree switching configuration
- [NASA-CASE-NPO-11333] c08 N72-22162  
Pulse coupling circuit with switch between generator and winding
- [NASA-CASE-LEW-10433-1] c09 N72-22197  
Solid state remote circuit selector switching circuit
- [NASA-CASE-LEW-10387] c09 N72-22201  
Pressure operated electrical switch responsive to pressure decrease after pressure increase
- [NASA-CASE-LAR-10137-1] c09 N72-22204  
Transistorized switching logic circuits with tunnel diodes
- [NASA-CASE-GSC-10878-1] c10 N72-22236  
Switching circuit for control of cathode ray tube beam with fast rise time for output signal
- [NASA-CASE-KSC-10647-1] c10 N72-31273  
Electronic video editor for switching video input signals to common output channel
- [NASA-CASE-KSC-10003] c10 N73-13235  
Solid state switch for variable circuit switching
- [NASA-CASE-NPO-10817-1] c08 N73-30135  
Transparent switchboard which permits optical display devices to be adapted for use in man machine communications
- [NASA-CASE-MS-C-13746-1] c10 N73-32143  
High isolation RF signal selection switches
- [NASA-CASE-NPO-13081-1] c33 N74-22814  
Isolated output system for a class D switching-mode amplifier
- [NASA-CASE-MFS-21616-1] c33 N75-30429  
Dual digital video switcher
- [NASA-CASE-KSC-10782-1] c33 N75-30431  
Multi-computer multiple data path hardware exchange system
- [NASA-CASE-NPO-13422-1] c60 N76-14818  
Sustained arc ignition system
- [NASA-CASE-LEW-12444-1] c33 N77-28385  
Dual mode solid state power switch
- [NASA-CASE-MFS-22880-2] c33 N77-31407
- Window comparator  
[NASA-CASE-PRC-10090-1] c33 N78-18308
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12585-1] c44 N78-27520
- Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c33 N79-24254
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c33 N79-26312
- System for automatically switching transformer coupled lines  
[NASA-CASE-MS-C-16697-1] c33 N79-28415
- SWITCHING THEORY**
- Multiple circuit switch apparatus requiring minimum hand and eye movement by operator  
[NASA-CASE-XAC-03777] c10 N71-15909
- SWIVELS**
- Swivel support for gas bearing for position adjustment between ball and supporting cup  
[NASA-CASE-XMP-07808] c15 N71-23812
- SYNCHRONISM**
- Synchronizing apparatus for multi-access satellite time division multiplex system  
[NASA-CASE-XGS-05918] c07 N69-39974
- Circuitry for generating sync signals in FM communication systems including video information  
[NASA-CASE-XNP-10830] c07 N71-11281
- Development of method for synchronizing clocks at several ground stations based on signals received from spacecraft or satellites  
[NASA-CASE-XNP-08875] c10 N71-23099
- Pulse generator for synchronizing or resetting electronic signals without requiring separate external source  
[NASA-CASE-XGS-03632] c09 N71-23311
- Time synchronization system for synchronizing clocks at remote locations with master clock using moon reflected coded signals  
[NASA-CASE-NPO-10143] c10 N71-26326
- System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
[NASA-CASE-NPO-10214] c10 N71-26577
- SYNCHRONIZED OSCILLATORS**
- Development of phase demodulation system with two phase locked loops  
[NASA-CASE-XNP-00777] c10 N71-19469
- Phase locked phase modulation system with voltage controlled oscillator for final phase linearity  
[NASA-CASE-XNP-05382] c10 N71-23544
- Automatic frequency control device for providing frequency reference for voltage controlled oscillator  
[NASA-CASE-KSC-10393] c09 N72-21247
- SYNCHRONIZERS**
- Development and characteristics of burst synchronization detection system  
[NASA-CASE-XMS-05605-1] c10 N71-19468
- Time division relay synchronizer with master sync pulse for activating binary counter to produce signal identifying time slot for station  
[NASA-CASE-GSC-10373-1] c07 N71-19773
- Design and development of synchronous servo loop control system  
[NASA-CASE-XNP-03744] c10 N71-20448
- Digital synchronizer for extracting binary data in receiver of PSK/PCM communication system  
[NASA-CASE-NPO-10851] c07 N71-24613
- Video sync processor with phase locked system  
[NASA-CASE-KSC-10002] c10 N71-25865
- Pulse code modulated signal synchronizer  
[NASA-CASE-MS-C-12462-1] c32 N74-20809
- Pulse code modulated signal synchronizer  
[NASA-CASE-MS-C-12494-1] c32 N74-20810
- System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c33 N75-19519
- Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c17 N76-22245
- SYNCHRONOUS MOTORS**
- Synchronous dc direct-drive system comprising multiple-loop hybrid control system controlling load directly connected to actuator  
[NASA-CASE-GSC-10065-1] c10 N71-27136

- Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c33 N75-19524
- SYNCHRONOUS SATELLITES**  
Position locating system for remote aircraft  
using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958
- Serrodyne traveling wave tube reentrant  
amplifier for synchronous communication  
satellites operating at microwave frequencies  
[NASA-CASE-XGS-01022] c07 N71-16088
- Traffic control system for supersonic transports  
using synchronous satellite for data relay  
between vehicles and ground station  
[NASA-CASE-GSC-10087-1] c02 N71-19287
- Tracking antenna system with array for  
synchronous satellite or ground based radar  
[NASA-CASE-GSC-10553-1] c07 N71-19854
- Satellite network synchronization system with  
multiple access to multiplex repeater  
[NASA-CASE-GSC-10390-1] c07 N72-11149
- Development of device for simulating charge and  
discharge cycle of battery in synchronous orbit  
[NASA-CASE-GSC-11211-1] c03 N72-25020
- Camera arrangement --- for satellite scanning of  
earth or sky  
[NASA-CASE-GSC-12032-2] c35 N76-19408
- Satellite personal communications system  
[NASA-CASE-NPO-10480-1] c32 N78-25275
- Systems and methods for determining radio  
frequency interference  
[NASA-CASE-GSC-12150-1] c32 N79-11265
- SYNTHESIS**  
Synthesis of polymeric schiff bases by  
schiff-base exchange reactions  
[NASA-CASE-XMP-08651] c06 N71-11236
- Preparation of ordered poly/arylenesiloxane/  
polymers  
[NASA-CASE-XMP-10753] c06 N71-11237
- Synthesis and chemical properties of  
imidazopyrrolone/imide copolymers  
[NASA-CASE-XLA-08802] c06 N71-11238
- Stable polyimide synthesis from mixtures of  
monomeric diamines and polycarboxylic acid  
esters  
[NASA-CASE-LEF-11325-1] c06 N73-27980
- Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-1] c23 N78-22154
- Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-2] c23 N78-22155
- SYNTHESIZERS**  
Digitally controlled frequency synthesizer for  
pulse frequency modulation telemetry systems  
[NASA-CASE-XGS-02317] c09 N71-23525
- SYNTHETIC APERTURE RADAR**  
Surface roughness measuring system --- synthetic  
aperture radar measurements of ocean wave  
height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391
- Azimuth correlator for real-time synthetic  
aperture radar image processing  
[NASA-CASE-NPO-14019-1] c32 N79-14268
- Real-time multiple-look synthetic aperture radar  
processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c32 N79-14278
- Multibeam single frequency synthetic aperture  
radar processor for imaging separate range  
swaths  
[NASA-CASE-NPO-14525-1] c32 N79-19195
- SYNTHETIC FIBERS**  
Manufacture of fluid containers from fused  
coated polyester sheets having resealable septum  
[NASA-CASE-NPO-10123] c15 N71-24835
- Structure of fabric layers for micrometeoroid  
protection garment with capability for  
eliminating heat shorts for use in  
manufacturing space suits  
[NASA-CASE-MSC-12109] c18 N71-26285
- Flexible barrier membrane comprising porous  
substrate and incorporating liquid gallium or  
indium metal used as sealant barriers for  
spacecraft walls and pumping liquid propellants  
[NASA-CASE-XNP-08881] c17 N71-28747
- Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c35 N78-25391
- Process for spinning flame retardant elastomeric  
compositions --- fabricating synthetic fibers  
for high oxygen environments  
[NASA-CASE-MSC-14331-3] c27 N78-32262
- SYNTHETIC RESINS**  
Process permitting application of synthetic  
resin coating to irregular-shaped objects at  
ambient temperature  
[NASA-CASE-XNP-06508] c18 N69-39895
- SYSTEM EFFECTIVENESS**  
System for the measurement of ultra-low stray  
light levels --- determining the adequacy of  
large space telescope systems  
[NASA-CASE-MPS-23513-1] c74 N79-11865
- SYSTEM FAILURES**  
Tape recorder designed for low power consumption  
and resistance to operational failure under  
high stress conditions  
[NASA-CASE-XGS-08259] c14 N71-23698
- Fault tolerant clock apparatus utilizing a  
controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c35 N75-30504
- SYSTEMS ANALYSIS**  
Analog to digital converter analyzing system  
[NASA-CASE-NPO-10560] c08 N72-22166
- SYSTEMS ENGINEERING**  
Design of magnetohydrodynamic induction machine  
with end poles which produce compensating  
magnetic fields  
[NASA-CASE-XNP-07481] c25 N69-21929
- Hovering type flying vehicle design and  
principle mechanisms for manned or unmanned use  
[NASA-CASE-MSC-12111-1] c02 N71-11039
- Solar battery with interconnecting means for  
plural cells  
[NASA-CASE-XNP-06506] c03 N71-11050
- Transparent polycarbonate resin, shell helmet  
and latch design for high altitude and space  
flight  
[NASA-CASE-XNS-00935] c05 N71-11190
- Design and operation of multi-feed cone  
Cassegrain antenna  
[NASA-CASE-NPO-10539] c07 N71-11285
- Design and operation of viscous pendulum damper  
[NASA-CASE-XLA-02079] c12 N71-16894
- Alarm system design for monitoring one or more  
relay circuits  
[NASA-CASE-XMS-10984-1] c10 N71-19417
- Wide range analog data compression system  
[NASA-CASE-XGS-02612] c08 N71-19435
- Space suit body heat exchanger design composed  
of thermal conductance yarn and liquid coolant  
loops  
[NASA-CASE-XNS-09571] c05 N71-19439
- Silicon radiation detecting probe design for in  
vivo biomedical use  
[NASA-CASE-XMS-01177] c05 N71-19440
- Design and operation of high speed binary to  
decimal conversion system  
[NASA-CASE-XGS-01230] c08 N71-19544
- Spatter proof evaporant source design for use in  
vacuum deposition of solid thin films on  
substrates  
[NASA-CASE-XMP-06065] c15 N71-20395
- Method and apparatus for fabrication of heat  
insulating and ablative reentry structure  
[NASA-CASE-XMS-02009] c33 N71-20834
- Polarization diversity monopulse tracking  
receiver design without radio frequency switches  
[NASA-CASE-XGS-03501] c09 N71-20864
- Pneumatic cantilever beams and platform for  
space erectable structure  
[NASA-CASE-XLA-01731] c32 N71-21045
- Magnetically opened diaphragm design with camera  
shutter and expansion tube applications  
[NASA-CASE-XLA-03660] c15 N71-21060
- Portable apparatus producing high velocity  
annular air column surrounding low velocity,  
filtered, superclean air central core for  
industrial clean room environmental control  
[NASA-CASE-XNP-03212] c15 N71-22721
- Potary spindle lathe attachments for machining  
geometrical cones  
[NASA-CASE-XMS-04292] c15 N71-22722
- Apparatus and method for spin forming tubular  
elbows with high strength, uniform thickness,  
and close tolerances  
[NASA-CASE-XNP-01083] c15 N71-22723
- Spacecraft air lock system to provide ingress  
and egress of astronaut without subjecting  
vehicular environment to vacuum of space  
[NASA-CASE-XLA-02050] c31 N71-22968

- Method of stationkeeping for lenticular gravity gradient satellites  
[NASA-CASE-XLA-03132] c31 N71-22969
- Filler valve design for supplying liquid propellants at high pressure to space vehicles  
[NASA-CASE-XNP-01747] c15 N71-23024
- Method and apparatus for producing very low temperature refrigeration based on gas pressure balance  
[NASA-CASE-XNP-08877] c15 N71-23025
- Monitoring circuit design for sampling circuit control and reduction of time-bandwidth in video communication systems  
[NASA-CASE-XNP-02791] c07 N71-23026
- Multisample test chamber for exposing materials to X rays, temperature change, and gaseous conditions and determination of material effects  
[NASA-CASE-XMS-02930] c11 N71-23042
- Variable duration pulse integrator design for integrating pulse duration modulated pulses with elimination of ripple content  
[NASA-CASE-XLA-01219] c10 N71-23084
- Sealed electrochemical cell with flexible casing for varying electrolyte level in cell  
[NASA-CASE-XGS-01513] c03 N71-23336
- Mosaic semiconductor radiation detector and position indicator systems engineering for low energy particles  
[NASA-CASE-XGS-03230] c14 N71-23401
- Device for measuring two orthogonal components of force with gallium flotation of measuring target for use in vacuum environments  
[NASA-CASE-XAC-04885] c14 N71-23790
- Transducer circuit design with single coaxial cable for input and output connections including incorporation into miniaturized catheter transducer  
[NASA-CASE-ARC-10132-1] c09 N71-24597
- Method of attaching cover glass to silicon solar cell without using adhesive  
[NASA-CASE-XLE-08569-2] c03 N71-24681
- Development of attitude control system for sounding rocket stabilization during ballistic phase of flight  
[NASA-CASE-XGS-01654] c31 N71-24750
- Temperature telemetric transmitter with frequency determining tank circuit for short range transmission  
[NASA-CASE-NPO-10649] c07 N71-24840
- Tuning arrangement for frequency control of magnetron-type electron discharge device  
[NASA-CASE-XMP-09771] c09 N71-24841
- Broadband modified turnstile antenna for use in space tracking and communications  
[NASA-CASE-MS-12209] c09 N71-24842
- Apparatus to determine electric field strength by measuring deflection of electron beam impinging on target  
[NASA-CASE-XMF-06617] c09 N71-24843
- Binary to decimal decoder logic circuit design with feedback control and display device  
[NASA-CASE-XKS-06167] c08 N71-24890
- Noninterruptable digital counter circuit design with display device for pulse frequency modulation  
[NASA-CASE-XNP-09759] c08 N71-24891
- Quick disconnect duct coupling device for single-handed operation  
[NASA-CASE-MFS-20395] c15 N71-24903
- Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
[NASA-CASE-MFS-20385] c09 N71-24904
- Pneumatic mechanism for releasing hook and loop fasteners between large rigid structures  
[NASA-CASE-XMS-10660-1] c15 N71-25975
- Sealed fluorescent tube light unit capable of connection with other units to form string of work lights  
[NASA-CASE-XKS-05932] c09 N71-26787
- Apparatus for semi-automatic inspection of microfilmed documents for density, resolution, size, and position  
[NASA-CASE-MFS-20240] c14 N71-26788
- Method and apparatus for remote measurement of displacement of marks on specimen undergoing tensile test  
[NASA-CASE-NPO-10778] c14 N72-11364
- Spacecraft solar cell system with switching circuit to provide compensation for environmental changes  
[NASA-CASE-GSC-10669-1] c03 N72-20031
- Electric storage battery with high impact resistance  
[NASA-CASE-NPO-11021] c03 N72-20032
- Method and apparatus for providing active attitude control for spacecraft by converting any attitude motion of vehicle into simple rotational motion  
[NASA-CASE-HQN-10439] c21 N72-21624
- Development of light sensing system for controlled orientation of object relative to sun or other light source  
[NASA-CASE-NPO-11311] c14 N72-25414
- Development of thrust control system for application to control of aircraft and spacecraft  
[NASA-CASE-MS-13397-1] c21 N72-25595
- Development of computer program for estimating reliability of self-repair and fault-tolerant systems with respect to selected system and mission parameters  
[NASA-CASE-NPO-13096-1] c15 N73-12495
- Design and development of active control system for air cushion vehicle to reduce or eliminate effects of excessive vertical vibratory acceleration  
[NASA-CASE-LAR-10531-1] c02 N73-13023
- Measurement system for physical quantity represented by or converted to variable frequency signal  
[NASA-CASE-MFS-20658-1] c14 N73-30386
- Design of precision vertical alignment system using laser with gravitationally sensitive cavity  
[NASA-CASE-ARC-10444-1] c16 N73-33397
- System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c35 N74-13132
- Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c74 N74-27866
- Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c35 N75-25124
- Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c36 N77-25502
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c15 N78-25119
- Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c37 N78-28460
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c44 N78-31526
- Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c74 N79-11866
- Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c44 N79-23481
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c43 N79-26439
- Autonomous navigation system --- using gyroscopic pendulums and gimbals for air navigation system which disposes  
[NASA-CASE-ARC-11257-1] c04 N79-33177

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## TACHOMETERS

- Digital cardi tachometer incorporating circuit for measuring heartbeat rate of subject over predetermined portion of one minute also converting rate to beats per minute  
[NASA-CASE-XMS-02399] c05 N71-22896
- Brushless dc tachometer design with Hall effect crystals and output voltage magnitude proportional to rotor speed  
[NASA-CASE-MFS-20385] c09 N71-24904
- Development of instantaneous reading tachometer for measuring electrocardiogram signal rate  
[NASA-CASE-MFS-20418] c14 N73-24473
- Tachometer  
[NASA-CASE-MFS-23175-1] c35 N77-30436
- TACKINESS
- Polyimide prepreg material having improved tack retention --- polyimide-graphite fiber composites  
[NASA-CASE-LEW-12933-1] c23 N79-24061

## TAKEOFF

Aircraft instrument for indicating malfunctions during takeoff  
[NASA-CASE-XLA-00100] c14 N70-36807

Aircraft indicator for pilot control of takeoff roll, climbout path and verticle flight path in poor visibility conditions  
[NASA-CASE-XLA-00487] c14 N70-40157

## TANGENTS

Integrated circuit tangent function generator  
[NASA-CASE-MSC-13907-1] c10 N73-26230

## TANK GEOMETRY

Liquid propellant tank design with spheroidal bulkhead  
[NASA-CASE-XMP-01899] c31 N70-41948

## TANKS (CONTAINERS)

Radiation source and detection system for measuring amount of liquid inside tanks independently of liquid configuration  
[NASA-CASE-MSC-12280] c27 N71-16348

Development of apparatus and method for testing leakage of large tanks  
[NASA-CASE-XMP-02392] c32 N71-24285

Design and development of device to prevent clogging in hoppers containing particulate materials  
[NASA-CASE-LAR-10961-1] c15 N73-12496

Floating baffle for tank drain  
[NASA-CASE-MSC-10639] c15 N73-26472

Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c36 N75-15029

## TANTALUM

Oxygen-doped tantalum emitter for thermionic devices such as cesium vapor diodes  
[NASA-CASE-NPO-11138] c03 N70-34646

Arc electrode of graphite with tantalum ball tip  
[NASA-CASE-XLE-04788] c09 N71-22987

Organometallic compounds of niobium and tantalum useful for film deposition  
[NASA-CASE-XNP-04023] c06 N71-28808

Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c35 N77-32454

## TANTALUM ALLOYS

Evaporating crucible of tantalum-tungsten foil, nickel alumina bonding agent, and ceramic coating  
[NASA-CASE-XLA-03105] c15 N69-27483

Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c26 N78-18182

## TANTALUM CARBIDES

Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206

## TANTALUM OXIDES

Development of thin film temperature sensor from TaO  
[NASA-CASE-NPO-11775] c26 N72-28761

## TAPE RECORDERS

Plural recorder system which limits signal recording to signals of sufficient interest  
[NASA-CASE-XMS-06949] c09 N69-21467

Endless loop tape transport mechanism for driving and tensioning recording medium in magnetic tape recorder  
[NASA-CASE-IGS-01223] c07 N71-10609

Development of low friction magnetic recording tape  
[NASA-CASE-XGS-00373] c23 N71-15978

Tape guidance system for multichannel digital recording system  
[NASA-CASE-XNP-09453] c08 N71-19420

Design and development of synchronous servo loop control system  
[NASA-CASE-XNP-03744] c10 N71-20448

Development of data storage system for storing digital data in high density format on magnetic tape  
[NASA-CASE-XNP-02778] c08 N71-22710

Digital telemetry system apparatus to reduce tape recorder wow and flutter noise during playback  
[NASA-CASE-IGS-01812] c07 N71-23001

Tape recorder designed for low power consumption and resistance to operational failure under high stress conditions  
[NASA-CASE-IGS-08259] c14 N71-23698

Transient video signal tape recorder with expanded playback  
[NASA-CASE-ARC-10003-1] c09 N71-25866

Closed loop servosystem for variable speed tape recorders onboard spacecraft  
[NASA-CASE-NPO-10700] c07 N71-33613

Design and characteristics of recording system for selective reprocessing and filtering of data to obtain optimum signal to noise ratios  
[NASA-CASE-ERC-10112] c07 N72-21119

Video tape recorder with scan conversion playback for color television signals  
[NASA-CASE-NPO-10166-1] c07 N73-22076

Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c35 N76-16391

Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c35 N77-17426

## TAPERED COLUMNS

Method for shaping regeneratively cooled rocket motor casing having minimum thickness at each channel cross section  
[NASA-CASE-XLE-00409] c28 N71-15658

Regeneratively cooled rocket motor casing with tapered channels to insure minimum thicknesses at each channel cross section for necessary strength requirements  
[NASA-CASE-XLE-05689] c28 N71-15659

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[NASA-CASE-MFS-20125] c16 N72-13437

Target acquisition antenna feed with reflector system  
[NASA-CASE-GSC-10064-1] c10 N72-22235

Development of electronic detection system for remotely determining number and movement of enemy personnel  
[NASA-CASE-ARC-10097-2] c07 N73-25160

## TARGET RECOGNITION

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[NASA-CASE-IGS-05211] c07 N69-39980

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[NASA-CASE-MFS-23052-2] c74 N79-13855

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[NASA-CASE-LAR-12012-1] c36 N77-10517

Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c32 N77-24339

Fuselage structure using advanced technology metal matrix fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c05 N78-18045

Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N78-28459

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Reinforced FEP Teflon composite material diffusion bonded to metal substrate  
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[NASA-CASE-NPO-13050-1] c36 N75-15029

Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c44 N76-27664

Portable heatable container  
[NASA-CASE-FPO-14237-1] c37 N78-24554

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Adaptive compression signal processor for PCM communication systems  
[NASA-CASE-XLA-03076] c07 N71-11266

Circuitry for generating sync signals in FM communication systems including video information  
[NASA-CASE-XNP-10830] c07 N71-11281

Automatic estimation of signal to noise ratio and other parameters in signal communication systems  
[NASA-CASE-XNP-05254] c07 N71-20791

Digital synchronizer for extracting binary data in receiver of PSK/PCM communication system  
[NASA-CASE-NPO-10851] c07 N71-24613

Encoders designed to generate comma free biorthogonal Reed-Muller type code comprising conversion of 64 6-bit words into 64 32-bit data for communication purposes  
[NASA-CASE-NPO-10595] c10 N71-25917

- Multicarrier communications system for transmitting modulated signals from single transmitter  
[NASA-CASE-NPC-11548] c07 N73-26118
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[NASA-CASE-XNP-03623] c09 N73-28084
- Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c32 N74-30523
- Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c35 N75-21582
- Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c32 N75-24981
- Receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-1] c32 N77-12248
- Secure communication system  
[NASA-CASE-MSC-16462-1] c32 N78-25274
- Common data buffer system  
[NASA-CASE-RSC-11048-1] c60 N79-23674
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- Telemetry data unit to form multibit words for use between demodulator and computer  
[NASA-CASE-XNP-09225] c09 N69-24333
- Development of telemetry system for position location and data acquisition  
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[NASA-CASE-XLA-03273] c14 N71-18699
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[NASA-CASE-XGS-02317] c09 N71-23525
- Time division multiplexed telemetry transmitting system controlled by programmed memory  
[NASA-CASE-GSC-10131-1] c07 N71-24624
- Temperature telemetric transmitter with frequency determining tank circuit for short range transmission  
[NASA-CASE-NPO-10649] c07 N71-24840
- System designed to reduce time required for obtaining synchronization in data communication with spacecraft utilizing pseudonoise codes  
[NASA-CASE-NPO-10214] c10 N71-26577
- Zero power telemetry actuated switch for biomedical equipment  
[NASA-CASE-ARC-10105] c09 N72-17153
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- Control and information system for digital telemetry data using analog converter to digitize sensed parameter values  
[NASA-CASE-NPO-11016] c08 N72-31226
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[NASA-CASE-NPO-11572] c07 N73-16121
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[NASA-CASE-NPO-13386-1] c54 N75-27758
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[NASA-CASE-MFS-14017] c14 N71-26627
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- TV camera output signal control system for digital spacecraft communication  
[NASA-CASE-XNP-01472] c14 N70-41807
- Solid state television camera system consisting of monolithic semiconductor mosaic sensor and molecular digital readout systems  
[NASA-CASE-XMP-06092] c07 N71-24612
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[NASA-CASE-NPO-10109] c03 N71-11049  
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[NASA-CASE-XLA-01926] c14 N71-15620  
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[NASA-CASE-XNP-00920] c15 N71-15906  
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[NASA-CASE-XLA-07728] c33 N71-22890  
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[NASA-CASE-NPO-11417] c15 N73-24513  
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[NASA-CASE-XLE-00703] c15 N71-15967  
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[NASA-CASE-MFS-14259] c15 N71-19213  
Temperature sensitive magnetometer with pulsating thermally cycled magnetic core  
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 [NASA-CASE-NPO-10764-2] c35 N75-25122  
**TEMPLATES**  
 Precision surface cutter for screen circuit negatives and other microcircuits  
 [NASA-CASE-XLA-09843] c15 N72-27485  
**TENSILE STRENGTH**  
 Method for producing fiber reinforced metallic composites with high strength and elasticity over wide temperature range  
 [NASA-CASE-XLE-00231] c17 N70-38198  
 Composites reinforced with short metal fibers or whiskers and having high tensile strength  
 [NASA-CASE-XLE-00228] c17 N70-38490  
 Apparatus for tensile strength testing of specimen by pressurized fluid  
 [NASA-CASE-XKS-06250] c14 N71-15600  
 Process for fiberizing ceramic materials with high fusion temperatures and tensile strength  
 [NASA-CASE-XNP-00597] c18 N71-23088  
 Tensile strength testing device having pulley guides for exerting multiple forces on test specimen  
 [NASA-CASE-XNP-05634] c15 N71-24834  
 Device for use in loading tension members --- characterized by elongated elastic body  
 [NASA-CASE-NPS-21488-1] c14 N75-24794  
**TENSILE STRESS**  
 Method for testing rocket nozzles at high tensile stress levels  
 [NASA-CASE-NPO-10311] c31 N71-15643  
 Device for measuring tensile forces  
 [NASA-CASE-NPS-21728-1] c35 N74-27865  
 Solid medium thermal engine  
 [NASA-CASE-ARC-10461-1] c44 N74-33379  
**TENSILE TEST**  
 Tensile strength testing device having pulley guides for exerting multiple forces on test specimen  
 [NASA-CASE-XNP-05634] c15 N71-24834  
**TENSILE TESTS**  
 Apparatus for tensile strength testing of specimen by pressurized fluid  
 [NASA-CASE-XKS-06250] c14 N71-15600  
 Apparatus for measuring load on cable under static or dynamic conditions comprising pulleys pivoting structure against restraint of tension strap  
 [NASA-CASE-XMS-04545] c15 N71-22878  
 Method and apparatus for remote measurement of displacement of marks on specimen undergoing tensile test  
 [NASA-CASE-NPO-10778] c14 N72-11364  
 Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
 [NASA-CASE-LAR-10426-1] c09 N74-19528

- Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c35 N76-18400
- Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MPS-23281-1] c35 N77-22450
- TENSION**  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MPS-22189-1] c35 N75-19615
- TERMINAL GUIDANCE**  
Data processing and display system for terminal guidance of X-15 aircraft  
[NASA-CASE-XPR-00756] c02 N71-13421
- Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-PRC-10049-1] c04 N74-13420
- Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c54 N79-20746
- TERRAIN**  
Vertically descending flight vehicle landing gear for rough terrain  
[NASA-CASE-MXP-01174] c02 N70-41589
- TERRAIN ANALYSIS**  
Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391
- TEST CHAMBERS**  
System for continuous monitoring of exhalations, weighing, and cage cleaning for animal exposed to controlled atmosphere for toxic study  
[NASA-CASE-XAC-05333] c11 N71-22875
- Multisample test chamber for exposing materials to X rays, temperature change, and gaseous conditions and determination of material effects  
[NASA-CASE-XMS-02930] c11 N71-23042
- Flammability test chamber for testing materials in certain predetermined environments  
[NASA-CASE-KSC-10126] c11 N71-24985
- Pressure seals suitable for use in environmental test chambers  
[NASA-CASE-NPO-10796] c15 N71-27068
- Test chamber for determining decomposition and autoignition of materials used in spacecraft under controlled environmental conditions  
[NASA-CASE-KSC-10198] c11 N71-28629
- Test chambers with orifice and helium mass spectrometer for detecting leak rate of encapsulated semiconductor devices  
[NASA-CASE-ERC-10150] c14 N71-28992
- Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MPS-23299-1] c39 N77-28511
- TEST EQUIPMENT**  
Equipment for testing of ground station ranging equipment and spacecraft transponders  
[NASA-CASE-XMS-05454-1] c07 N71-12391
- Apparatus for tensile strength testing of specimen by pressurized fluid  
[NASA-CASE-XKS-06250] c14 N71-15600
- Development of black-body source calibration furnace  
[NASA-CASE-XLE-01399] c33 N71-15625
- Design and characteristics of thermocouples consisting of flexible tape for improved attachment to temperature source  
[NASA-CASE-XNP-01659] c14 N71-23039
- Automatic controlled thermal fatigue testing apparatus  
[NASA-CASE-XLA-02059] c33 N71-24276
- Development and characteristics of electric circuitry for detecting electrical pulses rise time and amplitude  
[NASA-CASE-MXP-08804] c09 N71-24717
- Automated ball rebound resilience test equipment for determining viscoelastic properties of polymers  
[NASA-CASE-XLA-08254] c14 N71-26161
- Portable equipment for validating C band launch pad antennas and transmission lines used for spacecraft checkout  
[NASA-CASE-XKS-10543] c07 N71-26292
- Acoustic vibration test apparatus for wiring harnesses  
[NASA-CASE-MSC-15158-1] c14 N72-17325
- Design and development of two types of atmosphere sampling chambers  
[NASA-CASE-NPO-11373] c13 N72-25323
- Development of apparatus for testing burning rate and flammability of materials  
[NASA-CASE-XMS-09690] c33 N72-25913
- Development of apparatus for detonating explosive devices in order to determine forces generated and detonation propagation rate  
[NASA-CASE-LAR-10800-1] c33 N72-27959
- Equipment for vibration testing of assemblies, components, and other articles  
[NASA-CASE-GSC-11302-1] c14 N73-13416
- Design and development of test stand system for supporting test items in vacuum chamber  
[NASA-CASE-MPS-21362] c11 N73-20267
- Development and characteristics of apparatus for measuring intensity of electric field in atmosphere  
[NASA-CASE-KSC-10730-1] c14 N73-32318
- Test equipment to prevent buckling of small diameter specimens during compression tests  
[NASA-CASE-LAR-10440-1] c14 N73-32323
- Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c09 N74-17955
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c09 N74-19528
- Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c35 N74-21019
- Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MPS-20761-1] c44 N74-27519
- Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c35 N75-12270
- Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c35 N76-22509
- High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c35 N76-24523
- Method of and means for testing a tape record/playback system  
[NASA-CASE-MPS-22671-2] c35 N77-17426
- Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MPS-22409-2] c74 N78-15880
- TEST FACILITIES**  
Electric propulsion engine test chamber  
[NASA-CASE-XLE-00252] c11 N70-34844
- Test apparatus for determining mechanical properties of refractory materials at high temperatures in vacuum or inert atmospheres  
[NASA-CASE-XLE-00335] c14 N70-35368
- Gas analyzer for bi-gaseous mixtures suitable for use in test facilities  
[NASA-CASE-XLA-01131] c14 N71-10774
- Design and characteristics of device for launching models in wind tunnels without disturbance of air flow  
[NASA-CASE-XNP-03578] c11 N71-23030
- Design, development, and operation of shock tube with bypass piston tunnel  
[NASA-CASE-NPO-12109] c11 N72-22245
- TEST STANDS**  
Automatic balancing device for use on frictionless supported attitude-controlled test platforms  
[NASA-CASE-LAR-10774] c10 N71-13545
- Micro-pound extended range thrust stand for small rocket engines  
[NASA-CASE-GSC-10710-1] c28 N71-27094
- TETHERED SATELLITES**  
Tetherline system for orbiting satellites  
[NASA-CASE-MPS-23564-1] c15 N78-25119
- TETHERING**  
Force separation rigid tethering device using cables  
[NASA-CASE-XLA-02332] c32 N71-17609
- Space expandable tether device for use as passageway between two docked spacecraft  
[NASA-CASE-XMS-10993] c15 N71-28936
- TETHERLINES**  
Flexible cable that can be made rigid  
[NASA-CASE-MSC-13512-1] c15 N72-22485
- Tetherline system for orbiting satellites  
[NASA-CASE-MPS-23564-1] c15 N78-25119
- TETRAPHENYLS**  
Chemical synthesis of thermally stable organometallic polymers with divalent metal ion and tetraphenylphosphonitrilic units

- [NASA-CASE-HQN-10364] c06 N71-27363
- TEXTILES**
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c27 N76-24405
- THERMAL ABSORPTION**
- Development and characteristics of calorimeter with integral heat sink for maintenance of constant temperature  
[NASA-CASE-XMP-04208] c33 N71-29051
- Solar pond  
[NASA-CASE-NPO-13581-2] c44 N78-31525
- THERMAL CONDUCTIVITY**
- Measuring conductive heat flow and thermal conductivity of laminar gas stream in cylindrical plug to simulate atmospheric reentry  
[NASA-CASE-XLF-00266] c14 N70-34156
- Development of apparatus for measuring thermal conductivity  
[NASA-CASE-XGS-01052] c14 N71-15992
- Heated element sensor for fluid flow detection in thermal conductive conduit with adaptive means to determine flow rate and direction  
[NASA-CASE-MSC-12084-1] c12 N71-17569
- Method and apparatus for adjusting thermal conductance in electronic components for space use  
[NASA-CASE-XNP-05524] c33 N71-24876
- Thermally conductive polymer for potting electrical components  
[NASA-CASE-GSC-11304-1] c06 N72-21105
- Electrostatically controlled heat transfer system for conducting thermal energy  
[NASA-CASE-NPO-11942-1] c33 N73-32818
- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c34 N78-18355
- Support assembly for cryogenically coolable low-noise choked waveguide  
[NASA-CASE-NPO-14253-1] c31 N79-10246
- THERMAL CONDUCTORS**
- Thermal conductive, electrically insulated cleavable adhesive connection between electronic module and heat sink  
[NASA-CASE-XMS-02087] c09 N70-41717
- Solar energy absorber  
[NASA-CASE-MPS-22743-1] c44 N76-22657
- THERMAL CONTROL COATINGS**
- Low concentration alkaline solution treatment of aluminum with metal phosphate surface coatings to improve chemical bonding and reduce coating weight  
[NASA-CASE-XLA-01995] c18 N71-23047
- Binder stabilized zinc oxide pigmented coating for spacecraft thermal control  
[NASA-CASE-XMP-07770-2] c18 N71-26772
- Inorganic thermal control and solar reflector coatings  
[NASA-CASE-MPS-20011] c18 N72-22566
- Mercaptan terminated polymer containing sulfonic acid salts of nitrosubstituted aromatic amines for heat and moisture resistant coatings  
[NASA-CASE-ARC-10325] c06 N72-25147
- Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MPS-22324-1] c27 N75-27160
- Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c34 N77-18382
- Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MPS-23345-1] c27 N77-30237
- Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c24 N78-14096
- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c34 N78-18355
- High temperature resistant cernmet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c27 N78-19302
- Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c24 N78-27180
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c33 N79-12331
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c24 N79-14156
- THERMAL DEGRADATION**
- Use of silicon controlled rectifier shorting circuit to protect thermoelectric generator source from thermal destruction  
[NASA-CASE-XGS-04808] c03 N69-25146
- Electrical failure detector in solid rocket propellant motor insulation against thermal degradation by fuel grain  
[NASA-CASE-XMP-03968] c14 N71-27186
- THERMAL DIFFUSION**
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c74 N79-17683
- THERMAL EMISSION**
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c32 N79-19186
- THERMAL ENERGY**
- Direct conversion of thermal energy into electrical energy using crossed electric and magnetic fields  
[NASA-CASE-XLE-00212] c03 N70-34134
- Concentrator device for controlling direction of solar energy onto energy converters  
[NASA-CASE-XLE-01716] c09 N70-40234
- Storage stable, thermally activated foaming compositions for erecting and rigidizing mechanisms of thin sheet solar collectors  
[NASA-CASE-LAR-10373-1] c18 N71-26155
- Gaseous core diffusion nuclear reactor for thermal energy generation  
[NASA-CASE-LEW-10250-1] c22 N71-28759
- Electrostatically controlled heat transfer system for conducting thermal energy  
[NASA-CASE-NPO-11942-1] c33 N73-32818
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c44 N74-33379
- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MPS-22562-1] c44 N76-14595
- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MPS-23167-1] c44 N76-31667
- Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c44 N77-32581
- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c44 N79-18443
- THERMAL EXPANSION**
- Gas valve operated by thermally expanding and contracting device  
[NASA-CASE-XLE-00815] c15 N70-35407
- Adjustable rigid mount for trihedral mirror formed of alloy with small coefficient of thermal expansion supporting screws and spring-biased plates  
[NASA-CASE-XNP-08907] c23 N71-29123
- Application of spiral, bimetallic strip to create circular motion on mechanical shaft by changing strip temperature  
[NASA-CASE-NPO-11283] c09 N72-25260
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c37 N74-21063
- THERMAL FATIGUE**
- Automatic controlled thermal fatigue testing apparatus  
[NASA-CASE-XLA-02059] c33 N71-24276
- THERMAL INSULATION**
- Low thermal loss piping arrangement for moving cryogenic media through double chamber structure  
[NASA-CASE-XNP-08882] c15 N69-39935
- Insulating system for receptacles of liquefied gases using wire cloth for forming frost layer  
[NASA-CASE-XMP-00341] c15 N70-33323
- Unfired-ceramic, highly reflective composite insulation for large launch vehicles  
[NASA-CASE-XMP-01030] c18 N70-41583
- Carbon dioxide purge systems to prevent condensation in spaces between cryogenic fuel tanks and hypersonic vehicle skin  
[NASA-CASE-XLA-01967] c31 N70-42015
- Preparation and characteristics of lightweight refractory insulation  
[NASA-CASE-XMP-05279] c18 N71-16124
- Development of thermal insulation system for wing and control surfaces of hypersonic

- aircraft and reentry vehicles  
[NASA-CASE-XLA-00892] c33 N71-17897
- Prefabricated multilayered self-  
evacuating insulation panels using gas with low vapor  
pressure at cryogenic temperatures for  
application to storage of cryogenics  
[NASA-CASE-XLE-04222] c23 N71-22881
- Light weight plastic foam thermal insulation for  
cryogenic storage  
[NASA-CASE-XLE-02647] c18 N71-23658
- Development of foam insulation for filament  
wound cryogenic storage tank  
[NASA-CASE-XLE-03803] c15 N71-23816
- Multilayer insulation panels for cryogenic  
liquid containers  
[NASA-CASE-MPS-14023] c33 N71-25351
- Double-wall isothermal cylinder containing heat  
transfer fluid thermal reservoir as spacecraft  
insulation cover  
[NASA-CASE-MPS-20355] c33 N71-25353
- Structure of fabric layers for micrometeoroid  
protection garment with capability for  
eliminating heat shorts for use in  
manufacturing space suits  
[NASA-CASE-MSC-12109] c18 N71-26285
- Foam insulation thickness measuring and  
injection device for spacecraft applications  
[NASA-CASE-MPS-20261] c14 N71-27005
- Development of thermal insulation material for  
insulating liquid hydrogen tanks in spacecraft  
[NASA-CASE-XP-05046] c33 N71-28892
- Para-benzquinone dioxide and concentrated  
mineral acid processed to yield intumescent or  
fire resistant, heat insulating materials.  
[NASA-CASE-ARC-10304-1] c18 N73-26572
- Development and characteristics of thermal  
control system for maintaining constant  
temperature within spacecraft module with wide  
variations of component heat transfer  
[NASA-CASE-GSC-11018-1] c31 N73-30829
- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c35 N74-15093
- Intumescent composition, foamed product prepared  
therewith and process for making same  
[NASA-CASE-ARC-10304-2] c27 N74-27037
- High current electrical lead --- for thermionic  
converters  
[NASA-CASE-LEW-10950-1] c33 N74-27683
- Structural heat pipe --- for spacecraft wall  
thermal insulation system  
[NASA-CASE-GSC-11619-1] c34 N75-12222
- Thermal insulation attaching means  
[NASA-CASE-MSC-12619-1] c39 N75-21671
- Strain arrestor plate for fused silica tile ---  
bonding of thermal insulation to metallic  
plates or structural parts  
[NASA-CASE-MSC-14182-1] c27 N76-14264
- Ceramic fiber insulating material and methods of  
producing same --- product development of  
foams for thermal insulation  
[NASA-CASE-MSC-14795-1] c27 N76-15314
- Auger attachment method for insulation --- of  
spacecraft  
[NASA-CASE-MSC-12615-1] c37 N76-19437
- Ceramic fiber insulating material and method of  
producing same --- aircraft construction  
materials  
[NASA-CASE-MSC-14795-2] c24 N78-25138
- Flexible pile thermal barrier insulator  
[NASA-CASE-MSC-19568-1] c34 N78-25350
- Thermal insulation attaching means --- adhesive  
bonding of felt vibration insulators under  
ceramic tiles  
[NASA-CASE-MSC-12619-2] c27 N79-12221
- A method and technique for installing  
light-weight fragile, high-temperature fiber  
insulation --- sealing recoverable spacecraft  
[NASA-CASE-MSC-16934-1] c24 N79-16923
- Diced tile thermal protection for spacecraft  
[NASA-CASE-MSC-16366-1] c24 N79-23142
- Fibrous refractory composite insulation ---  
shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c24 N79-24062
- Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c24 N79-25142
- THERMAL PLASMAS**  
Apparatus for producing monochromatic light from  
continuous plasma source  
[NASA-CASE-INP-04167-2] c25 N72-24753
- THERMAL PROTECTION**  
Thermoprotective device for balances  
[NASA-CASE-XAC-00648] c14 N70-40400
- Design, development, and characteristics of  
ablation structures  
[NASA-CASE-XMS-01816] c33 N71-15623
- Development of spacecraft radiator cover  
[NASA-CASE-MSC-12049] c31 N71-16080
- Characteristics of foamed-in-place ceramic  
refractory insulating material and method of  
fabrication  
[NASA-CASE-YGS-02435] c18 N71-22998
- Unfired ceramic insulation for protection from  
radiant heating environments  
[NASA-CASE-MPS-14253] c33 N71-24858
- Development of solid state polymer coating for  
obtaining thermal balance in spacecraft  
components  
[NASA-CASE-XLA-01745] c33 N71-28903
- Anodizing method for providing metal surfaces  
with temperature reducing coatings against  
flames  
[NASA-CASE-XLE-00035] c33 N71-29151
- Ablative heat shield for protection from  
aerodynamic heating of reentry spacecraft  
[NASA-CASE-MSC-12143-1] c33 N72-17947
- Lightweight fire resistant plastic foam for  
thermal protection of reentry vehicles and  
aircraft structures  
[NASA-CASE-ARC-10180-1] c28 N72-20767
- Flexible fire retardant polyisocyanate modified  
neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c27 N74-12814
- Thermal insulation attaching means  
[NASA-CASE-MSC-12619-1] c39 N75-21671
- Adjustable securing base  
[NASA-CASE-MSC-19666-1] c37 N78-17393
- Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c27 N78-32260
- Diced tile thermal protection for spacecraft  
[NASA-CASE-MSC-16366-1] c24 N79-23142
- THERMAL RADIATION**  
Miniaturized radiometer for detecting low level  
thermal radiation  
[NASA-CASE-XLA-04556] c14 N69-27484
- Temperature sensitive capacitor device for  
detecting very low intensity infrared radiation  
[NASA-CASE-INP-09750] c14 N69-39937
- High temperature source of thermal radiation  
[NASA-CASE-XLE-00490] c33 N70-34545
- Development and characteristics of thermal  
radiation shielding of refractory metal foil  
used for induction furnace  
[NASA-CASE-XLE-03432] c33 N71-24145
- Flack body cavity radiometer with thermal  
resistance wire bridge circuit  
[NASA-CASE-INP-08961] c14 N71-24809
- Development of method for protecting large and  
oddly shaped areas from radiant and convective  
heat  
[NASA-CASE-INP-01310] c33 N71-28852
- THERMAL REACTORS**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c73 N78-19920
- THERMAL RESISTANCE**  
Single electrical circuit component combining  
diode, fuse, and blown indicator with  
elongated tube of heat resistant transparent  
material  
[NASA-CASE-XKS-03381] c09 N71-22796
- Polyimide foam for the thermal insulation and  
fire protection  
[NASA-CASE-ARC-10464-1] c27 N74-12812
- Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c34 N74-15652
- Self-regulating proportionally controlled  
heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c77 N75-20140
- Heat resistant polymers of oxidized  
styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N78-25217
- Heat resistant polymers of oxidized  
styrylphosphine  
[NASA-CASE-MSC-14903-1] c27 N78-32256
- Ambient cure polyimide foams --- thermal  
resistant foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215
- THERMAL SHOCK**  
Development of equipment for measuring thermal

- shock resistance of thin discs of material  
[NASA-CASE-XLE-02024] c14 N71-22960
- Thermal shock resistant hafnia ceramic materials  
[NASA-CASE-LAR-10894-1] c18 N73-14584
- Thermal shock and erosion resistant tantalum  
carbide ceramic material  
[NASA-CASE-LAR-11902-1] c27 N78-17206
- THERMAL SIMULATION**  
Simulating operation of thermopile vacuum gage  
tube at high and low pressures  
[NASA-CASE-XLA-02758] c14 N71-18481
- THERMAL STABILITY**  
Bonded solid lubricant coatings of calcium  
fluoride and binder for high temperature  
stability  
[NASA-CASE-XMS-00259] c18 N70-36400
- Portable environmental control and life support  
system for astronaut in and out of spacecraft  
[NASA-CASE-XMS-09632-1] c05 N71-11203
- Chemical synthesis of thermally stable  
organometallic polymers with divalent metal  
ion and tetraphenylphosphonitrilic units  
[NASA-CASE-HQN-10364] c06 N71-27363
- Cermet for nuclear fuel constructed by pressing  
metal coated ceramic particles in die at  
temperature to cause bonding of metal  
coatings, and tested for thermal stability  
[NASA-CASE-LEW-10219-1] c18 N71-28729
- Ultraviolet and thermally stable polymer  
compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156
- Ultraviolet and thermally stable polymer  
compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315
- Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c71 N79-14871
- Infusible silazane polymer and process for  
producing same --- protective coatings  
[NASA-CASE-XMP-02526-1] c27 N79-21190
- Catalytic trimerization of aromatic nitriles and  
triaryl-s-triazine ring cross-linked high  
temperature resistant polymers and copolymers  
made thereby  
[NASA-CASE-LEW-12053-2] c27 N79-28307
- THERMAL STRESSES**  
Strain gage for detecting and measuring  
mechanical strain in thermally strained  
specimens  
[NASA-CASE-FRC-10053] c14 N70-35587
- Multilegged support system for wind tunnel test  
models subjected to thermal dynamic loading  
[NASA-CASE-XLA-01326] c11 N71-21481
- Development of device for simulating cyclic  
thermal loading of flexible materials by  
application of mechanical stresses and  
deformations  
[NASA-CASE-LAR-10270-1] c32 N72-25877
- Method for alleviating thermal stress damage in  
laminates  
[NASA-CASE-LEW-12493-1] c24 N78-22163
- Apparatus and method for reducing thermal stress  
in a turbine rotor  
[NASA-CASE-LAR-12232-1] c07 N79-10057
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[NASA-CASE-GSC-11989-1] c74 N77-28932  
Method of fabricating a photovoltaic of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c44 N78-28626
- TRANSPARATION**  
Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c20 N76-14191
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Equipment for testing of ground station ranging equipment and spacecraft transponders  
[NASA-CASE-XMS-05454-1] c07 N71-12391  
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- Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c32 N74-12912
- Simultaneous acquisition of tracking data from two stations  
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- Automatic transponder --- measurement of the internal delay time of a transponder  
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Serrrodyne traveling wave tube reentrant amplifier for synchronous communication satellites operating at microwave frequencies  
[NASA-CASE-XGS-01022] c07 N71-16088
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[NASA-CASE-XNP-05219] c16 N71-15550
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[NASA-CASE-NPO-10548] c16 N71-24831
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- Traveling wave tube circuit  
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[NASA-CASE-NPO-11437] c16 N72-28521
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Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c51 N78-27733
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[NASA-CASE-XGS-03095] c09 N69-27463
- Triggering system for electric arc driven impulse wind tunnel  
[NASA-CASE-XMP-00411] c11 N70-36913
- Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244
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[NASA-CASE-XLE-2529-3] c33 N74-20859
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- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c27 N78-15276
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- [NASA-CASE-LEW-12053-2] c27 N79-28307
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- Gas chromatographic method for determining water in nitrogen tetroxide rocket propellant  
[NASA-CASE-NPO-10234] c06 N72-17094
- Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c52 N77-14736
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[NASA-CASE-ARC-11007-1] c52 N77-14736
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[NASA-CASE-XGS-04554] c15 N69-39786
- Method for producing porous tungsten plates for ionizing cesium compounds for propulsion of ion engines  
[NASA-CASE-XLE-00455] c28 N70-38197
- Small plasma probe using tungsten wire collector in tubular shield  
[NASA-CASE-XLE-02578] c25 N71-20747
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[NASA-CASE-XLA-03105] c15 N69-27483
- Cobalt-tungsten alloys with superior strength at elevated temperatures  
[NASA-CASE-LEW-10436-1] c17 N73-32415
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metallic or ceramic wires  
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[NASA-CASE-LW-12131-2] c07 N78-31103
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[NASA-CASE-MSC-13112] c03 N71-11057  
Portable cryogenic cooling system design  
including turbine pump, cooling chamber, and  
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[NASA-CASE-NPO-10467] c23 N71-26654  
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[NASA-CASE-LW-11058-1] c20 N74-13502
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[NASA-CASE-LEW-12608-1] c07 N77-27116
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rotating shafts including helical and  
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[NASA-CASE-XNP-02862-1] c15 N71-26294
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turbine with reverse flow reentry ducting  
[NASA-CASE-XLE-00170] c15 N70-36412  
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in a turbine rotor  
[NASA-CASE-LEW-12232-1] c07 N79-10057
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turbofan engines  
[NASA-CASE-LEW-11402-1] c07 N74-28226  
Noise suppressor --- for turbofan engine by  
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elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c07 N74-32418  
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[NASA-CASE-ARC-10812-1] c07 N76-18131  
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and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055
- TURBOPANS**  
Dual output variable pitch turbofan actuation  
system  
[NASA-CASE-LEW-12419-1] c07 N77-14025  
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[NASA-CASE-LEW-12760-1] c07 N77-17059
- TURBOJET ENGINES**  
Telescoping-spike supersonic nozzle for turbojet  
or ramjet engines  
[NASA-CASE-XLE-00005] c28 N70-39899  
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unit with nozzle guide vanes for introducing  
diluent air into combustion gases  
[NASA-CASE-XLE-103477-1] c28 N71-20330  
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[NASA-CASE-APC-10814-2] c25 N77-31260
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[NASA-CASE-LEW-12312-1] c07 N77-32148
- TURBOMACHINERY**  
Blade vibration damping pins for turbomachinery  
[NASA-CASE-XLE-00155] c28 N71-29154  
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[NASA-CASE-NPO-10597-1] c37 N79-23431
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Remote-reading torque meter for use where high  
horsepowers are required at high rotative  
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[NASA-CASE-XLE-00503] c14 N70-34818  
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in turbine engines  
[NASA-CASE-LEW-11274-1] c37 N75-21631
- TURBULENCE METERS**  
Turbulence intensity indicator  
[NASA-CASE-LAR-11833-1] c06 N76-31229
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[NASA-CASE-LAR-11570-1] c34 N76-18364  
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[NASA-CASE-ARC-10755-2] c34 N76-27517  
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components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c34 N77-27345  
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laminar and turbulent flow areas on a wing  
surface --- using an accelerometer to measure  
noise levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c02 N79-16805
- TURBULENT WAKES**  
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aircraft  
[NASA-CASE-LAR-12034-1] c02 N77-22045
- TURNSTILE ANTENNAS**  
Flexible turnstile antenna system for reducing  
mutation in spin-oriented satellites  
[NASA-CASE-XMP-00442] c31 N71-10747  
Broadband modified turnstile antenna for use in  
space tracking and communications  
[NASA-CASE-MSC-12209] c09 N71-24842  
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[NASA-CASE-LAR-10970-1] c33 N76-14372
- TURRET**  
Indexing mechanism for cathode array  
substitution in electron beam tube  
[NASA-CASE-NPO-10625] c09 N71-26182
- TWO BODY PROBLEM**  
Instrument for measuring potentials on two  
dimensional electric field plot  
[NASA-CASE-XLA-08493] c10 N71-19421
- TWO DIMENSIONAL BODIES**  
Two-dimensional radiant energy array computers  
and computing devices  
[NASA-CASE-GSC-11839-1] c60 N77-14751
- TWO PHASE FLOW**  
Solenoid two-step valve for bipropellant flow  
rate control to rocket engine  
[NASA-CASE-XMS-04890-1] c15 N70-22192  
Two phase fluid pressurization system for  
propellant tank  
[NASA-CASE-MSC-12390] c27 N71-29155  
Two-phase flow system with discrete, impinging  
two-phase jets  
[NASA-CASE-NPO-11556] c12 N72-25292  
Method and turbine for extracting kinetic energy  
from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c34 N79-20335

## TYPEWRITERS

Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c37 N77-19457

## U

## U BENDS

Elbow forming in jacketed pipes while maintaining separation between core shape and jacket pipes  
[NASA-CASE-XNP-10475] c15 N71-24679  
shaped heated tube for distillation and purification of liquid metals  
[NASA-CASE-XNP-08124-2] c06 N73-13129

## ULCERS

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c52 N78-11692  
Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N79-14755

## ULLAGE

Radiation source and detection system for measuring amount of liquid inside tanks independently of liquid configuration  
[NASA-CASE-MSC-12280] c27 N71-16348

## ULTRAHIGH FREQUENCIES

Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c33 N76-14372  
Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c32 N79-17069

## ULTRAHIGH VACUUM

Solid lubricant applied to porous roller bearings prior to use in ultrahigh vacuum  
[NASA-CASE-XLE-09527] c15 N71-17688  
Calibration of vacuum gauges for measuring total and partial pressures in ultrahigh vacuum region  
[NASA-CASE-XGS-07752] c14 N73-30390  
Ultrahigh vacuum gauge with two collector electrodes  
[NASA-CASE-LAR-02743] c14 N73-32324  
In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c35 N74-15092

## ULTRASONIC AGITATION

Development of ultrasonic radiation equipment for removing material from host surface and vacuum apparatus for recovery of material  
[NASA-CASE-NPO-11213] c15 N73-20514

## ULTRASONIC FLAW DETECTION

Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MSC-19672-1] c38 N79-14398

## ULTRASONIC RADIATION

Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c52 N74-20726  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c52 N76-33835  
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[NASA-CASE-ARC-10994-2] c52 N79-26771

## ULTRASONIC TESTS

Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c35 N74-10415  
Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c38 N74-15130  
Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c38 N74-15395  
CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c39 N78-15512

## ULTRASONIC WAVE TRANSDUCERS

Development of ultrasonic radiation equipment for removing material from host surface and vacuum apparatus for recovery of material  
[NASA-CASE-NPO-11213] c15 N73-20514  
Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c35 N75-12271  
Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c54 N75-27760  
Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c35 N76-15432  
A phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals

[NASA-CASE-LAR-12304-1] c71 N78-29871  
Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c52 N79-14751  
Method and apparatus for shaping and enhancing acoustical levitation forces --- ultrasonic transducer for generating a radiation pressure field  
[NASA-CASE-MFS-25050-1] c71 N79-29956

## ULTRASONIC WELDING

Ultrasonically bonded value assembly  
[NASA-CASE-NPO-13360-1] c37 N75-25185

## ULTRASONICS

Ultrasonic wrench for applying vibratory energy to mechanical fasteners  
[NASA-CASE-MFS-29585] c15 N71-17686  
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[NASA-CASE-LAR-12260-1] c35 N79-10390

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Ultraviolet filter of thorium fluoride and cryolite on quartz base  
[NASA-CASE-XNP-02340] c23 N69-24332  
Development of ultraviolet resonance lamp with improved transmission of radiation  
[NASA-CASE-ARC-10030] c09 N71-12521

## ULTRAVIOLET LASERS

Stabilization of He2(a 3 Sigma + molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c72 N79-13826

## ULTRAVIOLET RADIATION

Ultraviolet radiation resistant alkali-metal silicate coatings for temperature control of spacecraft  
[NASA-CASE-XGS-04119] c18 N69-39979  
Development of ultraviolet resonance lamp with improved transmission of radiation  
[NASA-CASE-ARC-10030] c09 N71-12521  
Gas leak detection in evacuated systems using ultraviolet radiation probe  
[NASA-CASE-ERC-10034] c15 N71-24896  
Phototropic composition of matter with sensitivity to ultraviolet light and usable for producing positive photographic images  
[NASA-CASE-XGS-03736] c14 N72-22443  
Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c70 N74-13436  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c27 N74-21156  
Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c34 N74-23066  
Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410  
Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c36 N76-29575  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c27 N76-32315

## ULTRAVIOLET REFLECTION

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[NASA-CASE-XGS-04799] c18 N71-24183  
Ultraviolet light reflective coating  
[NASA-CASE-GSC-11786-1] c24 N76-24363  
Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c74 N78-15879

## ULTRAVIOLET SPECTRA

Ultraviolet chromatographic detector for quantitative and qualitative analysis of compounds  
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## ULTRAVIOLET SPECTROMETERS

Concave grating spectrometer for use in near and vacuum ultraviolet regions  
[NASA-CASE-IGS-01036] c14 N70-40003  
Telespectrograph for analyzing upper atmosphere by tracking bodies reentering atmosphere at high velocities  
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## UMBILICAL CONNECTORS

Umbilical separator for rockets

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## VACUUM CHAMBERS

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Remotely actuated quick disconnect mechanism for umbilical cables  
[NASA-CASE-XLA-00711] c03 N71-12258  
Remotely actuated quick disconnect for tubular umbilical conduits used to transfer fluids from ground to rocket vehicle  
[NASA-CASE-XLA-01396] c03 N71-12259  
Internal and external serpentine devices for performing physical operations around orbital space stations  
[NASA-CASE-XNP-05388] c31 N71-16345  
Breakaway multiwire electrical cable connector with particular application for umbilical type cables  
[NASA-CASE-NPO-11140] c15 N72-17455  
Gas operated quick disconnect coupling for umbilical connectors  
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[NASA-CASE-XKS-02342] c05 N71-11199

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[NASA-CASE-LAP-10595-1] c35 N74-16135  
Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c46 N79-23555

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[NASA-CASE-MPS-20332] c05 N72-20097  
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[NASA-CASE-NXP-09768] c09 N71-12516

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[NASA-CASE-XNP-09770-3] c11 N71-27036

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[NASA-CASE-XLA-03273] c14 N71-18699  
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Pocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c15 N74-27360  
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**UREAS**  
A reverse osmosis membrane of high urea rejection properties  
[NASA-CASE-ARC-10980-1] c27 N77-18265  
Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c27 N77-30236

**URINALYSIS**  
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Enzymatic luminescent bioassay method for determining bacterial levels in urine  
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Automatic device for assaying urine on bacterial adenosine triphosphate content  
[NASA-CASE-GSC-11169-2] c05 N73-32011  
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[NASA-CASE-GSC-12046-1] c52 N79-14750

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Open type urine receptacle with tubular housing  
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[NASA-CASE-XLE-00288] c15 N70-34247
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[NASA-CASE-XLE-01449] c15 N70-41646
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[NASA-CASE-XNP-03282] c28 N72-20758
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[NASA-CASE-XKS-09340] c07 N71-24614
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- Lightweight life preserver without fastening devices  
[NASA-CASE-XMS-00864] c05 N70-36493
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[NASA-CASE-LAR-10106-1] c15 N71-27169
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[NASA-CASE-NPO-14596-1] c31 N79-24197
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[NASA-CASE-XLE-00155] c28 N71-29154
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[NASA-CASE-XAC-10768] c09 N71-18830
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[NASA-CASE-NPO-11213] c15 N73-20514
- Development of optical system for detecting defective components in rotating machinery with emphasis on bearing assemblies  
[NASA-CASE-KSC-10752-1] c15 N73-27407
- Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c37 N79-11404
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[NASA-CASE-XAC-11225] c14 N69-27486
- Miniature vibration isolator utilizing elastic tubing material  
[NASA-CASE-XLA-01019] c15 N70-40156
- Vibration damping system operating in low vacuum environment for spacecraft mechanisms  
[NASA-CASE-XMS-01620] c23 N71-15673
- Hermetically sealed vibration damper design for use in gimbal assembly of spacecraft inertial guidance system  
[NASA-CASE-MSC-10959] c15 N71-26243
- Tuned damped vibration absorber for mass vibrating in more than one degree of freedom for use with wind tunnel models  
[NASA-CASE-LAR-10083-1] c15 N71-27006
- Vibration isolation system, using coaxial helical compression springs  
[NASA-CASE-NPO-11012] c15 N72-11391
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[NASA-CASE-MFS-21680-1] c18 N74-27397
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[NASA-CASE-MSC-12619-2] c27 N79-12221
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[NASA-CASE-ARC-10154-1] c14 N72-22440
- Method and apparatus for vibration analysis utilizing the Mossbauer effect  
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- Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c35 N78-31406
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- Fiber optic transducers for monitoring and analysis of vibration in aerospace vehicles and onboard equipment  
[NASA-CASE-XNF-02433] c14 N71-10616
- VIBRATION MODE**
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[NASA-CASE-LAR-10310-1] c10 N73-20253

## VIBRATION SIMULATORS

Equipment for vibration testing of assemblies, components, and other articles  
[NASA-CASE-GSC-11302-1] c14 N73-13416

## VIBRATION TESTS

Electronic detection system for peak acceleration limits in vibrational testing of spacecraft components  
[NASA-CASE-NPO-10556] c14 N71-27185

Fixture for supporting articles during vibration tests comprising integral annular unit  
[NASA-CASE-MPS-20523] c14 N72-27412

Equipment for vibration testing of assemblies, components, and other articles  
[NASA-CASE-GSC-11302-1] c14 N73-13416

Multiaxes vibration device for making vibration tests along orthogonal axes of test specimen  
[NASA-CASE-MPS-20242] c14 N73-19421

## VIBRATIONAL SPECTRA

Tuned damped vibration absorber for mass vibrating in more than one degree of freedom for use with wind tunnel models  
[NASA-CASE-LAR-10083-1] c15 N71-27006

## VIDEO COMMUNICATION

Circuitry for generating sync signals in PM communication systems including video information  
[NASA-CASE-XNP-10830] c07 N71-11281

Monitoring circuit design for sampling circuit control and reduction of time-bandwidth in video communication systems  
[NASA-CASE-XNP-02791] c07 N71-23026

Teletypewriter video communication system and apparatus  
[NASA-CASE-XNP-06611] c07 N71-26102

Sampling video compression system  
[NASA-CASE-ARC-10984-1] c32 N77-24328

## VIDEO DATA

TV camera output signal control system for digital spacecraft communication  
[NASA-CASE-XNP-01472] c14 N70-41807

Transient video signal tape recorder with expanded playback  
[NASA-CASE-ARC-10003-1] c09 N71-25866

Restoration and improvement of demodulated facsimile video signals  
[NASA-CASE-GSC-10185-1] c07 N72-12081

Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c33 N75-30431

## VIDEO EQUIPMENT

Video signal processing system for sampling video brightness levels  
[NASA-CASE-NPO-10140] c07 N71-24742

Video sync processor with phase locked system  
[NASA-CASE-KSC-10002] c10 N71-25865

Teletypewriter video communication system and apparatus  
[NASA-CASE-XNP-06611] c07 N71-26102

Video signal enhancement of signal component representing brightness of scene element in low contrast  
[NASA-CASE-NPO-10343] c07 N71-27341

Circuitry for high input impedance video processor with high noise immunity  
[NASA-CASE-NPO-10199] c09 N72-17156

Electronic video editor for switching video input signals to common output channel  
[NASA-CASE-KSC-10003] c10 N73-13235

Video tape recorder with scan conversion playback for color television signals  
[NASA-CASE-NPO-10166-1] c07 N73-22076

Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c35 N76-16391

Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c45 N76-17656

## VIDICONS

Operation of vidicon tube for scanning spatial charge density pattern  
[NASA-CASE-XNP-06028] c09 N71-23189

Device which separates and screens particles of soil samples for vidicon viewing in vacuum and reduced gravity environments  
[NASA-CASE-XNP-09770-3] c11 N71-27036

## VINYL POLYMERS

Method of producing output voltage from photovoltaic cell using poly-N-vinyl carbazole complexed with iodine  
[NASA-CASE-NPO-10373] c03 N71-18698

Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c27 N78-25217

Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c27 N78-32256

## VINYLIDENE

Preparation of dicyanoacetylene and vinylidene copolymers using organic compounds  
[NASA-CASE-XNP-03250] c06 N71-23500

## VIRUSES

Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693

## VISCOELASTICITY

Automated ball rebound resilience test equipment for determining viscoelastic properties of polymers  
[NASA-CASE-XLA-08254] c14 N71-26161

Development and characteristics of parallel plate viscometer for determination of absolute viscosity of liquids and viscoelastic materials  
[NASA-CASE-NPO-11387] c14 N73-14429

Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c37 N75-18573

## VISCOMETERS

Describing instrument capable of measuring true shear viscosity of liquids and viscoelastic materials  
[NASA-CASE-XNP-09462] c14 N71-17584

Development and characteristics of parallel plate viscometer for determination of absolute viscosity of liquids and viscoelastic materials  
[NASA-CASE-NPO-11387] c14 N73-14429

Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c35 N78-27385

## VISCOSITY

Low density and low viscosity magnetic propellant for use under zero gravity conditions  
[NASA-CASE-XLE-01512] c12 N70-40124

Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c35 N78-27385

## VISCOUS DAMPING

Shock and vibration damping device using temperature sensitive solid amorphous polymers  
[NASA-CASE-XAC-11225] c14 N69-27486

Design and operation of viscous pendulum damper  
[NASA-CASE-XLA-02079] c12 N71-16894

Mercury filled pendulum damper for controlling bending vibration induced by wind effects  
[NASA-CASE-LAR-10274-1] c14 N71-17626

## VISIBILITY

Controlled visibility device for simulating poor visibility conditions in training pilots in instrument landing and flight procedures  
[NASA-CASE-TPR-04147] c11 N71-10748

High visibility air sea rescue panel  
[NASA-CASE-MSC-12564-2] c03 N78-25070

## VISORS

Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c23 N75-14834

## VISUAL ACUITY

Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c54 N75-27759

## VISUAL CONTROL

Visual target luminaires for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c31 N69-27499

## VISUAL FIELDS

Automated visual sensitivity tester for determining visual field sensitivity and blind spot size  
[NASA-CASE-ARC-10329-1] c05 N73-26072

Visual examination apparatus  
[US-PATENT-RE-28,921] c52 N76-30793

Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c74 N77-20882

## VISUAL OBSERVATION

Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c38 N78-17396

## VISUAL PERCEPTION

High pressure liquid flow sight assembly for wide temperature range applications including cryogenic fluids  
[NASA-CASE-XLE-02998] c14 N70-42074

## VISUAL STIMULI

Reaction tester for testing reaction to light stimuli  
[NASA-CASE-MSC-13604-1] c05 N73-13114

**VOICE COMMUNICATION**

Position locating system for remote aircraft using voice communication and digital signals  
[NASA-CASE-GSC-10087-2] c21 N71-13958

Earth satellite relay station for frequency multiplexed voice transmission  
[NASA-CASE-GSC-10118-1] c07 N71-24621

Voice operated receiving and transmitting system for use in protective suits  
[NASA-CASE-KSC-10164] c07 N71-33108

Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MSC-14219-1] c32 N74-27612

Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c32 N76-21366

Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c32 N76-31372

Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c32 N78-25275

**VOICE DATA PROCESSING**

Digital communication system  
[NASA-CASE-MSC-13912-1] c32 N74-30524

**VOLATILITY**

Apparatus for determining volatile condensable material present in polymeric products  
[NASA-CASE-XNP-09699] c06 N71-24607

**VOLT-AMPERE CHARACTERISTICS**

Simulating voltage-current characteristic curves of solar cell panel with different operational parameters  
[NASA-CASE-XMS-01554] c10 N71-10578

The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c33 N77-10428

Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c33 N79-18193

**VOLTAGE AMPLIFIERS**

Increasing power conversion efficiency of electronic amplifiers by power supply switching  
[NASA-CASE-XMS-00945] c09 N71-10798

Bootstrap unloading circuits for sampling transducer voltage sources without drawing current  
[NASA-CASE-XNP-09768] c09 N71-12516

RC networks with voltage amplifier, RC input circuit, and positive feedback  
[NASA-CASE-ARC-10020] c10 N72-17172

Wide range analog to digital converter with variable gain amplifier  
[NASA-CASE-NPO-11018] c08 N72-21200

Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c33 N78-17297

**VOLTAGE CONVERTERS (AC TO AC)**

Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c33 N79-26312

**VOLTAGE CONVERTERS (DC TO DC)**

Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c33 N74-11049

The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c33 N77-10428

Inrush current limiter  
[NASA-CASE-GSC-11789-1] c33 N77-14333

Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c33 N77-30365

Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c33 N78-32341

Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c33 N79-26312

Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c33 N79-27394

Power converter --- for display devices, lighting equipment  
[NASA-CASE-PRC-11014-1] c33 N79-27395

**VOLTAGE GENERATORS**

Pulsed energy power system for application of combustible gases to turbine controlling ac voltage generator  
[NASA-CASE-MSC-13112] c03 N71-11057

Biotelemetry apparatus with dual voltage generators for implanting in animals  
[NASA-CASE-XAC-05706] c05 N71-12342

Transistorized circuit for producing multiple slope voltage sweep  
[NASA-CASE-XMS-03542] c09 N71-28926

Inductive-capacitive loops as load insensitive power converters  
[NASA-CASE-ERC-10268] c09 N72-25252

Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c36 N79-21336

**VOLTAGE REGULATORS**

Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c03 N69-21330

Power control switching circuit using low voltage semiconductor controlled rectifiers for high voltage isolation  
[NASA-CASE-XNP-02713] c10 N69-39888

Automatic measuring and recording of gain and zero drift characteristics of electronic amplifier  
[NASA-CASE-XMS-05562-1] c09 N69-39986

Automatic control of voltage supply to direct current motor  
[NASA-CASE-XMS-04215-1] c09 N69-39987

Design, development, and operating principles of power supply with starting circuit which is independent of voltage regulator  
[NASA-CASE-XMS-01991] c09 N71-21449

High voltage divider system for attenuating high voltages to convenient levels suitable for introduction to measuring circuits  
[NASA-CASE-XLE-02008] c09 N71-21583

Power supply with overload protection for series stage transistor  
[NASA-CASE-XMS-00913] c10 N71-23543

Voltage controlled, variable frequency relaxation oscillator with MOSFET variable current feed  
[NASA-CASE-GSC-10022-1] c10 N71-25882

Design and development of buck-boost voltage regulator circuit with additive or subtractive alternating current impressed on variable direct current source voltage  
[NASA-CASE-GSC-10735-1] c10 N71-26085

Voltage range selection apparatus for sensing and applying voltages to electronic instruments without loading signal source  
[NASA-CASE-XMS-06497] c14 N71-26244

Dissipative voltage regulator system for minimizing heat dissipation  
[NASA-CASE-GSC-10891-1] c10 N71-26626

Power point tracker for maintaining optimal output voltage of power source  
[NASA-CASE-GSC-10376-1] c14 N71-27407

Microwave power divider for providing variable output power to output waveguide in fixed waveguide system  
[NASA-CASE-NPO-11031] c07 N71-33606

Relay controlled voltage switching unit for scanning circuitry of star tracker  
[NASA-CASE-NPO-11253] c09 N72-17157

Switching type voltage regulator with relatively simple circuit arrangement  
[NASA-CASE-LEW-11005-1] c09 N72-21243

Inductive-capacitive loops as load insensitive power converters  
[NASA-CASE-ERC-10268] c09 N72-25252

Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c33 N74-11049

Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c33 N74-17929

Low distortion automatic phase control circuit --- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c33 N74-22885

Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c33 N75-19521

Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c33 N78-17295

- Voltage regulator for battery power source ---  
using a bipolar transistor  
[NASA-CASE-PRC-10116-1] c33 N79-23345
- Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c33 N79-27394
- VOLTMETERS**  
Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c33 N75-19521
- VOLUMETRIC ANALYSIS**  
Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c36 N79-18307
- VOMITTING**  
Venting device for pressurized space suit helmet  
to eliminate vomit expelled by crewmen  
[NASA-CASE-XMS-09652-1] c05 N71-26333
- VORTEX BREAKDOWN**  
Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c02 N77-10001
- VORTEX GENERATORS**  
Multiple vortex amplifier system as fluid valve  
[NASA-CASE-XMP-04709] c15 N71-15609
- Vortex attenuation method --- for multi-engine  
aircraft  
[NASA-CASE-LAR-12034-1] c02 N77-22045
- Vortex generator for controlling the dispersion  
of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c34 N77-24423
- Smokestack-mounted airfoil  
[NASA-CASE-LAR-11669-1] c45 N79-10570
- VORTICES**  
Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c08 N79-14108
- VULCANIZING**  
Method for compression molding of thermosetting  
plastics utilizing a temperature gradient  
across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c31 N74-18124
- W**
- WAFERS**  
Separation of semiconductor wafer into chips  
bounded by scribe lines  
[NASA-CASE-ERC-10138] c26 N71-14354
- Apparatus for use in examining the lattice of a  
semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c76 N78-24950
- An improved system for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c31 N79-10245
- Method for anisotropically etching a silicon  
wafer having a reinforced peripheral portion  
[NASA-CASE-NPO-14482-1] c44 N79-25511
- WALKING**  
Drop foot corrective device  
[NASA-CASE-LAR-12259-1] c54 N78-18762
- WALL TEMPERATURE**  
Thermocouple apparatus for measuring wall  
temperatures in regeneratively cooled rocket  
engines having thin walled cooling passages  
[NASA-CASE-XLE-05230-2] c14 N73-13417
- Structural heat pipe --- for spacecraft wall  
thermal insulation system  
[NASA-CASE-GSC-11619-1] c34 N75-12222
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c34 N79-31523
- WALLS**  
Metal ribbon wrapped outer wall for  
regeneratively cooled combustion chamber  
[NASA-CASE-XLE-00164] c15 N70-36411
- WARNING SYSTEMS**  
Alarm system design for monitoring one or more  
relay circuits  
[NASA-CASE-XMS-10984-1] c10 N71-19417
- Unsaturating magnetic core transformer design  
with warning signal for electrical power  
processing equipment  
[NASA-CASE-ERC-10125] c09 N71-24893
- Electrical failure detector in solid rocket  
propellant motor insulation against thermal  
degradation by fuel grain  
[NASA-CASE-XMP-03968] c14 N71-27186
- Device for generating and controlling combustion  
products for testing of fire detection system  
[NASA-CASE-GSC-11095-1] c14 N72-10375
- Vertically stacked collinear array of  
independently fed omnidirectional antennas for  
use in collision warning systems on commercial  
aircraft  
[NASA-CASE-LAR-10545-1] c09 N72-21244
- Development and operating principles of  
collision warning system for aircraft accident  
prevention  
[NASA-CASE-HQN-10703] c21 N73-13643
- Pilot warning indicator system of intruder  
aircraft  
[NASA-CASE-ERC-10226-1] c14 N73-16483
- Silent alarm system for multiple room facility or  
school  
[NASA-CASE-NPO-11307-1] c10 N73-30205
- Development and characteristics of electronic  
signalling system and data processing  
equipment for warning systems to avoid midair  
collisions between aircraft  
[NASA-CASE-LAR-10717-1] c21 N73-30641
- Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c35 N74-18090
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c35 N77-19390
- Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c33 N78-10375
- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c32 N79-10262
- WASTE DISPOSAL**  
Fecal waste disposal container  
[NASA-CASE-XMS-06761] c05 N69-23192
- Airlock for waste transferal from pressurized  
enclosure aboard space vehicle to waste  
receiver at negative pressure  
[NASA-CASE-MFS-20922] c31 N72-20840
- Pressurized tank for feeding liquid waste into  
processing equipment  
[NASA-CASE-LAR-10365-1] c05 N72-27102
- Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c54 N74-20725
- Airlock  
[NASA-CASE-MFS-20922-1] c18 N74-22136
- Automatic liquid inventory collecting and  
dispensing unit  
[NASA-CASE-LAR-11071-1] c35 N75-19611
- Automatic bio waste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804
- WASTE ENERGY UTILIZATION**  
Pyrolysis system and process --- recovering  
energy from solid wastes containing hydrocarbons  
[NASA-CASE-MSC-12669-1] c44 N76-16621
- WASTE UTILIZATION**  
Simultaneous treatment of SO<sub>2</sub> containing stack  
gases and waste water  
[NASA-CASE-MSC-16258-1] c45 N79-12584
- WASTE WATER**  
Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693
- Process for purification of waste water produced  
by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747
- WATER**  
Variable water load for dissipating large  
amounts of electrical power during high  
voltage power supply tests  
[NASA-CASE-XMP-05381] c09 N71-20842
- Gas chromatographic method for determining water  
in nitrogen tetroxide rocket propellant  
[NASA-CASE-NPO-10234] c06 N72-17094
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c37 N76-16446
- Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c44 N77-22607
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c35 N78-27384
- Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c44 N79-11470
- WATER FLOW**  
Potable water dispenser  
[NASA-CASE-MFS-21115-1] c54 N74-12779
- WATER INJECTION**  
Reentry communication by injection of water  
droplets into plasma layer surrounding space  
vehicle  
[NASA-CASE-XLA-01552] c07 N71-11284
- WATER LANDING**  
Parachute system for lowering manned spacecraft  
from post-reentry to ocean landing  
[NASA-CASE-XLA-00195] c02 N70-38009
- Spacecraft design with single point aerodynamic  
and hydrodynamic stability for emergency  
transport of men from space station to  
splashdown  
[NASA-CASE-MSC-13281] c31 N72-18859

## WATER MANAGEMENT

- Description of electrical equipment and system for purification of waste water by producing silver ions for bacterial control  
[NASA-CASE-MSC-10960-1] c03 N71-24718
- Solar-powered pump  
[NASA-CASE-NPO-13567-1] c44 N76-29701
- WATER POLLUTION**
- Utilization of solar radiation by solar still for converting salt and brackish water into potable water  
[NASA-CASE-XMS-04533] c15 N71-23086
- Portable tester for monitoring bacterial contamination by adenosine triphosphate light reaction  
[NASA-CASE-GSC-10879-1] c14 N72-25413
- WATER QUALITY**
- Rapid, quantitative determination of bacteria in water  
[NASA-CASE-GSC-12158-1] c51 N78-22585
- Method and apparatus for continuous measurement of bacterial content of aqueous samples  
[NASA-CASE-MSC-16779-1] c51 N78-22586
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c51 N78-22588
- Water quality monitoring system  
[NASA-CASE-MSC-16778-1] c51 N78-22589
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c34 N79-24285
- A system for sterilizing objects --- such as water systems on the space shuttle using ethylene oxide  
[NASA-CASE-KSC-11085-1] c54 N79-33848
- WATER RECLAMATION**
- Potable water reclamation from human wastes in zero-G environment  
[NASA-CASE-XLA-03213] c05 N71-11207
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693
- Water separator  
[NASA-CASE-XMS-01295-1] c37 N79-21345
- WATER RESOURCES**
- Radar target remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c43 N78-33511
- WATER TEMPERATURE**
- Differential thermopile for measuring cooling water temperature rise  
[NASA-CASE-XAC-00812] c14 N71-15598
- WATER TREATMENT**
- Description of electrical equipment and system for purification of waste water by producing silver ions for bacterial control  
[NASA-CASE-MSC-10960-1] c03 N71-24718
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c25 N75-12087
- Water purification process  
[NASA-CASE-ARC-10643-2] c51 N75-13506
- Air removal device --- for purification of water under zero gravity conditions  
[NASA-CASE-XLA-8914-2] c34 N76-23522
- A reverse osmosis membrane of high urea rejection properties  
[NASA-CASE-ARC-10980-1] c27 N77-18265
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c54 N78-14784
- Water quality monitoring system  
[NASA-CASE-MSC-16778-1] c51 N78-22589
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c25 N79-10167
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c51 N79-10693
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c45 N79-12584
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c85 N79-17747
- WATER VAPOR**
- Equipment for measuring partial water vapor pressure in gas tank  
[NASA-CASE-XMS-01618] c14 N71-20741
- WATER WAVES**
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c35 N79-10391
- WATERPROOFING**
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c37 N74-21063
- WAVE AMPLIFICATION**
- Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c71 N77-26919
- WAVE DIFFRACTION**
- Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c74 N78-32857
- WAVE FRONT RECONSTRUCTION**
- Recording and reconstructing focused image holograms  
[NASA-CASE-ERC-10017] c16 N71-15567
- WAVE GENERATION**
- Wind tunnel air flow modulating device and apparatus for selectively generating wave motion in wind tunnel airstream  
[NASA-CASE-XLA-00112] c11 N70-33287
- Linear sawtooth voltage wave generator with transistor timing circuit having capacitor and zener diode feedback loops  
[NASA-CASE-XMS-01315] c09 N70-41675
- Sign wave generation simulator for variable amplitude, frequency, damping, and phase pulses for oscilloscope display  
[NASA-CASE-NPO-10251] c10 N71-27365
- Wideband generator for producing sine wave quadrature and second harmonic of input signal  
[NASA-CASE-NPO-11133] c10 N72-20223
- Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c12 N75-24774
- WAVE REFLECTION**
- Surface defect detection by reflected microwave radiation pattern  
[NASA-CASE-ARC-10009-1] c15 N71-17822
- Millimeter wave antenna system for spacecraft use  
[NASA-CASE-GSC-10949-1] c07 N71-28965
- WAVE SCATTERING**
- Device and method for determining X ray reflection efficiency, scattering properties, and surface finish of optical surfaces  
[NASA-CASE-WFS-20243] c23 N73-13662
- WAVEFORMS**
- Variable frequency magnetic coupled multivibrator with output signal of constant amplitude and waveform  
[NASA-CASE-XGS-00131] c09 N70-38995
- Cathode ray oscilloscope for analyzing electrical waveforms representing amplitude distribution of time function  
[NASA-CASE-IMP-01383] c09 N71-10659
- Peak polarity selector for monitoring waveforms  
[NASA-CASE-PRC-10010] c10 N71-24862
- Development of family of frequency to amplitude converters for frequency analysis of complex input signal waveforms  
[NASA-CASE-MSC-12395] c09 N72-25257
- Device for performing statistical time-series analysis of complex electrical signal waveforms  
[NASA-CASE-MSC-12428-1] c10 N73-25240
- Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c32 N76-16249
- Speech analyzer  
[NASA-CASE-GSC-11898-1] c32 N77-30309
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c33 N79-10337
- WAVEGUIDE ANTENNAS**
- Planar array circularly polarized antenna with wall slot excitation  
[NASA-CASE-NPO-10301] c07 N72-11148
- Dielectric loaded aperture antenna with directive radiation pattern from waveguide  
[NASA-CASE-LAR-11084-1] c09 N73-12216
- WAVEGUIDE FILTERS**
- Microwave power divider for providing variable output power to output waveguide in fixed waveguide system  
[NASA-CASE-NPO-11031] c07 N71-33606
- WAVEGUIDE WINDOWS**
- Broadband microwave waveguide window to

- compensate dielectric material filling  
[NASA-CASE-XNP-08890] c09 N71-24808
- WAVEGUIDES**  
Dual waveguide mode source for controlling amplitudes of two modes  
[NASA-CASE-XNP-03134] c07 N71-10676  
Design of folded traveling wave maser structure  
[NASA-CASE-XNP-05219] c16 N71-15550  
Quasi-optical microwave circuit with dielectric body for use with oversize waveguides  
[NASA-CASE-ERC-10011] c07 N71-29065  
Microwave waveguide mixer  
[NASA-CASE-ERC-10179] c07 N72-20141  
Waveguide, thin film window and microwave irises  
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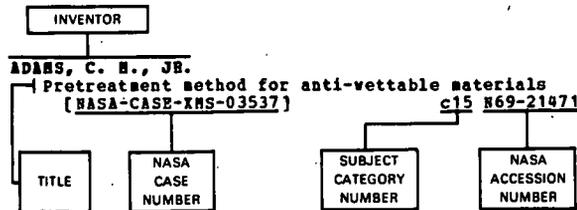
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Section 2

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**BACCHI, R.**  
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combustion chamber Patent  
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[NASA-CASE-GSC-12276-1] c37 N78-32429  
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**COPELAND, J. T., JR.**  
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**CORBIN, P. L.**  
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**CORNILLE, H. J., JR.**  
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**CORNISH, S. D.**  
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**CORSON, B. W., JR.**  
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 Cascade plug nozzle  
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**CORWIN, R. R.**  
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 properties of test specimens  
 [NASA-CASE-LAR-11883-1] c09 N77-27131  
**COSTAKOS, W. C.**  
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**COSTEN, R. C.**  
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 of effluents in a flowing liquid  
 [NASA-CASE-LAR-12045-1] c34 N77-24423  
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**COSTES, N. C.**  
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**COSTOGUE, E. H.**  
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**COSTON, R. H.**  
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**COTE, C. E.**  
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**COUCH, R. H.**  
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**COULBERT, C. D.**  
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**COUVILLON, L. A., JR.**  
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 [NASA-CASE-XNP-05254] c07 N71-20791  
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 multiplex communications by digital phase  
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 [NASA-CASE-NPO-11338] c08 N72-25208  
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 pulses in a single channel PCM communications

system  
 [NASA-CASE-NPO-11302-1] c07 N73-13149  
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 received signal for clocking receiver PN  
 generator  
 [NASA-CASE-XNP-03623] c09 N73-28084  
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**COYNER, J. V.**  
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**CRAIG, R. A.**  
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**CRAWFORD, D. W.**  
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 contact device  
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 [NASA-CASE-XMP-08651] c06 N71-11236  
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**HCCHESENEY, J. R.**  
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 converters  
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[NASA-CASE-NPO-11919-1] c35 N74-11284  
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**HERLEN, M. M.**  
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SMITH, J. P.		Production of high purity I-123 [NASA-CASE-LEW-10518-1]	c24 N72-33681
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SMITH, J. R., JR.		Automated fluid chemical analyzer Patent [NASA-CASE-XNP-09451]	c06 N71-26754
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SMITH, L.		Apparatus for measuring thermal conductivity Patent [NASA-CASE-XGS-01052]	c14 N71-15992
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SMITH, L. G.		Heat exchanger [NASA-CASE-LEW-12252-1]	c34 N79-13288
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SMITH, L. H., JR.		Error correcting method and apparatus Patent [NASA-CASE-XNP-02748]	c08 N71-22749
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SMITH, L. S.		Method of making membranes [NASA-CASE-XNP-04264]	c03 N69-21337
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SMITH, M.		Durable antistatic coating for polymethylmethacrylate [NASA-CASE-NPO-13867-1]	c27 N78-14164
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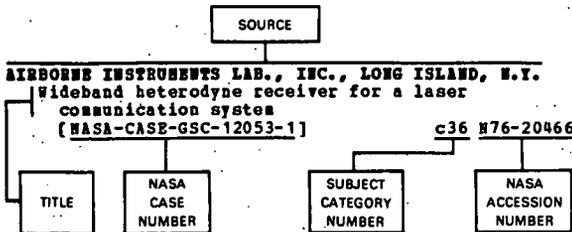
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### Section 2

#### Typical Source Index Listing



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[NASA-CASE-HQN-10780] c14 N71-30265

## G

**GARRETT CORP., LOS ANGELES, CALIF.**  
Relief valve  
[NASA-CASE-XMS-05894-1] c15 N69-21924

Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c05 N71-11203

Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c09 N71-23191

Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-XSC-10960-1] c03 N71-24718

Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c32 N72-25877

Process for separation of dissolved hydrogen from water by use of palladium and process for coating palladium with palladium black  
[NASA-CASE-XSC-13335-1] c06 N72-31140

Flexible joint for pressurizable garment  
[NASA-CASE-XSC-11072] c54 N74-32546

Gas compression apparatus  
[NASA-CASE-XSC-14757-1] c35 N78-10428

Wind tunnel  
[NASA-CASE-LAR-10135-1] c09 N79-21083

Water separator  
[NASA-CASE-XMS-01295-1] c37 N79-21345

**GCA CORP., BEDFORD, MASS.**  
Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c06 N71-13461

**GENERAL DYNAMICS/ASTRONAUTICS, SAN DIEGO, CALIF.**  
Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c15 N71-18613

Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c14 N71-23036

Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c17 N71-24830

**GENERAL DYNAMICS/CONVAIR, SAN DIEGO, CALIF.**  
Signal generator  
[NASA-CASE-XNP-05612] c09 N69-21468

Separation nut Patent  
[NASA-CASE-XGS-01971] c15 N71-15922

Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c15 N71-15968

Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c25 N74-12813

Heat exchanger  
[NASA-CASE-MFS-22991-1] c34 N77-10463

**GENERAL DYNAMICS CORP., SAN DIEGO, CALIF.**  
Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c14 N69-24331

Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XPR-07658-1] c05 N71-26293

Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c09 N73-30181

**GENERAL ELECTRIC CO., CINCINNATI, OHIO.**  
Dual output variable pitch turbofan actuation system

[NASA-CASE-LEW-12419-1] c07 N77-14025  
Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c07 N77-17059  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c24 N77-19170  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c07 N77-23106  
Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c07 N77-27116  
Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c07 N77-32148  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c37 N77-32500  
Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c37 N77-32501  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c37 N78-10467  
Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c37 N78-10468  
Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c07 N78-17055  
Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c07 N78-17056  
Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c37 N78-17384  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089  
Redundant disc  
[NASA-CASE-LEW-12496-1] c07 N78-33101  
Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c37 N79-11403  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c07 N79-14096  
Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c07 N79-14097  
Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c71 N79-14871  
**GENERAL ELECTRIC CO., CLEVELAND, OHIO.**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c07 N78-18067  
**GENERAL ELECTRIC CO., PHILADELPHIA, PA.**  
Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c15 N69-21922  
Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c03 N71-10608  
Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c15 N71-20739  
Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c05 N72-15098  
Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c05 N72-25122  
Reaction tester  
[NASA-CASE-MSC-13604-1] c05 N73-13114  
Air conditioned suit  
[NASA-CASE-LAR-10076-1] c05 N73-20137  
Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MPS-21441-1] c14 N73-30392  
Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c35 N74-18090  
Electrophoretic sample insertion  
[NASA-CASE-MPS-21395-1] c25 N74-26948  
Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MPS-21394-1] c34 N74-27744  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c54 N75-27759  
Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c54 N76-14804  
Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c33 N78-17297  
Solar cell module  
[NASA-CASE-NPO-14467-1] c44 N79-31753  
**GENERAL ELECTRIC CO., PLEASANTON, CALIF.**  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c18 N71-28729  
**GENERAL ELECTRIC CO., SCHECTADY, N. Y.**  
Superconductive accelerometer Patent  
[NASA-CASE-XMP-01099] c14 N71-15969  
Remote manipulator system  
[NASA-CASE-MPS-22022-1] c37 N76-15460  
Automatic transponder  
[NASA-CASE-GSC-12075-1] c32 N77-31350  
Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c26 N77-32279  
**GENERAL ELECTRIC CO., UTICA, N. Y.**  
Method of determining bond quality of power transistors attached to substrates  
[NASA-CASE-MPS-21931-1] c37 N75-26372  
**GENERAL MOTORS CORP., DETROIT, MICH.**  
Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c15 N71-26243  
**GENERAL MOTORS CORP., MILWAUKEE, WIS.**  
Adjustable tension wire guide Patent  
[NASA-CASE-XMS-02383] c15 N71-15918  
**GENERAL MOTORS CORP., SANTA BARBARA, CALIF.**  
Resilient wheel Patent  
[NASA-CASE-MPS-13929] c15 N71-27091  
**GENERAL PRECISION, INC., LITTLE FALLS, N.J.**  
Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c10 N71-18724  
**GENERAL PRECISION, INC., SUNNYVALE, CALIF.**  
Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c09 N72-17156  
**GENERAL PRECISION SYSTEMS, INC., LITTLE FALLS, N.J.**  
Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c12 N71-18603  
**GENERAL TECHNOLOGIES CORP., RESTON, VA.**  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c24 N77-19171  
**GEOPHYSICS CORP. OF AMERICA, BEDFORD, MASS.**  
Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c31 N71-16081  
Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c35 N79-33450  
**GEOPHYSICS CORP. OF AMERICA, BOSTON, MASS.**  
Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c03 N70-35408  
**GEORGE WASHINGTON UNIV., WASHINGTON, D. C.**  
Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c14 N73-13435  
Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c52 N74-27566  
**GIANNINI SCIENTIFIC CORP., SANTA ANA, CALIF.**  
Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c33 N75-29318  
Combination automatic-starting electrical plasma torch and gas shutoff valve  
[NASA-CASE-XLE-10717] c37 N75-29426  
**GINER, INC., WALTHAM, MASS.**  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c44 N79-14538  
**GLOBE-UNION, INC., MILWAUKEE, WIS.**  
Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c03 N72-24037  
**GOODYEAR AEROSPACE CORP., AKRON, OHIO.**  
Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c03 N70-41580  
Method of making a filament-wound container Patent  
[NASA-CASE-XLE-03803-2] c15 N71-17651  
Filament wound container Patent  
[NASA-CASE-XLE-03803] c15 N71-23816  
Panelized high performance multilayer insulation Patent  
[NASA-CASE-MPS-14023] c33 N71-25351  
Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c18 N71-26155  
Compression test assembly  
[NASA-CASE-LAR-10440-1] c14 F73-32323  
Deployable flexible tunnel  
[NASA-CASE-MPS-22636-1] c37 N76-22540  
**GRACE (W. R.) AND CO., CLARKSVILLE, MD.**  
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[NASA-CASE-HQN-10364] c06 N71-27363  
**GRUMMAN AIRCRAFT ENGINEERING CORP., BETHPAGE, N. Y.**  
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[NASA-CASE-MSC-12168-1] c09 N71-18600  
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[NASA-CASE-XMS-10984-1] c10 N71-19417

## GULF GENERAL ATOMIC, SAN DIEGO, CALIF.

Waveform simulator Patent  
[NASA-CASE-NPO-10251] c10 N71-27365

GULTON INDUSTRIES, INC., ALBUQUERQUE, N. MEX.  
Analog-to-digital converter  
[NASA-CASE-MSC-13110-1] c08 N72-22163

GUSTINCIC (J. J.) CONSULTING ENGINEER, MARINA DEL REY, CALIF.  
Microwave limb sounder  
[NASA-CASE-NPO-14544-1] c74 N79-34014

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## HAMILTON STANDARD, WINDSOR LOCKS, CONN.

Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c05 N71-26333

Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c54 N77-32722

## HAMILTON STANDARD DIV., UNITED AIRCRAFT CORP., WINDSOR LOCKS, CONN.

Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c77 N75-20139

HARRIS CORP., FORT LAUDERDALE, FLA.  
Adaptive polarization separation experiments  
[NASA-CASE-LAR-12196-1] c32 N79-18154

## HARRIS CORP., HELBOURNE, FLA.

Telescoping columns  
[NASA-CASE-LAR-12195-1] c37 N78-33446

## HAYES INTERNATIONAL CORP., BIRMINGHAM, ALA.

Space craft soft landing system Patent  
[NASA-CASE-XNP-02108] c31 N70-36845

Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XNP-08522] c15 N71-19486

## HAYES INTERNATIONAL CORP., HUNTSVILLE, ALA.

Method and apparatus for cryogenic wire stripping Patent  
[NASA-CASE-MPS-10340] c15 N71-17628

Self-balancing strain gage transducer Patent  
[NASA-CASE-MPS-12827] c14 N71-17656

Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MPS-13046] c07 N71-19433

## HAZLETON LABS., FALLS CHURCH, VA.

Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c04 N69-27487

Light detection instrument Patent  
[NASA-CASE-XGS-05534] c23 N71-16355

Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c06 N71-17705

Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c15 N72-21465

## HERCULES, INC., WILMINGTON, DEL.

Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c24 N74-30001

## HOFFMAN ELECTRONICS CORP., EL MONTE, CALIF.

Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c03 N69-24267

## HONEYWELL, INC., HOPKINS, MINN.

Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c10 N71-19418

## HONEYWELL, INC., MINNEAPOLIS, MINN.

Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XNS-04215-1] c09 N69-39987

Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MSC-12033-1] c09 N71-13531

Static inverter Patent  
[NASA-CASE-XGS-05289] c09 N71-19470

High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c09 N71-20569

Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c15 N71-20813

Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c26 N71-21824

Controllers Patent  
[NASA-CASE-XMS-07487] c15 N71-23255

Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c15 N71-23811

Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c10 N71-27366

Voice operated controller Patent  
[NASA-CASE-XLA-04063] c31 N71-33160

Load current sensor for a series-pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c09 N72-25249

Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c14 N73-25462

Optical instruments  
[NASA-CASE-MSC-14096-1] c74 N74-15095

Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c37 N77-23482

## HOUSTON UNIV., TEX.

Analysis of volatile organic compounds  
[NASA-CASE-MSC-14428-1] c23 N77-17161

## HOWARD UNIV., WASHINGTON, D. C.

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c54 N76-22914

A cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c52 N77-26796

Locking mechanism for orthopedic braces  
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Varactor high level mixer  
[NASA-CASE-XGS-02171] c09 N69-24324

Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c15 N70-35407

Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c14 N70-40203

Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c16 N70-41578

Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c21 N71-10771

Horn feed having overlapping apertures Patent  
[NASA-CASE-GSC-10452] c07 N71-12396

Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c09 N71-12518

Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c14 N71-15621

Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c15 N71-15966

Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c15 N71-15967

Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c07 N71-22750

Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c17 N71-23046

Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c28 N71-23081

Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c18 N71-23088

Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c18 N71-24184

Triaxial antenna Patent  
[NASA-CASE-XGS-02290] c07 N71-28809

Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c09 N71-28810

High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c28 N71-28850

Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c31 N71-29050

Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c17 N71-29137

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[NASA-CASE-LEW-10770-1] c28 N72-22770

Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MPS-22324-1] c27 N75-27160

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Power control circuit  
[NASA-CASE-XNP-02713] c10 N69-39888

Thermal switch Patent  
[NASA-CASE-XNP-00463] c33 N70-36847

Double-optic system for ion engine Patent  
[NASA-CASE-XNP-02839] c28 N70-41922

Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c15 N70-42034

Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c09 N71-12516

Difference circuit Patent  
[NASA-CASE-XNP-08274] c10 N71-13537

Gas regulator Patent  
[NASA-CASE-NPO-10298] c12 N71-17661

A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c10 N71-18723

Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c10 N71-19469

High voltage transistor circuit Patent  
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Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c08 N71-19687

System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c24 N71-20518

Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c07 N71-24583

Flexible, repairable, pottable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c18 N71-25881

Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c10 N71-26142

Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c07 N71-26579

Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c03 N71-26726

Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c17 N71-26773

Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c07 N72-11148

Conical reflector antenna  
[NASA-CASE-NPO-10303] c07 N72-22127

Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c15 N73-27406

High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c32 N74-20863

Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MPS-22411-1] c37 N74-21058

Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c74 N74-21304

Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c35 N77-20410

Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c74 N77-26942

Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c35 N77-27366

Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c33 N78-32340

System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c32 N79-20296

Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c33 N79-23347

**HUGHES RESEARCH LABS., MALIBU, CALIF.**  
Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c14 N71-20429

**ITT RESEARCH INST., CHICAGO, ILL.**  
Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c15 N71-15871

Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c18 N71-16124

Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XNP-07770-2] c18 N71-26772

Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MPS-13532] c18 N72-17532

Junction range finder  
[NASA-CASE-KSC-10108] c14 N73-25461

Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MPS-23345-1] c27 N77-30237

**IMAGE INFORMATION, INC., DANBURY, CONN.**  
Recorder/processor apparatus  
[NASA-CASE-GSC-11553-1] c35 N74-15831

**INCA ENGINEERING CORP., SAN GABRIEL, CALIF.**  
Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MPS-21424-1] c34 N74-27730

**INSTITUTE FOR RESEARCH, INC., HOUSTON, TEX.**  
Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c05 N72-25120

**INSTITUTE OF RESEARCH AND INSTRUMENTATION, HOUSTON, TEX.**  
Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c05 N71-12346

**INTERNATIONAL BUSINESS MACHINES CORP., HOPEWELL JUNCTION, N. Y.**  
A method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c76 N78-24952

Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c76 N79-23798

**INTERNATIONAL BUSINESS MACHINES CORP., NEW YORK.**  
Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c09 N69-39734

Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c15 N71-10809

Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c10 N71-29135

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[NASA-CASE-XLE-10910] c18 N71-29040

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[NASA-CASE-MSC-12609-1] c05 N73-32012

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Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c52 N79-21750

**ITT CORP., HUTLEY, N.J.**  
Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c07 N71-19773

Tracking receiver Patent  
[NASA-CASE-XGS-08679] c10 N71-21473

Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c07 N72-11149

**JAMES AND ASSOCIATES, LANCASTER, CALIF.**  
A system for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-PRC-11005-1] c06 N79-24988

**JET PROPULSION LAB., CALIF. INST. OF TECH., PASADENA.**  
Pressure variable capacitor  
[NASA-CASE-XNP-09752] c14 N69-21541

Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c14 N69-21923

Data compression system  
[NASA-CASE-XNP-09785] c08 N69-21928

Magneto-hydrodynamic induction machine  
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Signal phase estimator [NASA-CASE-NPO-11203]	c10 N72-20224	Light sensor [NASA-CASE-NPO-11311]	c14 N72-25414
Optimal control system for an electric motor driven vehicle [NASA-CASE-NPO-11210]	c11 N72-20244	Quick disconnect coupling [NASA-CASE-NPO-11202]	c15 N72-25450
Impact energy absorbing system utilizing fracturable material [NASA-CASE-NPO-10671]	c15 N72-20443	Coaxial injector for reaction motors [NASA-CASE-NPO-11095]	c15 N72-25455
Torsional disconnect unit [NASA-CASE-NPO-10704]	c15 N72-20445	Ball screw linear actuator [NASA-CASE-NPO-11222]	c15 N72-25456
Solid propellant rocket motor [NASA-CASE-NPO-03282]	c28 N72-20758	Helium refrigerator and method for decontaminating the refrigerator [NASA-CASE-NPO-10634]	c23 N72-25619
Shell side liquid metal boiler [NASA-CASE-NPO-10831]	c33 N72-20915	Uninsulated in-core thermionic diode [NASA-CASE-NPO-10542]	c09 N72-27228
Method and apparatus for mapping planets [NASA-CASE-NPO-11001]	c07 N72-21118	Audio frequency marker system [NASA-CASE-NPO-11147]	c14 N72-27408
Current steering commutator [NASA-CASE-NPO-10743]	c08 N72-21199	Light direction sensor [NASA-CASE-NPO-11201]	c14 N72-27409
Automated equipotential plotter [NASA-CASE-NPO-11134]	c09 N72-21246	Adjustable support [NASA-CASE-NPO-10721]	c15 N72-27484
Pressure transducer [NASA-CASE-NPO-10832]	c14 N72-21405	Method for controlling vapor content of a gas [NASA-CASE-NPO-10633]	c03 N72-28025
Positioning mechanism [NASA-CASE-NPO-10679]	c15 N72-21462	Maser for frequencies in the 7-20 GHz range [NASA-CASE-NPO-11437]	c16 N72-28521
Solid state matrices [NASA-CASE-NPO-10591]	c03 N72-22041	Thin film temperature sensor and method of making same [NASA-CASE-NPO-11775]	c26 N72-28761
Solar cell panels with light transmitting plate [NASA-CASE-NPO-10747]	c03 N72-22042	Circularly polarized antenna [NASA-CASE-NPO-10214]	c09 N72-31235
Data multiplexer using tree switching configuration [NASA-CASE-NPO-11333]	c08 N72-22162	Singly-curved reflector for use in high-gain antennas [NASA-CASE-NPO-11361]	c07 N72-32169
System for quantizing graphic displays [NASA-CASE-NPO-10745]	c08 N72-22164	Digital slope threshold data compressor [NASA-CASE-NPO-11630]	c08 N72-33172

Continuously variable voltage controlled phase shifter [NASA-CASE-NPO-11129]	c09 N72-33204	Automated attendance accounting system [NASA-CASE-NPO-11456]	c08 N73-26176
Pseudonoise sequence generators with three tap linear feedback shift registers [NASA-CASE-NPO-11406]	c08 N73-12175	Low phase noise digital frequency divider [NASA-CASE-NPO-11569]	c10 N73-26229
Versatile arithmetic unit for high speed sequential decoder [NASA-CASE-NPO-11371]	c08 N73-12177	Vehicle for use in planetary exploration [NASA-CASE-NPO-11366]	c11 N73-26238
Dual frequency microwave reflex feed [NASA-CASE-NPO-13091-1]	c09 N73-12214	Temperature control system with a pulse width modulated bridge [NASA-CASE-NPO-11304]	c14 N73-26430
Audio system with means for reducing noise effects [NASA-CASE-NPO-11631]	c10 N73-12244	Disconnect unit [NASA-CASE-NPO-11330]	c33 N73-26958
Interferometer-polarimeter [NASA-CASE-NPO-11239]	c14 N73-12446	Filter for third order phase locked loops [NASA-CASE-NPO-11941-1]	c10 N73-27171
Irradiance measuring device [NASA-CASE-NPO-11493]	c14 N73-12447	Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier [NASA-CASE-NPO-11593-1]	c07 N73-28012
Program for computer aided reliability estimation [NASA-CASE-NPO-13086-1]	c15 N73-12495	Analog-to-digital converter [NASA-CASE-XNP-00477]	c08 N73-28045
Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system [NASA-CASE-NPO-11302-1]	c07 N73-13149	Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator [NASA-CASE-XNP-03623]	c09 N73-28084
Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards [NASA-CASE-NPO-11418-1]	c14 N73-13420	Apparatus and method for measuring the Seebeck coefficient and resistivity of materials [NASA-CASE-NPO-11749]	c14 N73-28486
Gas flow control device [NASA-CASE-NPO-11479]	c15 N73-13462	Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer [NASA-CASE-XNP-05231]	c14 N73-28491
Electrolytic gas operated actuator [NASA-CASE-NPO-11369]	c15 N73-13467	Continuous magnetic flux pump [NASA-CASE-XNP-01187]	c15 N73-28516
Dual purpose momentum wheels for spacecraft with magnetic recording [NASA-CASE-NPO-11481]	c21 N73-13644	Preparation of alkali metal dispersions [NASA-CASE-XNP-08876]	c17 N73-28573
Multiple reflection conical microwave antenna [NASA-CASE-NPO-11661]	c07 N73-14130	Superconductive magnetic-field-trapping device [NASA-CASE-XNP-01185]	c26 N73-28710
Cyclically operable optical shutter [NASA-CASE-NPO-10758]	c14 N73-14427	Automatic carrier acquisition system [NASA-CASE-NPO-11628-1]	c07 N73-30113
Heat detection and compositions and devices therefor [NASA-CASE-NPO-10764-1]	c14 N73-14428	Ferrofluidic solenoid [NASA-CASE-NPO-11738-1]	c09 N73-30185
Parallel-plate viscometer with double diaphragm suspension [NASA-CASE-NPO-11387]	c14 N73-14429	Silent emergency alarm system for schools and the like [NASA-CASE-NPO-11307-1]	c10 N73-30205
Rotary actuator [NASA-CASE-NPO-10680]	c31 N73-14855	RF-source resistance meters [NASA-CASE-NPO-11291-1]	c14 N73-30388
Magnetically actuated tuning method for Gunn oscillators [NASA-CASE-NPO-12106]	c09 N73-15235	Event sequence detector [NASA-CASE-NPO-11703-1]	c10 N73-32144
Multichannel telemetry system [NASA-CASE-NPO-11572]	c07 N73-16121	Soil penetrometer [NASA-CASE-XNP-05530]	c14 N73-32321
Data-aided carrier tracking loops [NASA-CASE-NPO-11282]	c10 N73-16205	Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions [NASA-CASE-XNP-04231]	c14 N73-32325
Stacked solar cell arrays [NASA-CASE-NPO-11771]	c03 N73-20040	Magnetic-flux pump [NASA-CASE-XNP-01188]	c15 N73-32361
An n-ary linear feedback shift register with binary logic [NASA-CASE-NPO-11868]	c10 N73-20254	Burrowing apparatus [NASA-CASE-XNP-07169]	c15 N73-32362
Apparatus for recovering matter adhered to a host surface [NASA-CASE-NPO-11213]	c15 N73-20514	Electrostatically controlled heat shutter [NASA-CASE-NPO-11942-1]	c33 N73-32818
Scan converting video tape recorder [NASA-CASE-NPO-10166-1]	c07 N73-22076	Method and apparatus for a single channel digital communications system [NASA-CASE-NPO-11302-2]	c32 N74-10132
Collapsible structure for an antenna reflector [NASA-CASE-NPO-11751]	c07 N73-24176	Controlled oscillator system with a time dependent output frequency [NASA-CASE-NPO-11962-1]	c33 N74-10194
Pump for delivering heated fluids [NASA-CASE-NPO-11417]	c15 N73-24513	Low loss dichroic plate [NASA-CASE-NPO-13171-1]	c32 N74-11000
Ion thruster with a combination keeper electrode and electron baffle [NASA-CASE-NPO-11880]	c28 N73-24783	Image data rate converter having a drum with a fixed head and a rotatable head [NASA-CASE-NPO-11659-1]	c35 N74-11283
Solid propellant rocket motor [NASA-CASE-NPO-11559]	c28 N73-24784	Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver [NASA-CASE-NPO-11919-1]	c35 N74-11284
Code regenerative clean-up loop transponder for a mu-type ranging system [NASA-CASE-NPO-11707]	c07 N73-25161	Digital second-order phase-locked loop [NASA-CASE-NPO-11905-1]	c33 N74-12887
Numerical computer peripheral interactive device with manual controls [NASA-CASE-NPO-11497]	c08 N73-25206	Automatic vehicle location system [NASA-CASE-NPO-11850-1]	c32 N74-12912
Radiant source tracker independent of nonconstant irradiance [NASA-CASE-NPO-11686]	c14 N73-25462	Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control [NASA-CASE-NPO-11317-2]	c36 N74-13205
Two carrier communication system with single transmitter [NASA-CASE-NPO-11548]	c07 N73-26118	Use of thin film light detector [NASA-CASE-NPO-11432-2]	c35 N74-15090
High pulse rate high resolution optical radar system [NASA-CASE-NPO-11426]	c07 N73-26119	Temperature compensated digital inertial sensor [NASA-CASE-NPO-13044-1]	c35 N74-15094
Counting digital filters [NASA-CASE-NPO-11821-1]	c08 N73-26175	Compact hydrogenator [NASA-CASE-NPO-11682-1]	c35 N74-15127

Short range laser obstacle detector  
[NASA-CASE-NPO-11856-1] c36 N74-15145

System for stabilizing cable phase delay  
utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c33 N74-17927

Storage battery comprising negative plates of a  
wedge shaped configuration  
[NASA-CASE-NPO-11806-1] c44 N74-19693

Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c32 N74-19788

Apparatus for scanning the surface of a  
cylindrical body  
[NASA-CASE-NPO-11861-1] c36 N74-20009

Decision feedback loop for tracking a polyphase  
modulated carrier  
[NASA-CASE-NPO-13103-1] c32 N74-20811

Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c37 N74-21060

Thin film gauge  
[NASA-CASE-NPO-10617-1] c35 N74-22095

High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c33 N74-22814

Single reflector interference spectrometer and  
drive system therefor  
[NASA-CASE-NPO-11932-1] c35 N74-23040

Scanning nozzle plating system  
[NASA-CASE-NPO-11758-1] c31 N74-23065

Rock sampling  
[NASA-CASE-NXP-10007-1] c46 N74-23068

Rock sampling  
[NASA-CASE-NXP-09755] c46 N74-23069

Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c52 N74-26625

Dispensing targets for ion beam particle  
generators  
[NASA-CASE-NPO-13112-1] c73 N74-26767

Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c28 N74-27425

Coherent receiver employing nonlinear coherence  
detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c32 N74-30523

Digital servo control of random sound test  
excitation  
[NASA-CASE-NPO-11623-1] c71 N74-31148

Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c31 N74-32917

Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c37 N74-32918

Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c28 N74-33209

Geneva mechanism  
[NASA-CASE-NPO-13281-1] c37 N75-13266

Method of producing a storage bulb for an atomic  
hydrogen maser  
[NASA-CASE-NPO-13050-1] c36 N75-15029

Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c37 N75-15050

Simultaneous acquisition of tracking data from  
two stations  
[NASA-CASE-NPO-13292-1] c32 N75-15854

Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c37 N75-19573

System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c33 N75-19519

Motor run-up system  
[NASA-CASE-NPO-13374-1] c33 N75-19524

Frequency scanning particle size spectrometer  
[NASA-CASE-NPO-13606-1] c35 N75-19627

Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c36 N75-19652

Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c37 N75-19684

Wide angle sun sensor  
[NASA-CASE-NPO-13327-1] c35 N75-23910

Material suspension within an acoustically  
excited resonant chamber  
[NASA-CASE-NPO-13263-1] c12 N75-24774

Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c20 N75-24837

System for interference signal nulling by  
polarization adjustment  
[NASA-CASE-NPO-13140-1] c32 N75-24982

Heat detection and compositions and devices  
therefor  
[NASA-CASE-NPO-10764-2] c35 N75-25122

Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c35 N75-25123

Vehicle locating system utilizing AM  
broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c32 N75-26194

Asynchronous, multiplexing, single line  
transmission and recovery data system  
[NASA-CASE-NPO-13321-1] c32 N75-26195

Fluorescence detector for monitoring atmospheric  
pollutants  
[NASA-CASE-NPO-13231-1] c45 N75-27585

Cooperative multiaxis sensor for teleoperation  
of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c54 N75-27758

Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c54 N75-27761

Refrigerated coaxial coupling  
[NASA-CASE-NPO-13504-1] c33 N75-30430

Electric power generation system directory from  
laser power  
[NASA-CASE-NPO-13308-1] c36 N75-30524

Subminiature insertable force transducer  
[NASA-CASE-NPO-13423-1] c33 N75-31329

Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c33 N75-31330

Stored charge transistor  
[NASA-CASE-NPO-11156-2] c33 N75-31331

Doped Josephson tunneling junction for use in a  
sensitive IR detector  
[NASA-CASE-NPO-13348-1] c33 N75-31332

Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c36 N75-31427

Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c36 N75-32441

Helium refrigerator  
[NASA-CASE-NPO-13435-1] c31 N76-14284

Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c33 N76-14373

Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c35 N76-14430

Forward-scatter polarimeter for determining the  
gaseous depolarization factor in the presence  
of polluting polydispersed particles  
[NASA-CASE-NPO-13756-1] c35 N76-14434

Thermostatically controlled non-tracking type  
solar energy concentrator  
[NASA-CASE-NPO-13497-1] c44 N76-14602

Multi-computer multiple data path hardware  
exchange system  
[NASA-CASE-NPO-13422-1] c60 N76-14818

Cermet composition and method of fabrication  
[NASA-CASE-NPO-13120-1] c27 N76-15311

Dichroic plate  
[NASA-CASE-NPO-13506-1] c35 N76-15435

Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c35 N76-16390

Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c35 N76-16391

Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c37 N76-16446

Automated system for identifying traces of  
organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c25 N76-18245

Analog to digital converter  
[NASA-CASE-NPO-13385-1] c33 N76-18345

Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c35 N76-18401

Stark-effect modulation of CO2 laser  
[NASA-CASE-NPO-11945-1] c36 N76-18427

Diffused waveguiding capillary tube with  
distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c36 N76-18428

System for minimizing internal combustion engine  
pollution emission  
[NASA-CASE-NPO-13402-1] c37 N76-18457

Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c44 N76-18641

Hydrogen-rich gas generator  
[NASA-CASE-NPO-13464-1] c44 N76-18642

Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c44 N76-18643

Priority interrupt system  
[NASA-CASE-NPO-13067-1] c60 N76-18800

Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c33 N76-19338

Zero torque gear head wrench  
[NASA-CASE-NPO-13059-1] c37 N76-20480

Method and apparatus for measurement of trap  
density and energy distribution in dielectric  
films  
[NASA-CASE-NPO-13443-1] c76 N76-20994

Indicator providing continuous indication of the  
presence of a specific pollutant in air

[NASA-CASE-NPO-13474-1]	c45 N76-21742	Depressurization of arc lamps	
Shared memory for a fault-tolerant computer		[NASA-CASE-NPO-10790-1]	c33 N77-21316
[NASA-CASE-NPO-13139-1]	c60 N76-21914	Electromagnetic transducer recording head having a laminated core section and tapered gap	
Wind sensor		[NASA-CASE-NPO-10711-1]	c35 N77-21392
[NASA-CASE-NPO-13462-1]	c35 N76-24524	Cryogenic liquid sensor	
Fiber distributed feedback laser		[NASA-CASE-NPO-10619-1]	c35 N77-21393
[NASA-CASE-NPO-13531-1]	c36 N76-24553	Uniform variable light source	
Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback		[NASA-CASE-NPO-11429-1]	c74 N77-21941
[NASA-CASE-NPO-13346-1]	c36 N76-29575	Arc control in compact arc lamps	
Stirling cycle engine and refrigeration systems		[NASA-CASE-NPO-10870-1]	c33 N77-22386
[NASA-CASE-NPO-13613-1]	c37 N76-29590	Hydraulic drain means for servo-systems	
Hydrogen rich gas generator		[NASA-CASE-NPO-10316-1]	c37 N77-22479
[NASA-CASE-NPO-13342-2]	c44 N76-29700	Automated multi-level vehicle parking system	
Solar-powered pump		[NASA-CASE-NPO-13058-1]	c37 N77-22480
[NASA-CASE-NPO-13567-1]	c44 N76-29701	Sun direction detection system	
Hydrogen rich gas generator		[NASA-CASE-NPO-13722-1]	c74 N77-22951
[NASA-CASE-NPO-13464-2]	c44 N76-29704	Internal combustion engine with electrostatic discharging fuels	
Myocardium wall thickness transducer and measuring method		[NASA-CASE-NPO-13798-1]	c37 N77-25535
[NASA-CASE-NPO-13644-1]	c52 N76-29895	Isotope separation using metallic vapor lasers	
Catheter tip force transducer for cardiovascular research		[NASA-CASE-NPO-13550-1]	c36 N77-26477
[NASA-CASE-NPO-13643-1]	c52 N76-29896	Distributed feedback acoustic surface wave oscillator	
Real time analysis of voiced sounds		[NASA-CASE-NPO-13673-1]	c71 N77-26919
[NASA-CASE-NPO-13465-1]	c32 N76-31372	Penetrometer	
High resolution Fourier interferometer-spectropolarimeter		[NASA-CASE-NPO-11103-1]	c35 N77-27367
[NASA-CASE-NPO-13694-1]	c35 N76-31490	Lightweight reflector assembly	
Reflected-wave maser		[NASA-CASE-NPO-13707-1]	c74 N77-28933
[NASA-CASE-NPO-13490-1]	c36 N76-31512	Aldehyde-containing urea-absorbing polysaccharides	
Method of making hollow elastomeric bodies		[NASA-CASE-NPO-13620-1]	c27 N77-30236
[NASA-CASE-NPO-13535-1]	c37 N76-31524	Phase substitution of spare converter for a failed one of parallel phase staggered converters	
Solar cell grid patterns		[NASA-CASE-NPO-13812-1]	c33 N77-30365
[NASA-CASE-NPO-13087-2]	c44 N76-31666	Oil and fat absorbing polymers	
Furlable antenna		[NASA-CASE-NPO-11609-2]	c27 N77-31308
[NASA-CASE-NPO-13553-1]	c33 N76-32457	Combustion engine	
Annular arc accelerator shock tube		[NASA-CASE-NPO-13671-1]	c37 N77-31497
[NASA-CASE-NPO-13528-1]	c09 N77-10071	Apparatus for photon excited catalysis	
Cryostat system for temperatures on the order of 2 deg K or less		[NASA-CASE-NPO-13566-1]	c25 N77-32255
[NASA-CASE-NPO-13459-1]	c31 N77-10229	Strong thin membrane structure	
The dc-to-dc converters employing staggered-phase power switches with two-loop control		[NASA-CASE-NPO-14021-1]	c27 N77-32313
[NASA-CASE-NPO-13512-1]	c33 N77-10428	Charge-coupled device data processor for an airborne imaging radar system	
Ion and electron detector for use in an ICR spectrometer		[NASA-CASE-NPO-13587-1]	c32 N77-32342
[NASA-CASE-NPO-13479-1]	c35 N77-10492	Direct reading inductance meter	
Hydrogen-rich gas generator		[NASA-CASE-NPO-13792-1]	c35 N77-32455
[NASA-CASE-NPO-13560-1]	c44 N77-10636	Solar photolysis of water	
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel		[NASA-CASE-NPO-13675-1]	c44 N77-32580
[NASA-CASE-NPO-13545-1]	c32 N77-12240	Low to high temperature energy conversion system	
Computer interface system		[NASA-CASE-NPO-13510-1]	c44 N77-32581
[NASA-CASE-NPO-13428-1]	c60 N77-12721	Solar energy collection system	
High temperature oxidation resistant cermet compositions		[NASA-CASE-NPO-13810-1]	c44 N77-32582
[NASA-CASE-NPO-13666-1]	c27 N77-13217	Three-dimensional tracking solar energy concentrator and method for making same	
Frequency discriminator and phase detector circuit		[NASA-CASE-NPO-13736-1]	c44 N77-32583
[NASA-CASE-NPO-11515-1]	c33 N77-13315	Overload protection system for power inverter	
Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump		[NASA-CASE-NPO-13872-1]	c33 N78-10377
[NASA-CASE-NPO-13663-1]	c35 N77-14406	Photoelectron spectrometer with means for stabilizing sample surface potential	
Thermocouple installation		[NASA-CASE-NPO-13772-1]	c35 N78-10429
[NASA-CASE-NPO-13540-1]	c35 N77-14409	Machine for use in monitoring fatigue life for a plurality of elastomeric specimens	
Method and apparatus for background signal reduction in opto-acoustic absorption measurement		[NASA-CASE-NPO-13731-1]	c39 N78-10493
[NASA-CASE-NPO-13683-1]	c35 N77-14411	Portable linear-focused solar thermal energy collecting system	
Improved nozzle for use with abrasive and/or corrosive materials		[NASA-CASE-NPO-13734-1]	c44 N78-10554
[NASA-CASE-NPO-13823-1]	c37 N77-17466	Acoustic energy shaping	
Nuclear thermionic converter		[NASA-CASE-NPO-13802-1]	c71 N78-10837
[NASA-CASE-NPO-13121-1]	c73 N77-18891	High voltage, high current Schottky barrier solar cell	
Passive intrusion detection system		[NASA-CASE-NPO-13482-1]	c44 N78-13526
[NASA-CASE-NPO-13804-1]	c35 N77-19390	High resolution threshold photoelectron spectroscopy by electron attachment	
Multiple rate digital command detection system with range clean-up capability		[NASA-CASE-NPO-14078-1]	c76 N78-13917
[NASA-CASE-NPO-13753-1]	c32 N77-20289	Durable antistatic coating for polymethylmethacrylate	
Charge storage diode modulators and demodulators		[NASA-CASE-NPO-13867-1]	c27 N78-14164
[NASA-CASE-NPO-10189-1]	c33 N77-21314	Ultra stable frequency distribution system	
Compact, high intensity arc lamp with internal magnetic field producing means		[NASA-CASE-NPO-13836-1]	c32 N78-15323
[NASA-CASE-NPO-11510-1]	c33 N77-21315	Selective image area control of X-ray film exposure density	
		[NASA-CASE-NPO-13808-1]	c35 N78-15461
		Motion restraining device	
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[NASA-CASE-NPO-14019-1] c32 N79-14268

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[NASA-CASE-NPO-14657-1] c74 N79-17683

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- MB ASSOCIATES, SAN RAMON, CALIF.**  
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- METHODIST HOSPITAL, HOUSTON, TEX.**  
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- Gyrator employing field effect transistors  
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- High field CdS detector for infrared radiation  
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Telemetry actuated switch [NASA-CASE-ARC-10105] c09 N72-17153

Active RC networks [NASA-CASE-ARC-10020] c10 N72-17172

Apparatus for automatically stabilizing the attitude of a nonguided vehicle [NASA-CASE-ARC-10134] c30 N72-17873

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Gas chromatograph injection system [NASA-CASE-ARC-10344-1] c14 N72-21433

Method and apparatus for swept-frequency impedance measurements of welds [NASA-CASE-ARC-10176-1] c15 N72-21464

Space suit having improved waist and torso movement [NASA-CASE-ARC-10275-1] c05 N72-22092

RF controlled solid state switch [NASA-CASE-ARC-10136-1] c09 N72-22202

Wide range dynamic pressure sensor [NASA-CASE-ARC-10263-1] c14 N72-22438

Method and apparatus for measuring the damping characteristics of a structure [NASA-CASE-ARC-10154-1] c14 N72-22440

Magnetic position detection method and apparatus [NASA-CASE-ARC-10179-1] c21 N72-22619

Fluidic proportional thruster system [NASA-CASE-ARC-10106-1] c28 N72-22769

Thermodielectric radiometer utilizing polymer film [NASA-CASE-ARC-10138-1] c14 N72-24477

Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines [NASA-CASE-ARC-10325] c06 N72-25147

Stereoscopic television system and apparatus [NASA-CASE-ARC-10160-1] c23 N72-27728

Metallic intrusion detector system [NASA-CASE-ARC-10265-1] c10 N72-28240

Apparatus for ionization analysis [NASA-CASE-ARC-10017-1] c14 N72-29464

Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas [NASA-CASE-ARC-10308-1] c06 N72-31141

Two degree inverted flexure [NASA-CASE-ARC-10345-1] c15 N73-12488

Intumescent paint containing nitrile rubber [NASA-CASE-ARC-10196-1] c18 N73-13562

Temperature compensated light source using a light emitting diode [NASA-CASE-ARC-10467-1] c09 N73-14214

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Micrometeoroid analyzer [NASA-CASE-ARC-10443-1] c14 N73-20477

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Intruder detection system [NASA-CASE-ARC-10097-2] c07 N73-25160

Interferometric rotation sensor [NASA-CASE-ARC-10278-1] c14 N73-25463

Dual-fuselage aircraft having yawable wing and horizontal stabilizer [NASA-CASE-ARC-10470-1] c02 N73-26005

Temperature controller for a fluid cooled garment [NASA-CASE-ARC-10599-1] c05 N73-26071

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Intumescent composition, foamed product prepared therewith, and process for making same [NASA-CASE-ARC-10304-1] c18 N73-26572

Infrared tunable laser [NASA-CASE-ARC-10463-1] c09 N73-32111

Low power electromagnetic flowmeter providing accurate zero set  
 [NASA-CASE-ARC-10362-1] c14 N73-32326  
 Hand-held photomicroscope  
 [NASA-CASE-ARC-10468-1] c14 N73-33361  
 Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
 [NASA-CASE-ARC-10444-1] c16 N73-33397  
 Polyimide foam for the thermal insulation and fire protection  
 [NASA-CASE-ARC-10464-1] c27 N74-12812  
 Flexible fire retardant polyisocyanate modified neoprene foam  
 [NASA-CASE-ARC-10180-1] c27 N74-12814  
 Heater-mixer for stored fluids  
 [NASA-CASE-ARC-10442-1] c35 N74-15093  
 Bimetallic fluid displacement apparatus  
 [NASA-CASE-ARC-10441-1] c35 N74-15126  
 Automatic real-time pair-feeding system for animals  
 [NASA-CASE-ARC-10302-1] c51 N74-15778  
 Overvoltage protection network  
 [NASA-CASE-ARC-10197-1] c33 N74-17929  
 Ultrasonic biomedical measuring and recording apparatus  
 [NASA-CASE-ARC-10597-1] c52 N74-20726  
 Ultraviolet and thermally stable polymer compositions  
 [NASA-CASE-ARC-10592-1] c27 N74-21156  
 High speed shutter  
 [NASA-CASE-ARC-10516-1] c70 N74-21300  
 Bio-isolated dc operational amplifier  
 [NASA-CASE-ARC-10596-1] c33 N74-21851  
 Programmable physiological infusion  
 [NASA-CASE-ARC-10447-1] c52 N74-22771  
 Chromato-fluorographic drug detector  
 [NASA-CASE-ARC-10633-1] c25 N74-26947  
 Intumescent composition, foamed product prepared therewith and process for making same  
 [NASA-CASE-ARC-10304-2] c27 N74-27037  
 Photomultiplier circuit including means for rapidly reducing the sensitivity thereof  
 [NASA-CASE-ARC-10593-1] c33 N74-27682  
 G-load measuring and indicator apparatus  
 [NASA-CASE-ARC-10806] c06 N74-27872  
 Concentric differential gearing arrangement  
 [NASA-CASE-ARC-10462-1] c37 N74-27901  
 Measurement of plasma temperature and density using radiation absorption  
 [NASA-CASE-ARC-10598-1] c75 N74-30156  
 Abating exhaust noises in jet engines  
 [NASA-CASE-ARC-10712-1] c07 N74-33218  
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 [NASA-CASE-ARC-10461-1] c44 N74-33379  
 Automated analysis of oxidative metabolites  
 [NASA-CASE-ARC-10469-1] c25 N75-12086  
 Method of preparing water purification membranes  
 [NASA-CASE-ARC-10643-1] c25 N75-12087  
 Method of forming aperture plate for electron microscope  
 [NASA-CASE-ARC-10448-2] c74 N75-12732  
 Integrated lift/drag controller for aircraft  
 [NASA-CASE-ARC-10456-1] c05 N75-12930  
 Wind tunnel flow generation section  
 [NASA-CASE-ARC-10710-1] c09 N75-12969  
 Water purification process  
 [NASA-CASE-ARC-10643-2] c51 N75-13506  
 Continuous Fourier transform method and apparatus  
 [NASA-CASE-ARC-10466-1] c60 N75-13539  
 Dual wavelength scanning Doppler velocimeter  
 [NASA-CASE-ARC-10637-1] c35 N75-16783  
 Signal conditioning circuit apparatus  
 [NASA-CASE-ARC-10348-1] c33 N75-19518  
 Diode-quad bridge circuit means  
 [NASA-CASE-ARC-10364-3] c33 N75-19520  
 Reversed cowl flap inlet thrust augmentor  
 [NASA-CASE-ARC-10754-1] c07 N75-24736  
 Diode-quad bridge circuit means  
 [NASA-CASE-ARC-10364-2] c33 N75-25041  
 Rotary plant growth accelerating apparatus  
 [NASA-CASE-ARC-10722-1] c51 N75-25503  
 Shoulder harness and lap belt restraint system  
 [NASA-CASE-ARC-10519-2] c05 N75-25915  
 Gas chromatograph injection system  
 [NASA-CASE-ARC-10344-2] c35 N75-26334  
 Reference apparatus for medical ultrasonic transducer  
 [NASA-CASE-ARC-10753-1] c54 N75-27760  
 Electric arc light source having undercut recessed anode  
 [NASA-CASE-ARC-10266-1] c33 N75-29318  
 G-load measuring and indicator apparatus  
 [NASA-CASE-ARC-10806-1] c35 N75-29381  
 NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
 [NASA-CASE-ARC-10802-1] c35 N75-30502  
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 [NASA-CASE-ARC-10370-1] c36 N75-31426  
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 [NASA-CASE-ARC-10907-1] c37 N75-32465  
 Combined dual scatter, local oscillator laser Doppler velocimeter  
 [NASA-CASE-ARC-10642-1] c36 N76-14447  
 Fiber modified polyurethane foam for ballistic protection  
 [NASA-CASE-ARC-10714-1] c27 N76-15310  
 Transparent fire resistant polymeric structures  
 [NASA-CASE-ARC-10813-1] c27 N76-16230  
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 [NASA-CASE-ARC-10812-1] c07 N76-18131  
 Modulated hydrogen ion flame detector  
 [NASA-CASE-ARC-10322-1] c35 N76-18403  
 Electrical conductivity cell and method for fabricating the same  
 [NASA-CASE-ARC-10810-1] c33 N76-19339  
 Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector  
 [NASA-CASE-ARC-10631-1] c74 N76-20958  
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 [NASA-CASE-ARC-10711-2] c33 N76-21390  
 Nulling device for detection of trace gases by NDIR absorption  
 [NASA-CASE-ARC-10760-1] c25 N76-22323  
 Silica reusable surface insulation  
 [NASA-CASE-ARC-10721-1] c27 N76-22376  
 Optical alignment device  
 [NASA-CASE-ARC-10932-1] c74 N76-22993  
 Vehicle simulator binocular multiplanar visual display system  
 [NASA-CASE-ARC-10808-1] c09 N76-24280  
 Readout electrode assembly for measuring biological impedance  
 [NASA-CASE-ARC-10816-1] c35 N76-24525  
 Schlieren system employing antiparallel reflector in the forward direction  
 [NASA-CASE-ARC-10971-1] c09 N76-26224  
 System for measuring Reynolds in a turbulently flowing fluid  
 [NASA-CASE-ARC-10755-2] c34 N76-27517  
 Oblique-wing supersonic aircraft  
 [NASA-CASE-ARC-10470-3] c05 N76-29217  
 Accelerometer telemetry system  
 [NASA-CASE-ARC-10849-1] c17 N76-29347  
 Miniature ingestible telemeter devices to measure deep-body temperature  
 [NASA-CASE-ARC-10583-1] c52 N76-29894  
 Visual examination apparatus  
 [US-PATENT-RE-28,921] c52 N76-30793  
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 [NASA-CASE-ARC-10445-1] c31 N76-31365  
 Ultraviolet and thermally stable polymer compositions  
 [NASA-CASE-ARC-10592-2] c27 N76-32315  
 Biomedical ultrasonoscope  
 [NASA-CASE-ARC-10994-1] c52 N76-33835  
 Thermistor holder for skin temperature measurements  
 [NASA-CASE-ARC-10855-1] c52 N77-10780  
 Spectrally balanced chromatic landing approach lighting system  
 [NASA-CASE-ARC-10990-1] c04 N77-12031  
 Smoke generator  
 [NASA-CASE-ARC-10905-1] c37 N77-13418  
 Electron microscope aperture system  
 [NASA-CASE-ARC-10448-3] c35 N77-14408  
 Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
 [NASA-CASE-ARC-11007-1] c52 N77-14736  
 Hingeless helicopter rotor with improved stability  
 [NASA-CASE-ARC-10807-1] c05 N77-17029  
 The engine air intake system  
 [NASA-CASE-ARC-10761-1] c07 N77-18154  
 A reverse osmosis membrane of high urea rejection properties  
 [NASA-CASE-ARC-10980-1] c27 N77-18265

Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c35 N77-18417

Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c09 N77-19076

Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c34 N77-19353

Selective data segment monitoring system  
[NASA-CASE-ARC-10899-1] c60 N77-19760

All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c35 N77-20399

Metallic hot wire anemometer  
[NASA-CASE-ARC-10911-1] c35 N77-20400

Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c74 N77-22950

Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c52 N77-23743

Abrasion resistant coatings for plastic surfaces  
[NASA-CASE-ARC-10915-3] c24 N77-24200

Sampling video compression system  
[NASA-CASE-ARC-10984-1] c32 N77-24328

Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c35 N77-24454

Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c36 N77-25501

System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c34 N77-27345

Acoustically swept rotor  
[NASA-CASE-ARC-11106-1] c05 N77-31130

Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-21] c25 N77-31260

Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c33 N77-31404

Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c54 N77-32721

Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c52 N78-10686

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c52 N79-11692

Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c35 N78-13400

Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c24 N78-14096

Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c25 N78-14104

Flow separation detector  
[NASA-CASE-ARC-11046-1] c35 N78-14364

Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c24 N78-15180

Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c34 N78-17336

Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c34 N78-17337

Walking boot assembly  
[NASA-CASE-ARC-11101-1] c54 N78-17675

Pull color hybrid display for aircraft simulators  
[NASA-CASE-ARC-10903-1] c09 N78-18083

Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c35 N78-19465

Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c35 N78-19466

Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-1] c23 N78-22154

Synthesis of multifunction triaryltrifluoroethanes  
[NASA-CASE-ARC-11097-2] c23 N78-22155

Catalysts for imide formation from aromatic isocyanates and aromatic dianhydrides  
[NASA-CASE-ARC-11107-1] c23 N78-22156

Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c54 N78-22720

Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c24 N78-27180

Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-2] c24 N78-27184

Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c27 N78-27275

Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c37 N78-27425

Tread drum for animals  
[NASA-CASE-ARC-10917-1] c51 N78-27733

Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c24 N78-28178

Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c27 N78-31232

Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c27 N78-31233

Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c54 N78-31735

Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c54 N78-31736

Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c26 N78-32229

Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c27 N78-32260

Angle detector  
[NASA-CASE-ARC-11036-1] c35 N78-32395

Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c37 N78-32434

Process for producing a well-adhered durable optical coating on an optical plastic substrate  
[NASA-CASE-ARC-11039-1] c74 N78-32854

Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c52 N78-33717

Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c25 N79-10162

Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c52 N79-10724

Ambient cure polyimide foams  
[NASA-CASE-ARC-11170-1] c27 N79-11215

Subcutaneous channeling probe  
[NASA-CASE-ARC-11091-1] c52 N79-11684

Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c25 N79-14169

Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c27 N79-14214

Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c52 N79-14755

Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c33 N79-15245

Improved subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c52 N79-15576

Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c24 N79-16915

Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c05 N79-17847

Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c27 N79-18052

Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c31 N79-18087

Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c52 N79-18580

Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c27 N79-22300

Process for the preparation of new elastomeric polytriazines  
[NASA-CASE-ARC-11248-1] c27 N79-22301

The 1,2;4-oxadiazole elastomers  
[NASA-CASE-ARC-11253-1] c27 N79-22302

High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c37 N79-23432

Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c07 N79-23971

Fibrous refractory composite insulation  
[NASA-CASE-ARC-11169-1] c24 N79-24062

New perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c27 N79-24153

Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c54 N79-24651

Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c15 N79-26100

Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c52 N79-26771

Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c37 N79-28551

An improved synthesis of 2, 4, 8, 10-tetroxaspiro (5.5)undecane  
[NASA-CASE-ARC-11243-1] c27 N79-30375

Improved synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c27 N79-30376

Pressure control valve  
[NASA-CASE-ARC-11251-1] c37 N79-30553

Spine immobilization method and apparatus  
[NASA-CASE-ARC-11167-1] c52 N79-30921

Electrical short locator  
[NASA-CASE-ARC-11116-1] c33 N79-31498

Autonomous navigation system  
[NASA-CASE-ARC-11257-1] c04 N79-33177

Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c09 N79-33220

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Fifth wheel  
[NASA-CASE-FRC-10081-1] c37 N77-14477

Window comparator  
[NASA-CASE-FRC-10090-1] c33 N78-18308

Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c35 N78-18393

A portable device particularly suited for use in starting air-start units for aircraft  
[NASA-CASE-FRC-10113-1] c09 N78-19166

Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c06 N78-25088

A signal attenuator  
[NASA-CASE-FRC-11012-1] c33 N78-28339

Wire stripper  
[NASA-CASE-FRC-10111-1] c37 N79-10419

Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c05 N79-12061

An improved system for use in conducting wake investigation for a wing in flight  
[NASA-CASE-FRC-11024-1] c02 N79-17797

Voltage regulator for battery power source  
[NASA-CASE-FRC-10116-1] c33 N79-23345

An annular wing  
[NASA-CASE-FRC-11007-2] c02 N79-24959

Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c05 N79-24979

A system for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c06 N79-24988

Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c39 N79-25424

Power converter  
[NASA-CASE-FRC-11014-1] c33 N79-27395

Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c02 N79-31139

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Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c16 N69-31343

A method for the deposition of beta-silicon carbide by isoeptitaxy  
[NASA-CASE-ERC-10120] c26 N69-33482

Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c15 N70-10867

A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c09 N70-11148

Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c09 N71-12539

Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c26 N71-14354

Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c16 N71-15551

Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c16 N71-15567

Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c14 N71-18483

Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c09 N71-18721

Array phasing device Patent  
[NASA-CASE-ERC-10046] c10 N71-18722

Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c09 N71-23598

Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c09 N71-24800

Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c16 N71-24832

Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c23 N71-24868

Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c09 N71-24893

Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c15 N71-24896

Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c15 N71-24910

Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c21 N71-24948

Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c26 N71-25490

A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c10 N71-25900

Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c16 N71-26154

Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c15 N71-26635

Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c14 N71-26672

Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c09 N71-26678

Voltage regulator Patent  
[NASA-CASE-ERC-10113] c09 N71-27053

A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c14 N71-27090

Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c14 N71-27334

Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c09 N71-27364

Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c15 N71-28465

Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c09 N71-28618

Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c14 N71-28863

Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c14 N71-28992

Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c14 N71-28994

Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c07 N71-29065

Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c16 N71-29131

Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c09 N71-33519

Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c14 N72-17323

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Electrostatic plasma modulator for space vehicle  
re-entry communication Patent  
[NASA-CASE-XLA-01400] c07 N70-41331

Micrometeoroid velocity measuring device Patent  
[NASA-CASE-XLA-00495] c14 N70-41332

Method of obtaining permanent record of surface  
flow phenomena Patent  
[NASA-CASE-XLA-01353] c14 N70-41366

Means for communicating through a layer of  
ionized gases Patent  
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Quick release separation mechanism Patent  
[NASA-CASE-XLA-01441] c15 N70-41679

Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c02 N70-41863

Self-sealing, unbonded, rocket motor nozzle  
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[NASA-CASE-XLA-02651] c29 N70-41967

Fatigue testing device Patent  
[NASA-CASE-XLA-02131] c32 N70-42003

Techniques for insulating cryogenic fuel  
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Double hinged flap Patent  
[NASA-CASE-XLA-01290] c02 N70-42016

Spacecraft separation system for spinning  
vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c31 N71-10582

Method for molding compounds Patent  
[NASA-CASE-XLA-01091] c15 N71-10672

Automatic force measuring system Patent  
[NASA-CASE-XLA-02605] c14 N71-10773

Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c14 N71-10774

Multiple input radio receiver Patent  
[NASA-CASE-XLA-00901] c07 N71-10775

Rotating space station simulator Patent  
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Composite powerplant and shroud therefor Patent  
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All-directional fastener Patent  
[NASA-CASE-XLA-01807] c15 N71-10799

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[NASA-CASE-XLA-06824-2] c02 N71-11037

Control for flexible parawing Patent  
[NASA-CASE-XLA-06958] c02 N71-11038

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[NASA-CASE-XLA-03659] c02 N71-11041

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[NASA-CASE-XLA-08801-1] c02 N71-11043

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[NASA-CASE-XLA-05332] c05 N71-11194

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[NASA-CASE-LAR-10007-1] c05 N71-11195

Recovery of potable water from human wastes in  
below-G conditions Patent  
[NASA-CASE-XLA-03213] c05 N71-11207

Process for interfacial polymerization of  
pyromellitic dianhydride and 1,2,4,  
5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c06 N71-11235

Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c06 N71-11238

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[NASA-CASE-XLA-03076] c07 N71-11266

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[NASA-CASE-XLA-01552] c07 N71-11284

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[NASA-CASE-LAR-10056] c05 N71-12351

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[NASA-CASE-XLA-00670] c08 N71-12501

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[NASA-CASE-XLA-01952] c08 N71-12507

SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c09 N71-12514

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[NASA-CASE-XLA-00755] c01 N71-13410

Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c01 N71-13411

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[NASA-CASE-XLA-06339] c02 N71-13422

Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c10 N71-13545

Quick release connector Patent  
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control system Patent  
[NASA-CASE-XLA-05464] c21 N71-14132

Pressurized cell micrometeoroid detector Patent  
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Crossed-field MHD plasma generator/accelerator  
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Control system for rocket vehicles Patent  
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Test unit free-flight suspension system Patent  
[NASA-CASE-XLA-00939] c11 N71-15926

Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c11 N71-16028

Method of coating carbonaceous base to prevent  
oxidation destruction and coated base Patent  
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Method of coating carbonaceous base to prevent  
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Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c32 N71-16106

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[NASA-CASE-XLA-00937]	c31 N71-17691	Variable duration pulse integrator Patent	c10 N71-23084
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[NASA-CASE-XLA-01832]	c14 N71-21006	Direct lift control system Patent	c02 N71-26110
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[NASA-CASE-XLA-01326]	c11 N71-21481		
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Canister closing device Patent			
[NASA-CASE-XLA-01446]	c15 N71-21528		
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[NASA-CASE-XLA-01794]	c33 N71-21586		
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[NASA-CASE-XLA-03492]	c15 N71-22713		
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[NASA-CASE-LAR-12148-1] c44 N79-29608

Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
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Fluid jet amplifier  
[NASA-CASE-XLE-03512] c12 N69-21466

Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c09 N69-21542

Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c14 N69-23191

Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c25 N69-39884

Ion thruster cathode  
[NASA-CASE-XLE-07087] c06 N69-39889

Superconducting alternator  
[NASA-CASE-XLE-02824] c03 N69-39890

Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c03 N69-39898

Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c03 N69-39983

Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c12 N69-39988

Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c15 N70-33226

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[NASA-CASE-XLE-00103] c28 N70-33241

Modification and improvements to cooled blades Patent  
[NASA-CASE-XLE-00092] c15 N70-33264

Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c28 N70-33265

High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00168] c11 N70-33278

High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c17 N70-33283

Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c28 N70-33284

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Process for applying a protective coating for salt bath brazing Patent  
[NASA-CASE-XLE-00046] c15 N70-33311

Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c15 N70-33330

Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c28 N70-33356

External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c28 N70-33372

Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c28 N70-33375

Flexible seal for valves Patent  
[NASA-CASE-XLE-00101] c15 N70-33376

Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c15 N70-33382

Energy conversion apparatus Patent  
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Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c14 N70-34156

Electrothermal rockets having improved heat exchangers Patent  
[NASA-CASE-XLE-01783] c28 N70-34175

Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c15 N70-34247

Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c28 N70-34294

High temperature heat source Patent  
[NASA-CASE-XLE-00490] c33 N70-34545

Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c28 N70-34788

Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c33 N70-34812

Optical torque meter Patent  
[NASA-CASE-XLE-00503] c14 N70-34818

Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c11 N70-34844

Conical valve plug Patent  
[NASA-CASE-XLE-00715] c15 N70-34859

Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c28 N70-34860

Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c15 N70-34861

High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c14 N70-35368

Ion thruster cathode Patent Application  
[NASA-CASE-XLE-10814-1] c28 N70-35422

Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c15 N70-36411

Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c15 N70-36412

Fluid coupling Patent  
[NASA-CASE-XLE-00397] c15 N70-36492

Injector-valve device Patent  
[NASA-CASE-XLE-00303] c15 N70-36535

Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c17 N70-36616

Apparatus having coaxial capacitor structure for measuring fluid density Patent  
[NASA-CASE-XLE-00143] c14 N70-36618

Rocket thrust chamber Patent  
[NASA-CASE-XLE-00145] c28 N70-36806

Ion rocket Patent  
[NASA-CASE-XLE-00376] c28 N70-37245

Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c02 N70-37939

Rocket engine Patent  
[NASA-CASE-XLE-00342] c28 N70-37980

Variable sweep aircraft wing Patent  
[NASA-CASE-XLE-00350] c02 N70-38011

Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c15 N70-38020

Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c28 N70-38197

Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c17 N70-38198

Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c28 N70-38199

Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c17 N70-38490

Rocket motor system Patent  
[NASA-CASE-XLE-00323] c28 N70-38505

Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent  
[NASA-CASE-XLE-00243] c14 N70-38602

Penshape exhaust nozzle for supersonic engine Patent  
[NASA-CASE-XLE-00057] c28 N70-38711

Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00085] c28 N70-39895

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more stable vacuum-high temperature performance  
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[NASA-CASE-LEW-12164-1] c36 N77-32478

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Bearing seat usable in a gas turbine  
engine  
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Oil cooling system for a gas turbine  
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Impact absorbing blade mounts for variable pitch  
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and method of operating same  
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Gas turbine engine with convertible accessories  
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Magnetic heat pumping  
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[NASA-CASE-LEW-12389-2] c07 N78-18066

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Tantalum modified ferritic iron base  
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Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-2] c28 N78-19907

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[NASA-CASE-LEW-12081-1] c28 N78-24365

Automotive gas turbine fuel control  
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Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c07 N78-25089

Counter pumping debris excluder and separator  
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Apparatus for extraction and separation of a  
preferentially photo-dissociated molecular  
isotope into positive and negative ions by  
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automation  
[NASA-CASE-LEW-12541-1] c44 N78-25529

Inorganic-organic separators for alkaline  
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Solar cell system having alternating current  
output  
[NASA-CASE-LEW-12806-1] c44 N78-25553

Cesium thermionic converters having improved  
electrodes  
[NASA-CASE-LEW-12038-3] c44 N78-25555

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[NASA-CASE-LEW-11877-1] c34 N78-27357

Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c44 N78-27520

Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c37 N78-28459

Gas path seal  
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Regulated high efficiency, lightweight  
capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c33 N78-32341

Redundant disc  
[NASA-CASE-LEW-12496-1] c07 N78-33101

Apparatus and method for reducing thermal stress  
in a turbine rotor  
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Traveling wave tube circuit  
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Cantilever mounted resilient pad gas bearing  
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Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c37 N79-10426

Hydrogen hollow cathode ion source  
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Modification of the electrical and optical  
properties of polymers  
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Fuel delivery system including heat exchanger  
means  
[NASA-CASE-LEW-12793-1] c37 N79-11403

Solar cells having integral collector grids  
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Application of semiconductor diffusants to solar  
cells by screen printing  
[NASA-CASE-LEW-12775-1] c44 N79-11468

Solar cell collector and method for producing same  
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Self-stabilizing radial face seal [NASA-CASE-LEW-12991-1]	c37 N79-12445	temperature resistant polymers and copolymers made thereby [NASA-CASE-LEW-12053-2]	c27 N79-28307
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Cam-operated pitch-change apparatus [NASA-CASE-LEW-13050-1]	c07 N79-14095	<b>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.</b> <b>MANNED SPACECRAFT CENTER, CAPE CANAVERAL, FLA.</b> Electrode for biological recording [NASA-CASE-XMS-02872]	c05 N69-21925
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Variable area exhaust nozzle [NASA-CASE-LEW-12379-1]	c07 N79-14097	<b>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.</b> <b>MARSHALL SPACE FLIGHT CENTER, HUNTSVILLE, ALA.</b> Electrical feed-through connection for printed circuit boards and printed cable [NASA-CASE-XMP-01483]	c14 N69-27431
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Cross-linked polyvinyl alcohol and method of making same [NASA-CASE-LEW-13101-1]	c25 N79-14173	Electrical connector Patent Application [NASA-CASE-NFS-14741]	c09 N70-20737
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Composite seal for turbomachinery [NASA-CASE-LEW-12131-1]	c37 N79-18318	Attitude and propellant flow control system and method Patent [NASA-CASE-XMP-00185]	c21 N70-34539
Method for fabricating solar cells having integrated collector grids [NASA-CASE-LEW-12819-2]	c44 N79-18444	Electrical connector for flat cables Patent [NASA-CASE-XMP-00324]	c09 N70-34596
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Low heat leak connector for cryogenic system [NASA-CASE-XLE-02367-1]	c31 N79-21225	Printed cable connector Patent [NASA-CASE-XMP-00369]	c09 N70-36494
A heat exchanger and method of making [NASA-CASE-LEW-12441-2]	c34 N79-21313	Landing pad assembly for aerospace vehicles Patent [NASA-CASE-XMP-02853]	c31 N70-36654
Method for the preparation of inorganic single crystal and polycrystalline electronic materials [NASA-CASE-XLE-02545-1]	c76 N79-21910	Electric arc driven wind tunnel Patent [NASA-CASE-XMP-00411]	c11 N70-36913
Method and device for the detection of phenol and related compounds [NASA-CASE-LEW-12513-1]	c25 N79-22235	Gravity device Patent [NASA-CASE-XMP-00424]	c11 N70-38196
Process for making a high toughness-high strength ion alloy [NASA-CASE-LEW-12542-2]	c26 N79-22271	Injector for bipropellant rocket engines Patent [NASA-CASE-XMP-00148]	c28 N70-38710
Shaft seal assembly for high speed and high pressure applications [NASA-CASE-LEW-11873-1]	c37 N79-22475	Electronic motor control system Patent [NASA-CASE-XMP-01129]	c09 N70-38712
A heat exchanger and method of making [NASA-CASE-LEW-12441-3]	c34 N79-23383	Slosh suppressing device and method Patent [NASA-CASE-XMP-00658]	c12 N70-38997
Polyimide prepreg material having improved tack retention [NASA-CASE-LEW-12933-1]	c23 N79-24061	Air bearing Patent [NASA-CASE-XMP-00339]	c15 N70-39896
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In situ self cross-linking of polyvinyl alcohol battery separators [NASA-CASE-LEW-12972-1]	c44 N79-25481	Collapsible loop antenna for space vehicle Patent [NASA-CASE-XMP-00437]	c07 N70-40202
Electrochemical cell for rebalancing REDOX flow system [NASA-CASE-LEW-13150-1]	c44 N79-26474	Flexible back-up bar Patent [NASA-CASE-XMP-00722]	c15 N70-40204
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		Missile launch release system Patent [NASA-CASE-XMP-03198]	c30 N70-40353

Double-acting shock absorber Patent  
[NASA-CASE-XMP-01045] c15 N70-40354

Portable alignment tool Patent  
[NASA-CASE-XMP-01452] c15 N70-41371

Device for suppressing sound and heat produced  
by high-velocity exhaust jets Patent  
[NASA-CASE-XMP-01813] c28 N70-41582

Unfired-ceramic flame-resistant insulation and  
method of making the same Patent  
[NASA-CASE-XMP-01030] c18 N70-41583

Pulse counting circuit which simultaneously  
indicates the occurrence of the nth pulse Patent  
[NASA-CASE-XMP-00906] c09 N70-41655

Support apparatus for dynamic testing Patent  
[NASA-CASE-XMP-01772] c11 N70-41677

Locking device with rolling detents Patent  
[NASA-CASE-XMP-01371] c15 N70-41829

Tank construction for space vehicles Patent  
[NASA-CASE-XMP-01899] c31 N70-41948

Positive displacement flowmeter Patent  
[NASA-CASE-XMP-02822] c14 N70-41994

Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMP-03248] c11 N71-10604

Fiber optic vibration transducer and analyzer  
Patent  
[NASA-CASE-XMP-02433] c14 N71-10616

Method and means for damping nutation in a  
satellite Patent  
[NASA-CASE-XMP-00442] c31 N71-10747

Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMP-05843] c03 N71-11055

Synthesis of siloxane-containing epoxy polymers  
Patent  
[NASA-CASE-MPS-13994-1] c06 N71-11240

Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMP-01160] c07 N71-11298

Harness assembly Patent  
[NASA-CASE-MPS-14671] c05 N71-12341

Magnetic matrix memory system Patent  
[NASA-CASE-XMP-05835] c08 N71-12504

Pulse amplitude and width detector Patent  
[NASA-CASE-XMP-06519] c09 N71-12519

Microwave power receiving antenna Patent  
[NASA-CASE-MPS-20333] c09 N71-13486

Hybrid holographic system using reflected and  
transmitted object beams simultaneously Patent  
[NASA-CASE-MPS-20074] c16 N71-15565

Reactance control system Patent  
[NASA-CASE-XMP-01598] c21 N71-15583

Apparatus for welding torch angle and seam  
tracking control Patent  
[NASA-CASE-XMP-03287] c15 N71-15607

Multway vortex valve system Patent  
[NASA-CASE-XMP-04709] c15 N71-15609

Injector assembly for liquid fueled rocket  
engines Patent  
[NASA-CASE-XMP-00968] c28 N71-15660

Space capsule ejection assembly Patent  
[NASA-CASE-XMP-03169] c31 N71-15675

Air cushion lift pad Patent  
[NASA-CASE-MPS-14685] c31 N71-15689

Method of making a molded connector Patent  
[NASA-CASE-XMP-03498] c15 N71-15986

Regenerative braking system Patent  
[NASA-CASE-XMP-01096] c10 N71-16030

Condition and condition duration indicator Patent  
[NASA-CASE-XMP-01097] c10 N71-16058

Method and apparatus for securing to a  
spacecraft Patent  
[NASA-CASE-MPS-11133] c31 N71-16222

Method and apparatus of simulating zero gravity  
conditions Patent  
[NASA-CASE-MPS-12750] c27 N71-16223

Passive optical wind and turbulence detection  
system Patent  
[NASA-CASE-XMP-14032] c20 N71-16340

Serpentuator Patent  
[NASA-CASE-XMP-05344] c31 N71-16345

Gravimeter Patent  
[NASA-CASE-XMP-05844] c14 N71-17587

High pressure gas filter system Patent  
[NASA-CASE-MPS-12806] c14 N71-17588

Burst diaphragm flow initiator Patent  
[NASA-CASE-MPS-12915] c11 N71-17630

Vacuum deposition apparatus Patent  
[NASA-CASE-XMP-01667] c15 N71-17647

Quick disconnect latch and handle combination  
Patent  
[NASA-CASE-MPS-11132] c15 N71-17649

Method and apparatus for precision sizing and  
joining of large diameter tubes Patent  
[NASA-CASE-XMP-05114] c15 N71-17650

Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMP-02964] c14 N71-17659

Precision stepping drive Patent  
[NASA-CASE-MPS-14772] c15 N71-17692

Multi-mission module Patent  
[NASA-CASE-XMP-01543] c31 N71-17730

Ratchet mechanism Patent  
[NASA-CASE-MPS-12805] c15 N71-17805

Method of making impurity-type semiconductor  
electrical contacts Patent  
[NASA-CASE-XMP-01016] c26 N71-17818

Apparatus for the determination of the existence  
or non-existence of a bonding between two  
members Patent  
[NASA-CASE-MPS-13686] c15 N71-18132

Static inverters which sum a plurality of waves  
Patent  
[NASA-CASE-XMP-00663] c08 N71-18752

Space environmental work simulator Patent  
[NASA-CASE-XMP-07488] c11 N71-18773

Space manufacturing machine Patent  
[NASA-CASE-MPS-20410] c15 N71-19214

Extensometer Patent  
[NASA-CASE-XMP-04680] c15 N71-19489

Mechanical simulator of low gravity conditions  
Patent  
[NASA-CASE-MPS-10555] c11 N71-19494

Weld control system using thermocouple wire Patent  
[NASA-CASE-MPS-06074] c15 N71-20393

Evaporant source for vapor deposition Patent  
[NASA-CASE-XMP-06065] c15 N71-20395

Satellite despinn device Patent  
[NASA-CASE-XMP-08523] c31 N71-20396

Method of coating circuit paths on printed  
circuit boards with solder Patent  
[NASA-CASE-XMP-01599] c09 N71-20705

Elastomeric silazane polymers and process for  
preparing the same Patent  
[NASA-CASE-XMP-04133] c06 N71-20717

Method of producing alternating ether siloxane  
copolymers Patent  
[NASA-CASE-XMP-02584] c06 N71-20905

Honeycomb panel and method of making same Patent  
[NASA-CASE-XMP-01402] c18 N71-21651

Portable milling tool Patent  
[NASA-CASE-XMP-03511] c15 N71-22799

Energy absorbing device Patent  
[NASA-CASE-XMP-10040] c15 N71-22877

Continuous detonation reaction engine Patent  
[NASA-CASE-XMP-06926] c28 N71-22983

Adaptive tracking notch filter system Patent  
[NASA-CASE-XMP-01892] c10 N71-22986

Meteorological balloon Patent  
[NASA-CASE-XMP-04163] c02 N71-23007

Continuous turning slip ring assembly Patent  
[NASA-CASE-XMP-01049] c15 N71-23049

Automatic welding speed controller Patent  
[NASA-CASE-XMP-01730] c15 N71-23050

Positive dc to positive dc converter Patent  
[NASA-CASE-XMP-14301] c09 N71-23188

Zero gravity apparatus Patent  
[NASA-CASE-XMP-06515] c14 N71-23227

Positive dc to negative dc converter Patent  
[NASA-CASE-XMP-08217] c03 N71-23239

Evacuation port seal Patent  
[NASA-CASE-XMP-03290] c15 N71-23256

Azimuth laying system Patent  
[NASA-CASE-XMP-01669] c21 N71-23289

Electron beam instrument for measuring electric  
fields Patent  
[NASA-CASE-XMP-10289] c14 N71-23699

Anemometer with braking mechanism Patent  
[NASA-CASE-XMP-05224] c14 N71-23726

Apparatus for testing a pressure responsive  
instrument Patent  
[NASA-CASE-XMP-04134] c14 N71-23755

Electric welding torch Patent  
[NASA-CASE-XMP-02330] c15 N71-23798

Swivel support for gas bearings Patent  
[NASA-CASE-XMP-07808] c15 N71-23812

Welding skate with computerized control Patent  
[NASA-CASE-XMP-07069] c15 N71-23815

Docking structure for spacecraft Patent  
[NASA-CASE-XMP-05941] c31 N71-23912

High pressure helium purifier Patent  
[NASA-CASE-XMP-06888] c15 N71-24044

Horizontal cryostat for fatigue testing Patent		Method of manufacturing semiconductor devices using refractory dielectrics	
[ NASA-CASE-XMP-10968 ]	c14 N71-24234	[ NASA-CASE-IER-08476-1 ]	c26 N72-17820
Method for leakage testing of tanks Patent		Underwater space suit pressure control regulator	
[ NASA-CASE-XMP-02392 ]	c32 N71-24285	[ NASA-CASE-MFS-20332 ]	c05 N72-20097
Internal flare angle gauge Patent		Apparatus for making diamonds	
[ NASA-CASE-XMP-04415 ]	c14 N71-24693	[ NASA-CASE-MFS-20698 ]	c15 N72-20446
Pulse rise time and amplitude detector Patent		An airlock	
[ NASA-CASE-XMP-08804 ]	c09 N71-24717	[ NASA-CASE-MFS-20922 ]	c31 N72-20840
System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent		Photoetching of metal-oxide layers	
[ NASA-CASE-XMP-06892 ]	c09 N71-24805	[ NASA-CASE-ERC-10108 ]	c06 N72-21094
Power system with heat pipe liquid coolant lines Patent		Liquid aerosol dispenser	
[ NASA-CASE-MFS-14114-2 ]	c09 N71-24807	[ NASA-CASE-MFS-20829 ]	c12 N72-21310
Magnetomotive metal working device Patent		Optical probing of supersonic flows with statistical correlation	
[ NASA-CASE-XMP-03793 ]	c15 N71-24833	[ NASA-CASE-MFS-20642 ]	c14 N72-21407
Apparatus for determining the deflection of an electron beam impinging on a target Patent		Mechanically actuated triggered hand	
[ NASA-CASE-XMP-06617 ]	c09 N71-24843	[ NASA-CASE-MFS-20413 ]	c15 N72-21463
Transistor servo system including a unique differential amplifier circuit Patent		Hermetically sealed elbow actuator	
[ NASA-CASE-XMP-05195 ]	c10 N71-24861	[ NASA-CASE-MFS-14710 ]	c09 N72-22195
RC rate generator for slow speed measurement Patent		Shielded flat cable	
[ NASA-CASE-XMP-02966 ]	c10 N71-24863	[ NASA-CASE-MFS-13687-2 ]	c09 N72-22198
Method and apparatus for precision sizing and joining of large diameter tubes Patent		Shock wave convergence apparatus	
[ NASA-CASE-XMP-05114-3 ]	c15 N71-24865	[ NASA-CASE-MFS-20890 ]	c14 N72-22439
Duct coupling for single-handed operation Patent		Bonding of reinforced Teflon to metals	
[ NASA-CASE-MFS-20395 ]	c15 N71-24903	[ NASA-CASE-MFS-20482 ]	c15 N72-22492
Brushless direct current tachometer Patent		Inorganic thermal control coatings	
[ NASA-CASE-MFS-20385 ]	c09 N71-24904	[ NASA-CASE-MFS-20011 ]	c18 N72-22566
Self-lubricating gears and other mechanical parts Patent		High temperature furnace for melting materials in space	
[ NASA-CASE-MFS-14971 ]	c15 N71-24984	[ NASA-CASE-MFS-20710 ]	c11 N72-23215
Pulse width inverter Patent		Siloxane containing epoxide compounds	
[ NASA-CASE-MFS-10068 ]	c10 N71-25139	[ NASA-CASE-MFS-13994-2 ]	c06 N72-25148
Isothermal cover with thermal reservoirs Patent		Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups	
[ NASA-CASE-MFS-20355 ]	c33 N71-25353	[ NASA-CASE-MFS-20979 ]	c06 N72-25151
Storage container for electronic devices Patent		Emergency lunar communications system	
[ NASA-CASE-MFS-20075 ]	c09 N71-26133	[ NASA-CASE-MFS-21042 ]	c07 N72-25171
Method and apparatus for precision sizing and joining of large diameter tubes Patent		Lead attachment to high temperature devices	
[ NASA-CASE-XMP-05114-2 ]	c15 N71-26148	[ NASA-CASE-ERC-10224 ]	c09 N72-25261
Filter system for control of outgas contamination in vacuum Patent		Device for measuring bearing preload	
[ NASA-CASE-MFS-14711 ]	c15 N71-26185	[ NASA-CASE-MFS-20434 ]	c11 N72-25288
Image magnification adapter for cameras Patent		Altitude simulation chamber for rocket engine testing	
[ NASA-CASE-XMP-03844-1 ]	c14 N71-26474	[ NASA-CASE-MFS-20620 ]	c11 N72-27262
Thickness measuring and injection device Patent		Fixture for supporting articles during vibration tests	
[ NASA-CASE-MFS-20261 ]	c14 N71-27005	[ NASA-CASE-MFS-20523 ]	c14 N72-27412
Personal propulsion unit Patent		Electrical connector	
[ NASA-CASE-MFS-20130 ]	c28 N71-27585	[ NASA-CASE-MFS-20757 ]	c09 N72-28225
Power system with heat pipe liquid coolant lines Patent		Remote control manipulator for zero gravity environment	
[ NASA-CASE-MFS-14114 ]	c33 N71-27862	[ NASA-CASE-MFS-14405 ]	c15 N72-28495
Method of making shielded flat cable Patent		Thermal compensating structural member	
[ NASA-CASE-MFS-13687 ]	c09 N71-28691	[ NASA-CASE-MFS-20433 ]	c15 N72-28496
A dc motor speed control system Patent		Semiconductor transducer device	
[ NASA-CASE-MFS-14610 ]	c09 N71-28886	[ NASA-CASE-ERC-10087-2 ]	c14 N72-31446
Cryogenic thermal insulation Patent		Coaxial high density, hypervelocity plasma generator and accelerator with ionizable metal disc	
[ NASA-CASE-XMP-05046 ]	c33 N71-28892	[ NASA-CASE-MFS-20589 ]	c25 N72-32688
Method of coating through-holes Patent		Process for the preparation of brushite crystals	
[ NASA-CASE-XMP-05999 ]	c15 N71-29032	[ NASA-CASE-ERC-10338 ]	c04 N72-33072
Response analyzers for sensors Patent		Adjustable force probe	
[ NASA-CASE-MFS-11204 ]	c14 N71-29134	[ NASA-CASE-MFS-20760 ]	c14 N72-33377
Current regulating voltage divider		Polyimide resin-fiberglass cloth laminates for printed circuit boards	
[ NASA-CASE-MFS-20935 ]	c09 N71-34212	[ NASA-CASE-MFS-20408 ]	c18 N73-12604
Nuclear mass flowmeter		Differential pressure control	
[ NASA-CASE-MFS-20485 ]	c14 N72-11365	[ NASA-CASE-MFS-14216 ]	c14 N73-13418
Fine adjustment mount		Redundant hydraulic control system for actuators	
[ NASA-CASE-MFS-20249 ]	c15 N72-11386	[ NASA-CASE-MFS-20944 ]	c15 N73-13466
Method of making foamed materials in zero gravity		Device and method for determining X ray reflection efficiency of optical surfaces	
[ NASA-CASE-XMP-09902 ]	c15 N72-11387	[ NASA-CASE-MFS-20243 ]	c23 N73-13662
Air bearing assembly for curved surfaces		Process for making diamonds	
[ NASA-CASE-MFS-20423 ]	c15 N72-11388	[ NASA-CASE-MFS-20698-2 ]	c15 N73-19457
Stud-bonding gun		Test stand system for vacuum chambers	
[ NASA-CASE-MFS-20299 ]	c15 N72-11392	[ NASA-CASE-MFS-21362 ]	c11 N73-20267
Holographic stress analyzer for solder joints		Material fatigue testing system	
[ NASA-CASE-MFS-20687 ]	c16 N72-11415	[ NASA-CASE-MFS-20673 ]	c14 N73-20476
Apparatus for obtaining isotropic irradiation of a specimen		Ratemeter	
[ NASA-CASE-MFS-20095 ]	c24 N72-11595	[ NASA-CASE-MFS-20418 ]	c14 N73-24473
Wind tunnel test section		Underwater space suit pressure control regulator	
[ NASA-CASE-MFS-20509 ]	c11 N72-17183	[ NASA-CASE-MFS-20332-2 ]	c05 N73-25125
Multiple image storing system for high speed projectile holography		Maxometers (peak wind speed anemometers)	
[ NASA-CASE-MFS-20596 ]	c14 N72-17324	[ NASA-CASE-MFS-20916 ]	c14 N73-25460
		Monitoring deposition of films	
		[ NASA-CASE-MFS-20675 ]	c26 N73-26751

Docking structure for spacecraft  
[NASA-CASE-MFS-20863] c31 N73-26876

Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c09 N73-27150

Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c14 N73-27377

Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c15 N73-27405

Ergometer  
[NASA-CASE-MFS-21109-1] c05 N73-27941

Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c05 N73-30078

Measurement system  
[NASA-CASE-MFS-20658-1] c14 N73-30386

Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c14 N73-30389

Holographic thin film analyzer  
[NASA-CASE-MFS-20823-1] c16 N73-30476

Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c18 N73-30532

Polymerizable disilanolis having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20823-1] c06 N73-32030

Redundant speed control for brushless Hall effect motor  
[NASA-CASE-MFS-20207-1] c09 N73-32107

Induction motor control system with voltage controlled oscillator circuit  
[NASA-CASE-MFS-21865-1] c10 N73-32145

Synthesis of superconducting compounds by explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c18 N73-32437

Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c35 N74-10415

Digital computing cardiometer  
[NASA-CASE-MFS-20284-1] c52 N74-12778

Integrated circuit package with lead structure and method of preparing the same  
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Vee-notching device  
[NASA-CASE-MFS-20730-1] c39 N74-13131

Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c38 N74-15130

Method and apparatus for checking the stability of a setup for making reflection type holograms  
[NASA-CASE-MFS-21855-1] c35 N74-15146

Method and apparatus for nondestructive testing  
[NASA-CASE-MFS-21233-1] c38 N74-15395

Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c35 N74-17153

Nonflammable coating compositions  
[NASA-CASE-MFS-20886-2] c27 N74-17283

Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c54 N74-17853

Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c37 N74-18125

Reinforced polyquinoxaline gasket and method of preparing the same  
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Manual actuator  
[NASA-CASE-MFS-21481-1] c37 N74-18127

Cryogenic gyroscope housing  
[NASA-CASE-MFS-21136-1] c35 N74-18323

Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c32 N74-19790

Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c44 N74-19870

Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c54 N74-20725

Metabolic analyzer  
[NASA-CASE-MFS-21415-1] c52 N74-20728

Automatic quadrature control and measuring system  
[NASA-CASE-MFS-21660-1] c35 N74-21017

Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c37 N74-21058

Airlock  
[NASA-CASE-MFS-20922-1] c18 N74-22136

Low distortion automatic phase control circuit  
[NASA-CASE-MFS-21671-1] c33 N74-22885

Two speed drive system  
[NASA-CASE-MFS-20645-1] c37 N74-23070

Insert facing tool  
[NASA-CASE-MFS-21485-1] c37 N74-25968

LC-oscillator with automatic stabilized amplitude via bias current control  
[NASA-CASE-MFS-21698-1] c33 N74-26732

Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c35 N74-26945

Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c35 N74-26946

Electrophoretic sample insertion  
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Sprag solenoid brake  
[NASA-CASE-MFS-21846-1] c37 N74-26976

Device for configuring multiple leads  
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Thrust-isolating mounting  
[NASA-CASE-MFS-21680-1] c18 N74-27397

Battery testing device  
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Apparatus for establishing flow of a fluid mass having a known velocity  
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Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c34 N74-27744

Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c34 N74-27861

Conductive elastomeric extensometer  
[NASA-CASE-MFS-21049-1] c52 N74-27864

Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c35 N74-27865

Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c74 N74-27866

Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c19 N74-29410

Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c33 N74-34638

System for depositing thin films  
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Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c35 N75-12273

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Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c09 N75-12968

Phase-locked servo system  
[NASA-CASE-MFS-22073-1] c33 N75-13139

Self-energized plasma compressor  
[NASA-CASE-MFS-22145-1] c75 N75-13625

Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c36 N75-15028

Variable frequency inverter for ac induction motors with torque, speed and braking control  
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Leak detector  
[NASA-CASE-MFS-21761-1] c35 N75-15931

Ergometer calibrator  
[NASA-CASE-MFS-21045-1] c35 N75-15932

Space vehicle  
[NASA-CASE-MFS-22734-1] c18 N75-19329

Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c35 N75-19615

Multiplate focusing collimator  
[NASA-CASE-MFS-20932-1] c35 N75-19616

Latching device  
[NASA-CASE-MFS-21606-1] c37 N75-19685

Internally supported flexible duct joint  
[NASA-CASE-MFS-19193-1] c37 N75-19686

Pseudo-noise test set for communication system evaluation  
[NASA-CASE-MFS-22671-1] c35 N75-21582

Device for use in loading tension members  
[NASA-CASE-MFS-21488-1] c14 N75-24794

Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c35 N75-25124

Hole cutter  
[NASA-CASE-MFS-22649-1] c37 N75-25186

Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c33 N75-26244

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Anti-gravity device [NASA-CASE-MFS-22758-1]	c70 N75-26789	[NASA-CASE-MFS-23099-1]	c09 N76-23273
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 [NASA-CASE-MPS-23513-1] c74 N79-11865

A system for concurrently delivering a stream of  
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 oxidizer to a combustion chamber for a  
 reaction motor  
 [NASA-CASE-MPS-23904-1] c20 N79-13077

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- Method and apparatus for fabricating improved solar cell modules  
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- Terminal guidance sensor system  
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- Phase conjugation method and apparatus for an active retrodirective antenna array  
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- Compact artificial hand  
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- Schottky barrier cell and method of fabricating it  
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- A general logic structure for custom LSI circuits  
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- Double-sided solar cell package  
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- Multifunctional transducer  
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- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
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[NASA-CASE-NPO-13953-1] c35 N79-28527
- Solar cell with improved N-region contact and method of forming the same  
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 [NASA-CASE-GSC-12046-1] c52 N79-14750  
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 [NASA-CASE-MFS-13100] c15 N72-11390  
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 [NASA-CASE-GSC-10376-1] c14 N71-27407  
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 Patent  
 [NASA-CASE-XNP-01961] c26 N71-29156  
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 [NASA-CASE-NPO-10828] c33 N72-17948  
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 [NASA-CASE-XNP-08124-2] c06 N73-13129  
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[NASA-CASE-MFS-11537] c14 N71-20442  
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[NASA-CASE-XNP-10475] c15 N71-24679  
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[NASA-CASE-NPO-10070] c15 N71-27372  
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[NASA-CASE-NPO-10998-1] c06 N73-32029  
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[NASA-CASE-MFS-19193-1] c37 N75-19686  
Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c26 N75-29236  
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Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XMP-05882] c35 N75-27329  
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[NASA-CASE-MFS-19194-1] c37 N76-14460  
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[NASA-CASE-LAR-11465-1] c37 N76-21554  
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[NASA-CASE-MSC-16800-1] c32 N79-19194  
Sequencing device utilizing planetary gear set  
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[NASA-CASE-MSC-16000-1] c37 N78-24544
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[NASA-CASE-MPS-10946-1] c31 N79-21226
- Edge coating of flat wires  
[NASA-CASE-XNP-05757-1] c31 N79-21227
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## Y

## YOUNGSTOWN STATE UNIV., OHIO.

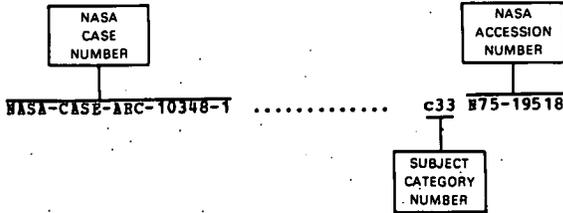
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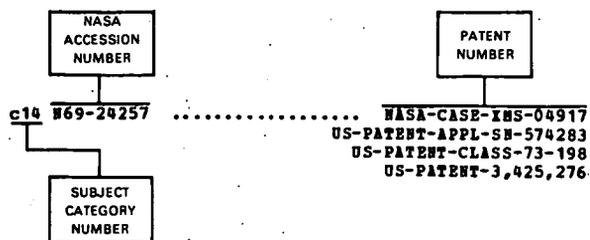
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### Section 2

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c14 869-21363	NASA-CASE-IGS-03865	
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c15 869-21460	NASA-CASE-XRS-04614	
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1. Report No. NASA SP-7039 (16)	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle NASA PATENT ABSTRACTS BIBLIOGRAPHY A Continuing Bibliography (Supplement 16)		5. Report Date January 1980	6. Performing Organization Code
		8. Performing Organization Report No.	
7. Author(s)		10. Work Unit No.	
9. Performing Organization Name and Address  National Aeronautics and Space Administration Washington, D. C. 20546		11. Contract or Grant No.	
		13. Type of Report and Period Covered	
12. Sponsoring Agency Name and Address		14. Sponsoring Agency Code	
		15. Supplementary Notes  Section 2: Indexes	
16. Abstract  This bibliography is issued in two sections: Section 1 - Abstracts, and Section 2 - Indexes. This issue of the Index Section contains entries for 3709 patent and applications for patent citations covering the period May 1969 through December 1979. The Index Section contains five indexes --- subject, inventor, source, number, and accession number.			
17. Key Words (Suggested by Author(s))  Bibliographies Inventions NASA Programs Patents		18. Distribution Statement  Unclassified - Unlimited	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 648	22. Price* \$12.50 HC

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