DATA CATALOG SERIES
FOR SPACE SCIENCE AND APPLICATIONS FLIGHT MISSIONS

Volume 4B

Descriptions of Data Sets from Meteorological and Terrestrial Applications
Spacecraft and Investigations

September 1989
CATEGORIES OF SPACECRAFT USED IN THIS SERIES

PLANETARY AND HELIOCENTRIC

This category includes probes to the various planets of the solar system and probes designed to make measurements of the characteristics of interplanetary space. Also included are the probes that will pass out of the solar system into interstellar space.

METEOROLOGICAL AND TERRESTRIAL APPLICATIONS

This category includes geocentric spacecraft whose primary mission is to make remote sensing measurements of the earth and its atmosphere. Spacecraft that carry instrumentation to make geodesy and gravimetry measurements are also included. Technology, engineering, and communications spacecraft or investigations are not included because NSSDC does not archive such data.

ASTRONOMY, ASTROPHYSICS, AND SOLAR PHYSICS

This category consists of scientific satellites designed to conduct investigations of the sun, stellar objects, nonstellar sources, and interstellar phenomena. These satellites are geocentric except for the selenocentric RAE-B.

GEOSTATIONARY AND HIGH-ALTITUDE SCIENTIFIC

This category includes those satellites designed to conduct investigations of the characteristics of near-earth space from orbits with apogees near geostationary altitude and higher. Three of the spacecraft are selenocentric. Communications satellites are not included because NSSDC does not archive such data.

LOW- AND MEDIUM-ALTITUDE SCIENTIFIC

This category includes those spacecraft whose apogees are well below geostationary altitude and whose primary purpose is to conduct investigations in the near-earth environment.
DATA CATALOG SERIES FOR SPACE SCIENCE
AND APPLICATIONS FLIGHT MISSIONS

Volume 4B

DESCRIPTIONS OF DATA SETS FROM METEOROLOGICAL
AND TERRESTRIAL APPLICATIONS SPACECRAFT AND INVESTIGATIONS

By

Carolyn Ng
G. Richard Stonesifer

September 1989

National Space Science Data Center (NSSDC)/
World Data Center A for Rockets and Satellites (WDC-A-R&S)
National Aeronautics and Space Administration
Goddard Space Flight Center
Greenbelt, Maryland 20771
PREFACE

This document is one volume of a catalog series (see inside front cover) that describes data sets and related spacecraft and investigations from space and applications flight investigations. The series describes the data sets held by the National Space Science Data Center (NSSDC) and some of the data sets held by NASA-funded and other investigators. The documents in this series serve as guides to extensive data sets held and serviced by other Government agencies.

This volume is the second and last one for the Meteorological and Terrestrial Applications catalog. The first volume described the spacecraft and investigations, along with personnel names and affiliations. This volume describes the data sets associated with the various investigations and how users can obtain the data.

The authors would like to thank the many investigators who have submitted their data for archiving at NSSDC. Their cooperation in supplying current status information is gratefully acknowledged. Thanks are also extended to the other NSSDC personnel, employees of the onsite contractor, Science Applications Research (SAR), who have been involved in the information handling necessary to produce this volume. Special acknowledgment is given to Karen Satin for her extensive editorial assistance and to Patricia Ross for her invaluable assistance with the computer data base.

The Data Center is continually striving to increase the usefulness of its data holdings, supporting indexes, and documentation. We are now beginning to provide remote electronic accessibility to some of the data and information files. Scientists are invited to submit their space science data and related documentation to NSSDC. Their comments on, and corrections to, the present catalog will be greatly appreciated. Catalog recipients are urged to inform potential users of its availability.

Carolyn Ng
G. Richard Stonesifer
September 1989
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INTRODUCTION
INTRODUCTION

1.1 PURPOSE

Since the National Space Science Data Center (NSSDC) was established by the National Aeronautics and Space Administration (NASA), it has provided data and information from space science and applications flight investigations in support of additional studies beyond those performed as the principal part of any flight mission. This volume is one of a series of 11 that describes (1) the spacecraft investigations for which NSSDC possesses data or can direct people to the data source, (2) all data sets held by NSSDC, (3) some data sets held and serviced by NASA-funded investigators, and (4) some data sets held and serviced by other investigators. The series also directs readers to extensive data sets held and serviced by other Government agencies, particularly the National Oceanographic and Atmospheric Administration (NOAA).

The 11-volume series consists of (1) five volumes that describe the spacecraft and their associated investigations, separated into various categories; (2) five corresponding volumes that describe investigation data sets and the available orbital information, and (3) a master index volume. The five categories of spacecraft are (i) Planetary and Heliocentric, which includes planetary flybys and probes; (ii) Meteorological and Terrestrial Applications; (iii) Astronomy, Astrophysics, and Solar Physics, which are all geocentric except the selenocentric RAE-B; (iv) Geostationary and High-Altitude Scientific; and (v) Low- and Medium-Altitude Scientific. It is impossible to provide an organization of categories that separates the investigations cleanly into scientific disciplines, since many missions were multidisciplinary. With the above organization, which is partly discipline-oriented and partly orbit-oriented, it is found that in nearly all cases a given spacecraft belonged clearly to only one of the five categories. The few exceptions encountered have resulted in some data sets appearing in more than one data set volume.

This catalog series and the periodic NSSDC Data Listing briefly identify NSSDC data sets. They will be for some time to come the principal offline sources of information on NSSDC holdings in the disciplines that NSSDC handles. However, NSSDC is bringing its information files to a state of remote electronic accessibility so that users may have easy access to the most current information. The NASA Climate Data System (NCDS) and the Master Directory (MD) are good examples.

1.2 ORGANIZATION

Volume 4A of the NSSDC Data Catalog Series for Space Science and Applications Flight Missions describes geocentric spacecraft missions that make remote sensing measurements of the earth and its atmosphere. It contains descriptions not only of those investigations for which NSSDC has data sets (or reasonably expects to receive them) but also of others that are located elsewhere, such as at NOAA.

This volume, 4B, contains descriptions only of NSSDC data sets from the investigations described in Volume 4A. Most proprietary data sets, such as the geodetic and gravimetric data sets, are excluded. Data sets that are superseded by new ones processed with improved algorithms are also omitted from this volume. Consequently, a number of investigations described in Volume 4A do not have corresponding data sets in Volume 4B. However, nearly all the spacecraft and investigation descriptions for the data sets in this volume are given in Volume 4A. The few descriptions that were not in Volume 4A are given in Appendix A of the present volume.

For easy reference to Volume 4A, this volume is organized in the same order; namely, the data set descriptions are presented alphabetically by spacecraft common name. Under each spacecraft name, the appropriate investigations are given alphabetically by the name of the principal
investigator. Under each investigation heading, the data set descriptions are arranged according to the NSSDC ID, which is an identification code based on the international ID. The data set ID is the investigation ID followed by a letter that is assigned, in alphabetical order, whenever a new data set is received at NSSDC. If the data set sequence for an investigation is not continuous (e.g., 01A, 01B, 01D), it means that the omitted data sets do not meet the selection criteria given in the above paragraph. This is particularly true with the Nimbus data sets.

Descriptions of each data set begin with the following fixed-field information: the data set short and long names, the NSSDC ID, the time period covered, the quantity of data, and the medium on which the data are stored. The 33-character short name is included because it is the only name that appears in the periodic publication NSSDC Data Listing, which for many years has been the principal means of announcing NSSDC data holdings. For certain atmospheric science data sets that have been restored, i.e., copied onto a higher density tape medium such as 6250-bpi magnetic tapes or onto IBM 3480 tape cartridges, the quantity and medium may not be accurate.

The data set description, in free text, is given below the fixed-field information. An attempt has been made to indicate first the source of the data set, its basic contents, and its medium. For all data sets, especially the digital ones, storage medium characteristics stated are those that currently hold the data. If these characteristics are not suitable, data users can discuss their requirements with the NSSDC staff; NSSDC may be able to provide the same data in a more convenient format. Following the introductory statements, a more detailed description of the data set contents is given. Additional information is typically available for the data sets and is provided either on request or with the information packet that is sent with the requested data. NSSDC does not provide every publication that is referenced in the description unless it is necessary to use with the data and is not readily available, such as an internal agency report. In such cases, NSSDC can provide a microfiche of the file copy.

Section 3, Index of Data Sets, follows the Data Set Descriptions and is ordered alphabetically by spacecraft as are the descriptions. It provides, in effect, a detailed table of contents for the catalog.

Certain words, phrases, and acronyms used in this volume are defined in Appendix B.

For most data sets in this catalog, the corresponding spacecraft ephemeris data are merged with the data from the investigations. In some cases, the ephemeris data must be obtained from separate standard data sets identified by the spacecraft ID followed by the designation 00A, 00B, or 00C. These data sets are described only once, in Appendix C, since each type is very uniform in content and format. The availability of such data sets for the spacecraft of interest in this volume is indicated by a table also given in Appendix C. In some other cases, there may be additional data sets associated with the spacecraft and designated as 00D, 00E, 00F, etc., which may contain nonstandard ephemeris information or other data information. Descriptions of these other data sets are listed in Section 2, Data Set Descriptions, after the spacecraft name and before the investigation data sets.

Appendix D provides a directory of image data sets that are available either at NSSDC or from other agencies. The directory includes data sets that are not described in Section 2, Data Set Descriptions.

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* An identification code used in the NSSDC information system. Each successfully launched spacecraft and experiment is assigned a code based on the launch sequence of the spacecraft. This code (e.g., 78-098A for the spacecraft Nimbus 7) corresponds to the COSPAR international designation. The experiment codes are based on the spacecraft code. For example, the experiments carried aboard the spacecraft 78-098A are numbered 78-098A-01, 78-098A-02, etc. Similarly, data sets corresponding to experiment 78-098A-01 are coded by a letter in alphabetical order (e.g., 78-098A-01A, 78-098A-01B, etc.).
Although most earth science data held at NSSDC are offline data sets, NASA-sponsored researchers may gain access to online advanced information and data systems such as the NASA Climate Data System. Appendix E describes the functionalities of NCDS and lists the data sets that are currently accessible.

Document and Data Request Forms are provided at the end of this catalog for the users' convenience.

1.3 NSSDC PURPOSE, FACILITIES, AND SERVICES

As stated in Section 1.1, NSSDC was established by NASA to provide data and information from space and earth science investigations in support of additional studies beyond those performed by principal investigators. As part of that support, NSSDC has prepared this series of volumes providing descriptions of archived data. In addition to its function of providing selected data and supporting information for further analysis of space science flight experiments, NSSDC produces numerous publications. Among these publications are an NSSDC newsletter, the Report on Active and Planned Spacecraft and Experiments, and various users' guides.

The majority of data available through NSSDC result from individual experiments carried on board individual spacecraft. NSSDC has developed an information system utilizing a spacecraft/investigation/data identification hierarchy. This catalog is based on the information contained in that system.

In addition to spacecraft data, NSSDC maintains some supporting information and other usable data that may be related to the needs of the researchers. Data from campaigns or projects such as the International Satellite Cloud Climatology Project (ISCCP) and the First ISCCP Regional Experiment (FIRE), which gather information from a number of diverse sources, are also available from NSSDC via the online data systems.

NSSDC provides facilities for reproduction of data and for onsite data use. Researchers are invited to study the data while at NSSDC. The Data Center staff will assist users with data searches and the use of equipment.

NSSDC provides services to any individual or organization resident in the United States and to researchers outside the United States through the World Data Center A for Rockets and Satellites (WDC-A-R&S). Normally, a charge is made to cover the cost of processing a request and reproducing the data. The researcher is notified of the charge, and payment must be received prior to processing. However, as resources permit, the director of NSSDC may waive charges for modest amounts of data when they are used for scientific studies or for specific educational purposes and when they are requested by an individual affiliated with (1) NASA installations, NASA contractors, or NASA grantees; (2) other U.S. Government agencies, their contractors, or their grantees; (3) universities or colleges; (4) state or local governments; or (5) nonprofit organizations.

Copies of the Data Request Form are provided at the end of this catalog to facilitate ordering data from NSSDC. A researcher may also obtain data described in this catalog by a letter, a telephone request, an onsite visit, or electronic mail utilizing the Space Physics Analysis Network (SPAN) or Telenet. Anyone who wishes to obtain data for a scientific study should specify the NSSDC ID and the time span (and/or location) of interest. A researcher should also specify why and when the data are needed, the subject of the work, organizational affiliation, and any Government contracts used for performing the study. The NSSDC staff is available to help requesters identify data sets for use.
NSSDC would appreciate receiving copies of all publications resulting from studies in which data supplied by the Data Center have been used. It is further requested that both NSSDC and the original data provider be acknowledged as sources of the data.

Data can be provided in a format or medium other than that used for archiving. For example, magnetic tapes can be reformatted; computer printout or microfilmed listings can be produced from magnetic tape; enlarged paper prints can be provided from data on photographic film and microfilm, etc. NSSDC/WDC-A-R&S will provide the requester with an estimate of the response time and the charge for such requests.

For researchers within the United States, further information may be obtained from:

National Space Science Data Center  
Code 633  
Goddard Space Flight Center  
Greenbelt, MD  20771  
Telephone: (301) 286-6695  
Telex:  89675 NASCOM GBLT  
TWX:  7108289716  
SPAN Address:  NCF::REQUEST

Researchers residing outside the United States should direct requests for information to the following:

World Data Center A for Rockets and Satellites  
Code 630.2  
Goddard Space Flight Center  
Greenbelt, MD  20771  U.S.A.  
Telephone: (301) 286-6695  
Telex:  89675 NASCOM GBLT  
TWX:  7108289716  
SPAN Address:  NCF::REQUEST

For access to a menu of information, the Master Directory (MD), which is a limited data directory, and limited data displays such as the Nimbus 7 gridded TOMS ozone values, requesters may use SPAN to log onto the NSSDC node, with NSSDC as Username. No password is required. NSSDC may also be reached by Telenet; current procedures are available from the NSSDC Network Hotline (301-286-7251). MD is being continually expanded and developed, and allows users to search for useful data sets by several methods.

1.4 DATA ACQUISITION

NSSDC invites members of the scientific community involved in spacecraft investigations to submit data to the Data Center or to provide information about the data sets that they prefer to make accessible themselves. The Data Center assigns a discipline specialist to work with each investigator or science working team to determine the forms of data that are likely to be most useful to the user community obtaining data from NSSDC. Discipline specialists can also help in the preparation of a Project Data Management Plan (PDMP), which is required of all NASA flight projects. Information on PDMPs and data archival procedures can be provided upon request.
DATA SET DESCRIPTIONS
NSSDC ID 75-066A-O, EPHEMERIS DATA ON MAG. TAPE

Time period covered: 07/15/75 TO 07/24/75

Quantity of data: 222 REELS OF TAPE

These project-supplied, master experiment support magnetic tapes are stored in the Washington National Records Center (WNRC). They contain all Apollo spacecraft ephemeris, attitudes, sensor pointings, fields of view, and other parameters generated in support of ASTP experiments, such as, e.g., sunrise and sunset times, vehicle-sun angle, magnetic field intensity, and l-shell radius. They are binary 1100 compatible, 7-track, odd parity, 800-bpi density, and binary with word lengths of 36 bits. Each tape is introduced as seven header records of input data followed by 241-word logical data records. The format of the data record is given in Table 7 of the formal document. Included in the tape are 10-track (CCHk) tapes, which contain the cm downlink telemetry parameters that were required for generating the ASTP experiment support data. One tape in this "CCH" tape group is identified as the telemetry shutter activation tape and contains the times of "shutter open" events including all c-band and s-band observations of the Apollo spacecraft transmitted to the RTCC during the mission. The format document also describes the "CCH" and ground radio link timing tapes.

Data set name: EPHIMERIS DATA ON MICROFILM

NSSDC ID 75-066A-001, EPHIMERIS DATA ON MICROFILM

Time period covered: 07/16/75 TO 07/24/75

Quantity of data: 103 REELS OF MICROFILM

This project-supplied data set on 16 mm microfilm, is stored in the Washington National Records Center (WNRC). It contains all Apollo spacecraft ephemeris, attitudes, sensor pointings, fields of view, and other parameters generated in support of ASTP experiments, such as, e.g., sunrise and sunset times, vehicle-sun angle, magnetic field intensity, and l-shell radius. Each frame contains 12 columns which are coded in the data and time of the measurements. The elements in one column identify particular variables, e.g., geographic latitude, and the corresponding elements in the adjacent column are the numerical values of those variables at the time approximated in the frame heading.

Data set name: ECLN DATA ON MAGNETIC TAPE

NSSDC ID 75-066A-00A, ECLN DATA ON MAC TAPE

Time period covered: 07/15/75 TO 07/24/75

Quantity of data: 1 REEL OF TAPE

This tape was supplied by the experimenter and is a merge digital tape of the data tapes used for analysis. It is odd parity, 9-track, and was written at 1500 bpi. There are 13 files in each file is the entire contents of an individual data tape, and each file terminates with a file mark. Each file contains a large number of physical records. The first and second physical record of each file are "header" records, and these records may contain questionable data. All other physical records contain 30 operator commands, each of which contains 10 eight-bit bytes of information. When the experiment was on, logical records were obtained at 0.75-s intervals. The first eight bytes give day and time of the measurement. The detector 1 and 2 outputs (in counts) are given in bytes 15 and 16, respectively. The data are distributed with the data describes the instrument operation and provides the calibration curves to convert output from counts to protons per sq cm per s per event.

Data set name: APOLLO-SOYUZ HELIUM GLOW

NSSDC ID 75-066A-00D, EPHEMERIS DATA ON MAC TAPE

Time period covered: 07/15/75 TO 07/24/75

Quantity of data: 1 REEL OF TAPE

This tape contains Smithsonian Astrophysical Observatory (SAMO)).[1] The Smithsonian Astrophysical Observatory (SAMO) proceeds to collect and analyze all data relevant to its mission. This is the magnetic data of magnetic data collected from the Apollo spacecraft and the Soyuz spacecraft. This data is used for the analysis of the magnetic field of the earth. The data is stored on magnetic tapes and is available for further analysis.
The EUV telescopes were generated by an IBM 360 computer onto 9-track, 1600 bpi, binary magnetic tape. Each data file contains two header records (48 BCD characters) of mission and experiment identification. All other physical records contain 30 logical records of 24 eight-bit bytes of information. The logical records consist of time in days, hours, seconds and milliseconds of day, flag bits, quality reference measurements, helium tank pressure and temperature, current, detector 1-4 count rates, and door bits 1 and 2.

**ASTP-APOLLO, EL-18A7**

**EARTH OBSERVATIONS AND PHOTOGRAPHY**

**Data set name - EARTH OBSERVATION AND PHOTOGRAPHY ON 35MM COLOR FILM**

NSSDC ID 75-066A-21A, 35MM COLOR FILM

**Time period covered - (N/A)**

**Quantity of data - (N/A)**

This data set includes photographs CX-18, CX-14, CI-17, CI-18, and CI-20, which are included in data set 75-066A-000.

**ASTP-APOLLO, PEPIII**

**STRATOSPHERIC AEROSOL MEASUREMENT**

**Data set name - SECOND GENERATION POSITIVES ON 70MM FILM**

NSSDC ID 75-066A-19A, SECOND GENERATION PDS. 70 MM FILM

**Time period covered - (N/A)**

These data contained on 70-mm roll film, type 50-280, are second generation positive copies. These data measure the concentration and vertical distribution of aerosols in the stratosphere. Solar extinction measured by a photometer operating in the near-infrared region of the spectrum in order to measure the stratospheric constituents and concentration. Measurements were taken while the spacecraft approached sunset or sunrise.

**Data set name - PHOTON FMR INTENSITIES VS TIME DATA ON MAGNETIC TAPE**

NSSDC ID 75-066A-19B, PHOTON FMR INTENSITIES VS TIME, 1P

**Time period covered - 07/26/75 TO 07/26/75**

**Quantity of data - 1 MILLION**

These experimenter-supplied photometer intensities as a function of time data are on a magnetic tape created on a CDC 3600 computer. The data are on a 7-track binary tape, at 400 bpi, with two forms. The first file is ephemeral information written in CDC 48-bit floating point words, with 240 words per record. The second file contains the intensities as a function of time data. The first two records of the second file are header records, containing in BCD format, mission experiment information and the date of the run. The remaining records in the file are blocked at 24 to 120-bit logical records per physical record and contain time in milliseconds, quality reference measurements 1 and 2, and CI-17/60 data.

**ASTP-APOLLO, VONBUN**

**GEDDYNAMICS**

**Data set name - GEDDYNAMICS ON COLOR FILM**

NSSDC ID 75-066A-17A, GEDDYNAMICS, 35MM COLOR

**Time period covered - 11/07/67 TO 07/31/69**

**Quantity of data - 42 CARDS OF B/W MICROFICHE**

This data set is contained in vol 2, 3, and 4 of the five-volume publication, "The ATS Meteorological Data Catalog," published by NASA/DSIC. This describes and indexes the data from the ATS 3, Multicolor Spin-Scan Cloud Camera (MSSC), the ATS 3 Image Dissector Camera System (IDCS) the catalog also contains origin information and usually one picture per day (usually full disk taken near local noon) as acquired from the three experiments. The first two volumes of this set are contained in vol 1 only, containing only ATS 3 data.

**ATS 3, BRANCHFLOWER**

**IMAGE DISSECTOR CAMERA (IDC)**

**Data set name - THE ATS METEOROLOGICAL DATA CATALOG ON MICROFICHE**

NSSDC ID 67-111A-03A, ATS METER DATA CAT ON MICROFICHE

**Time period covered - 11/07/67 TO 07/31/69**

**Quantity of data - 5 BOOKS OR BOUND VOLUMES**

This data set is contained in vol 2, 3, 4, and 5 of the five-volume publication, "The ATS Meteorological Data Catalog," published by NASA/DSIC. This describes and indexes the data from the ATS 3 Spin-Scan Cloud Camera (SSCC), the ATS 3 Multicolor Spin-Scan Cloud Camera (MSSC), and the ATS 3 Image Dissector Camera System (IDCS) the catalog also contains origin information and usually one picture per day (usually full disk taken near local noon) as acquired from the three experiments. The first two volumes of this set are contained in vol 1 only, containing only ATS 3 data.
Data set name - TOTAL ELECTRON CONTENT DATA ON MICROFILM

NSSDC ID 64-064A-01A, TOTAL ELECTRON CONTENT (MICROFILM)

Time period covered - 10/13/64 TO 04/17/65

Quantity of data - 4 REELS OF MICROFILM

This data set contains electron content data on four reels of 16-mm microfilm. The content was determined from Faraday rotation of the beacon signals at the electronic beacon stations in Germany during 1964. The content was determined from the beacon signals at the electronic beacon stations. The data are available in hard copy at NSSDC for interested persons.

Data set name - TOTAL ELECTRON CONTENT, HARD COPY

NSSDC ID 64-064A-01B, TOTAL ELECTRON CONTENT (BOOKS)

Time period covered - 10/16/64 TO 12/31/64

Quantity of data - 27 BOOKS OR BOUND VOLUMES

These data are published giving the total electron content (TEC) between the satellite and the earth's base recording site. The data are usually normalized to a vertical path through an ionospheric point (IP), where the propagation path intersects the electron maximum (usually taken to be near 300 km). The data are available in hard copy at NSSDC for interested persons.

Data set name - LATITUDE VERSUS TOTAL ELECTRON CONTENT OVER ILLINOIS, MICHIGAN AND MONTANA, MCHEN

NSSDC ID 64-064A-01C, LAT VS TEC PLOTS ON MICROFICHE

Time period covered - 10/21/64 TO 03/17/65

Quantity of data - 4 CARDS OF BX MICROFICHE

These data have been reduced to units of number density per unit of cross section for a vertical path through the ionospheric point. The data are normalized to a vertical path through an ionospheric point (IP), where the propagation path intersects the electron maximum (usually taken to be near 300 km). The data are available in hard copy at NSSDC for interested persons.

Data set name - TABULATIONS OF ELECTRON DENSITY DATA ON MICROFILM

NSSDC ID 64-064A-02A, ELECTRON DENSITY (MICROFILM)

Time period covered - 10/10/64 TO 05/31/65

Quantity of data - 1 REEL OF MICROFILM

This data set contains electron density data from 10 stations recording beacon signals at the electronic beacon stations. The data are available in hard copy at NSSDC for interested persons.

Data set name - AURORAL IMAGERY ON MICROFILM

NSSDC ID 65-039A-01A, AURORAL IMAGERY (PRINTOUT)

Time period covered - 06/03/65 TO 07/10/65

Quantity of data - 1 REEL OF MICROFILM

This data set contains auroral imagery data on one reel of 16-mm microfilm. The content was determined from Faraday rotation of the beacon signals at the electronic beacon stations. The data are available in hard copy at NSSDC for interested persons.

Data set name - NIGHTTIME POLAR IMAGERY ON 35MM MICROFILM

NSSDC ID 72-018A-01B, NIGHTTIME POLAR IMAGERY

Time period covered - 06/16/72 TO 04/30/75

Quantity of data - 16 REELS OF MICROFILM

This data set contains nighttime visual imagery data on 35-mm film. The data are available in hard copy at NSSDC for interested persons.
NSSDC ID 72-089A-01A, AURORAL IMAGERY

Time period covered - 02/01/73 to 05/31/75

Quantity of data - 3 REELS OF MICROFILM

This data set of 35-mm film, prepared by a U.S. Air Force office in Omaha, Nebraska, contains auroral images that were telemetered from the satellite sensors. The data are corrected for roll and altitude variations but are not corrected for small pitch and yaw variations. The data frame width is about 3000 km. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data.

Data set name - NIGHTIME POLAR IMAGERY ON 35MM MICROFILM

NSSDC ID 72-089A-01B, NIGHTIME POLAR IMAGERY

Time period covered - 02/01/73 to 05/31/75

Quantity of data - 3 REELS OF MICROFILM

This data set, on reels of 35-mm film, consists of nighttime visual imagery taken over the polar regions. The film was prepared by the U.S. Air Force Global Weather Central. The data are corrected for altitude and roll variations but are not corrected for small pitch and yaw variations. The data frame width is about 3000 km. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data.

Data set name - AURORAL IMAGERY ON MICROFILM

NSSDC ID 74-063A-01A, AURORAL IMAGERY, MICROFILM

Time period covered - 10/01/74 to 11/28/74

Quantity of data - 5 REELS OF MICROFILM

This data set, on reels of 35-mm film, consists of auroral images that were telemetered from the satellite sensors. The data are corrected for roll and altitude variations but are not corrected for small pitch and yaw variations. The data frame width is about 3000 km. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data.

Data set name - NIGHTIME POLAR IMAGERY ON 35MM MICROFILM

NSSDC ID 74-063A-01B, NIGHTIME POLAR IMAGERY

Time period covered - 10/01/74 to 11/28/74

Quantity of data - 4 REELS OF MICROFILM

This data set, on reels of 35-mm film, consists of nighttime visual imagery taken over the polar regions. The film was prepared by the U.S. Air Force Global Weather Central. The data are corrected for altitude and roll variations but are not corrected for small pitch and yaw variations. The data frame width is approximately 3000 km. Data are not gridded, but they can be gridded by the user with ephemeris information and coordinate grids that accompany the data.

Data set name - AURORAL IMAGERY ON MICROFILM

NSSDC ID 74-015A-01A, AURORAL IMAGERY, MICROFILM

Time period covered - 03/29/74 to 05/07/76

Quantity of data - 36 REELS OF MICROFILM

This data set of 35-mm film contains auroral images that were telemetered from the satellite sensors. The data are corrected for roll and altitude variations but are not corrected for small pitch and yaw variations. The data frame width is about 3000 km. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data.

Data set name - NIGHTIME POLAR IMAGERY ON 35MM MICROFILM

NSSDC ID 74-015A-01B, NIGHTIME POLAR IMAGERY

Time period covered - 03/29/74 to 04/30/75

Quantity of data - 31 REELS OF MICROFILM

This data set, on reels of 35-mm film, contains auroral images that were telemetered from the satellite sensors. The film was prepared by the U.S. Air Force Global Weather Central. The data are corrected for altitude and roll variations but are not corrected for small pitch and yaw variations. The data frame width is approximately 3000 km. Data are not gridded, but they can be gridded by the user with ephemeris information and coordinate grids that accompany the data.
NSSDC ID 75-043A-01A, AURORAL IMAGERY, MFII
Time period covered - 05/30/75 to 07/31/77
Quantity of data - 34 REELS OF MICROFILM

This data set, on reels of 35-mm film, contains auroral images that were telemetered from the satellite sensors. The data are corrected for roll and altitude variations but are not corrected for small pitch and yaw variations. The data frame width is about 3000 km. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data.

Data set name - NIGHTIME POLAR IMAGERY ON 35MM MICROFILM
NSSDC ID 75-043A-01B, NIGHTIME POLAR IMAGERY
Time period covered - 05/30/75 to 07/31/77
Quantity of data - 34 REELS OF MICROFILM

This data set, on reels of 35-mm film, contains nighttime visual images taken over the polar regions in a grid format. The data are corrected for roll and altitude variations but are not corrected for small pitch and yaw variations. The data frame width is about 3000 km. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data.

DMSF 50-1/1, AFSC STAFF
OPERATIONAL LINEARSCAN SYSTEM (GLS)

Data set name - AURORAL IMAGERY ON MICROFILM
NSSDC ID 76-091A-01A, AURORAL IMAGERY ON MICROFILM
Time period covered - 06/01/77 to 09/30/77
Quantity of data - 43 REELS OF MICROFILM

This data set, on reels of 35-mm film, contains auroral images that were telemetered from the satellite sensors. The data are corrected for roll and altitude variations but are not corrected for small pitch and yaw variations. The data frame width is about 3000 km. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data. These data are arranged chronologically with images from all four DMSF block 50-1 satellites.

DMSF 50-1/1, AFSC STAFF
MULTICHANNEL FILTER RADIOMETER (SH)

Data set name - TOTAL OZONE AND CALIBRATED RADIANCE DATA
NSSDC ID 76-091A-02A, TOTAL OZONE + CALIBRATED RADIANCE
Time period covered - 03/25/77 to 07/23/77
Quantity of data - 13 REELS OF TAPE

This data set is contained on 6250-bpi, 1-track, binary tapes. The multichannel filter radiometer (MFR) was a scanning instrument carried on the DMSP satellite and was used to calculate the total column ozone globally. The infrared MFR sensors made both daytime and nighttime observations, thus permitting a possible 67,000 observations every 24 h by each satellite. The MFR instruments were unique in that they had a channel for measurements of upwelling radiation in the 0.65 micrometer band of ozone. Uncalibrated radiance data were calibrated and stored on earth coordinates at Lawrence Livermore National Laboratory (LLNL). The total column ozone was derived using the MFR calibrated radiance data from all four DMSF block 50-1 satellites. It can be implemented on any VAX system with a VMS operating system, providing that the system has sufficient disk space to hold 1 day of data. Similar data sets for DMSF are in 76-044A-02A, 78-042A-02A, and 79-050A-02A.

Data set name - TOTAL OZONE GRID POINT DATA ON MAGNETIC TAPE
NSSDC ID 76-091A-02B, TOTAL OZONE GRID POINT DATA
Time period covered - 03/25/77 to 07/23/77
Quantity of data - 2 REELS OF TAPE

The gridded ozone data are archived on two 6250-bpi tapes in blocks of 9380 ASCII characters. Each block contains 20 records, each record containing 60 8-bit bytes. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data.

NSSDC ID 77-044A-01A, AURORAL IMAGERY ON MICROFILM
Time period covered - 08/01/77 to 06/05/78
Quantity of data - 37 REELS OF MICROFILM

This data set, on reels of microfilm, contains auroral images that were telemetered from the satellite sensors. The data are corrected for roll and altitude variations but are not corrected for small pitch and yaw variations. The data frame width is about 3000 km. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data.

DMSF 50-1/2, AFSC STAFF
OPERATIONAL LINEARSCAN SYSTEM (GLS)

Data set name - AURORAL IMAGERY ON MICROFILM
NSSDC ID 77-044A-02A, TOTAL OZONE + CALIBRATED RADIANCE
Time period covered - 07/13/77 to 02/16/80
Quantity of data - 97 REELS OF TAPE

This data set is contained on 6250-bpi, 1-track, binary tapes. The multichannel filter radiometer (MFR) was a scanning instrument carried on the DMSP satellite and was used to calculate the total column ozone globally. The infrared MFR sensors made both daytime and nighttime observations, thus permitting a possible 67,000 observations every 24 h by each satellite. The MFR instruments were unique in that they had a channel for measurements of upwelling radiation in the 0.65 micrometer band of ozone. Uncalibrated radiance data were calibrated and stored on earth coordinates at Lawrence Livermore National Laboratory (LLNL). The total column ozone was derived using the MFR calibrated radiance data from all four DMSF block 50-1 satellites. It can be implemented on any VAX system with a VMS operating system, providing that the system has sufficient disk space to hold 1 day of data. Similar data sets for DMSF are in 78-042A-02A, 78-042A-02A, and 79-050A-02A.

Data set name - TOTAL OZONE GRID POINT DATA ON MAGNETIC TAPE
NSSDC ID 77-044A-02B, TOTAL OZONE GRID POINT DATA
Time period covered - 07/13/77 to 02/16/80
Quantity of data - 2 REELS OF TAPE

The gridded ozone data are archived on two 6250-bpi tapes in blocks of 9380 ASCII characters. Each block contains 20 records, each record containing 60 8-bit bytes. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data.
Greenwich Mean Time (GMT). A file may contain as many as four grids, one for each of the DMSP block 50-1 satellites. The grid in each hemisphere is a 67 x 67 rectangular matrix of points superimposed on a polar stereographic map base.

DMSP 5D-1/F3, AFSC Staff
OPERATIONAL LINESCAN SYSTEM (OLS)

Data set name: AURAL Imagery on Microfilm

NSSDC ID 7D-042A-01A, AURAL IMAGERY ON MICROFILM

Time period covered: 05/20/78 TO 09/30/79

Quantity of data: 26 REELS OF MICROFILM

This data set, on reels of 35-mm film, contains auroral images that were photographed from the satellite sensors. The data are logically correlated for roll and altitude variations but are not corrected for small pitch and yaw variations. The data frame width is about 3000 km. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data.

DMSP 5D-1/F3, AFSC Staff
MULTICHANNEL FILTER RADIOMETER (SSR)

Data set name: TOTAL OZONE AND CALIBRATED RADIANCE DATA

NSSDC ID 7D-042A-02A, TOTAL OZONE + CALIBRATED RADIANCE

Time period covered: 07/23/78 TO 02/05/80

Quantity of data: 56 REELS OF TAPE

This data set is comprised of binary tapes from a VAX computer. The multi-channel filter radiometer (MFR) used a scanning instrument carried on the DMSP satellite and used to calculate the total column ozone globally. The infrared MFR sensors made both daytime and nighttime observations. The data frame width is about 3000 km. The geographic positions of the auroral forms can be determined from the ephemeris information and coordinate grids accompanying the data.

DMSP 5D-1/F4, AFSC Staff
OPERATIONAL LINESCAN SYSTEM (OIS)

Data set name: SATELLITE DRAG ATMOSPHERIC DENSITY

NSSDC ID 64-004A-03A, AIRMS DRAG DENSITY TABLES

Time period covered: 01/31/65 TO 08/05/69

Quantity of data: 6 CARDS OF B/W MICROFICHE

Atmospheric density values required for the drag data are contained in the Smithsonian Institution Atmospheric Observatory (SAI) Special Report no. 346. These values were computed for a standard height of 1130 km and cover the time period between January 31, 1964, and June 5, 1964. The density values were computed on the basis of the SAI Special Report no. 346.
Data are primarily in tabular form, with some summary graphs for overall considerations. A diagram showing the projection of temperature (diurnal and semiannual means), 10.7-cm solar flux, and daily temperature index values is included in the document. Also included in these tables are the observed rate of change of anomalous period, acceleration due to day brightness, pressure, and other parameters, the daily right ascension, and estimated temperatures from different areas.

The data set name is "RAW TEMPERATURE," and contains pressure, wind speed, and other measured parameters. The data were obtained from an optical disk and are contained in a single file. The solar constant was measured by the solar monitor (0.19-0.6 micrometers), and the rate of change of the earth's temperature was from an acoustic period of solar calibration.

The data set contains an atmospheric model of diurnal temperature variation, and includes some summary graphs for the overall considerations. The data are contained in a single file, with one tape per day and one optical disk per month.

Additional data sets include:
- Processed Archive Tape (PAT) images on optical disk (NSSDC ID B4-108B-01C)
- Total Solar Irradiance on hardcopy (NSSDC ID B4-108B-01D)
- Solar Incident (52) data on optical disk (NSSDC ID B4-108B-01E)
- Gridded Earth Radiation Budget (5-4) data on optical disk (NSSDC ID B4-108B-01F)

Each data set is described with details such as time periods covered, quantity of data, and notes on the data's origin and processing method.
Data set name - 5-9 SCANNER EARTH RADIANT EXISTANCE + ALBEO DATA
NSSDC ID 84-108B-01C, SCAN EARTH(SR)RAD EXISTANCE+ALBEO

Time period covered - 11/01/84 TO 10/31/86
Quantity of data - 5 DISKS

This set of earth radiation budget data was supplied by the ERBE science team as tape images on 12-in. WORM optical disks that were created on Optima drives in an Aquided system. The data were first generated on a CDC computer as scaled integers in IBM representation and put on unlabeled magnetic tapes. This data set contains daily, monthly hourly, and monthly averages of longwave and shortwave radiant existance at the top of the atmosphere and albedo. The parameters are derived from the scanner measurements and are spatially averaged for 2.5-deg regions. There is also statistical information and scene information, i.e., cloud condition. Similar parameters are determined for those scanner measurements that were identified as viewing clear sky areas. One month of data from the ERBS spacecraft or from combined spacecraft (ERBS, NOAA 9, and NOAA 10) are contained on 1-17 tapes. This data set is archived on the last Processed Archive Tape (PAT) optical disk of the month.

Data set name - NONSCANNER EARTH RADIANT EXISTANCE + ALBEO DATA
NSSDC ID 84-108B-01H, N 5 EARTH(SR)RAD EXISTANCE+ALBEO

Time period covered - 11/01/84 TO 10/31/86
Quantity of data - 5 DISKS

This set of earth radiation budget data was supplied by the ERBE science team as tape images on 12-in. WORM optical disks that were created on Optima drives in an Aquided system. The data were first generated on a CDC computer as scaled integers in IBM representation and put on unlabeled magnetic tapes. This data set contains daily, monthly hourly, and monthly averages of longwave and shortwave radiant existance at the top of the atmosphere and albedo. The parameters are derived from the scanner measurements by the shape factor (SF) technique and the numerical filter (NF) technique. The SF data are collected into 30-deg regions and the NF data are collected into 5-deg regions. Similar to the scanner data set (5-9, NSSDC ID 84-108B-01C), there is also statistical and scene information, i.e., cloud conditions. However, there are no parameters calculated for clear sky areas. One month of data from the ERBS spacecraft or from combined spacecraft (ERBS, NOAA 9, and NOAA 10) are contained on four tapes. This data set is archived on the last Processed Archive Tape (PAT) optical disk of the month.

ERBS, MCCORMICK
STRATOSPHERIC AEROSOL AND GAS (SAGE)

Data set name - METEOROLOGICAL, EPHemeris, RAW DATA ARCHIVAL TAPE (MERDAT)
NSSDC ID 84-108B-02A, MET, EPHERM, RAW ARCH TAPE (MERDAT)

Time period covered - 11/01/84 TO 03/31/89
Quantity of data - 104 REELS OF TAPE

This data set contains unprocessed solar radiation data that were generated on a CDC Cyber computer onto 6250-bpi magnetic tapes in 60-bit floating point numbers. Telemetry science data measured between 0.385 and 1.0 micrometer from cloud top to 150 km are grouped by spacecraft altitude and existance events. Ephemeris data and meteorological such as pressure, temperature, and density are also included. Supplied by the experimenter, each tape (802 full) contains 15 days of data. This data set is not expected to be of much value to secondary investigators.

Data set name - OZONE NUMBER DENSITY AND MIXING RATIO PROFILE TAPE
NSSDC ID 84-108B-02B, OZONE NO DENS/MIX RATIO PROFIL

Time period covered - 10/24/84 TO 11/30/88
Quantity of data - 4 REELS OF TAPE

This data set contains profiles of ozone density number and ozone volume mixing ratio on one 6250-bpi tape per year in CDC 66 bit format. The profiles are inverted from solar irradiiances measured 0.385-1.0 micrometers during the Earth Radiation Budget Satellite (ERBS)
Data set name - ZODIACAL LIGHT PHOTOGRAPHY

NSIDC ID 86-066A-01A, ZODIACAL LIGHT PHOTOGRAPH

Time period covered - 07/18/66 to 07/21/66

This data set consists of 35-mm TRI-X negatives of the 20 exposures made on Gemini 10 and is available on film. Together with zodiacal light photographs from Gemini 5 and 9, the four-mission set is a unique set sensitive enough to be used on the earlier flights. For frame numbers and a brief index to the photographs, see NSIDC 70-08, "Descriptive Index to Gemini Zodiacal Light Photography."

GEMINI 10, NEY ZODIACAL LIGHT PHOTOGRAPHY

Data set name - ZODIACAL LIGHT PHOTOGRAPHY ON 35-MM FILM

This set of data was prepared by the experimenter's office and is available on 7-track, 1600-bpi, binary magnetic tapes known as the Experimenter History Tapes (EHT). It contains, in image sections, radiances that were measured at visible (0.55 to 0.70 micrometer) and IR (10.5 to 12.6 micrometer) wavelengths with spatial resolutions of 0.9 and 8 km, respectively. Each tape contains up to 4400 image files: 1) visible (0.55 to 0.70 micrometer) image data file, an IR (10.5 to 12.6 micrometer) image data file, an IR grid data file, and a calibration data file. Both the visible and infrared data cover from pole to pole, from 65°W to 120°E. The resolutions are 0.9 km and 8 km, respectively. The ADIP format is described in appendix B of the "VlSSR Data Processing Plan for Synchronous Meteorological and Geostationary Operational Environmental Satellites (SMS/ODES)" by P.L. McKowan, TR 82/9538.

GDES 1, NESDIS STAFF VISIBLE INFRARED SPIN-SCAN RADIOMETER (VISSR)

Data set name - EXPERIMENTER HISTORY TAPES - VISSR DATA IN DIGITAL FORMAT ON MAGNETIC TAPE

NSIDC ID 75-100A-01A, EHT - VISSR DIGITAL DATA TAPES

Time period covered - 04/16/76 TO 05/29/77

Quantity of data - 285 REELS OF TAPE

This set of radiances was prepared by the experimenter's office and is available on 7-track, 800-bpi, binary magnetic tapes in the Image Display and Manipulation System (IDAMS) format. Each tape contains up to 4400 image records in brightness temperatures and has orbit/telemetry information also. The tapes were used to generate 70-mm film products, but were subsequently replaced by the Atmospheric and Oceanographic Image Processing System (ADIPS) format data. More description of these data may be found in appendix B of the "VlSSR Data Processing Plan for Synchronous Meteorological and Geostationary Operational Environmental Satellites (SMS/ODES)" by P.L. McKowan, TR 82/9538.

GDES 2, NESDIS STAFF VISIBLE-INFRARED SPIN-SCAN RADIOMETER (VISSR)

Data set name - EXAMONER HISTORY TAPES - VISSR DATA IN DIGITAL FORMAT ON MAGNETIC TAPE

NSIDC ID 75-100A-01B, VISSR VISIBLE IMAGERY, 70MM FILM

Time period covered - 04/11/76 TO 10/28/76

Quantity of data - 1701 B/W NEGATIVE FRAMES

This set of visible imagery was produced on commercial image generation equipment from digital tapes and is available on 70-mm film. Each picture contains a title on the top boundary and a 33-level gray scale on the right boundary that represents brightness temperatures. It may have a combination of the following options: 1) contrast enhancement, 2) image segmentation, 3) full-resolution sectorized imagery, 4) 1/16-size imagery, and 5) 1/16-size imagery. The maximum effective size covers 500 sq km, represented by 4000 by 3904 pixels. Each element has a maximum resolution of 3.7 km. The title contains the satellite identification, picture number, picture type, coordinate numbers of the top left pixel relative to the visible sensor, start time of sectorized image, and pixel scaling and sector size identification. Sectorized images may be requested by data, time, and geographic area.

GDES 3, NESDIS STAFF VISIBLE INFRARED SPIN-SCAN RADIOMETER (VISSR)

Data set name - VISIBLE INFRARED SPIN-SCAN RADIOMETER (VISSR)

Data set name - VISIBLE INFRARED SPIN-SCAN RADIOMETER (VISSR)

NSIDC ID 75-100A-01C, VISSR IR IMAGERY, 70MM FILM

Time period covered - 04/11/76 TO 10/28/76

Quantity of data - 1890 B/W NEGATIVE FRAMES

This set of IR imagery was produced on commercial image generation equipment from digital tapes and is available on 70-mm film. Each picture contains a title on the top boundary and a 33-level gray scale on the right boundary that represents brightness temperatures. It may have a combination of the following options: 1) contrast enhancement, 2) image segmentation, 3) full-resolution sectorized imagery, 4) 1/16-size imagery, and 5) 1/16-size imagery. The maximum effective size covers 500 sq km, represented by 4000 by 3904 pixels. Each element has a maximum resolution of 3.7 km. The title contains the satellite identification, picture number, picture type, coordinate numbers of the top left pixel relative to the visible sensor, start time of sectorized image, and pixel scaling and sector size identification. Sectorized images may be requested by data, time, and geographic area.

This set of radiances was prepared by the experimenter's office and is available on 7-track, 1600-bpi, binary magnetic tapes in the Image Display and Manipulation System (IDAMS) format. Each tape contains up to 4400 image records in brightness temperatures and has orbit/telemetry information also. The tapes were used to generate 70-mm film products, but were subsequently replaced by the Atmospheric and Oceanographic Image Processing System (ADIPS) format data. More description of these data may be found in appendix B of the "VlSSR Data Processing Plan for Synchronous Meteorological and Geostationary Operational Environmental Satellites (SMS/ODES)" by P.L. McKowan, TR 82/9538.

Data set name - ADIPS IR AND VISIBLE IMAGERY DIGITAL DATA TAPES

NSIDC ID 75-100A-01D, VISSR IR/VIS ADIPS IMAGE TAPES

Time period covered - 07/19/75 TO 06/11/78

Quantity of data - 4602 REELS OF TAPE

This set of radiances was prepared by the experimenter's office and is available on 7-track, 1600-bpi, binary magnetic tapes in the Atmospheric and Oceanographic Image Processing System (ADIPS) format. Each tape contains up to four data files: a visible (0.55- to 0.70-micrometer) image data file, an IR (10.5- to 12.6-micrometer) image data file, an IR grid data file, and a calibration data file. Both the visible and infrared data cover from pole to pole, from 65°W to 120°E. The resolutions are 0.9 km and 8 km, respectively. The ADIPS format is described in appendix B of the "VlSSR Data Processing Plan for Synchronous Meteorological and Geostationary Operational Environmental Satellites (SMS/ODES)" by P.L. McKowan, TR 82/9538.

Data set name - ADIPS IR AND VISIBLE IMAGERY DIGITAL DATA TAPES

NSIDC ID 75-100A-01E, IDAMS VISIBLE + IR IMAGE DATA ON TAPE

Time period covered - 01/26/76 TO 02/02/76

Quantity of data - 4 REELS OF TAPE

This set of radiances was prepared by the experimenter's office and is available on 7-track, 800-bpi, binary magnetic tapes in the Image Display and Manipulation System (IDAMS) format. Each tape contains up to 4400 image records in brightness temperatures and has orbit/telemetry information also. The tapes were used to generate 70-mm film products, but were subsequently replaced by the Atmospheric and Oceanographic Image Processing System (ADIPS) format data. More description of these data may be found in appendix B of the "VlSSR Data Processing Plan for Synchronous Meteorological and Geostationary Operational Environmental Satellites (SMS/ODES)" by P.L. McKowan, TR 82/9538.

This set of radiances was prepared by the experimenter's office and is available on 7-track, 1600-bpi, binary magnetic tapes in the Image Display and Manipulation System (IDAMS) format. Each tape contains up to 4400 image records in brightness temperatures and has orbit/telemetry information also. The tapes were used to generate 70-mm film products, but were subsequently replaced by the Atmospheric and Oceanographic Image Processing System (ADIPS) format data. More description of these data may be found in appendix B of the "VlSSR Data Processing Plan for Synchronous Meteorological and Geostationary Operational Environmental Satellites (SMS/ODES)" by P.L. McKowan, TR 82/9538.

This set of radiances was prepared by the experimenter's office and is available on 7-track, 1600-bpi, binary magnetic tapes in the Image Display and Manipulation System (IDAMS) format. Each tape contains up to 4400 image records in brightness temperatures and has orbit/telemetry information also. The tapes were used to generate 70-mm film products, but were subsequently replaced by the Atmospheric and Oceanographic Image Processing System (ADIPS) format data. More description of these data may be found in appendix B of the "VlSSR Data Processing Plan for Synchronous Meteorological and Geostationary Operational Environmental Satellites (SMS/ODES)" by P.L. McKowan, TR 82/9538.
This set of visible imagery was produced on commercial image-generation equipment from digital tapes and is available on 70-mm film. Each picture contains a title on the top boundary and a 33-level gray scale on the right boundary that represents brightness temperatures. It may have a combination of the following options: 1) contrast enhancement, 2) image sectorization, and 3) 1/8-size imagery. The maximum effective size covers 500 sq km, represented by 4000 by 3904 pixels. Each element in the maximum resolution of 3.7 km. The title contains the satellite identification, picture number, picture type, coordinate numbers of the top left pixel relative to the visible sensor, start time of sectorized image, and pixel scaling and sector size identification. Sectorized images may be requested by date, time, and geographic area.

Data set name - VISSR INFRARED IMAGERY ON 70MM FILM

NSSDC ID 77-048A-01C, VISSR IR IMAGERY ON 70MM FILM

Time period covered - 01/03/79 TO 01/03/79

Quantity of data - 131 B/W NEGATIVE FRAMES

This set of IR imagery was produced on commercial image-generation equipment from digital tapes and is available on 70-mm film. Each picture contains a title on the top boundary and a 33-level gray scale on the right boundary that represents brightness temperatures. It may have a combination of the following options: 1) contrast enhancement, 2) image sectorization, and 3) 1/8-size imagery. The maximum effective size covers 500 sq km, represented by 4000 by 3904 pixels. Each element in the maximum resolution of 3.7 km. The title contains the satellite identification, picture number, picture type, coordinate numbers of the top left pixel relative to the visible sensor, start time of sectorized image, and pixel scaling and sector size identification. Sectorized images may be requested by date, time, and geographic area.

Data set name - GOES 3, NESDIS STAFF

VISIBL INFRARED SPIN-SCAN RADIOMETER (VISSR)

NSSDC ID 78-062A-01A, VISSR IR IMAGERY ON 70MM FILM

Time period covered - 05/02/79 TO 06/05/79

Quantity of data - 265 B/W NEGATIVE FRAMES

This set of IR imagery was produced on commercial image-generation equipment from digital tapes and is available on 70-mm film. Each picture contains a title on the top boundary and a 33-level gray scale on the right boundary that represents brightness temperatures. It may have a combination of the following options: 1) contrast enhancement, 2) image sectorization, and 3) 1/8-size imagery. The maximum effective size covers 500 sq km, represented by 4000 by 3904 pixels. Each element in the maximum resolution of 3.7 km. The title contains the satellite identification, picture number, picture type, coordinate numbers of the top left pixel relative to the visible sensor, start time of sectorized image, and pixel scaling and sector size identification. Sectorized images may be requested by date, time, and geographic area.

Data set name - VISSR INFRARED IMAGERY ON 70MM FILM

NSSDC ID 78-062A-01B, VISSR VIS IMAGERY ON 70MM FILM

Time period covered - 05/20/79 TO 06/08/79

Quantity of data - 296 B/W NEGATIVE FRAMES

This set of visible imagery was produced on commercial image-generation equipment from digital tapes and is available on 70-mm film. Each picture contains a title on the top boundary and a 33-level gray scale on the right boundary that represents brightness temperatures. It may have a combination of the following options: 1) contrast enhancement, 2) image sectorization, and 3) 1/8-size imagery. The maximum effective size covers 500 sq km, represented by 4000 by 3904 pixels.
Data set name - DAY/NIGHT REGISTERED IMAGERY

NSSLGC ID 78-041A-01C, DAY/NIGHT REGISTERED DATA ON FILM

Time period covered - 07/11/78 TO 09/16/79

Quantity of data - 7800 FEET OF B/W NEGATIVES

These day/night registered data consist of the following images: day visible, day thermal infrared, night thermal infrared, temperature differences (produced by differentiating the radiometric temperature observed during the night and day passes), and apparent thermal inertia. Each image is processed in an elongated format to provide maximum day/night overlap and may depict a scene as long as 3000 km. Each day/night pair is processed as a separate entity. The quality of registration is scene dependent, being a function of the number of pixels that can be identified and the residual distortion in the scene, caused by errors in estimation of the satellite attitude. Each frame contains a 16-step gray scale and annotation as to the date (day, month, year), latitude/longitude of the scene center, definition of the image type (day, IR, etc.), sun angles (elevation and azimuth) where applicable; geometric correction applied to the data; type of imagery data used to compute the image center, agency and project names, and frame identification number. There are a limited number of pairs.

Data set name - DAY/NIGHT REGISTERED DATA ON MAGNETIC TAPE

NSSLGC ID 78-041A-01D, DAY/NIGHT REGISTERED DATA

Time period covered - 05/11/78 TO 06/17/79

Quantity of data - 310 REELS OF TAPE

These imagery data are on 9-track, 1600-bpi, band sequential binary tapes and consist of the following images: day visible, day thermal infrared, night thermal infrared, temperature differences (produced by differentiating the radiometric temperatures observed during the night and day passes), and apparent thermal inertia. Each image is processed in an elongated format to provide maximum day/night overlap and may depict a scene as long as 3000 km. Each day/night pair is processed as a separate entity. Each frame contains a 16-step gray scale and annotation as to the date; latitude/longitude of the scene center; definition of the image type; i.e., day, IR, etc.; sun angles (elevation and azimuth) where applicable; geometric correction applied to the data; type of imagery data used to compute the image center, agency and project names, and frame identification number. There are a limited number of pairs.

Data set name - DENSITY PLOTS, 140-240NM, 23-26 MAY 1967

NSSLGC ID 67-0508-01A, PLOTS, 140-240 NM, MAY 67, FICHE

Time period covered - 05/23/67 TO 05/26/67

Quantity of data - 9 CARDS OF B/W MICROFICHE

This data set consists of reduced density data in the form of density-altitude profiles on semilog plots. There are 96 plots with altitude ranging from 140-260 km. The plots are by orbit (orbits b through 68, with gaps in data coverage) and separated within orbit according to whether their motion was toward or away from perigee. These data are in vol 2, appendix B, of the "Pearson et al., "The Nimbus 1 High Resolution Infrared Radiation and Calibration System Experimental Observations and Calculations," published in 1971. There are 24-25 density profiles on each card and 3-4 cards per day.

Data set name - ACCELEROMETER PLOTS, 140-240 NM, 23-26 MAY 1967

NSSLGC ID 67-0508-01B, ACCELEROMETER PLOTS, MAY 67, FICHE

Time period covered - 05/23/67 TO 05/26/67

Quantity of data - 9 CARDS OF B/W MICROFICHE

This data set consists of reduced data in the form of linear acceleration data long term reference C (TRC) time in seconds, from the accelerometer experiment. One set of graphs is in counts (C), and the other set is in f/sec sq sec. The "counts" graphs are in vol 1, appendix C, and the other graphs, converted to units of acceleration, are in vol 2, appendix A, of Pearson et al., "The Low-C Accelerometer Calibration System Orbital Accelerometer Experiment" (TRF B16604). Experimental data reductions and calculations have been applied to these data. Documentation for reduction procedures used for these data are in chapter 2, vol 1 of this reference.

Data set name - AGENA, CHIU

NSSLGC ID 67-0508-02A, WIND COMPONENT NORMAL TO ORBIT PLANE BELOW 200 KM

Time period covered - 05/25/67 TO 05/27/67

Quantity of data - 9 CARDS OF B/W MICROFICHE

Wind velocity components perpendicular to the orbit plane (inclination 90, deg) were calculated using the satellite yaw angle of attack data. These were calculated on plots prepared by the experimenters' office. On each of eight polar diagrams (4 pole only), several orbits (near perigee) are traced with component wind vectors plotted at regularly spaced intervals. For an orbit of this magnitude, u-winds were calculated, two of the polar diagrams are "double scale" and also constant height lines for the data. These data are on pages 7-36 of section 7, of Pearson et al., "The Low-C Accelerometer Calibration System Orbital Accelerometer Experiment" (TRF B16604). Documentation for reduction of these data is also contained in this paper (section 7). Raw data samples are illustrated in the paper, and more complete raw data make up appendix C of vol 2.

Data set name - WIND COMPONENTS PERPENDICULAR TO ORBIT PLANE BELOW 200 KM, MICROFICHE

NSSLGC ID 67-0508-02A, WIND COMPONENT NORMAL TO ORBIT PLANE BELOW 200 KM, MICROFICHE

Time period covered - 05/25/67 TO 05/27/67

Quantity of data - 9 CARDS OF B/W MICROFICHE

Wind velocity components perpendicular to the orbit plane (inclination 90, deg) were calculated using the satellite yaw angle of attack data. These were calculated on plots prepared by the experimenters' office. On each of eight polar diagrams (4 pole only), several orbits (near perigee) are traced with component wind vectors plotted at regularly spaced intervals. For an orbit of this magnitude, u-winds were calculated, two of the polar diagrams are "double scale" and also constant height lines for the data. These data are on pages 7-36 of section 7, of Pearson et al., "The Low-C Accelerometer Calibration System Orbital Accelerometer Experiment" (TRF B16604). Documentation for reduction of these data is also contained in this paper (section 7). Raw data samples are illustrated in the paper, and more complete raw data make up appendix C of vol 2.

Data set name - HIR METEOROLOGICAL RADIATION DATA ON TAPE

NSSLGC ID 64-052A-03A, NIMBUS HIR MET. RADIATION TAPE

Time period covered - 08/29/64 TO 09/22/64

Quantity of data - 238 REELS OF TAPE

This experiment-supplied radiation data set consists of 7-track, 1600-bpi, binary magnetic tapes that were generated on an IBM 7094 computer. It contains radiation values emitted within the 3.5- to 4.1-micrometer thermal window. The first record of each orbit contains information about the orbit. Subsequent records contain radiation values, in decay and times of each observation. Detailed description of this data set is contained in 64-052A-030.

Data set name - HIR METEOROLOGICAL RADIATION TAPE

NSSLGC ID 64-052A-03B, NIMBUS HIR MET. RADIATION TAPE

Time period covered - 08/28/64 TO 09/22/64

Quantity of data - 186 FEET OF B/W NEGATIVES

This set of 70-micrometer film strips contains orbital night-time cloud cover or the earth's surface temperature within the 3.5- to 4.1-micrometer atmospheric window. The film strips are available in the form of either positive or negative transparencies or as positive prints. Each picture is grided with geographic coordinates. Data set 64-052A-03C contains contact prints of all available photofacsimile film strips and should be consulted before ordering specific data.

Data set name - HIR PHOTOGRAMMIE FILM STRIPS

NSSLGC ID 64-052A-03B, NIMBUS HIR MET. RADIATION TAPE

Time period covered - 08/28/64 TO 09/22/64

Quantity of data - 4 CARDS OF B/W MICROFICHE

The catalog named "Photofacsimile Film Strips" in the first of two volumes of the "Nimbus 1 High Resolution Radiation
Data set name - HRIR DATA CATALOG. RADIATION TAPES

NSSDC ID 66-040A-030, HRIR RAD. TAPE CAT ON MICROFICHE

Time period covered - 08/26/64 to 09/22/64

Quantity of data - 2 CARDS OF B/W MICROFICHE

The catalog named "Nimbus Meteorological Radiation Tapes" in the second of two volumes of the "Nimbus II High Resolution Radiation Data Catalog and Users' Manual." It contains a complete description of the experiment, performance, and data acquisition and processing. It also contains a complete index to the tapes and to their calibration, location, and format.

Data set name - HRIR 2 DATA CATALOG

NSSDC ID 66-0404-069, DATA CATALOG OF EXPERIMENT OPERATIONS

Time period covered - 05/15/66 to 07/28/66

Quantity of data - 29 CARDS OF B/W MICROFICHE

The "Nimbus II Data Catalog" was published to document meteorological data acquired by the Nimbus 2 meteorological satellite. The catalog presents geographic location and time information concerning the satellite and/or photograpic forms of the data from the Advanced Vidicon Camera System (AVCS), the High-Resolution Infrared Radiometer (HRIR), and the Medium-Resolution Infrared Radiometer (MRIR). This catalog does not contain background information concerning the satellite nor is there a description of the experiments or data formats. Such information is contained in the "Nimbus 2 Users' Guide," which is necessary adjacent to each catalog volume.

Data set name - HRIR METEROLOGICAL RADIATION DATA ON TAPE

NSSDC ID 66-040A-03A, NIMBUS HRIR MET. RADIATION TAPES

Time period covered - 05/15/66 to 11/15/66

Quantity of data - 1700 REELS OF TAPE

This experiment-supplied radiance data set consists of 7-track, 800-kpi, binary magnetic tapes that were generated on an IBM 7044 computer. It contains radiance values emitted within the 3.5- to 4.1-micrometer atmospheric window. The first record of each orbit contains information about the orbit. Subsequent records contain radiance values, location, and time of each observation. The format of the tapes is given in appendix A of the "Nimbus II Users' Guide.

Data set name - HRIR PHOTOFACSIMILE FILM STRIPS

NSSDC ID 66-040A-03B, HRIR PHOTOFACSIMILE FILM STRIPS

Time period covered - 05/15/66 to 11/15/66

Quantity of data - 1700 FEET OF B/W NEGATIVES

This set of 70-mm photofacsimile film strips contains orbital nighttime cloud cover or the earth's surface temperature from emission within the 3.5- to 4.1-micrometer atmospheric window. The film strips are available in the form of either positive or negative transparencies or as positive prints. Each picture sheet is gridded with geographic coordinates and covers a distance approximately from pole to pole. As a result of direct morning of data, the pictures are degraded considerably near the south polar regions. The processing techniques used to produce the data set and a full description of the data are contained in section 3.4 of the "Nimbus II Users' Guide." For an index of all available data see "The Nimbus II High Resolution Infrared Data World Montage Catalog."
that are miniature reproductions of the daytime television pictures taken daily from successive orbits. The satellite orbit number is printed below each scene. Transparent grid overlays in each scene (and one for the Western Hemisphere) provide geographic references. These montages are useful for browse purposes and may be directly useful for research. However, this catalog does not contain background information on the spacecraft or experiment, nor in there is a description of the technique used in processing the data. Such information is contained in the "Nimbus II Users Guide," which should be used with this catalog when ordering data.

DATA SET NAME: NIMBUS 3 DATA CATALOG ON MICROFICHE

NSSDC ID 69-037A-000, DATA CAT EXPERNAT OPERATNS, FICHE

Time period covered - 04/14/69 TO 05/31/70
Quantity of data - 55 CARDS OF B/W MICROFICHE

This data set consists of the "Nimbus III Data Catalog," documenting data acquired by the Nimbus 3 meteorological satellite. Brief summaries of the data are given in section 1 of each volume, and a listing of experiment-on-time series is presented in section 2 of each volume. The catalog consists of six volumes: volume 1, April 14 to May 31, 1969; volume 2, June 1 to August 14, 1969; volume 3, August 15 to November 1, 1969; volume 4, November 2 to January 31, 1970; volume 5, February 1 to May 31, 1970; and volume 6, June 1 to August 14, 1970. However, IDCs catalog is limited to the first five volumes. The catalog contains background information on the spacecraft or experiment, nor in there is a description of the technique used in processing the data. Such information is contained in the "Nimbus III User's Guide," which should be used with this catalog when ordering data.

DATA SET NAME: NIMBUS 3 INFRARED INTERFEROMETER SPECTROMETER (IRIS)

NSSDC ID 69-037A-02A, NIGHTTIME PHOTOACOUCAL FILM STRIPS

Time period covered - 04/22/69 TO 01/31/70
Quantity of data - 3235 FEET OF B/W NEGATIVES

This data set consists of nighttime High Resolution Infrared Radiometer (HIR) data on 70-mm photofacsimile film strips. The data were measured at 3.4 to 4.2 micrometers. The film strips are uniform or variable density exposure, positive or negative copies, in either a transparency or paper print. The variable density exposure film strips were produced with enhanced contrast. The negative density exposure film strips are true copies of the archived HIR film strips. Each film strip is grided with geographic coordinates and is identified by orbit number and time. For a complete description of the photofacsimile film strips, see section 3.4.1 in "The Nimbus III User's Guide," available from NSSDC.
Data set name - MIRI PHOTOSENSITIVE FILMS

NSSDC ID 69-037A-05A, MIRI PHOTOSENSITIVE FILMS
Time period covered - 04/14/69 TO 02/05/70

This set of photosensitive film strips is available as 4-by-5-in. positive or negative film transparencies or positive paper prints. Data measured by five channels (5.5-7.0, 10-11, 14.5-15.5, 20-23, and 0.2-4.0 micrometers) are displayed along with gridding, time, and a calibration gray-scale strip. Prints of these photosensitive data are contained in data set 69-037A-05C.

Data set name - MIRI METEOROLOGICAL RADIATION TAPES

NSSDC ID 69-037A-05B, MIRI METEOR. RADIATION TAPES
Time period covered - 04/15/69 TO 02/04/70

Quantity of data - 368 REELS OF TAPE

The Medium-Resolution Infrared Radiometer (MIR) data are on 7-track, 800-bpi, binary magnetic tapes that contain Nimbus Meteorological Radiation Tapes (MRIR) data. The data consist of radiances measured at 5.6-5.9, 10.1-11.1, 14-16, 5-30, and 0.2-4.0 micrometers. Latitude, longitude, texture, and other orbital and telemetry data are also included. There is one file for each orbit of data. The first record in each file contains the documentation for the succeeding data records. The documentation on the file can be found in section 4 of "The Nimbus III User's Guide."

Data set name - NIMBUS 4 DATA CATALOGS ON MICROFICHE

NSSDC ID 69-037A-05C, MHD RES IN DATA CATALOGS, FICHE
Time period covered - 04/14/69 TO 05/31/70

Quantity of data - 62 CARDS OF B/W MICROFICHE

This data set consists of a six-volume catalog called "The Nimbus 4 Data Catalog." It pictorially describes and indexes the data from the Nimbus 4 Medium-Resolution Infrared Radiometer (MRIR) experiment. Each data volume contains data for a specific month of the Nimbus 4 orbital period. Each data volume consists of nine sectors, each of which contain data for a specific month. Each data volume contains daily black and white pictures of the Earth at different times of day. These pictures, along with the associated geographical and meteorological data, are contained in section 4 of "The Nimbus 4 User's Guide," which should be used in conjunction with the data catalog.

Data set name - NIMBUS 3 DATA CATALOGS ON MICROFICHE

NSSDC ID 69-037A-05D, MHD RES IN DATA CATALOGS, FICHE
Time period covered - 04/14/69 TO 05/31/70

Quantity of data - 62 CARDS OF B/W MICROFICHE

This data set consists of a six-volume catalog called "The Nimbus 3 Data Catalog." It pictorially describes and indexes the data from the Nimbus 3 Medium-Resolution Infrared Radiometer (MRIR) experiment. Each data volume contains data for a specific month of the Nimbus 3 orbital period. Each data volume consists of nine sectors, each of which contain data for a specific month. Each data volume contains daily black and white pictures of the Earth at different times of day. These pictures, along with the associated geographical and meteorological data, are contained in section 4 of "The Nimbus 3 User's Guide," which should be used in conjunction with the data catalog.

Data set name - SIRS RADIANCE VALUES ON TAPE

NSSDC ID 69-037A-05A, SIRS RADIANCE TAPE
Time period covered - 04/14/69 TO 06/19/70

Quantity of data - 60 REELS OF TAPE

This data set contains radiance values that were generated on a CDC 6600 computer onto 7-track, 550-bpi, binary magnetic tapes. The first record of each orbit contains information identifying the spacecraft and the type of instrument status throughout the orbit. The following records contain the radiance data along with calibration data. The data are classified in sections by latitude, longitude, and time of each observational observation. For more complete description of the data format and a discussion of the data quality, see vol 1 of both "The Nimbus 3 User's Guide" and "The Nimbus 3 Data Catalog." A set of derived temperature profiles is also available from the National Climatic Data Center, Asheville, North Carolina.

Data set name - MIRI 4 DATA CATALOGS

NSSDC ID 70-025A-00C, DATA CATALOG OF TEMPERATURE OPERATING
Time period covered - 04/18/70 TO 04/30/72

Quantity of data - 48 CARDS OF B/W MICROFICHE

This data set consists of a series of volumes in the "Nimbus 4 Data Catalog." It contains data acquired by the Nimbus 4 meteorological satellite. Brief summaries of experiment operations are presented in section 1 of each volume. Section 2 of each volume contains a listing of satellite equatorial crossing times and on-off times for the various experiments. Vol 1 covers the period April 18 to May 22, 1970; vol 2, May 23 to June 30, 1970; vol 3, July 1 to August 31, 1970; vol 4, September 1 to October 31, 1970; vol 5, November 1 to December 31, 1970; vol 6, January 1 to February 28, 1971; vol 7, March 1 to April 30, 1971; and vol 8, May 1, 1971, to April 30, 1972.

Data set name - NIMBUS 4 BRANCHFLOWER IMAGE DISSECTOR CAMERA SYSTEM (IDC5)

NSSDC ID 70-025A-05A, IDC5 WORLD MONITOR CAT, MICROFICHE
Time period covered - 04/18/70 TO 04/08/71

Quantity of data - 48 CARDS OF B/W MICROFICHE

This catalog contains daily black and white pictorial montages that are made up of adjacent patches of data from successive orbits. The satellite orbit number is printed below each image. A transparent grid overlay provides geographic reference. These montages may assist a user in identifying specific data and may be directly useful for some research. The catalog consists of eight volumes, seven of which contain montages. It does not, however, contain background information on the spacecraft experiment, nor is there a description of the techniques used in processing the data. The "Nimbus 4 User's Guide" should be used with this catalog when ordering data.

Data set name - NIMBUS 4, HANEL INFRARED INTERFEROMETER SPECTROMETER (IRIS)

NSSDC ID 70-025A-03A, IRIS RADIANCE TAPES
Time period covered - 04/09/70 TO 01/30/71

Quantity of data - 466 REELS OF TAPE

This set of calibrated radiance data consists of 9-track, 1600-bpi magnetic tapes that were generated from the data recorded on an IBM 360 computer. The tapes contain thermal emission of the earth-atmosphere system for wavelengths between 400 and 1600 over 51 wavelengths. The tapes also contain documentation information, reference calibration, average instrument temperatures, and a summary for each orbital pass. Additional description of the data can be found in section 4 of "The Nimbus 4 User's Guide," TR 800681.

Data set name - NIMBUS 4, HEATH BACKSCATTER ULTRAVIOLET (BV) SPECTROMETER

NSSDC ID 70-025A-05B, BV RADIANCE VALUES (U-TAPE)
Time period covered - 04/10/70 TO 05/06/77

Quantity of data - 43 REELS OF TAPE

This set of radiance data is contained on 9-track, 1600-bpi, EBCDIC magnetic tapes that were created on an IBM 360 computer. The data are calibrated for radiance at wavelengths between 0.25 and 0.34 micrometer in 32-nm scans. The data set also contains quality flags, dark current analyses of the data.
This set of raw data is contained on 9-track, 1600-bpi, EBCDIC magnetic tapes that were created on an IBM 360/91 computer.

These data consist of: tidal data, orbit, altitude, latitude, longitude, and zonal mean values for long-term trend study. Also, dark current counts that are zenith angle dependent and that affect the derivation of ozone profiles, especially at high altitudes, are flagged. For further information, refer to the "Note to Users of BNV Tapes," issued in 1987.

Data set name - ZONAL MEANS TAPE (ZMT)

NSSID 70-025A-051, ZONAL MEANS TAPE (ZMT)

Time period covered - 04/10/70 TO 05/02/77

Quantity of data - 1 REEL OF TAPE

This set of averaged ozone data was supplied by the NASA Ozone Processing Team on one 9-track, 1600-bpi, tape, in IBM 3081 binary format. It contains daily, weekly, and seasonal averages of total ozone, mixing ratios, and reflectivities in geodetic coordinates. The input data source is the High Density Bulk Ozone (HD00V; NSSID 70-025A-050) Data set.

The data values are given for each of the same 19 pressure levels (0.3, 0.4, 0.5, 0.7, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, 7.0, 10, 15, 20, 30, 40, 50, 70, and 100 mbar) for 10-deg latitudinal zones from 80 deg S to 60 deg N. There are also standard deviations, maximum and minimum values, and sample size. This data set was reprocessed using the same algorithm as that used to prepare the Nimbus-7 Solar Backscatter Ultraviolet (SBUV) data set (78-098A-097). Their formats are identical, but users should note that ground truth data had been used in adjusting the BNV albedos for changes in instrument sensitivity, thus rendering uncertainty in the derived ozone values for long-term trend study. Also, dark current counts that are zenith angle dependent and that affect the derivation of ozone profiles, especially at high altitudes, are flagged. For further information, refer to the "Note to Users of BNV Tapes," issued in 1987.

Data set name - COMPRDSSED OZONE PROFILE (COPDZ) DATA ON MAGNETIC TAPE

NSSID 70-025A-051, COMPRDSSED OZONE PROFILE TAPE (COPDZ)

Time period covered - 04/10/70 TO 05/06/77

Quantity of data - 4 REELS OF TAPE

This set of ozone data was supplied by the NASA Ozone Processing Team on 9-track, 1600-bpi tapes, in IBM binary format. The data set consists of the reprocessed version of the HDO0V (NSSID 70-025A-050). Measured radiiances, absorption coefficients, and instrument calibration for 13 wavelengths (0.25 to 0.34 micrometer) are contained in the header record. Data records contain earth-located total, derived ozone amounts and without IR cloud height information, reflectivity, ozone mixing ratio, and layer ozone amounts. The mixing ratios are given at 19 pressure levels (0.3, 0.4, 0.5, 0.7, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, 7.0, 10, 15, 20, 30, 40, 50, 70, and 100 mbar). The layer ozone amounts are given for 12 layers: 0.0-0.24, 0.24-0.49, 0.49-0.99, 0.99-1.98, 1.98-3.96, 3.96-7.92, 7.92-15.8, 15.8-31.7, 31.7-63.3, 63.3-127, 127-253, and 253-1013 mbar. This data set was reprocessed using the same algorithm as that used to process the Nimbus-7 Solar Backscatter Ultraviolet (SBUV) data set (78-098A-097). Their formats are identical, but users should note that ground truth data had been used in adjusting the BNV albedos for changes in instrument sensitivity, thus rendering uncertainty in the derived ozone values for long-term trend study. Also, dark current counts that are zenith angle dependent and that affect the derivation of ozone profiles, especially at high altitudes, are flagged. For further information, refer to the "Note to Users of BNV Tapes," issued in 1987.

Data set name - TOTAL AND PROFILE OZONE DATA (HD00N) ON MAGNETIC TAPE

NSSID 70-025A-051, TOTAL + PROFILE OZONE TAPE (HD00N)

Time period covered - 04/10/70 TO 05/06/77

Quantity of data - 15 REELS OF TAPE

This set of ozone data was supplied by the NASA Ozone Processing Team on 9-track, 1600-bpi tapes, in IBM binary format. It contains, scan by scan and orbit by orbit, total ozone, mixing ratios, ground reflectivity and, layer ozone amounts. The mixing ratios are given at 19 pressure levels: 0.3, 0.4, 0.5, 0.7, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, 7.0, 10, 15, 20, 30, 40, 50, 70, and 100 mbar. The layer ozone amounts are given for 12 layers: 0.0-0.24, 0.24-0.49, 0.49-0.99, 0.99-1.98, 1.98-3.96, 3.96-7.92, 7.92-15.8, 15.8-31.7, 31.7-63.3, 63.3-127, 127-253, and 253-1013 mbar. This data set was reprocessed using the same algorithm as that used to process the Nimbus-7 Solar Backscatter Ultraviolet (SBUV) data set (78-098A-097). Their formats are identical, but users should note that ground truth data had been used in adjusting the BNV albedos for changes in instrument sensitivity, thus rendering uncertainty in the derived ozone values for long-term trend study. Also, dark current counts that are zenith angle dependent and that affect the derivation of ozone profiles, especially at high altitudes, are flagged. For further information, refer to the "Note to Users of BNV Tapes," issued in 1987.

Data set name - ZONAL MEANS TAPE (ZMT)

NSSID 70-025A-051, ZONAL MEANS TAPE (ZMT)

Time period covered - 04/10/70 TO 05/02/77

Quantity of data - 1 REEL OF TAPE

This set of averaged ozone data was supplied by the NASA Ozone Processing Team on one 9-track, 1600-bpi tape, in IBM 3081 binary format. It contains daily, weekly, and seasonal averages of total ozone, mixing ratios, and reflectivities in geodetic coordinates. The input data source is the High Density Bulk Ozone (HD00V; NSSID 70-025A-050). Data values are given for each of the same 19 pressure levels (0.3, 0.4, 0.5, 0.7, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, 7.0, 10, 15, 20, 30, 40, 50, 70, and 100 mbar) for 10-deg latitudinal zones from 80 deg S to 60 deg N. There are also standard deviations, maximum and minimum values, and sample size. This data set was reprocessed using the same algorithm as that used to prepare the Nimbus-7 Solar Backscatter Ultraviolet (SBUV) data set (78-098A-097). Their formats are identical, but users should note that ground truth data had been used in adjusting the BNV albedos for changes in instrument sensitivity, thus rendering uncertainty in the derived ozone values for long-term trend study. Also, dark current counts that are zenith angle dependent and that affect the derivation of ozone profiles, especially at high altitudes, are flagged. For further information, refer to the "Note to Users of BNV Tapes," issued in 1987.

Data set name - SELECTIVE CHIPPER RADIOMETER RADIANCE TAPES

NSSID 70-025A-10A, SCR RADIANCE TAPES

Time period covered - 07/27/70 TO 01/30/73

Quantity of data - 51 REELS OF TAPE

This data set contains calibrated, earth-located radiances that were prepared by the experimenter's office on 7-track, IBM 3081 magnetic tapes. Measured radiances, measured by 16 channels at 2.3-15 micrometers with a ground resolution of 25 km by 60 km and smoothed across regions of cloud. They are grouped into major frames along with orbit, latitude, longitude, and some ancillary data. Each tape contains approximately 10 days of data.

Data set name - THER 11.5-MICRON PHOTOFLASHMIE FILM STRIPS

NSSID 70-025A-10A, SCR RADIANCE TAPES

Time period covered - 07/27/70 TO 01/30/73

Quantity of data - 51 REELS OF TAPE

This data set contains calibrated, earth-located radiances that were prepared by the experimenter's office on 7-track, IBM 3081 magnetic tapes. Measured radiances, measured by 16 channels at 2.3-15 micrometers with a ground resolution of 25 km by 60 km and smoothed across regions of cloud. They are grouped into major frames along with orbit, latitude, longitude, and some ancillary data. Each tape contains approximately 10 days of data.
NSSDC ID 70-025A-02A, 11.5-MICRON CLOUD MONTAGE, FILM

Time period covered - 04/18/70 to 04/08/71

Quantity of data - 8049 FEET OF B/W NEGATIVES

These montages of brightness temperatures, measured at 11.5 micrometers, are available on 70-mm photocollimation film strips. Positive or negative copies of the film strips are available in uniform density exposure in either transparency or paper prints. Daytime and nighttime orbital swaths are displayed in strips, each corresponding to a distance approximately from pole to pole and a width from horizon to horizon. The ground resolution of 7.7 km at nadir decreases as the horizontal distance from the sub-satellite track increases.

Each film strip is gridded with geographic coordinates and is identified by orbit number, time, and an indication of whether it is daytime (D) or nighttime (N). The strips are arranged chronologically on 100- to 500-ft rolls of film. Additional descriptions of the data can be found in section 3.4.1 of "The Nimbus IV Data Catalog." (TRF 806586) and in "The Nimbus IV Data Catalog." (NSSDC ID 70-025A-02C (TRF 806582.)

Data set name - THIR 6.7-MICRON PHOTOCOLLIMATION FILM STRIPS

NSSDC ID 70-025A-02B, 6.7-MICRON CLOUD MONTAGE, FILM

Time period covered - 04/18/70 to 04/08/71

Quantity of data - 4419 FEET OF B/W NEGATIVES

These montages of brightness temperatures, measured at 6.7 micrometers, are available on 70-mm photocollimation film strips. Positive or negative copies of the film strips are available in uniform density exposure in either transparency or paper prints. Daytime and nighttime orbital swaths are displayed in strips, each corresponding to a distance approximately from pole to pole and a width from horizon to horizon. The ground resolution of 22.6 km at nadir decreases as the horizontal distance from the sub-satellite track increases.

Each film strip is gridded with geographic coordinates and is identified by orbit number, time, and an indication of whether it is daytime (D) or nighttime (N). The strips are arranged chronologically on 100- to 500-ft rolls of film. Additional descriptions of the data can be found in section 3.4.1 of "The Nimbus IV User's Guide." (TRF 806861) and in "The Nimbus IV Data Catalog." (NSSDC ID 70-025A-02C (TRF 806582.)

Data set name - THIR DATA CATALOGS ON MICROfiche

NSSDC ID 70-025A-02C, NIMBUS 4 THIR DATA CATALOGS, FICHE

Time period covered - 04/18/70 to 04/08/71

Quantity of data - 48 CARDS OF B/W MICROfiche

This data set consists of a series of volumes called "The Nimbus 4 Data Catalog. 5" pictorially describes data sets that are available at the Nimbus Data and Information Center (NDIC) and the Temperature-Humidity Infrared Radiometer (THIR) experiments. The data are arranged in sequential order by each volume, which also includes superimposed grids for reading key data. These montages display the period April 1970 to April 1972. This data set should be used in conjunction with "The Nimbus IV User's Guide." (TRF 806861)

Data set name - 11.5-MICRON THIR RADIATION TAPES

NSSDC ID 70-025A-02D, 11.5-MICRON CLOUD RADIANCE TAPE

Time period covered - 04/10/70 to 02/13/71

Quantity of data - 1293 REELS OF TAPE

This set of brightness temperatures is available on 7-track, 800-bpi, binary magnetic tapes. These tapes, also referred to as Nimbus Meteological Radiation Tapes (MMR-THIR), are produced on an IBM 360 computer and contain one orbit of data per file. The first record of each file contains documentation and information describing the orbit. Subsequent records contain brightness temperatures that are measured at 11.5 micrometers with a ground resolution of 7.7 km. There are also locations and time of each observation.

Data set name - 6.7-MICRON THIR RADIATION TAPES

NSSDC ID 70-025A-02E, 6.7-MICRON CLOUD RADIANCE TAPE

Time period covered - 04/14/70 to 03/25/71

Quantity of data - 1032 REELS OF TAPE

This set of brightness temperatures is available on 7-track, 800-bpi, binary magnetic tapes. These tapes, also referred to as Nimbus Meteological Radiation Tapes (MMR-THIR), are produced on an IBM 360 computer and contain one orbit of data per file. The first record of each file contains documentation and information describing the orbit. Subsequent records contain brightness temperatures that are measured at 6.7 micrometers with a ground resolution of 22.6 km. There are also locations and time of each observation.

NIMBUS 4, WARK
SATELLITE INFRARED SPECTROMETER (SIRS)

Data set name - SATELLITE INFRARED SPECTROMETER RADIANCE TAPES

NSSDC ID 70-025A-04A, SIRS RADIANCE TAPES

Time period covered - 04/08/70 to 04/08/71

Quantity of data - 70 REELS OF TAPE

This set of radiances is contained on 7-track, 558-bpi, binary magnetic tapes that were created on a CDC 6600 computer. An identical set of 800-bpi tapes generated on an IBM 7094 is also available. The data set contains radiances that were measured at 11-36 micrometer wavelengths. Unusable, erroneous, or erroneous. For further description of the tapes forested see section 3.4.3, vol 1, "The Nimbus 4 Data Catalog." (TRF 806586)

Data set name - DATA CATALOGS OF EXPERIMENT OPERATIONS

NSSDC ID 70-097A-000, DATA CATALOG OF EXPERIMENT OPERATIONS

Time period covered - 12/19/72 to 07/31/74

Quantity of data - 78 CARDS OF B/W MICROfiche


NIMBUS 5, HODCUTHON
SELECTIVE CHOPPER RADIDMETR (SCR)

Data set name - SELECTIVE CHOPPER RADIDMETR RADIANE

NSSDC ID 70-097A-02A, SCR RADIANCE TAPES

Time period covered - 12/13/72 to 12/26/74

Quantity of data - 70 REELS OF TAPE

This set of data contains calibrated, earth-located radiances that were prepared by the grumer's office on 7-track, 800-bpi, binary magnetic tapes. The radiances, measured by 36 channels at 2.3-15 micrometers with a ground resolution of 25 km, are closely measured and smoothed across regions of uniform temperature. They are grouped into major frames along with orbit, altitude, latitude, longitude, and some ancillary data. Each tape contains approximately 10 days of data.

NIMBUS 5, HODVIS
SURFACE COMPOSITION MAPPING RADIDMETR (SCRM)

ORIGINAL PAGE IS OF POOR QUALITY
Data set name - SURFACE COMPOSITE MAPPING RADIODIOMETER (SCMR) DATA ON MAGNETIC TAPE

NSSDC ID 72-097A-08A, SFC COMPOSITION MAPPING RADIAOERIDES

Time period covered - 12/11/72 TO 12/20/72

Quantity of data - 45 REELS OF TAPE

This data set of earth surface radiances was generated on an IBM 360 computer and put on 9-track, 1600-bpi, EBCDIC magnetic tapes. It contains calibrated and located IR radiances and brightness temperatures at 660 x 660 km ground resolution. Data are grouped in 7-win observations in the Mercator projection, covering globally from 80 deg S. to 80 deg N. for each day of observation, there is a varying number of archival magnetic tapes.

Nimbus 5, Mcculloch
TEMPERATURE/HUMIDITY INFRARED RADIODIOMETER (THIR)

Data set name - 11.5-MICRON THIR PHOTOFACTSIMILE FILM

NSSDC ID 72-097A-08A, 11.5-MICRON CLOUD MONTAGE, FILM

Time period covered - 12/15/72 TO 03/12/75

Quantity of data - 18544 FEET OF B/W NEGATIVES

These montages of brightness temperatures, measured at 11.5 micrometers, are available on 70-mm photofactsimile film strips. Positive or negative copies of the film strips are available in uniform density exposure in either transparencies or paper prints. Daytime and nighttime orbital aspects are displayed in strips, each corresponding to a distance approximately from pole to pole and a width from horizon to horizon. The ground resolution of 5.2 km at nadir decreases as the horizontal distance from the subsatellite track increases. Each film strip is gridded with geographic coordinates and is identified by orbit number, time, and an indication of whether it is daytime (D) or nighttime (N). The strips are arranged chronologically on 100- to 500-ft rolls of film.

Data set name - 6.7-MICRON THIR PHOTOFACTSIMILE FILM

NSSDC ID 72-097A-08B, 6.7-MICRON CLOUD MONTAGES, FILM

Time period covered - 12/15/72 TO 03/12/75

Quantity of data - 19213 FEET OF B/W NEGATIVES

These montages of brightness temperatures, measured at 6.7 micrometers, are available on 70-mm photofactsimile film strips. Positive or negative copies of the film strips are available in uniform density exposure in either transparencies or paper prints. Daytime and nighttime orbital aspects are displayed in strips, each corresponding to a distance approximately from pole to pole and a width from horizon to horizon. The ground resolution of 5.2 km at nadir decreases as the horizontal distance from the subsatellite track increases. Each film strip is gridded with geographic coordinates and is identified by orbit number, time, and an indication of whether it is daytime (D) or nighttime (N). The strips are arranged chronologically on 100- to 500-ft rolls of film.

Data set name - 11.5 MICRON THIR DATA TAPE

NSSDC ID 72-097A-08C, 11.5-MICRON CLOUD RADIANCE TAPE

Time period covered - 12/15/72 TO 02/07/74

Quantity of data - 1866 REELS OF TAPE

This set of brightness temperatures is available on 7-track, 800-bpi, binary magnetic tapes. These tapes, also referred to as Nimbus Meteorological Radiation tapes (NMMR-THIR), are produced on an IBM 360 computer and contain one orbit of data per file. The first record of each file contains documentation and information describing the orbit. Subsequent records contain brightness temperatures that are measured at 11.5 micrometers with a ground resolution of 8.2 km. There are also locations and times of each observation.

Data set name - 6.7 MICRON THIR DATA TAPE

NSSDC ID 72-097A-08D, 6.7-MICRON CLOUD RADIANCE TAPE

Time period covered - 12/19/72 TO 02/07/74

Quantity of data - 1030 REELS OF TAPE

This set of brightness temperatures is available on 7-track, 800-bpi, binary magnetic tapes. These tapes, also referred to as Nimbus Meteorological Radiation tapes (NMMR-THIR), are produced on an IBM 360 computer and contain one orbit of data per file. The first record of each file contains documentation and information describing the orbit. Subsequent records contain brightness temperatures that are measured at 6.7 micrometers with a ground resolution of 22.5 km. There are also locations and times of each observation.

Nimbus 5, Smith
INFRARED TEMPERATURE PROFILE RADIODIOMETER

Data set name - INFRARED TEMPERATURE PROFILE RADIANCE OBSERVATIONS ON MAGNETIC TAPE

NSSDC ID 72-097A-01A, RADIANCE OBSERVATIONS ON TAPE

Time period covered - 02/14/75 TO 09/30/75

Quantity of data - 1 REEL OF TAPE

This data set contains calibrated, earth-located radiances that were supplied by the experimenter's office on 7-trick, 800-bpi, binary magnetic tapes. This data set includes all infrared observations from geosynchronous orbit. The original tapes have been compressed by NSSDC onto one 9-track, 1600-bpi tape.

Nimbus 5, Steaclin
MICROWAVE SPECTROMETER (NEMS)

Data set name - MICROWAVE SPECTROMETER OUTPUT TAPES (NEMSOT)

NSSDC ID 72-097A-03A, NEMS OUTPUT TAPES (NEMSOT)

Time period covered - 12/18/72 TO 10/31/73

Quantity of data - 31 REELS OF TAPE

The Nimbus Microwave Spectrometer (NEMS) data are available on 9-track, 1600-bpi magnetic tapes. Also referred to as NEMS Output Tapes (NEMSOT), the data were produced by the experimenter on an IBM 360/165 computer. They contain surface reflectivity, water vapor, liquid water, thickness, temperature at standard pressure levels, surface brightness temperature, and surface type information. Data are grouped into 16-s. earth-viewing frames. National Meteorological Center grid data, interpolated in time and space to the NEMS measurement point, are sometimes included. Each tape contains 2 to 6 days of data. These data are also available on microfiche as data set 72-097A-03B.

Data set name - NEMS OUTPUT TAPES ON MICROFICHE

NSSDC ID 72-097A-03B, NEMS OUTPUT TAPE PP (NEMSOT) ON MICROFICHE

Time period covered - 12/18/72 TO 10/25/73

Quantity of data - 160 CARDS OF B/W MICROFICHE

This set of Nimbus Microwave Spectrometer (NEMS) data were generated from the NEMS Output Tapes (NEMSOT); NSSDC ID 72-097A-03B. This set contains printsouts of infrared and inverted meteorological parameters, including surface reflectivity, water vapor, liquid water, thickness, temperature at standard pressure levels, surface brightness temperature, and surface type information. Data are grouped into 16-s. earth-viewing frames. National Meteorological Center grid data, interpolated in time and space to the NEMS measurement point, are sometimes included.

Data set name - NEMS BRIGHTNESS TEMPERATURE DATA ON MICROFICHE

NSSDC ID 72-097A-03C, NEMS BRIGHTNESS TEMP. - MICROFICHE

Time period covered - 12/17/72 TO 12/31/73

Quantity of data - 93 CARDS OF B/W MICROFICHE

This set of brightness temperatures was generated by the experimenter on an IBM 360 computer and archived on microfiche.
in both graphic and tabular form. Brightness temperatures for each of the five experiment channels (29, 31, 54, 85, and 107 GHz) are displayed in 16-a, earth-viewing frames. The data, time, latitude, and longitude are also printed after every 14 data points. Refer to section 1.7, vol 1, of "The Nimbus 5 Data Catalog" (TRF B17697) for examples.

NIMBUS 5, WILHEIT, JR ELETRICALLY SCANNING MICROWAVE RADIOMETER (ESMR)

Data set name - ELECTRICALLY SCANNING MICROWAVE RADIOMETER (ESMR)

NSSDC ID 72-097A-04A, ESMR CALIB BRIGHT TEMP (CBT) TAPE

Time period covered - 12/11/72 TO 05/15/77

Quantity of data - 103 REELS OF TAPE

This data set contains brightness temperature data on 9-track, 1600-bpi, binary tapes that were generated by IBM 360 computers. It consists of calibrated brightness temperatures measured at 19.35 GHz during each 4-a scan of the earth. The resolution is 25 x 25 km near nadir, degrading to 180 km cross-track by 45 km down-track at the ends of the scan. There is also information on geographic locations and time of observations. Each tape contains 16 days of data.

Data set name - SELECTED ESMR COLOR IMAGES

NSSDC ID 72-097A-04B, SELECTED ESMR COLOR IMAGES

Time period covered - 12/15/72 TO 02/10/73

Quantity of data - 43 COLOR NEGATIVE FRAMES

This data set consists of false color composites that depict terrestrial brightness temperatures in the range of 363 to 310 K. The data are displayed using either polar or Mercator projection, with each frame representing observations from 1 day (15 orbits). Horizontal resolution of the data varies from 25 to 180 km, depending on the sensor's viewing angle. These data are normally available in 8 x 10 in positive or negative transparencies and prints. An index of the days and areas for which data are available can be found in table 3 of "The Nimbus 5 Data Catalog," vol 2.

Data set name - ESMR 70 MH PHOTOFACSIMILE FILM

NSSDC ID 72-097A-04C, ESMR 70 MH PHOTOFACSIMILE FILM

Time period covered - 12/11/72 TO 05/14/75

Quantity of data - 9094 FEET OF B/W NEGATIVES

This set of brightness temperatures is supplied by the experiment on 70-micron photofacsimile film. Each frame contains a geographic grid and two groups of three parallel stripes of temperature data containing one-half of the orbital data. The spatial coverage is identical in each group, but each strip has a different dynamic range, false color palette: 100-200 K, 190-270 K, and 250-300 K, respectively. Further description can be found in section 3, vol 1, of "The Nimbus 5 Data Catalog." TRF B17697.

Data set name - SATELLITE-DERIVED GLOBAL OCEANIC RAINFALL

NSSDC ID 72-097A-04D, SATELLITE-DERIVED OCEANIC RAINFALL

Time period covered - 12/11/72 TO 02/28/75

Quantity of data - 6 CARDS OF B/W MICROFICHE

This data set contains quantitative maps of rainfall in a hardbound volume. The maps were derived from the relationship between brightness temperatures and rain rates measured over oceans. Rainfall between December 1972 and February 1975 was averaged by week, month, season, and year. From these maps, an analysis was made of the patterns of rainfall in the Atlantic Pacific. The variations in oceanic rainfall and in latent heat release should provide useful inputs to numerical models used to study aspects of planetary energy and water budget. The atlas was originally printed as GSFC document X111-70-39. Subsequently, it was printed as a NASA document, NASA SP-410. Additional reference describing methods of deriving rainfall rates are available from NSSDC, namely B23474 and B279445.

Data set name - BRIGHTNESS TEMPERATURE AND SEA ICE CONCENTRATION DATA ON MAGNETIC TAPE

NSSDC ID 72-097A-04E, BRIGHTNESS TEMP + SEA ICE CONCENTRATION DATA ON MAGNETIC TAPE

Time period covered - 01/01/73 TO 12/31/76

Quantity of data - 4 REELS OF TAPE

This data set contains sea ice concentrations and brightness temperatures that were generated by an IBM computer using 2650-bpi, 10-inch tape. It is derived from measurements taken at 19-GHz frequency. Calibrated brightness temperatures, sea ice concentrations, and ancillary data such as the sea surface temperatures are presented in a 293 x 293 polar stereographic grid that encloses the 50 deg latitude circle and a 5 deg. latitude circle, respectively. The cell size varies from 32 x 32 km at the pole to 26 x 26 km at 50 deg latitude. Monthly, two-monthly, and yearly data were created for 4 yr from 1973 to 1976, except for 7 mo for which there were insufficient data.

NIMBUS 6, GILLES LIMB RADIANCE INVERSION RADIOMETER

Data set name - INVERTED PROFILE OF TEMPERATURE AND OZONE ARCHIVAL TAPE

NSSDC ID 75-052A-04A, INVR TEMPZON E PRFL ARCH TP(IPAT)

Time period covered - 06/20/75 TO 01/06/76

Quantity of data - 7 REELS OF TAPE

This data set contains temperature and ozone concentration profiles that were inverted from radiance measurements in four spectral regions (9.6, 10.8, 12.2, and 37-micrometer). It provides profiles as a function of pressure for 17 standard levels (from 100 to 0.1 mb) and 9.6 to 64 km. Horizontally, it covers from 64 deg S to 64 deg N at 4-deg increments. Both the temperature and upper level (300 mb) wind data agree with coincident rocket measurements. This data set is provided by the experimenter on seven 9-track, 1600-bpi, IBM binary magnetic tapes.

NIMBUS 5, MCCULLOCH TEMPERATURE/HUMIDITY INFRARED RADIOMETER

Data set name - 6.7 MICRON PHOTOFACSIMILE BLACK AND WHITE 70-MH FILM

NSSDC ID 75-052A-12A, 11.5-MICRON CLOUD MONTAGE, FILM

Time period covered - 07/14/75 TO 02/13/77

Quantity of data - 21993 FEET OF B/W NEGATIVES

This data set consists of brightness temperatures measured at 11.5 microns, for available photofacsimile film strips. Positive or negative copies of the film strips are available in uniform density exposure in either transparencies or paper prints. Daytime and nighttime orbit altitudes are displayed in strips, each corresponding to a distance from pole to pole and a width from horizon to horizon. The ground resolution of 8.2 km at nadir decreases as the horizontal distance from the subsatellite track increases. Each film strip is gridded with geographic coordinates and is identified by orbit number, time, and an indication of whether it is daytime (p) or nighttime (n). The strips are arranged chronologically on 100- to 500-ft rolls of film. For a complete description of the data set, see section 2.4.1 in "The Nimbus 6 User's Guide," TRF B23261.

Data set name - 8.7 MICRON PHOTOFACSIMILE BLACK AND WHITE 70-MH FILM

NSSDC ID 75-052A-12B, 6.7-MICRON CLOUD MONTAGE, FILM

Time period covered - 07/14/75 TO 02/13/77

Quantity of data - 21993 FEET OF B/W NEGATIVES

This data set consists of brightness temperatures measured at 6.7 microns, for available photofacsimile film strips. Positive or negative copies of these film strips are available in uniform density exposure in either transparencies or paper prints. Daytime and nighttime orbit altitudes are displayed in strips, each corresponding to a distance from pole to pole and a width from horizon to horizon. The ground resolution of 22.5 km at nadir decreases as the horizontal...
This set of brightness temperatures is available on 7-track, 800-bpi, binary magnetic tapes. These tapes, also referred to as Nimbus Meteorological Radiation Tapes (NMMRT), are produced on an IBM 360 computer and contain one orbit of data per file. The first record of each file contains documentation and information describing the orbit. Subsequent records contain brightness temperatures that are measured at 6.7 micrometers with a ground resolution of 22.5 km. There are also locations and time of each observation.

Nimbus 6, Smith

High Resolution Infrared Radiation Sounder (HIRS)

Data set name - HIRS BRIGHTNESS TEMPERATURES ON 70-MM FILM

NSSDC ID 75-052A-02A, HIRS BRIGHTNESS TEMP ON 70-MM FILM

Time period covered - 06/13/75 TO 05/26/76

Quantity of data - 1200 FEET OF B/W NEGATIVES

These brightness temperatures, supplied by the experimenter, are recorded as black and white images at either full vertical scale (F) or partial vertical scale (F'). In the F mode an orbit of data, i.e., up to 125 min of data from one of the 17 channels (0.64 and 3.7 to 15 micrometers), is output on a single image. In the F' mode, data are displayed as a portion of the vertical scale used in the F mode; two images are usually needed to display all 125 min of data. Spatial resolution at nadir is about 25 km. Conversion from the 18-bit gray scale to brightness temperatures can be found in a table in each of the first five volumes of the Nimbus 6 Data Catalog. TRF 9200731

Data set name - Merged HIRS/SCAMS rad, TEMP & HUMIDITY SOUNDING DATA FOR CARP DATA SYS TEST (TP)

NSSDC ID 75-052A-02B, HIRS/SCAMS rad, TEMP-HUMIDITY TP

Time period covered - 08/17/75 TO 03/04/76

Quantity of data - 260 REELS OF TAPE

This data set contains calibrated radiances and parameters derived from the High Resolution Infrared Radiometer Sounder (HIRS) and the Scanning Microwave Spectrometer (SCAMS) measurements. Data are saved on an orbit-by-orbit basis. Each orbit contains: 1) calibrated and earth-located HIRS radiances per field-of-view with 30- to 50-km resolution; 2) calibrated and earth-located SCAMS radiances per field-of-view with 180- to 380-km resolution; 3) temperature and humidity sounding retrieval data at standard pressure levels from 1000 to 100 mb; and 4) retrieved water vapor amount and cloud water content. The sounding data also include estimates of clear column radiances, surface albedo, cloud parameters, and longwave flux at approximately 300-m resolution. This data set was generated by the former Goddard Applications Directorate on the Atmospheric and Oceanographic Information Processing System (ADIPS) as a data system test in support of the Global Atmospheric Research Program (GARP). The data set was archived on 9-track, 1600-bpi, binary magnetic tapes. It is also listed as a SCAMS data set (NSSDC ID 75-052A-10C).

Nimbus 6, Wilheit, Jr.

Electrically Scanning Microwave Radiometer (ESMR)

Data set name - ESMR BRIGHTNESS TEMPERATURES ON 70-MM FILM

NSSDC ID 75-052A-02A, SCAMS OUTPUT TAPE OF WATER VAPOR AND TEMPERATURE (SOTA)

Time period covered - 06/15/75 TO 03/02/76

Quantity of data - 1500 FEET OF B/W NEGATIVES

This set of brightness temperatures and retrieved parameters was supplied by the experimenter as black and white images. Each image contains eight vertical strips of data from one orbit. All strips have the same horizontal coverage, but differ in temperature, brightness temperatures for channels 2 (31.65 GHz), and 3 (52.85 GHz) and their differences. The next two represent retrieved earth vapor and liquid water from cloud or precipitation over the oceans, respectively. The remaining three are pressures in the first five volumes for atmospheric layers 1000-500 mb, 500-250 mb, and 250-100 mb, respectively. The first five parameters are displayed in 18-step gray levels, the values of which can be found in a table in each of the first five volumes of the Nimbus 6 Data Catalog. The last three parameters are displayed by contour bands (labeled on the sides) that are spaced 3 K apart. Spatial resolution on the ground for the parameters varies from 145 km at nadir to 330 km at scan extremes. Normally, one tape contains 4 days of data.
NSSDC ID 75-052A-038, ESRM BRIGHTNESS TEMP ON 70-MM FILM

Time period covered - 08/22/75 TO 08/11/77
Quantity of data - 2000 FEET OF B/W NEGATIVES

These brightness temperatures, supplied by the experimenter, are displayed as black and white images at either full vertical scale (F) or partial vertical scale (P). In the F mode, up to 125 min of data are output on a single image. In the P mode, data are displayed in black and white images at 15 min of data. Two images are usually needed to display all 15 min of data. Each display contains mean brightness data or vertically polarized data of the 37-GHz channel at a 30 x 30 km horizontal resolution. The data are grouped in scenes, each covering an area of 30 x 30 km. There are 6 days of data per one or two tapes.

NSSDC ID 78-098A-008, ANTENNA TEMPERATURE TAPE (TAT) ON MAGNETIC TAPE

NSSDC ID 78-098A-008, ANTENNA TEMPERATURE TAPE (TAT)

Time period covered - 10/25/78 TO 08/29/88
Quantity of data - 746 REELS OF TAPE

This experimenter-supplied radiometric data set was generated on an IBM 3081 computer. It contains orbit-by-orbit antenna temperature data (counts measured in five bands from 6.6 to 37 GHz) for horizontal and vertical polarizations separately. It also contains antenna angles, incidence and reflected angles, spacecraft, and housekeeping information. Each TAT contains 3 days of data on a 6250-bpi tape. The TAT data set is in the most basic form of the SMMR data and is not expected to be of significant use to most investigators.

NSSDC ID 78-098A-08F, HOR-MER POLRZ BROM TMP(CELL-ALL)

Time period covered - 10/29/78 TO 08/25/87
Quantity of data - 528 REELS OF TAPE

This experimenter-supplied brightness temperature data set was generated from the Antenna Temperature Tape (TAT; NSSDC ID 78-098A-008) and was produced on 6-track, 1600-bpi, binary magnetic tapes. Each tape contains 3 days of brightness temperature data that were calculated from radiometric data and mapped into a given area. Each TAT contains 3 days of data on a 6250-bpi tape. The TAT data set is in the most basic form of the SMMR data and is not expected to be of significant use to most investigators.

NSSDC ID 78-098A-08C, 37-GHZ CHAL DATA (SMIR MAP-LD) ON MAGNETIC TAPE

NSSDC ID 78-098A-08C, SEA ICE, PARM 37-GHZ CHAN (PARM-30)

Time period covered - 10/29/78 TO 10/29/86
Quantity of data - 394 REELS OF TAPE

This experimenter-supplied set of sea ice concentration data was generated by an IBM 3081 computer onto 6-track, 1600-bpi, binary magnetic tapes. It contains sea ice concentration, i.e., the fraction of ice cover in a 30 x 30 km field-of-view that was calculated from the dual-polarized 37-GHz channel radiance data. Data are grouped in scenes, each covering an area of 30 x 30 km. There are 6 days of data per one or two tapes.

NSSDC ID 78-098A-08B, PARAM OF LAND AND OCEAN (PARM-LD)

Time period covered - 10/29/78 TO 10/29/86
Quantity of data - 243 REELS OF TAPE

This experimenter-supplied set of land and ocean parameters was generated by an IBM 3081 computer onto 6-track, 1600-bpi, binary magnetic tapes. It contains surface temperatures, total atmospheric water vapor, and sea surface winds. These data were calculated from the CELL-ALL (NSSDC ID 78-098A-08B) radiance measurements in one of the 10 channels (dual-polarized 37, 21, 18, 10.7, and 6.6 GHz). Sea surface temperatures are calculated at low 5-km resolution. They are computed for areas lying between 55 deg S. and 60 deg N., at least 500 km away from land mass and clear of severe rainstorms. Water vapor retrievals, at 60-km resolution, may not be reliable after the 21-GHz channel was turned off in March 1985. There is no wind retrieval (at 97.5-km resolution) for the first year. Each PARM-LD tape contains 6 days of data.
parameters are derived from radiances measured at 3.6 to 37 GHz in both horizontal and vertical polarization. Each parameter is mapped from 64 deg N. to 64 deg S. in Mercator projection in one or three different grid sizes (vertical x horizontal): 83 x 202, 136 x 303, and 261 x 606. Generated from the PAR-L0 tapes (NSSDC ID 78-098A-08B), this data set was produced by the Nimbus Project on color, 105-mm film. No data were processed beyond Year 4 (October 1982).

Data set name - GRADIENT RATIO
NSSDC ID 78-098A-081, GRADIENT RATIO
Time period covered - 10/30/78 TO 10/31/82
Quantity of data - 175 COLOR POSITIVE FRAMES

This data set is a subset of the MATRIX-SS data set. It contains maps of 6-day and monthly averages of sea ice concentration, percent of ice cover within field-of-view, percent polarization of the 18- and 37-GHz brightness temperatures, and other geophysical parameters over land, ice, and sea ice. These maps are displayed in polar stereographic projection. The MATRIX-SS data set was produced by the Nimbus Project from the MAP-SS tapes (NSSDC ID 78-098A-08F) onto color, 105-mm film. No data were processed beyond Year 4 (October 1982).

Data set name - SEA ICE CONCENTRATION
NSSDC ID 78-098A-082, SEA ICE CONCENTRATION
Time period covered - 10/30/78 TO 10/31/82
Quantity of data - 176 COLOR POSITIVE FRAMES

This data set is a subset of the MATRIX-SS data set. It contains maps of 6-day and monthly averages of sea ice concentration, percent of ice cover within field-of-view, percent polarization of the 18- and 37-GHz brightness temperatures, and other geophysical parameters over land, ice, and sea ice. These maps are displayed in polar stereographic projection. The MATRIX-SS data set was produced by the Nimbus Project from the MAP-SS tapes (NSSDC ID 78-098A-08F) onto color, 105-mm film. No data were processed beyond Year 4 (October 1982).

Data set name - SPECTRAL GRADIENT
NSSDC ID 78-098A-083, SPECTRAL GRADIENT
Time period covered - 10/30/78 TO 10/31/82
Quantity of data - 45 COLOR POSITIVE FRAMES

This data set is a subset of the MATRIX-SS data set. It contains maps of 6-day and monthly averages of sea ice concentration, percent of ice cover within field-of-view, percent polarization of the 18- and 37-GHz brightness temperatures, and other geophysical parameters over land, ice, and sea ice. These maps are displayed in polar stereographic projection. The MATRIX-SS data set was produced by the Nimbus Project from the MAP-SS tapes (NSSDC ID 78-098A-08F) onto color, 105-mm film. No data were processed beyond Year 4 (October 1982).

Data set name - SEA ICE AND OCEAN SURFACE TEMPERATURE
NSSDC ID 78-098A-084, SEA ICE AND OCEAN SURFACE TEMP
Time period covered - 10/30/78 TO 10/31/82
Quantity of data - 45 COLOR POSITIVE FRAMES

This data set is a subset of the MATRIX-SS data set. It contains maps of 6-day and monthly averages of sea ice concentration, percent of ice cover within field-of-view, percent polarization of the 18- and 37-GHz brightness temperatures, and other geophysical parameters over land, ice, and sea ice. These maps are displayed in polar stereographic projection. The MATRIX-SS data set was produced by the Nimbus Project from the MAP-SS tapes (NSSDC ID 78-098A-08F) onto color, 105-mm film. No data were processed beyond Year 4 (October 1982).

Data set name - SEA SURFACE WIND SPEED
NSSDC ID 78-098A-085, SEA SURFACE WIND SPEED
Time period covered - 10/30/78 TO 10/31/82
Quantity of data - 242 COLOR POSITIVE FRAMES

This data set contains maps of 6-day and monthly averages of sea surface wind speed (m/s) and direction. Generated from the MAP-SS tapes (NSSDC ID 78-098A-08B), this data set is a subset of the MATRIX-SS data set that was produced by the Nimbus Project on color, 105-mm film. No data were processed beyond Year 4 (October 1982).

Data set name - TOTAL ATMOSPHERIC LIQUID WATER OVER OCEAN
NSSDC ID 78-098A-086, LIQUID WATER OVER OCEANS
Time period covered - 10/30/78 TO 10/31/82
Quantity of data - 287 COLOR POSITIVE FRAMES

This data set contains maps of 6-day and monthly averages of total atmospheric liquid water over oceans in Mercator projection. Generated from the MAP-SS tapes (NSSDC ID 78-098A-08B), this data set is a subset of the MATRIX-SS data set that was produced by the Nimbus Project on color, 105-mm film. No data were processed beyond Year 4 (October 1982).

Data set name - PERCENT POLARIZATION OVER TERRAIN
NSSDC ID 78-098A-087, PERCENT POLARIZATION OVER TERRAIN
Time period covered - 10/30/78 TO 10/31/82
Quantity of data - 173 COLOR POSITIVE FRAMES

This data set contains maps of 6-day and monthly averages of percent polarization of brightness temperatures over terrain in Mercator projection. Generated from the MAP-SS tapes (NSSDC ID 78-098A-08B), this data set is a subset of the MATRIX-SS data set that was produced by the Nimbus Project on color, 105-mm film. No data were processed beyond Year 4 (October 1982).

Data set name - WATER VAPOR OVER OCEANS
NSSDC ID 78-098A-088, WATER VAPOR OVER OCEANS
Time period covered - 10/30/78 TO 10/31/82
Quantity of data - 289 COLOR POSITIVE FRAMES

This data set contains maps of 6-day and monthly averages of total atmospheric vapor over oceans in Mercator projection. Generated from the MAP-SS tapes (NSSDC ID 78-098A-08B), this data set is a subset of the MATRIX-SS data set that was produced by the Nimbus Project on color, 105-mm film. No data were processed beyond Year 4 (October 1982).

Data set name - BRIGHTNESS TEMPERATURE
NSSDC ID 78-098A-089, BRIGHTNESS TEMPERATURE
Time period covered - 10/30/78 TO 10/31/82
Quantity of data - 186 COLOR POSITIVE FRAMES

This data set contains maps of 6-day and monthly averages of 37-GHz (horizontal polarization channel) brightness temperatures in polar stereographic projection. Generated from the MAP-30 tapes (NSSDC ID 78-098A-08B), this data set is a subset of the MATRIX-30 data set that was provided by the Nimbus Project on color, 105-mm film. No data were processed beyond Year 4 (October 1982).

Data set name - SEA SURFACE TEMPERATURE OVER OCEANS
NSSDC ID 78-098A-090, SEA SURFACE TEMP OVER OCEANS
Time period covered - 10/30/78 TO 10/31/82
Quantity of data - 290 COLOR POSITIVE FRAMES

This data set contains maps of 6-day and monthly averages of sea surface temperatures over oceans in Mercator projection. Generated from the MAP-SS tapes (NSSDC ID 78-098A-08B), this data set is a subset of the MATRIX-SS data set that was produced by the Nimbus Project on color, 105-mm film. No data were processed beyond Year 4 (October 1982).
This is a document containing scientific data sets and descriptions. Here are the key points:

1. **Data set name**: SEA ICE MULTI-YEAR ICE FRACTION

2. **Data set name**: CALIBRATED TEMPERATURE DATA (CTC) ON MAGNETIC TAPE

3. **Data set name**: MARGINAL ICE ZONE EXPERIMENT (MIZEX) BRIGHTNESS TEMPERATURE DATA ON TAPE

4. **Data set name**: HALF-DEGREE CALIBRATED TEMPERATURE MAPS ON MAGNETIC TAPE

5. **Data set name**: QUARTER-DEGREE CALIBRATED TEMPERATURE MAPS ON MAGNETIC TAPE

### Data set name: SEA ICE MULTI-YEAR ICE FRACTION

**NSSDC ID**: 78-098A-08S, **SEA ICE MULTI-YEAR ICE FRACTION**

**Time period covered**: 10/30/78 TO 10/31/82

**Quantity of data**: 174 COLOR POSITIVE FRAMES

This data set is a subset of the MATRIX-SS data set that contains maps of 6-day and monthly averages of sea ice surface temperatures, sea ice concentration (percent of ice cover within field-of-view), percent polarization of the 18- and 37-GHz brightness temperatures, and other geophysical parameters over land ice, snow, ice sheets, and sea ice. The maps are displayed in polar stereographic projection. The MATRIX-SS data set was produced by the Nimbus Project from the MAP-SS Tapes (NSSDC ID 78-098A-08F) onto color, 100-line film. No data were processed beyond Year 4 (October 1982).

### Data set name: CALIBRATED TEMPERATURE DATA (CTC) ON MAGNETIC TAPE

**NSSDC ID**: 78-098A-08W, **CALIBRATED TEMPERATURE TAPE (CTC)**

**Time period covered**: 10/25/78 TO 08/20/87

**Quantity of data**: 536 REELS OF TAPE

This calibrated radiometric data set was generated from the Antenna Temperature Tape (TAT; NSSDC ID 78-098A-08A) and was prepared by the NSSDC computer onto 9-track, 6250-bpi, binary magnetic tapes. Each tape contains 3 days of brightness temperatures in the TAT resolution. There are also data on the incidence and look-up/look-down angles, and geographic and quality flags. The radiance contained in this data set was calibrated based on a model computation; consequently, they differ from those of the CELL-ALL data (NSSDC ID 78-098A-08B), which were derived from prelaunch test data. Conversions from the CELL to the CTC radiance are possible by means of a linear equation.

### Data set name: MARGINAL ICE ZONE EXPERIMENT (MIZEX) BRIGHTNESS TEMPERATURE DATA ON TAPE

**NSSDC ID**: 78-098A-08X, **MIZEX BRIGHTNESS TEMPERATURE DATA**

**Time period covered**: 11/27/83 TO 04/29/84

**Quantity of data**: 6 REELS OF TAPE

This set of Scanning Multichannel Microwave Radiometer (SSMR) brightness temperature data was supplied by the Marginal Ice Zone Experiment (MIZEX-West) principal investigator in 9-track, 6250-bpi, IBM binary magnetic tapes. Each tape contains 3 days of brightness temperatures that were calibrated on a model and are mapped into evenly spaced cells. Four different cell sizes are used: 156 x 156 km (all polar regions), 97 x 97 km, 18 x 18 km (diurnal and 6-GHz channels), 60 x 60 km (21- and 37-GHz channels), and 30 x 30 km (the dual-pol 37-GHz channel only). Besides the brightness temperatures and the location coordinates for each cell and band, there are data on the incidence and reflected sun-boreight angles, and geographic and quality flags.

### Data set name: HALF-DEGREE CALIBRATED TEMPERATURE MAPS ON MAGNETIC TAPE

**NSSDC ID**: 78-098A-08Y, **0.5-DEG CAL TEMP MAP (TCT) TAPE**

**Time period covered**: 10/25/78 TO 05/02/87

**Quantity of data**: 129 REELS OF TAPE

This set of calibrated global brightness temperature maps was produced by an IBM 3081 computer onto 9-track, 6250-bpi, binary magnetic tapes. It was generated from the Calibrated Temperature Tape (TCT; NSSDC ID 78-098A-08W), and each map covers a 6-day period, i.e., 3 days of data. Daytime and nighttime calibrated horizontal and vertical polarization brightness temperatures are from 5 bands (37, 21, 18, 10, and 6.6 GHz) are mapped onto grids of 1/2-deg latitude by 1/2-deg longitude (50 x 50 km at the equator). The maps range from 85 deg N, to 85 deg S, and from 180 deg W. to 180 deg E. There is approximately one tape per month.

### Data set name: QUARTER-DEGREE CALIBRATED TEMPERATURE MAPS ON MAGNETIC TAPE

**NSSDC ID**: 78-098A-08Z, **0.25-DEG CAL TEMP MAP (TCT) TAPE**

**Time period covered**: 10/25/78 TO 08/20/87

**Quantity of data**: 36 REELS OF TAPE

This set of calibrated global brightness temperature maps was produced by an IBM 3081 computer onto 9-track, 6250-bpi, binary magnetic tapes. It was generated from the Calibrated Temperature Tape (TCT; NSSDC ID 78-098A-08W), and each map covers a 6-day period, i.e., 3 days of data. Daytime and nighttime calibrated horizontal and vertical polarization brightness temperatures are from 5 bands (37, 21, 18, 10, and 6.6 GHz) are mapped onto grids of 1/4-deg latitude by 1/4-deg longitude (27.5 x 27.5 km). The maps range from 85 deg N, to 85 deg S, and from 180 deg W to 180 deg E. There is approximately one tape per 3 mo.

### Data set name: MIZEX-WEST BERING SEA SMR 27 GHz (V) CONCENTRATION MAP FOR FEB. 1983

**NSSDC ID**: 78-098A-08B, **MIZEX-W SEA ICE CONCENTRATION**

**Time period covered**: 02/01/83 TO 02/28/83

**Quantity of data**: 1 REEL OF TAPE

This data set contains sea ice concentration values (fraction of ice cover in 30 x 30 km field-of-view) that are mapped into 293 x 293 uniform grids. Maps are in polar stereographic projections, covering regions between 50 and 90 deg in both hemispheres. Daily values are computed from the observed, ice-free ocean, and consolidated sea ice brightness temperatures are measured by the vertically-polarized 37-GHz channel in 30 x 30 km ground resolutions. This data set was provided by the Bering Sea Marginal Sea Ice Zone Experiment (MIZEX-West) principal investigator on one 1600-bpi, IBM binary tape.

### Data set name: COLORADO RIVER BASIN SNOW PARAMETER ATLAS (POLARIZATION RATIOS & GRADIENT RATIO) DISK

**NSSDC ID**: 78-098A-08c, **COLORADO R SNOW PARATL AS DISK**

**Time period covered**: 12/05/78 TO 04/21/86

**Quantity of data**: 15 DISKS

This set of snow parameters over the Colorado River Basin was supplied by the investigator on 15 5 1/4-in. floppy disks in ASCII format. Snow parameters called the polarization ratio (PR) and gradient ratio (GR) are computed for both daytimes and nighttime from brightness temperatures measured at 18 and 37 GHz. The GR values are indicators of the spatial distribution of snow water equivalent in the area snowpack, and they may be used to predict the timing of the onset of snow melting. Both PR and GR are gridded onto a map that covers from 37 to 46 deg N latitude and 105 to 120 deg W longitude, with a spatial resolution of 0.5 x 0.5 deg. Each grid contains 3 days data (or 6 calendar days) of data. Altogether there are 7 yr of data, which began December through May of each year, starting in 1976.

### Data set name: NIMBUS 7, HEATH SOLAR BACKSCATTER ULTRAVIOLET/TOTAL OZONE MAPPING SPECTROMETER (SBS/TOMS)

**NSSDC ID**: 78-098A-08d, **Nimbus 7, Heath Solar Backscatter Ultraviolet/Total Ozone Mapping Spectrometer (SBS/TOMS) DISK**

**Time period covered**: 02/01/83 TO 02/28/83

**Quantity of data**: 1 REEL OF TAPE

This data set contains daily total ozone at the equator. The data were generated by the Nimbus 7, Heath Solar Backscatter Ultraviolet/Total Ozone Mapping Spectrometer (SBS/TOMS) payload data processing system. The data set includes daily total ozone values for each day of the year from January 1, 1979, to December 31, 1983.
This experiment-supplied ozone data set was generated by an IBM 360/65 computer on tape. It contains 0.1-nm resolution over 312.5 to 380 nm. Reflectivity data from the same 12-scan profiles are made by the two longest wavelength bands, whereas total ozone values are determined from the four shorter wavelength bands. There is one 3-week tape per year, each containing 3 weeks worth of data.

Data set name - SOLAR BACKSCATTERED UV (SRBU) TOTAL OZONE DATA TAPE
NSSDC ID 78-098A-096, HDTM TOTAL OZONE DATA TAPE
Time period covered - 10/31/78 TO 12/31/88
Quantity of data - 189 REELS OF TAPE

This experiment-supplied ozone data set was generated by an IBM 3081 computer on tape. It contains 0.1-nm resolution over 312.5 to 380 nm. Reflectivity data from the same 12-scan profiles are made by the two longest wavelength bands, whereas total ozone values are determined from the four shorter wavelength bands. There is one 3-week tape per year, each containing 3 weeks worth of data.

Data set name - RAW UNITS TAPE-9TONS (RUT-T) DATA ON MAG TAPE
NSSDC ID 78-098A-097, RAW UNITS TAPE-9TONS (RUT-T)
Time period covered - 10/31/78 TO 05/21/89
Quantity of data - 312 REELS OF TAPE

This experiment-supplied ozone data set was generated by an IBM 360/65 computer on tape. It contains 0.1-nm resolution over 312.5 to 380 nm. Reflectivity data from the same 12-scan profiles are made by the two longest wavelength bands, whereas total ozone values are determined from the four shorter wavelength bands. There is one 3-week tape per year, each containing 3 weeks worth of data.

Data set name - RAW UNITS TAPE-SRBU (RUT-S) DATA ON MAG TAPE
NSSDC ID 78-098A-099, RAW UNITS TAPE-SRBU DATA (RUT-S)
Time period covered - 10/31/78 TO 05/21/89
Quantity of data - 312 REELS OF TAPE

This experiment-supplied ozone data set was generated by an IBM 360/65 computer on tape. It contains 0.1-nm resolution over 312.5 to 380 nm. Reflectivity data from the same 12-scan profiles are made by the two longest wavelength bands, whereas total ozone values are determined from the four shorter wavelength bands. There is one 3-week tape per year, each containing 3 weeks worth of data.

Data set name - DAILY GRIDDED TOTAL OZONE FROM THE TOTAL OZONE MAPPING SPECTROMETER (TOMS) ON MAG TAPE
NSSDC ID 78-098A-098, DAILY ORID TOMS 63 TP (GRID1DMS)
Time period covered - 10/31/78 TO 03/31/89
Quantity of data - 16 REELS OF TAPE

This experiment-supplied ozone data set was generated by an IBM 360/65 computer on tape. It contains 0.1-nm resolution over 312.5 to 380 nm. Reflectivity data from the same 12-scan profiles are made by the two longest wavelength bands, whereas total ozone values are determined from the four shorter wavelength bands. There is one 3-week tape per year, each containing 3 weeks worth of data.

Data set name - SRBU CONTINUOUS SCAN EARTH RADIANCE TAPE (EARTH)
NSSDC ID 78-098A-099, SRBU CONT SCAN EARTH RAD TP, EARTH
Time period covered - 11/04/78 TO 10/15/85
Quantity of data - 7 REELS OF TAPE

This experiment-supplied ozone data set was generated by an IBM 360/65 computer on tape. It contains 0.1-nm resolution over 312.5 to 380 nm. Reflectivity data from the same 12-scan profiles are made by the two longest wavelength bands, whereas total ozone values are determined from the four shorter wavelength bands. There is one 3-week tape per year, each containing 3 weeks worth of data.

Data set name - SBUV ZONAL MEANS OZONE DATA (ZMT-S) ON MAG TAPE
NSSDC ID 78-098A-097, SBUV ZONAL MEANS OZONE TP(ZMT-S)
Time period covered - 10/31/78 TO 02/29/88
Quantity of data - 11 REELS OF TAPE

This experiment-supplied ozone data set was generated by an IBM 360/65 computer on tape. It contains 0.1-nm resolution over 312.5 to 380 nm. Reflectivity data from the same 12-scan profiles are made by the two longest wavelength bands, whereas total ozone values are determined from the four shorter wavelength bands. There is one 3-week tape per year, each containing 3 weeks worth of data.

Data set name - SBWV COMPREHENSIVE PROFILE OZONE DATA TAPE (CPD2)
NSSDC ID 78-098A-094, SBWV COMPREHENSIVE PROFILE OZONE TP(CPD2)
Time period covered - 10/31/78 TO 12/31/87
Quantity of data - 12 REELS OF TAPE

This experiment-supplied ozone data set was generated by an IBM 360/65 computer on tape. It contains 0.1-nm resolution over 312.5 to 380 nm. Reflectivity data from the same 12-scan profiles are made by the two longest wavelength bands, whereas total ozone values are determined from the four shorter wavelength bands. There is one 3-week tape per year, each containing 3 weeks worth of data.

Data set name - DAILY GRIDDED TOTAL OZONE FROM THE TOTAL OZONE MAPPING SPECTROMETER (TOMS) ON MAG TAPE
NSSDC ID 78-098A-098, DAILY ORID TOMS 63 TP (GRID1DMS)
Time period covered - 10/31/78 TO 03/31/89
Quantity of data - 16 REELS OF TAPE

This experiment-supplied ozone data set was generated by an IBM 360/65 computer on tape. It contains 0.1-nm resolution over 312.5 to 380 nm. Reflectivity data from the same 12-scan profiles are made by the two longest wavelength bands, whereas total ozone values are determined from the four shorter wavelength bands. There is one 3-week tape per year, each containing 3 weeks worth of data.

Data set name - DAILY GRIDDED TOTAL OZONE FROM THE TOTAL OZONE MAPPING SPECTROMETER (TOMS) ON MAG TAPE
NSSDC ID 78-098A-098, DAILY ORID TOMS 63 TP (GRID1DMS)
Time period covered - 10/31/78 TO 03/31/89
Quantity of data - 16 REELS OF TAPE

This experiment-supplied ozone data set was generated by an IBM 360/65 computer on tape. It contains 0.1-nm resolution over 312.5 to 380 nm. Reflectivity data from the same 12-scan profiles are made by the two longest wavelength bands, whereas total ozone values are determined from the four shorter wavelength bands. There is one 3-week tape per year, each containing 3 weeks worth of data.
343.3 nm, 3) daily mean monochromator solar irradiances at each of the 1200 wavelengths and daily mean photometer solar irradiances at 343.3 nm, as computed for the Continuous-Scan Solar Flux Data Tape (NSSOC ID 78-098A-04). The data set consists of daily global parameters, an optimized scheme was used. There is one tape per data year.

Data set name - SIUV CONTINUOUS SCAN SOLAR FLUX TAPE (55)
NSSDC ID 78-098A-04V, SIUV CONT SCANN SOLAR FLUX TP, SWC
Time period covered - 11/04/78 TO 10/15/85
Quantity of data - 7 REELS OF TAPE

This experimenter-supplied set of corrected, continuous scan solar flux data was generated by an IBM 3081 onto 9-track, 6250-bpi magnetic tapes. The data were derived from the raw solar flux data (RUT), NSSDC ID 78-098A-04) and are organized into one file per barrel (29-day period). Each file contains the following types of records: 1) normalized monochromator solar irradiances for each of 1200 wavelengths (from 160 to 400 nm at 0.2-nm intervals), normalized photometer solar irradiances for each of 16 samples at 343.3 nm, and normalized reference diode solar irradiances for 16 samples, 2) orbital and daily mean monochromator solar irradiances, mean photometer solar irradiances at 343.3 nm, corrected, optimized, daily minimum irradiances, and number of samples; 3) daily mean solar irradiances for every 5 nm between 160- and 400-nm wavelengths at 0.2-nm intervals (162.5, 167.5, 172.5, 177.5, and 182.5 nm), and 4) a trailer record with quality control information. There is one tape per data year.

Data set name - SIUV DAILY TOTAL OZONE AND PROFILE POLAR SYMPOSIUM CONFO (PSC) DATA ON TAPE
NSSDC ID 78-098A-09V, SIUV DAILY TOTAL OZONE AND PROFILE POLAR SYMPOSIUM CONFO (PSC) DATA ON TAPE
Time period covered - 11/07/78 TO 09/30/86
Quantity of data - 7 REELS OF TAPE

This data set contains daily averages of total ozone and profile continuance in polar coordinates. The total ozone data consist of daily global total ozone concentration in Dobson units (Dob-100). The profile ozone data consist of ozone mass mixing ratios (units of g/m) at pressure levels 30, 50, 85, 120, and 1.4 mb. These data were abstracted from the version 5.0 (processed Profile ozone data (CPCU, NSSDC ID 78-098A-08D). They are gridded in the Standard National Meteorological Center (SNC) 65 x 65 rectangular array on a stereographic projection. The data set is supplied by NOAA on 1600-bpi IBM magnetic tapes. There is one tape per year for Years 1-5 and two each for Years 6 and 7.

NEBULUS 7, KYLIE
EARTH RADIATION BUDGET (ERB)

Data set name - EARTH RADIATION BUDGET MASTER ARCHIVAL DATA ON MAGNETIC TAPE (MAT)
NSSDC ID 78-098A-07A, RADON BUDGET MASTER ARCH TP, MAT
Time period covered - 11/16/78 TO 11/06/88
Quantity of data - 1200 REELS OF TAPE

This experimenter-supplied set of solar and earth flux data was generated by IBM 360 and 3081 computers onto 9-track, 6250-bpi, binary magnetic tapes. It contains preliminary calibrated radiances and raw digital counts in an earth-sun-earth sequence. Earth-located radiances are measured at 0.2 to 50 micrometer wavelengths by four fixed wide-field-of-view channels and 0.2 to 50 micrometer wavelengths by eight scanning narrow-field-of-view (NFDV) channels. The NFDV footprints are 80 km at nadir. Solar radiative flux counts are obtained on 10 solar channels. There are also orbital and daily summary records, data quality flags, housekeeping information, and a calibration adjustment table. Data are arranged in 16-records and there are usually 3 days of data per 6250-bpi tape.

Data set name - SOLAR AND EARTH FLUX DATA ON MAGNETIC TAPE (SEFDAT)
NSSDC ID 78-098A-07B, SOLAR + EARTH FLUX DATA TP (SEFDAT)
Time period covered - 11/01/78 TO 04/30/89
Quantity of data - 115 REELS OF TAPE

This experimenter-supplied set of solar and wide-field-of-view earth flux data was generated by IBM 3081 computers onto 9-track, 1600-bpi magnetic tapes. A subset of the Master Archival Tape (MAT, NSSDC ID 78-098A-07A), it contains both raw counts and recalibrated radiances and irradiances measured on the NFDV and 50 micrometer range. The latitude and longitude of the earth pixels are given. For the first 1500 days, calibrations were developed along the longitude narrow-field-of-view channels. Following the failure of the scanner, an optimized scheme was used. There is one tape per month.

Data set name - MAPPED RADIATION DATA MATRIX ON MAGNETIC TAPE
NSSDC ID 78-098A-07C, MAPPED RADON DATA MATRIX TP
Time period covered - 11/16/78 TO 05/05/87
Quantity of data - 104 REELS OF TAPE

This data set contains gridded, daily and monthly averaged, earth radiation budget parameters generated by an IBM 3081 computer onto 9-track, 1600-bpi magnetic tapes. The data are stratified from the Nimbus Project (NSSDC ID 78-098A-07A). Outgoing longwave radiation (O_L), albedo, and net radiation are calculated from measurements made by the fixed wide-field-of-view channels and the 20-mo scanning narrow-field-of-view channels. Different values for the ascending and descending nodes, as well as some statistical information, are given for 2070 equal areas, each approximately 500 km x 500 km. Besides the daily averages, there are the 4-day and monthly averaged values, and the 4-day and monthly averages in Mercator/polar stereographic map projection for a full solar production. The set was supplied by the Nimbus Project on one tape per month.

Data set name - ZONAL MEANS INSULATION AND EARTH RADIATION DATA ON MAGNETIC TAPE (2MT)
NSSDC ID 78-098A-07E, ZONAL MEANS RADIATION TAPE (2MT)
Time period covered - 11/16/78 TO 11/30/85
Quantity of data - 15 REELS OF TAPE

This data set contains zonal means of earth radiation budget parameters. They include insulation, outgoing longwave radiation (O_L), albedo, and net radiation calculated from the narrow-field-of-view measurements. Data are calculated for 4.5-degree latitude zones on a daily, 6-day, monthly, and seasonal basis. The data set was derived from the Nimbus Project from the ERB, SEFDAT, and ZONAL TAPE (NSSDC ID 78-098A-07B, 78-098A-07C, and 78-098A-07I) on an IBM 3081 computer. There are two 9-track, 1600-bpi tapes per year.

Data set name - SUB-TARGET RADIANCE DATA ON MAGNETIC TAPE (STRT)
NSSDC ID 78-098A-07O, SUB-TARGET RADIANCE TAPE (STRT)
Time period covered - 11/01/78 TO 01/30/80
Quantity of data - 47 REELS OF TAPE

This data set contains earth-satellite reflected radiance that were observed on-orbit at 0.2- to 4.0- and 5.0- to 50-micrometer wavelengths by the narrow-field-of-view scanner from a number of viewing geometries. The calibration radiances and ancillary information are stored into 2070 target areas (TA), which are approximately 500 km x 500 km each and are further divided into nine sub-target areas (STA). Ancillary information includes cloud cover data from the first version of the Nimbus 7, and the other ancillary data sets. The data set was supplied by NOAA on 2550-bpi IBM tapes, each containing 6 days of data for a total of 272 days.

Data set name - POST MAT CALIBRATION DATA ON MAGNETIC TAPE (DELMAT)
NSSDC ID 78-098A-07H, POST MAT CALIBRATION TP (DELMAT)
Time period covered - 11/01/78 TO 11/05/87
Quantity of data - 106 REELS OF TAPE

This data set contains calibration adjustments for the corrections of earth-satellite radiances measured by the wide-field-of-view channels. New calibration adjustment algorithms were developed for the scanner, which was used for in-flight calibration, failed 20 mo after launch. In addition to the calibration adjustments, the data set contains the uncorrected and corrected radiances. Designed to complement rather than replace the Master Archival Tape (MAT, NSSDC ID 78-098A-07A), the DELMAT data was collected by the Nimbus Project on one 1600-bpi, IBM magnetic tape per month.

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Data set name - SEASONAL AVERAGES OF RADIATION BUDGET DATA ON MAGNETIC TAPE (SAVER)

NSSDC ID 78-098A-071, SEASONAL AVG RADI BUDGET(SAVER)

Time period covered - 12/02/78 TO 03/01/86

Quantity of data - 29 REELS OF TAPE

This data set contains earth radiation budget parameters such as outgoing longwave radiation (DLR), albedo, and net radiation on a seasonal basis. The seasonal intervals are December through February, March through May, June through August, and September through November. Separate wide-field-of-view and narrow-field-of-view scanner data (when available) are presented globally for 2070 fixed target areas, each approximately 500 x 500 km. In addition to the world grids, data are also given in the form of Mercator/polar stereographic projection matrices for microcomputer production. The data set is provided by the Nimbus Project on four 0-track, 1600-bpi IBM tapes per year.

Data set name - ERB SOLAR ANALYSIS DATA ON MAGNETIC TAPE (ESAT)

NSSDC ID 78-098A-071, ERB SOLAR ANALYSIS TAPE (ESAT)

Time period covered - 11/16/78 TO 03/31/86

Quantity of data - 1 REEL OF TAPE

This experiment-supplied composite set of solar data was generated by an IBM 3081 computer onto a 9-track, 1600-bpi magnetic tape. The data set contains data derived from the 10 IBM solar channels (0.5 to 50 micrometers) measured in the solar and Earth flux data tapes (SEFD, NSSDC ID 78-098A-078). It includes orbital and daily mean solar irradiances and certain common solar activity indicators such as the Zurich relative sunspot numbers. The solar data are also available. An improved wide-field-of-view, inflight calibration adjustment table known as the Global Calibration Adjustment Table (GAT) was developed for use in subsequent analysis. This additional time covering November 1982 to October 1985 has been prepared with the Global Calibration Adjustment Table. Additional processing will be extended back to the November 1980 data.

Data set name - MATRIX MONTHLY AVERAGED SUMMARY (EMST) DATA ON MAGNETIC TAPE

NSSDC ID 78-098A-070, MATRIX MONTHLY AVG SUMMARY TAPE (EMST)

Time period covered - 11/01/78 TO 10/31/86

Quantity of data - 2 REELS OF TAPE

This data set contains gridded monthly averages of earth radiation budget parameters generated by an IBM 3081 computer onto 9-track, 1600-bpi magnetic tapes. The data are extracted from the monthly ERB MATRIX tapes (NSSDC ID 78-098A-07C). They contain outgoing longwave radiation (DLR), albedo, net radiation, and many statistical parameters. Data are calculated for 2070 equal areas, each approximately 500 x 500 km. The first 20 of 50 variables are available. An improved wide-field-of-view, inflight calibration adjustment table known as the Global Calibration Adjustment Table was developed for use in subsequent analysis. This additional time covering November 1982 to October 1985 has been prepared with the Global Calibration Adjustment Table. Additional processing will be extended back to the November 1980 data.

Nimbus 7, McCormick, Stratospheric Aerosol Measurement - II (SAM-II)

Data set name - RAW DATA ARCHIVE TAPE (RDAT) DATA ON MAGNETIC TAPE

NSSDC ID 78-098A-06A, RADIANCE DATA ARCHIVE TAPE (RDAT)

Time period covered - 11/01/78 TO 10/31/85

Quantity of data - 84 REELS OF TAPE

This set of radiation data was generated by LARC in an IBM representation on 9-track, 1600-bpi magnetic tapes. It contains earth-located IR radiation measured at 1 microsecond for each spacecraft sunrise and sunset as well as housekeeping information, instrument status, etc. Measurements are obtained only in regions between 60 and 80 deg in both hemispheres. There are 12 RDAT tapes per year.

Data set name - BETA-AEROSOL NUMBER DENSITY ARCHIVE DATA ON MAGNETIC TAPE

NSSDC ID 78-098A-06B, BETA-AEROSOL NO DEN ARCH (BANAT)

Time period covered - 11/01/78 TO 11/01/87

Quantity of data - 108 REELS OF TAPE

This data set contains aerosol extinction profiles and is provided by the experimenter in an IBM representation on 9-track, 1600-bpi magnetic tapes. It contains data from the ROD (NSSDC ID 78-098A-06A). For each sunrise and sunset event, 1-km-resolution vertical profiles of aerosol extinction coefficients are given above an earth tangent point between 64 and 80 deg in both hemispheres. Profiles of aerosol number density, extinction, and aerosol number density, along with error bars, are also given. There are 12 BANAT tapes per year.

Nimbus 7, Russell, 3rd Edition LIMS INFRARED MONITOR OF THE STRATOSPHERE (LIMS)

Data set name - LIMS INVERTED PROFILE ARCHIVAL TAPE(LIMS/ LAIPAT) OF TEMPERATURES AND MIXING RATIOS

NSSDC ID 78-098A-01A, TEMP/MIX RATIO PROFIL TAPE (LAIPAT)

Time period covered - 10/25/78 TO 05/29/79

Quantity of data - 36 REELS OF TAPE

This experiment-supplied data set from LARC known as Inverted Profile Archive Tape (LAIPAT). It contains corrected IR radiances generated by an IBM 360 computer onto 9-track, 1600-bpi, binary magnetic tapes. Selective radiances from the ROD (NSSDC ID 78-098A-01B) are corrected and profiled at 4-deg latitude zones from 64 deg S to 84 deg N. Vertical coverage extends from approximately 10 to 16 km. All radiances are measured through the lower mesosphere to 65 km. The data set also contains data daily profiles, about 1000 of temperature and 1000 each of mixing ratios for ozone, water vapor, nitric acid, and nitrogen dioxide, all as a function of pressure. In addition, earth location, time, cloud top, and housekeeping information are included. Each LAIPAT tape contains 2 to 5 days of data covering the period from October 26, 1978, through May 28, 1979.

Data set name - LIMS RADIANCE ARCHIVAL TAPE (LIMS/RAT) ON MAGNETIC TAPE

NSSDC ID 78-098A-01B, RADIANCE ARCHIVAL TAPE (RAT)

Time period covered - 10/25/78 TO 05/30/79

Quantity of data - 205 REELS OF TAPE

This experiment-supplied IR radiances data set is on 9-track, 1600-bpi, binary magnetic tapes created on an IBM 360 computer. It contains calibrated and earth-located radiances, as well as housekeeping information, instrument status, and data quality information. Radiances are measured daily and nightly in six spectral channels at 4-deg zones from 65 deg S to 84 deg N. Vertical coverage extends from approximately 10 to 16 km. The data set also contains profiles at 9-track, 1600-bpi, binary magnetic tapes created on an IBM 360 computer. It contains daily global maps of six parameters (temperature, ozone, nitrogen dioxide, water vapor, nitric acid, and geopotential height) at 18 pressure levels (0.05, 0.1, 0.2, 0.4, 0.5, 0.7, 1, 1.5, 2, 2.5, 3, 5, 7, 10, 15, 20, 30, 50, 70, and 100 mb). These maps are stored in the form of Fourier coefficients for each parameter, altitude cone, and pressure level. These maps are 8 bits per byte, 4-dog latitude zones, and 3-dog longitude sections. There is one Radiance Archive Tape (RAT) per day data covering the period from October 26, 1978, through May 30, 1979, minus 15 off days.

Data set name - LIMS MAP ARCHIVAL TAPE (LIMS/LAMAT) OF TEMP, MIXING RATIOS & GEOPOTENTIAL HEIGHTS

NSSDC ID 78-098A-01C, TEMP/MIX RATIO, H. MAPS (LAMAT)

Time period covered - 10/25/78 TO 05/29/79

Quantity of data - 9 REELS OF TAPE

This experiment-supplied data set from LARC, known as the Map Archive Tape (LAMAT), is on 9-track, 1600-bpi, binary magnetic tapes. It contains daily global maps of six parameters (temperature, ozone, nitrogen dioxide, water vapor, nitric acid, and geopotential height) at 18 pressure levels (0.05, 0.1, 0.2, 0.4, 0.5, 0.7, 1, 1.5, 2, 2.5, 3, 5, 7, 10, 15, 20, 30, 50, 70, and 100 mb). These maps are stored in the form of Fourier coefficients for each parameter, latitude cone, and pressure level. These maps are 8 bits per byte, 4-dog latitude zones, and 3-dog longitude sections. There is one Radiance Archive Tape (RAT) per day data covering the period from October 26, 1978, through May 30, 1979, minus 15 off days.
Cloud data is available on 241-mm (9.5-) film. Each montage contains either a daytime or nighttime assembly of individual scans (13 or 14) of Temperature Humidity Infrared Radiometer (THIR). These montages are generated on 6-track, 1600-bpi magnetic tapes. For data reduction, there are eight LAMAT tapes covering the period October 26, 1978, to May 28, 1979.

Data set name: PROFILES OF RADIANCE DATA ON MAGNETIC TAPE (PROFILE-R)

NSSDC ID 78-098A-01F, RADIANCE PROFILE TAPE (PROFILE-R)

Time period covered: 10/25/78 to 05/30/79

Quantity of data: 8 REELS OF TAPE

This experimenter-supplied cloud data set was generated in IBM representation on 9-track, 1600-bpi magnetic tapes. The data set was generated from the Temperature Humidity Infrared Radiometer (THIR) 11.5-micrometer radiances (CLDT), NSSDC ID 78-098A-10C, the Total Ozone Mapping Spectrometer (TOMS) derived UV (0.36- and 0.38-micrometer) reflectivities (HITRMS; NSSDC ID 78-098A-09C), and the Air Force surface temperature. Data consist of total cloud amounts in percent coverage; cloud amounts at three altitudes: low (below 2 km), medium (2 to 7 km), and high (above 7 km). These data are averaged over orbit by orbit for the Nimbus 7 Earth Radiation Budget (ERB) experiment subtarget area (51A), approximately 185 km by 185 km each. NCLE is a new version of CLT, with improved cloud estimation. There is one tape per week starting in April 1979, when the Air Force surface temperature information began.

Data set name: CLOUD DATA IN EUR FORMAT (NCLE) ON MAGNETIC TAPE

NSSDC ID 78-098A-10C, CLOUD DATA EUR FORMAT (NCLE)

Time period covered: 10/30/78 to 03/31/85

Quantity of data: 312 REELS OF TAPE

This data set consists of monthly and seasonal means of six parameters (temperature, ozone, nitrogen dioxide, water vapor, nitric acid, and geopotential heights) at 18 pressure levels (0.05, 0.1, 0.2, 0.4, 0.5, 0.7, 1.5, 2, 3, 5, 7, 10, 15, 30, 50, 70, and 100 mb). The data are on 9-track, 1600-bpi magnetic tapes. The data set was generated from the Temperature Humidity Infrared Radiometer (THIR) 11.5-micrometer radiances (CLDT), NSSDC ID 78-098A-10C, the Total Ozone Mapping Spectrometer (TOMS) derived UV (0.36- and 0.38-micrometer) reflectivities (HITRMS; NSSDC ID 78-098A-09C), and the Air Force surface temperature. Data consist of total cloud amounts in percent coverage; cloud amounts at three altitudes: low (below 2 km), medium (2 to 7 km), and high (above 7 km). These data are averaged over orbit by orbit for the Nimbus 7 Earth Radiation Budget (ERB) experiment subtarget area (51A), approximately 185 km by 185 km each. NCLE is a new version of CLT, with improved cloud estimation. There is one tape per week starting in April 1979, when the Air Force surface temperature information began.

Data set name: CALIBRATED LOCATED RADIATION DATA ON MAGNETIC TAPE (CLDT)

NSSDC ID 78-098A-10C, CALIB.-LOCATED RAD DATA TP (CLDT)

Time period covered: 10/30/78 to 05/06/85

Quantity of data: 447 REELS OF TAPE

This data set consists of monthly and seasonal means of six parameters (temperature, ozone, nitrogen dioxide, water vapor, nitric acid, and geopotential heights) at 18 pressure levels (0.05, 0.1, 0.2, 0.4, 0.5, 0.7, 1, 1.5, 2, 3, 5, 7, 10, 15, 30, 50, 70, and 100 mb). The data are on 9-track, 1600-bpi magnetic tapes. The data set was generated from the Temperature Humidity Infrared Radiometer (THIR) 11.5-micrometer radiances (CLDT), NSSDC ID 78-098A-10C, the Total Ozone Mapping Spectrometer (TOMS) derived UV (0.36- and 0.38-micrometer) reflectivities (HITRMS; NSSDC ID 78-098A-09C), and the Air Force surface temperature. Data consist of total cloud amounts in percent coverage; cloud amounts at three altitudes: low (below 2 km), medium (2 to 7 km), and high (above 7 km). These data are averaged over orbit by orbit for the Nimbus 7 Earth Radiation Budget (ERB) experiment subtarget area (51A), approximately 185 km by 185 km each. NCLE is a new version of CLT, with improved cloud estimation. There is one tape per week starting in April 1979, when the Air Force surface temperature information began.

Data set name: CLOUD DATA IN EUR FORM (NCLE) ON MAGNETIC TAPE

NSSDC ID 78-098A-10E, CLOUD DATA EUR FORMAT (NCLE)

Time period covered: 10/31/78 to 10/31/84

Quantity of data: 843 REELS OF TAPE

This data set consists of monthly and seasonal means of six parameters (temperature, ozone, nitrogen dioxide, water vapor, nitric acid, and geopotential heights) at 18 pressure levels (0.05, 0.1, 0.2, 0.4, 0.5, 0.7, 1, 1.5, 2, 3, 5, 7, 10, 15, 30, 50, 70, and 100 mb). The data are on 9-track, 1600-bpi magnetic tapes. The data set was generated from the Temperature Humidity Infrared Radiometer (THIR) 11.5-micrometer radiances (CLDT), NSSDC ID 78-098A-10C, the Total Ozone Mapping Spectrometer (TOMS) derived UV (0.36- and 0.38-micrometer) reflectivities (HITRMS; NSSDC ID 78-098A-09C), and the Air Force surface temperature. Data consist of total cloud amounts in percent coverage; cloud amounts at three altitudes: low (below 2 km), medium (2 to 7 km), and high (above 7 km). These data are averaged over orbit by orbit for the Nimbus 7 Earth Radiation Budget (ERB) experiment subtarget area (51A), approximately 185 km by 185 km each. NCLE is a new version of CLT, with improved cloud estimation. There is one tape per week starting in April 1979, when the Air Force surface temperature information began.

Data set name: CLOUD DATA IN EUR FORMAT (NCLE) ON MAGNETIC TAPE

NSSDC ID 78-098A-10E, CLOUD DATA EUR FORMAT (NCLE)

Time period covered: 10/31/78 to 10/31/84

Quantity of data: 843 REELS OF TAPE

This data set consists of monthly and seasonal means of six parameters (temperature, ozone, nitrogen dioxide, water vapor, nitric acid, and geopotential heights) at 18 pressure levels (0.05, 0.1, 0.2, 0.4, 0.5, 0.7, 1, 1.5, 2, 3, 5, 7, 10, 15, 30, 50, 70, and 100 mb). The data are on 9-track, 1600-bpi magnetic tapes. The data set was generated from the Temperature Humidity Infrared Radiometer (THIR) 11.5-micrometer radiances (CLDT), NSSDC ID 78-098A-10C, the Total Ozone Mapping Spectrometer (TOMS) derived UV (0.36- and 0.38-micrometer) reflectivities (HITRMS; NSSDC ID 78-098A-09C), and the Air Force surface temperature. Data consist of total cloud amounts in percent coverage; cloud amounts at three altitudes: low (below 2 km), medium (2 to 7 km), and high (above 7 km). These data are averaged over orbit by orbit for the Nimbus 7 Earth Radiation Budget (ERB) experiment subtarget area (51A), approximately 185 km by 185 km each. NCLE is a new version of CLT, with improved cloud estimation. There is one tape per week starting in April 1979, when the Air Force surface temperature information began.

Data set name: CLOUD DATA IN EUR FORM (NCLE) ON MAGNETIC TAPE

NSSDC ID 78-098A-10E, CLOUD DATA EUR FORMAT (NCLE)

Time period covered: 10/31/78 to 10/31/84

Quantity of data: 843 REELS OF TAPE

This data set consists of monthly and seasonal means of six parameters (temperature, ozone, nitrogen dioxide, water vapor, nitric acid, and geopotential heights) at 18 pressure levels (0.05, 0.1, 0.2, 0.4, 0.5, 0.7, 1, 1.5, 2, 3, 5, 7, 10, 15, 30, 50, 70, and 100 mb). The data are on 9-track, 1600-bpi magnetic tapes. The data set was generated from the Temperature Humidity Infrared Radiometer (THIR) 11.5-micrometer radiances (CLDT), NSSDC ID 78-098A-10C, the Total Ozone Mapping Spectrometer (TOMS) derived UV (0.36- and 0.38-micrometer) reflectivities (HITRMS; NSSDC ID 78-098A-09C), and the Air Force surface temperature. Data consist of total cloud amounts in percent coverage; cloud amounts at three altitudes: low (below 2 km), medium (2 to 7 km), and high (above 7 km). These data are averaged over orbit by orbit for the Nimbus 7 Earth Radiation Budget (ERB) experiment subtarget area (51A), approximately 185 km by 185 km each. NCLE is a new version of CLT, with improved cloud estimation. There is one tape per week starting in April 1979, when the Air Force surface temperature information began.
The data set of zonal mean retrieved mixing ratios of methane and nitrous oxide, originally supplied by experimenters in DEC format, is written on a single 9-track, 6250-bpi magnetic tape in IBM 360/91 binary integers. The earth's surface is divided into 2.5-deg latitudinal zones that extend from 50 deg S. to 67.5 deg N. Retrieved mixing ratios are stored over day and night at 10 pressure levels: 100, 30, 10, 3, 1, 0.3, 0.1, 0.03, 0.01, and 0.003 mb. There are some discontinuities caused by changes in the operation modes of the instrument (CO2 channels C1 and A1). Users should refer to the tabular listing of modes for each nominal day in the Nimbus 7 Stratospheric and Mesospheric Sounder (SAMS) Experiment Data User's Guide, which also contains an article by C.D. Rodgers et al. on the method of composition retrieval.

Data set name - ZONAL MEANS COMPOSITION DATA ON MAGNETIC TAPE
NSSDC ID 78-098A-004, ZONAL MEANS NGO, CH4 TAPE (ZM-C)
Time period covered - 01/01/84 TO 12/30/81
Quantity of data - 1 REEL OF TAPE

This data set contains 1 day of data. This is the second data set of zonal mean retrieved mixing ratios of methane and nitrous oxide, originally supplied by experimenters in DEC format, which was copied by the Nimbus Project onto 9-track, 6250-bpi magnetic tapes in IBM 360/91 binary integers. It consists of two kinds of data blocks: block types 7402 and 7403. For both types, the earth's surface is divided into 2.5-degree latitude by 10-degree longitude grids that extend from 50 deg S. to 67.5 deg N. Block type 7402 contains retrieved temperatures averaged over day and night at 62 pressure levels, which range from ln(P0/P) = 1.4 to 13.6, with an increment of 0.2. PO is 1000 mb and P is the pressure in mbar. Zonal mean and climatology values are also given. Block type 7403 contains either temperatures or temperature errors averaged over day and night, at 10 pressure levels: 100, 30, 10, 3, 1, 0.3, 0.1, 0.03, 0.01, and 0.003 mb. There are some discontinuities caused by changes in the operation modes of the instrument, 85% channels C1 and A1. Users should refer to the tabular listing of modes for each nominal day in the Nimbus 7 Stratospheric and Mesospheric Sounder (SAMS) Experiment Data User's Guide, which also contains an article by C.D. Rodgers et al. on the method of composition retrieval.
Data are collected into 5-deg regions. Similar to the scanner data set (S-9, NSDC ID 84-1088-01C), there is also statistical and ancillary information, including estimated errors. However, there are no parameters calculated for clear-sky areas. One month of data from the NOAA spacecraft or from combined spacecraft (ERS, NOAA 9, and NOAA 10) are contained on four tapes. This data set is archived on the last Processed Archive Tape (PAT) optical disk of the month.

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SAGE
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**SAGE, MCDONNCH**

**STRATOSPHERIC AEROSOL AND GAS EXPERIMENT (SAGE)**

**Data set name** - METEOROLOGICAL, EPHEMERIS AND RAW DATA ARCHIVAL MAGNETIC TAPES

NSDC ID 79-013A-01A, MET, EPHM, RAW ARCH TAPE (MERDAT)

Time period covered - 02/21/79 TO 11/18/80

Quantity of data - 233 REELS OF TAPE

These experimenter-supplied, meteorological, ephemeris, reduced data are on track 1800-bpi, binary magnetic tapes created on a CDC 6600 computer. Each event is composed of one record containing meteorological and ephemeris data (combined) plus 10 records, or more if necessary, containing telemetry data records. The meteorological data, which are provided by NOAA, include temperature and density data at various levels. The ephemeris data include the position and velocity vectors and the atmospheric pressure at the ephemeris points. The telemetry data include raw solar radiance data (in counts) that were measured at four wavelengths between 0.385 and 1 micrometer, for each spacecraft orientation, and sunlit event periods of 4 days.

**Data set name** - OZONE, AEROSOL AND NITROGEN DIOXIDE PROFILE DATA ON MAGNETIC TAPE

NSDC ID 79-013A-01C, OZONE, AEROSOL & NO2 FIL TAPE

Time period covered - 02/21/79 TO 11/18/80

Quantity of data - 2 REELS OF TAPE

This data set contains aerosol extinction profiles and mixing ratios of ozone and nitrogen dioxide. The data set was derived from radiances measured at a 0.385-0.41 micrometer wavelength for each sunrise and sunset event on the Meteorological-Ephemeris, Raw Data Archival Tape (MERDAT, NSDC ID 79-013A-01A). Profiles of aerosol coefficients of extinction and profiles of nitrogen dioxide and ozone number density are given at 1-km resolution above an earth tangent point from cloud top (310 km) to 40 km. Initial coverage is from 79 deg N. to 79 deg S., with a horizontal resolution of 200 km. There are also total extinction ratios and mixing ratios of nitrogen dioxide. The aerosol coefficients of these derived products at their peak distributions are: 10% for aerosol extinction, 10% for nitrogen dioxide, and 20% for nitrogen dioxide. This data set was supplied by the experimenter as one 1800-bpi tape per month. For each spacecraft orientation in CDC binary, the data set was compressed by NSDC into two 6250-bpi tapes.

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SKYLAB, DEMEL
MULTISPECTRAL PHOTOGRAPHIC FACILITY
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**Data set name** - SKYLAB EARTH RESOURCES DATA CATALOG ON MICROFICHE

NSDC ID 73-027A-17A, INDEX OF EREPH PHOTOS, MICROFICHE

Time period covered - 05/14/73 TO 11/01/74

Quantity of data - 1 CARD OF B/W MICROFICHE

This data set consists of 173 pages of tabulated indexing and six maps that identify photographs available from this experiment. Introductory material provides experiment descriptions for all spacecraft, monthly averaged, and monthly averaged images in IR, visual, and ultraviolet wavelengths. There are also sections for sounding, location, identification, and short descriptive location comments. This document may be obtained from the U.S. Government Printing Office, stock no. 3300-000886, no author. Title "Skylab Earth Resources Data Catalog," or from the National Technical Information Service.
VIII. VISUAL DATA PROCESSING PLAN FOR SYNCHRONOUS METEOROLOGICAL AND GEOGRAPHICAL OPERATIONAL ENVIRONMENTAL SATELLITES (SMES/GES)\textsuperscript{a} by P.L. McKowan, TRF 829538.

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\textsuperscript{a} This is a preliminary draft of the VSSR Data Processing Plan for the synchronous meteorological and geographical operational environmental satellites (SMES/GES). It includes details on the visible data processing, format, and specific requirements for the visible imagery.

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V. Visible Data Processing Plan for Synchronous Meteorological and Geographical Operational Environmental Satellites (SMES/GES)\textsuperscript{b} by P.L. McKowan, TRF 829538.

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\textsuperscript{b} This section outlines the visible data processing plan for the SMES/GES, detailing the processing steps, formats, and specific requirements relevant to the visible imagery.
This set of IR imagery was produced on commercial image-processing equipment and is available on 70-micron film. Each picture contains a title on the top box and a numerical code identifying the right-hand box. The code represents brightness temperatures. It may have a combination of the following elements: 1) contrast enhancement, 2) image magnification, 3) full-earth or sector imagery, 4) 1/4-size imagery, and 5) 1/16-size imagery. The maximum effective size varies, ranging from 500 by 2040 pixels. Each element has a maximum resolution of 3.7 km. The title contains the satellite identification, picture number, picture type, coordinate numbers of the top left pixel relative to the visible sensor, start times of rasterized images, and pixel scaling and sector size identification. Vectorized images may be requested by date, time, and geographic area.

Data set name - ADIPS IR AND VISIBLE IMAGE DATA ON TAPE

NSSDC ID 75-011A-040, ADIPS IR + VISIBLE IMAGE TAPES

Time period covered - 08/12/74 TO 09/12/79

Quantity of data - 2478 REELS OF TAPE

This set of radiance measurements was prepared by the experimenter's office and is available on 7-track, 800-bpi, magnetic tapes in the Image Display and Manipulation System (IDAMS) format. Each tape contains up to 4000 images recorded in brightness temperatures and have orbital/satellite information. The tapes were used to generate 70-micron film products but were subsequently replaced by the Atmospheric and Oceanographic Image Processing System (AOIPS) format data. More description of these data may be found in appendix B of the VISIR Data Processing Plan for Synchronous Meteorological and Geostationary Operational Environmental Satellites (SMS/GDES)* by P.L. McNamara, TR 829538.

Data set name - IDAMS VISIBLE AND IR IMAGE DATA ON TAPE

NSSDC ID 75-011A-04E, IDAMS IR + VISIBLE IMAGE DATA

Time period covered - 02/06/75 TO 10/27/75

Quantity of data - 1780 REELS OF TAPE

This set of radiance measurements was prepared by the experimenter's office and is available on 7-track, 800-bpi, magnetic tapes in the Image Display and Manipulation System (IDAMS) format. Each tape contains up to 4000 images recorded in brightness temperatures and have orbital/satellite information. The tapes were used to generate 70-micron film products but were subsequently replaced by the Atmospheric and Oceanographic Image Processing System (AOIPS) format data. More description of these data may be found in appendix B of the VISIR Data Processing Plan for Synchronous Meteorological and Geostationary Operational Environmental Satellites (SMS/GDES)* by P.L. McNamara, TR 829538.

Data set name - CALIBRATED RADIOMETRIC DATA ON MAGNETIC TAPE

NSSDC ID 81-111A-02A, RADIOMETRIC CALIBRATION DATA

Time period covered - 06/06/81 TO 03/01/82

Quantity of data - 1 REEL OF TAPE

This set of calibration data is on one 9-track, 1600-bpi magnetic tape that was generated by an IBM 360 computer in binary format. Two calibrations were performed before launch and another after launch. Limited documentation was provided by the principal investigator. This data set is sent automatically when special radiometric measurements (NSSDC ID 81-111A-029) are ordered.

Data set name - UNCALIBRATED RADIOMETRIC DATA ON MAGNETIC TAPE

NSSDC ID 81-111A-02B, UNCALIBRATED RADIOMETRIC DATA

Time period covered - 11/12/81 TO 11/14/81

Quantity of data - 5 REELS OF TAPE

This set of uncalibrated radiometric data was archived by the principal investigator on 9-track, 1600-bpi, binary magnetic tapes that were generated on an IBM 360 computer. The data contains radiometric reflectance of selected portions of the earth's surface. They have been measured in 10 wavelengths (0.5-2.5 micrometers). Approximately 80 min of cloud-free data are available on each tape, with a total of 17 data sets. The radiometric calibration data tape (NSSDC ID 81-111A-029) and the photographs (81-111A-02C or 81-111A-02D) are necessary for calibration and location of the radiances. Limited documentation was provided by the P.I.

Data set name - BLACK AND WHITE IMAGERY

NSSDC ID 81-111A-01B, SIR-A MOVIE, COLOR

Time period covered - (N/A)

Quantity of data - 300 FEET OF COLOR NEGATIVES

This 11-min motion picture ("The SIR-A Movie") begins with a long view of the actual launch of the spacecraft and continues with examples of the radar imagery acquired with the Shuttle Imaging Radar-A film on STS-2. The narration is done by the principal investigator, Dr. Charles Elachi, of JPL. The film is made in such a way that the imagery appears as though the viewer is flying on the Shuttle. Imagery examples include the coast of southern California, villages and tectonic features in China, river patterns in Borneo, and buried drainage patterns in the Egyptian/Sudanese desert.

Data set name - SIR-A MOVIE FILM ON VIDEO TAPE

NSSDC ID 81-111A-01C, SIR-A MOVIE ON VIDEO TAPE

Time period covered - (N/A)

Quantity of data - 1 REEL OF TAPE

This video cassette ("The SIR-A Movie") begins with footage of the actual launch of the spacecraft and continues with examples of the radar imagery acquired with the Shuttle Imaging Radar-A film on STS-2. The narration is done by the principal investigator, Dr. Charles Elachi, of JPL. The film is made in such a way that the imagery appears as though the viewer is flying on the Shuttle. Imagery examples include the coast of southern California, villages and tectonic features in China, river patterns in Borneo, and buried drainage patterns in the Egyptian/Sudanese desert.

Data set name - MOVIE IN COLOR

The geographic locations.

STIS 2/OSTA-1, GdniL
SHUTTLE MULTISPECTRAL INFRARED RADIOMETER (SMIR)

Data set name - CALIBRATED RADIOMETRIC DATA ON MAGNETIC TAPE

NSSDC ID 81-111A-02A, RADIOMETRIC CALIBRATION DATA

Time period covered - 06/06/81 TO 03/01/82

Quantity of data - 1 REEL OF TAPE

This set of calibration data is on one 9-track, 1600-bpi magnetic tape that was generated by an IBM 360 computer in binary format. Two calibrations were performed before launch and another after launch. Limited documentation was provided by the principal investigator. This data set is sent automatically when special radiometric measurements (NSSDC ID 81-111A-029) are ordered.

Data set name - UNCALIBRATED RADIOMETRIC DATA ON MAGNETIC TAPE

NSSDC ID 81-111A-02B, UNCALIBRATED RADIOMETRIC DATA

Time period covered - 11/12/81 TO 11/14/81

Quantity of data - 5 REELS OF TAPE

This set of uncalibrated radiometric data was archived by the principal investigator on 9-track, 1600-bpi, binary magnetic tapes that were generated on an IBM 360 computer. The data contains radiometric reflectance of selected portions of the earth's surface. They have been measured in 10 wavelengths (0.5-2.5 micrometers). Approximately 80 min of cloud-free data are available on each tape, with a total of 17 data sets. The radiometric calibration data tape (NSSDC ID 81-111A-029) and the photographs (81-111A-02C or 81-111A-02D) are necessary for calibration and location of the radiances. Limited documentation was provided by the P.I.

Data set name - BLACK AND WHITE IMAGERY

NSSDC ID 81-111A-01B, SIR-A MOVIE, COLOR

Time period covered - (N/A)

Quantity of data - 300 FEET OF COLOR NEGATIVES

This 11-min motion picture ("The SIR-A Movie") begins with a long view of the actual launch of the spacecraft and continues with examples of the radar imagery acquired with the Shuttle Imaging Radar-A film on STS-2. The narration is done by the principal investigator, Dr. Charles Elachi, of JPL. The film is made in such a way that the imagery appears as though the viewer is flying on the Shuttle. Imagery examples include the coast of southern California, villages and tectonic features in China, river patterns in Borneo, and buried drainage patterns in the Egyptian/Sudanese desert.

Data set name - SIR-A MOVIE FILM ON VIDEO TAPE

NSSDC ID 81-111A-01C, SIR-A MOVIE ON VIDEO TAPE

Time period covered - (N/A)

Quantity of data - 1 REEL OF TAPE

This video cassette ("The SIR-A Movie") begins with footage of the actual launch of the spacecraft and continues with examples of the radar imagery acquired with the Shuttle Imaging Radar-A film on STS-2. The narration is done by the principal investigator, Dr. Charles Elachi, of JPL. The film is made in such a way that the imagery appears as though the viewer is flying on the Shuttle. Imagery examples include the coast of southern California, villages and tectonic features in China, river patterns in Borneo, and buried drainage patterns in the Egyptian/Sudanese desert.
NSSDC ID 81-111A-02C, BLACK AND WHITE IMAGERY
Time period covered - 11/12/81 to 11/14/81
Quantity of data - 250 FEET OF B/W NEGATIVES

This set of black and white photographs is on 16-mm, 250-ft film. The data provides accompanying images to the digital radiometric measurements (NSSDC ID 81-111A-029). Approximately 120 min of images were collected, but, unlike the radiometer data, no separate data takes are available. Since these photographs are necessary to geographically locate the radiometric measurements, they are sent automatically when the radiometric measurements (NSSDC ID 81-111A-029) are ordered.

Data set name - COLOR IMAGERY
NSSDC ID 81-111A-020, COLOR IMAGERY
Time period covered - 11/12/81 to 11/14/81
Quantity of data - 250 FEET OF COLOR NEGATIVES

This set of color photographs is on 16-mm, 250-ft film. The data provides accompanying images to the digital radiometric measurements (NSSDC ID 81-111A-029). Approximately 120 min of images were collected, but, unlike the radiometer data, no separate data takes are available. The quality of this set is poorer than the black and white images (NSSDC ID 81-111A-02C). The frame numbers, for example, are almost illegible. Therefore, the black and white film is the necessary data set to geographically locate the radiometric measurements.

ST5 2/OSTA-1, KIM
OCEAN COLOR EXPERIMENT (OCE)

Data set name - CALIBRATED RADIANCE DATA ON MAGNETIC TAPE
NSSDC ID 81-111A-05A, CALIBRATED RADIANCE DATA
Time period covered - 11/14/81 to 11/14/81
Quantity of data - 2 REELS OF TAPE

This data set contains calibrated and located radiances on two 9-track, 1600-bpi, binary magnetic tapes. The radiances were measured at eight wavelengths between 0.49 and 0.79 micrometer and were corrected for solar zenith angle, surface albedo, Rayleigh scattering, and aerosol scattering. Approximately 120 min of scanning data were acquired over the Mediterranean and the Yellow Seas, with a swath width of 500 km and a resolution of 1.2 km. From this data set, digital and photographic images of chlorophyll concentrations and concentration gradients may have been produced and may be available through the investigator.

ST5 2/OSTA-1, REICHEL, JR
MEASUREMENT OF AIR POLLUTION FROM SATELLITES (MAPS)

Data set name - MIDDLE AND UPPER TROPOSPHERIC CARBON MONOXIDE MIXING RATIOS DATA ON TAPE
NSSDC ID 81-111A-04A, TROPOSPHERIC CO MIXING RATIO TAPE
Time period covered - 11/14/81 to 11/14/81
Quantity of data - 2 REELS OF TAPE

This set of carbon monoxide values was archived by the principal investigator on 9-track, 1600-bpi magnetic tapes that were created on IBM or CDC computer in ASCII format. The data set contains carbon monoxide mixing ratios that were inferred from radiances measured at 2080-2250 case-1. The columns cover an altitude range of 3-12 km, horizontally, between 30 deg N. and 30 deg S. over all latitudes, with a precision of about 10%. The data agree to within 20-30% of near simultaneous aircraft measurements made over Australia.

ST5-41C, ELACHI
SHUTTLE IMAGING RADAR-B (SIR-B)

Data set name - RADAR IMAGERY ON FILM
NSSDC ID 81-110A-01A, RADAR IMAGERY ON FILM
Time period covered - 10/07/84 to 10/13/84
Quantity of data - 200 B/W NEGATIVE FRAMES

This data set contains radar images of the earth on 8- x 10-in black and white transparencies. The optically recorded images were acquired at 1.28 GHz frequency (23 cm wavelength) and at varying incidence angles from 15 to 60 deg. The resulting imagery has a scale of 1:500,000. Its resolution is 25 m along track and 5-58 m across track, and it has a swath width of 20-40 km. Besides the imagery, the film products also contain scene annotation, the JPL logo, a gray scale, and a kilometer scale. Limited coverage of all continents except Antarctica is available. For more detail, refer to the map in "The Shuttle Imaging Radar B (SIR-B) Experiment Report," JPL 86-2.

ST5-41C, MILLBERG
LARGE FORMAT CAMERA (LFC)

Data set name - IMAGE AND ANNOTATION DATA ON MAGNETIC TAPE
NSSDC ID 81-110A-01B, IMAGE DATA & ANNOTATION TAPE
Time period covered - 10/07/84 to 10/12/84
Quantity of data - 160 REELS OF TAPE

This data set contains radar images of the earth on 8- x 10-in black and white transparencies. Approximately 2100 frames were acquired during daylight passes from altitudes of more than 200 km. The resulting scales of the images range from near 1,750,000 to about 1,200,000,000. Coverage is limited by excessive cloud cover, especially in the Northern Hemisphere. High quality images of areas of all continents except Antarctica, however, are available. In compliance with the Land Remote Sensing Commercialization Act of 1984, only federally funded and cooperative researchers may order these data from NSSDC.

Data set name - COLOR IMAGERY ON FILM
NSSDC ID 81-110A-02A, COLOR IMAGE FILM
Time period covered - 10/05/84 to 10/13/84
Quantity of data - 5000 FEET OF B/W NEGATIVES

This data set contains photographs of the earth on 8- x 12-in color film. Approximately 2000 frames were acquired during daylight passes from altitudes of more than 200 km. The resulting scale of the images ranges from near 1,750,000 to about 1,100,000. Ground coverage is limited by excessive cloud cover, especially in the Northern Hemisphere. High quality images of areas of all continents except Antarctica, however, are available. In compliance with the Land Remote Sensing Commercialization Act of 1984, only federally funded and cooperative researchers may order these data from NSSDC.

Data set name - COLOR IMAGERY ON FILM
NSSDC ID 81-110A-02B, COLOR IMAGE FILM
Time period covered - 10/08/84 to 10/11/84
Quantity of data - 2000 FEET OF COLOR POSITIVES

This data set contains photographs of the earth on 8- x 12-in color film. Approximately 1500 frames were acquired during daylight passes from altitudes of more than 200 km. The resulting scale of the images ranges from near 1,750,000 to about 1,100,000. Ground coverage is limited by excessive cloud cover, especially in the Northern Hemisphere. High quality images of areas of all continents except Antarctica, however, are available. In compliance with the Land Remote Sensing Commercialization Act of 1984, only federally funded and cooperative researchers may order these data from NSSDC.
Time with an NSSOC ID 85-034A-14A, the contains information concerning the where data were produced on 04/01/85 to 05/31/85.

Quantity of data - 3 DISK

This set of trace and minor gas volume mixing ratio (VMR) profiles was supplied by the experimenter on one 5 1/4-inch floppy disk in IBM-compatible, ASCII format. The data were acquired during the Shuttle flight of Spacelab 3 in April-May 1985. Profiles for more than 25 atmospheric species, including CO and halogenated hydrocarbons, were retrieved from high-resolution (0.01 cma1 unassigned), IN (2-6 micrometer), solar occultation spectra. They cover both the Northern Hemisphere (at about 30 deg N) and the Southern Hemisphere (at about 47 deg S), at altitudes that range from 10 to 150 km, with an average resolution of 4.1 km. For most of the species, separate profiles for sunrises (SM) and sunsets (SS) are listed. Based on the data files, there is also an occultation file that lists all occultations by longitude and latitude in chronological order, a physical model file that tabulates models that are derived from the spectra and are used in establishing the VMR profiles, and an information file that documents the contents of the disk.

THEROS 2, BARKSDALE
SCANNING RADIOMETER

Data set name - FINAL METEROLOGICAL RADIATION TAPES (FMT)
NSSSC ID 60-016A-02A, FINAL MET. RADIATION TAPES
Time period covered - 11/29/60 TO 04/26/61
Quantity of data - 126 ROLLS OF TAPE

The TIROS 2 Final Meteorological Radiation Tapes (FMT) were produced on an IBM 7094 computer. They contain calibrated radiances measured in five wavebands between 0.2 and 30 micrometers. They also include altitude/orbit data, geographic locations associated with the radiation measurements, solar elevation, and satellite temperature. These 7-track, 200-bpi binary tapes contain the original reduced data in their entirety. Each tape contains approximately 1 day, i.e., eight orbits of data. The exact format of the tapes is described in the TIROS 2 Radiation Data Users' Manual and its supplement (NSSSC).

THEROS 3, SUOMI
LOW-RESOLUTION OMNIDIRECTIONAL RADIOMETER

Data set name - LOW-RESOLUTION OMNIDIRECTIONAL RADIOMETER TEMPERATURE TAPES
NSSSC ID 61-017A-01A, OMNIDIRECTIONAL RADIOMETER TAPES
Time period covered - 07/12/61 TO 10/20/61
Quantity of data - 5 ROLLS OF TAPE

The TIROS 3 low-resolution omnidirectional radiometer data are available on magnetic tape produced on an IBM 7094 computer. These 7-track, 556-bpi, WCO tapes contain the black and white sensor temperature values obtained from the hemispheric bolometers. Each temperature is recorded with respect to time, latitude, and longitude. The data were not processed on a routine basis.

ORIGINAI PAGE IS OF POOR QUALITY
This data set contains analyzed spacecraft attitude data prepared by Aracom Laboratories on contract to the project office. The spacecraft attitude was determined primarily from the horizon sensors and sun sensors, and is listed once per orbit in two forms. One form is in an orbital coordinate system where the minimum nadir angle in degree is shown, along with the time of the minimum nadir angle occurrence. The other form is in a standard form, columns and format are included in the "TIROS Attitude Data Catalog and Users' Manual".

Changes in spacecraft day and orbit number, longitude, UT time of ascending node crossing, and spin-axis/satellite-sun angle are also included. Changes in magnetic attitude control (MAC) are published in Goldshlak's "TIROS 4 Attitude Summary," B16525.

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**Data set name**: ATTITUDE SUMMARY TABLES

**NSSDC ID**: 62-002A-000, TIROS 4 ATTITUDE SUMMARY

**Time period covered**: 02/08/62 TO 06/28/62

**Quantity of data**: 4 CARDS OF B/W MICROFICHE

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**Data set name**: FINAL METEOROLOGICAL RADIATION TAPES (FMRT)

**NSSDC ID**: 62-002A-03A, FINAL MET. RADIATION TAPES

**Time period covered**: 02/08/62 TO 06/30/62

**Quantity of data**: 132 REELS OF TAPE

The TIROS 4 Final Meteorological Radiation Tapes (FMRT) were produced on an IBM 7094 computer. They contain calibrated radiances and attitude/orbit data. They also include geophysical data and time and date of observation. These tapes are written on an IBM 7-track, 200-bpi, binary format. The tapes contain the original reduced data in their entirety. Each tape contains approximately 1 day, i.e., eight orbits of data in an index of the FMRT. These data are also included in the "TIROS IV Radiation Data Catalog and Users' Manual".

---

**Data set name**: RADIATION DATA CATALOG AND USERS' MANUAL (MICROFICHE)

**NSSDC ID**: 62-002A-038, RAD DATA CATALOG + USERS, MANUAL (MICROFICHE)

**Time period covered**: 02/08/62 TO 06/30/62

**Quantity of data**: 5 CARDS OF B/W MICROFICHE

The "TIROS IV Radiation Data Catalog and Users' Manual" fully describes the TIROS 4 meteorological satellite scanning radiometer and its calibration, data processing, Final Meteorological Radiation Tapes (FMRT), observed degradation patterns, and possible corrections for degradation. The catalog also includes a plot of the data. The index is divided into two sections. One section contains a summary of the observations and the location of the data. The other section contains a function off the index gives the time for which radiation data are available on the FMRT. The index also includes geographic locations associated with the radiation measurements, solar ephemeris, and satellite temperature. These 7-track, 556-bpi, BCD tapes contain the original reduced data in their entirety. Each tape contains approximately 1 day, i.e., eight orbits of data. The exact format of the tapes is described in the "TIROS VII Radiation Data Catalog and Users' Manual".

---

**Data set name**: LOW-RESOLUTION OMINIDIRECTIONAL RADIOMETER DATA CATALOG AND USERS' MANUAL (MICROFICHE)

**NSSDC ID**: 62-002A-01A, OMINIDIRECTIONAL RADIOMETER TEMPERATURE TAPES

**Time period covered**: 02/08/62 TO 06/28/62

**Quantity of data**: 10 REELS OF TAPE

The TIROS 4 low-resolution omnidirectional radiometer data are available on magnetic tapes produced on an IBM 7094 computer. These 7-track, 556-bpi, BCD tapes contain the black and white sensor, temperature values obtained from the hemispheric bolometers. Each temperature value is located with respect to time, latitude, and longitude. The data were not processed on a routine basis.

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**Data set name**: OMINIDIRECTIONAL RADIOMETER RADIANCE VALUE TAPES

**NSSDC ID**: 62-002A-01B, RADIANCE VALUE TAPES

**Time period covered**: 02/08/62 TO 06/30/62

**Quantity of data**: 2 REELS OF TAPE

These TIROS 4 radiation tapes were produced on an IBM 7094 computer. The tapes contain the low-resolution omnidirectional radiometer temperature values. The 7-track tapes were written on 556-bpi, BCD format at 556 bpi. The temperature values were converted to longwave radiation values in Langleys per minute. All data are given in a 1965 doctoral thesis by Frederick B. House, from the University of Wisconsin, titled "The Radiation Balance of the Earth from a Satellite." B16525.

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**Data set name**: TIROS VII ATTITUDE SUMMARY

**NSSDC ID**: 63-024A-000, TIROS VII ATTITUDE SUMMARY

**Time period covered**: 06/15/63 TO 06/29/65

**Quantity of data**: 10 CARDS OF B/W MICROFICHE

These are analyzed spacecraft attitude data prepared by Aracom Laboratories on contract to the project office. The spacecraft attitude was determined primarily from the horizon sensors and sun sensors, and is listed once per orbit in two forms. Each form is in an orbital coordinate system where the minimum nadir angle in degree is shown, along with the time of the minimum nadir angle occurrence. These tapes are produced on an IBM 7-track, 200-bpi, binary format. The tapes also contain geophysical data and time and date of observation. These data are also included in the "TIROS IV Attitude Data Catalog and Users' Manual".

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**Data set name**: FINAL METEOROLOGICAL RADIATION TAPES (FMRT)

**NSSDC ID**: 63-024A-02A, FINAL MET. RADIATION TAPES

**Time period covered**: 06/15/63 TO 06/19/65

**Quantity of data**: 692 REELS OF TAPE

The TIROS 7 Final Meteorological Radiation Tapes (FMRT) were produced on an IBM 7094 computer. These contain calibrated radiances and attitude/orbit data. They also include geophysical data and time and date of observation. The index is divided into two sections. One section contains a summary of the observations and the location of the data. The other section contains a function of the index gives the time for which radiation data are available on the FMRT. The index also includes geographic locations associated with the radiation measurements, solar ephemeris, and satellite temperature. These 7-track, 556-bpi, BCD tapes contain the original reduced data in their entirety. Each tape contains approximately 1 day, i.e., eight orbits of data. The exact format of the tapes is described in the "TIROS VII Radiation Data Catalog and Users' Manual".

---

**Data set name**: RADIATION DATA CATALOG AND USERS' MANUAL (MICROFICHE)

**NSSDC ID**: 63-024A-02B, RAD DATA CATALOG + USERS, MANUAL (MICROFICHE)

**Time period covered**: 06/15/63 TO 06/19/65

**Quantity of data**: 10 CARDS OF B/W MICROFICHE

The TIROS 7 Radiation Data Catalog and Users' Manual fully describes the TIROS 7 meteorological satellite scanning radiometer and its calibration, data processing, Final Meteorological Radiation Tapes (FMRT), observed degradation patterns, and possible corrections for degradation. The catalog also includes a plot of the data. The index is divided into two sections. One section contains a summary of the observations and the location of the data. The other section contains a function of the index gives the time for which radiation data are available on the FMRT. The index also includes geographic locations associated with the radiation measurements, solar ephemeris, and satellite temperature. These 7-track, 556-bpi, BCD tapes contain the original reduced data in their entirety. Each tape contains approximately 1 day, i.e., eight orbits of data. The exact format of the tapes is described in the "TIROS VII Radiation Data Catalog and Users' Manual".
The "TIROS VII Radiation Data Catalog and Users' Manual" (500-050) fully describes the TIROS 7 scanning radiometer, calibration, data processing, Final Meteorological Radiation Tape (FMRT) format, and radiometer performance. The catalog/manual also contains, in two forms, documentation of each orbit of successfully reduced radiation data. One method of presentation is the index of the FMRT, and the other is a subpoint track summary of available radiation data in diagrammatic form.

## TIROS 7, BRACE,
LANE-MUIR PROBE

Data set name - TABLE OF ELECTRON DENSITIES ON MICROFILM

NSSOC ID 63-024A-02A, LANCE-MUIR PROBE DENSITY DATA

Time period covered - 06/19/63 TO 07/09/63

Quantity of data - 1 REEL OF MICROFILM

The analyzed data set, which was received from the experimenter, presents electron density data in tabular form on 35-mm microfilm. Other types of information given are time (UT and local), pass number, station, geographic and geomagnetic location, altitude, electron current, volts, magnetic latitude, dip angle, and solar and magnetic indices. There is approximately one data point per minute. A description of the data is contained in a data users' note (NSSOC 67-24). "TIROS 7 (1963 24A) Electrostatic Probe Experiment." RO4104.

## TIROS 7, SUOMI
LOW-RESOLUTION OMNIDIRECTIONAL,
RADIOMETER

Data set name - LOW-RESOLUTION OMNIDIRECTIONAL,
RADIOMETER TEMPERATURE TAPES

NSSOC ID 63-024A-01A, OMNIDIRECTIONAL RADIOMETER TAPES

Time period covered - 06/19/63 TO 08/29/63

Quantity of data - 9 REELS OF TAPE

The TIROS 7 low-resolution omnidirectional radiometer data are available on magnetic tapes that were produced on an IBM 7094 computer. These 7-track, 566-bpi, BCD tapes contain the black and white sensor temperature values obtained from the hemispheric bolometers. Each temperature value is located with respect to time, latitude, and longitude. The omnidirectional radiometer data were not processed on a routine basis.
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**Notes:**
- **NIMBUS 5** and **NIMBUS 6** data sets were acquired during their respective launch dates.
- **NIMBUS 7** data sets were acquired during a span of dates from 06/25/72 to 08/31/77.
- **NIMBUS 5** and **NIMBUS 6** data sets are available in various NSIDC IDs (70-025A-02B to 70-025A-02T).
- **NIMBUS 7** data sets are available in various NSIDC IDs (70-025A-02U to 70-025A-02Y).
- **Spacecraft Name** refers to the specific satellite or instrument.
- **Launch Date** indicates the date when the satellite was launched.
- **Experiment Name** describes the specific type of data collected.
- **NSIDC ID** is the identifier for the data set in the NSIDC database.
- **Data Set Information** includes the date span of data available and the page count.
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### Notes
- **Spacecraft Name**: The names of the spacecraft are listed.
- **Launch Date**: The date of launch is provided.
- **NTSSC ID**: The identification number for each dataset.
- **Time Span**: The duration of the data collection.

### Examples
- **RADIANCE DATA ARCHIVE TAPE (R)**: 78-098A-06A, 11/07/79 to 10/31/85
- **STOWE**: 78-098A-10, 11.5-MICRON CLOUD MONTAGE
- **TAYLOR**: 78-098A-02, 10/23/78 to 06/13/85
- **BARKSTRUM**: 12/12/84, 02/12/73 to 02/13A-01
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APPENDIX A
SUPPLEMENT TO VOLUME 4A

This appendix contains descriptions of the few spacecraft and investigations that were not included in Volume 4A. The format is the same as in Volume 4A.
The Earth Radiation Budget Experiment (ERBE) was designed to measure the energy exchange between the earth-atmosphere system and space. The sensors were used to observe global, zonally averaged, regional radiation budgets on monthly time scales and to develop and test the accuracy of a radiative transfer model. The ERBE experiment included two spacecraft and the SAGE I and II experiments. The spacecraft was named “ERBS” and the SAGE spacecraft were named “ERBE.”

The ERBS spacecraft was launched on October 30, 1984, and the SAGE I and II spacecraft were launched on December 8, 1984. The mission was designed to measure the total radiation budget of the earth-atmosphere system and to provide data for the development of global and regional climate models.

The ERBE experiment included two spacecraft, the ERBS and SAGE I and II, which were launched in 1984. The spacecraft were equipped with advanced radiometers to measure the total radiation budget of the earth-atmosphere system. The experiment was designed to provide data for the development of global and regional climate models.

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SPACECRAFT COMMON NAME: STS-41C
ALTERNATE NAMES: DST-3/STS 41-C, 15353

NSSDC ID: 84-108A
LAUNCH DATE: 10/05/84

ORBIT PARAMETERS
ORBIT TYPE: GEODENTIC
EPOCH DATE: 10/05/84
ORBIT PERIOD: 80.9 MIN
INCLINATION: 57. DEC
APOLYSIS: 291. KM ALT
PERIAPLIS: 220. KM ALT

PERSONNEL
MC - L. J. DEMAS NASA HEADQUARTERS
SC - M. SETTLE NASA HEADQUARTERS

BRIEF DESCRIPTION
The 13th flight of the Space Shuttle (STS 41-C) carried the DST-3 (Office of Space and Terrestrial Applications) payload designed for conducting experiments in earth remote sensing. This experiment payload consisted of 1) a Shuttle Imaging Radar (SIR-B) for studies of the earth’s surface, 2) a Large Format Camera (LFC) for cartographic mappings of the earth, 3) a Measurement of Air Pollution from Satellite (MAPS) experiment to determine the distribution of CO in the atmosphere, and 4) a Feature Identification and Location Experiment (FILE) for classification of surface materials. The SIR-B payload was an upgraded version of the SIR-A flown on the DST-3 payload during the STS-2 mission (NSSDC ID B1-111A-01). The MAPS payload carried the range of those same instruments on the DST-3 payload (NSSDC ID B1-111A-04 and B1-111A-03). The mission lasted 8 days and, except for SIR-B, all instruments met their prelaunch requirements.

INVESTIGATION NAME: SHUTTLE IMAGING RADAR-B (SIR-B)

NSSDC ID: 84-108A-01

PERSONNEL
PI - C. ELACHI NASA-JPL

BRIEF DESCRIPTION
The primary purpose of the Shuttle Imaging Radar-B (SIR-B) experiment was to provide data for studies of geography, geology, hydrology, oceanography, vegetation, and ice applications. The SIR-B was a side-looking, synthetic aperture radar that illuminated the earth’s surface with horizontally polarized (H polar) microwave radiation transmitted at L-band frequency (24 GHz) and received at the ground. The SIR-B antenna was mechanically tilted while the Shuttle’s payload bay was facing the earth. This enabled researchers to obtain radar imagery of a specific area at up to six incidence angles ranging from 30° to 60°. The SIR-B radar imagery was used to distinguish surface materials on the basis of their roughness characteristics. With a 12-MHz bandwidth and a pulse repetition frequency of 8 kHz, the range resolution was 17 m at a 60° incidence angle and 50 m at 30°. The SIR-B produced radar imagery at incidence angles ranging from 30° to 60°. The data were collected in PASS mode and included the Ku-band antenna failure, a TD/JSS link loss for more than 12 h, and anomalies in the RF feed system to the antennas. As a result, only 71/2 h of digital data and 1 h of optical data were collected. The digital data were transmitted from the Shuttle through the Tracking and Data Relay Satellite System (TDRSS) to White Sands, New Mexico. White Sands received the SIR-B data via DSS-60 to JPL. The digital tapes were then sent to JPL to be processed to imagery. The optical data were processed by an optical correlator at JPL.

---STS-41G, MOLLERG---

INVESTIGATION NAME: LARGE FORMAT CAMERA (LFC)

NSSDC ID: 84-108A-02

PERSONNEL
PI - B. MOLLERG NASA-JSC

BRIEF DESCRIPTION
The Large Format Camera (LFC) was a photographic camera with a 300-mm focal length, an f/6.5 aperture, and a film format of 23 by 46 cm. The objective was to evaluate the utility of orbiting photographic cameras for cartographic mapping and land use studies at scales of 1:50,000. To minimize skewing effects, the camera's film plane moved horizontally along the Shuttle's line of flight when the shutter was open. A ground resolution of 10 m was achieved at altitudes of 200 to 250 km with standard photographic films. The LFC was real-time, real-time, telecommunication system. The experiment was considered a success.
### APPENDIX B

#### DEFINITIONS

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<tr>
<th>Acronym</th>
<th>Description</th>
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<td>ACRIM</td>
<td>Active Cavity Radiometer Irradiance Monitor</td>
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<tr>
<td>AEM</td>
<td>Application Explorer Mission</td>
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<tr>
<td>AFGWC</td>
<td>Air Force Global Weather Central</td>
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<tr>
<td>AOIPS</td>
<td>Atmospheric and Oceanographic Image Processing System</td>
</tr>
<tr>
<td>ASCII</td>
<td>American Standard Code for Information Interchange</td>
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<tr>
<td>AVHRR</td>
<td>Advanced Very High Resolution Radiometer</td>
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<tr>
<td>BANAT</td>
<td>Beta Aerosol Number Density Tape (data product)</td>
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<tr>
<td>BCD</td>
<td>Binary coded decimal</td>
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<tr>
<td>bpi</td>
<td>Bits per inch</td>
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<td>BUV</td>
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</tr>
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<td>CDC</td>
<td>Control Data Corporation</td>
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<td>CDF</td>
<td>Common Data Format</td>
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<td>CMATRIX</td>
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<td>COADS</td>
<td>Comprehensive Ocean-Atmosphere Data Set</td>
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<td>COSPAR</td>
<td>Committee on Space Research (ICSU)</td>
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<td>CZCS</td>
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<td>EREP</td>
<td>Earth Resources Experiment Package</td>
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<td>Earth Resources Observation System</td>
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<td>ESMR</td>
<td>Electronically Scanning Microwave Radiometer</td>
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<td>ETO</td>
<td>Extended time observation</td>
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<td>FGGE</td>
<td>First GARP Global Experiment (now Global Weather Experiment)</td>
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<td>FIRE</td>
<td>First ISCCP Regional Experiment</td>
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<tr>
<td>FOV</td>
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<tr>
<td>GAC</td>
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<td>GARP</td>
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<td>GISS</td>
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<td>GOES</td>
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<td>HIRS</td>
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<td>High Resolution Picture Transmission</td>
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<tr>
<td>HRV</td>
<td>High Resolution Visible (spacecraft instrument)</td>
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<td>ICSU</td>
<td>International Council of Scientific Unions</td>
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<tr>
<td>IDAMS</td>
<td>Image Display and Manipulation System</td>
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<tr>
<td>IFOV</td>
<td>Instantaneous field-of-view</td>
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IR    Infrared
ISCCP International Satellite Cloud Climatology Project
JPL    Jet Propulsion Laboratory (NASA)
K    Kelvin
LAC    Local area coverage
Level 0 Raw telemetry data
Level I Data that have been calibrated into engineering units (e.g., radiances, brightness, temperatures) and located with respect to time, orbit, and altitude
Level II Climate parameters (e.g., sea surface temperature, soil moisture) at full spatial and temporal resolution
Level III Climate parameters spatially and temporally averaged
LFC    Large Format Camera (spacecraft instrument)
LIMS   Limb Infrared Monitor of the Stratosphere (spacecraft instrument)
MFOV   Medium field-of-view
MOMS   Modular Optoelectric Multispectral Scanner
MSS    Multispectral Scanner
MSU    Microwave Sounding Unit
NASA   National Aeronautics and Space Administration
NCAR  National Center for Atmospheric Research (NSF)
NCDC  National Climatic Data Center (NOAA)
NCDS  NASA Climate Data System
NESDIS National Environmental Satellite, Data, and Information Service (NOAA)
NESS  National Environmental Satellite Service (now NESDIS)
NET   Nimbus Experiment Team
NFOV  Narrow field-of-view
n.m.   Nautical mile
NMC   National Meteorological Center (NOAA)
NOAA  National Oceanic and Atmospheric Administration
NODS  NASA Ocean Data System
NOPS  Nimbus Observation Processing System
NSF   National Science Foundation
NSSDC National Space Science Data Center
OCE   Ocean Color Experiment
OI    Other investigator
OLS   Operational Linescan System (spacecraft instrument)
OSTA  Office of Space and Terrestrial Applications (NASA)
PI    Principal investigator
PM    Project manager
PS    Project scientist
SAGE  Stratospheric Aerosol and Gas Experiment
SAM II Stratospheric Aerosol Measurement II (spacecraft instrument)
SAO   Smithsonian Institution Astrophysical Observatory
SAR   Synthetic Aperture Radar
SBUV  Solar Backscatter Ultraviolet (spacecraft instrument)
SDSD  Satellite Data Service Division (NOAA)
SIR   Shuttle Imaging Radar
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<td>SMS</td>
<td>Synchronous Meteorological Satellite</td>
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<td>SR</td>
<td>Scanning Radiometer</td>
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<tr>
<td>SSU</td>
<td>Stratospheric Sounding Unit</td>
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<tr>
<td>THIR</td>
<td>Temperature-Humidity Infrared Radiometer</td>
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<tr>
<td>TIROS-N</td>
<td>Television and Infrared Observation Satellite, N Series</td>
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<tr>
<td>TL</td>
<td>Team leader</td>
</tr>
<tr>
<td>TM</td>
<td>Team member</td>
</tr>
<tr>
<td>TM</td>
<td>Thematic Mapper</td>
</tr>
<tr>
<td>TOMS</td>
<td>Total Ozone Mapping Spectrometer</td>
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<tr>
<td>TOVS</td>
<td>TIROS Operational Vertical Sounder</td>
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<td>TRF</td>
<td>Technical Reference File. A computerized, space-investigation-oriented, bibliographic list maintained by NSSDC. Journal publications and other documents are cited and can be retrieved by author name, title, or NSSDC ID of relevant investigation. The TRF accession number begins with the letter B and contains five digits; for example, B29538.</td>
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<td>Ultraviolet</td>
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<tr>
<td>VAS</td>
<td>VISSR Atmospheric Sounder</td>
</tr>
<tr>
<td>VISSR</td>
<td>Visible and Infrared Spin-Scan Radiometer</td>
</tr>
<tr>
<td>WFOV</td>
<td>Wide field-of-view</td>
</tr>
<tr>
<td>WORM</td>
<td>Write-once-read-many (optical disk)</td>
</tr>
</tbody>
</table>
In many of the NSSDC earth science data sets, the spacecraft position data (altitude, latitude, and longitude vs. time) and various position-related geophysical parameters are merged with the data from the investigations. In such cases, the investigation data sets provide essentially all the information needed for the analysis of the data. In other cases, however, the spacecraft ephemeris must be obtained from separate data sets, called "world maps," which are identified by the spacecraft ID followed by the designations 00A and 00B. Thus, the NSSDC IDs 64-064A-00A and 64-064A-00B represent ephemeris data for the BE-B spacecraft (64-064A). Typically, the 00A data sets contain predicted spacecraft positions (based upon earlier tracking information) and the 00B data sets provide more accurate spacecraft ephemeris data (based upon tracking data obtained during the corresponding orbits). Although the 00A and 00B data sets are not completely uniform in their respective contents and formats, the following descriptions provide the main features of each type of data set.

00A Predicted World Maps Listed in Microfilm

Each 00A data set contains a list of predicted spacecraft positions and is usually produced on reels of 16-mm microfilm at Goddard Space Flight Center (GSFC). The positions, which are listed at 1-min intervals, are based on predicted orbital elements. Each line of data contains the Greenwich mean time (to 1 s) and the geodetic altitude, latitude, and longitude. An asterisk identifies each position at which the satellite was in sunlight.

00B Refined World Maps or Interim Definitive World Maps Listed on Microfilm

Each 00B data set contains a list of spacecraft positions based on actual tracking data and is usually produced on reels of 16-mm microfilm at GSFC. Each 00B data set is either a Refined World Map or an Interim Definitive World Map. Each type lists spacecraft positions at 1-min intervals and contains the date, Greenwich mean time (to 1 min), and geodetic altitude, latitude, and longitude. The Refined World Maps also list six special spacecraft position points in each orbit: the sunlight entrance and exit points, the northbound and southbound equatorial crossing points, and the northernmost and southernmost points. The Refined World Maps include a flag on each point at which the spacecraft was in sunlight. The Interim Definitive World Maps use the word "TWILIGHT" to flag the points for which the upper limb of the sun was between 0 and 6 deg below the visual horizon. The Interim Definitive World Maps also include lines of tracking station data that contain the station name, Greenwich mean time (to 0.001 s), zenith angle of the spacecraft, distance from station to spacecraft, and direction of travel of the spacecraft. There is usually a line of tracking station data for each station's acquisition and loss of the spacecraft signal, inserted chronologically between the spacecraft position data lines. In the early 1960s the Interim Definitive World Maps were phased out and superseded by the Refined World Maps.
AVAILABLE 00A AND 00B EPHEMERIS DATA SETS

This table covers all the spacecraft included in this volume. The headings "A" and "B" represent data sets 00A and 00B, respectively. A "Y" indicates that the data set is available, while an "N" indicates that it is not available.

<table>
<thead>
<tr>
<th>Spacecraft Name</th>
<th>A</th>
<th>B</th>
<th>Spacecraft Name</th>
<th>A</th>
<th>B</th>
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<tbody>
<tr>
<td>ASTP-Apollo</td>
<td>N</td>
<td>N</td>
<td>LOGACS 1, Agena</td>
<td>N</td>
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<tr>
<td>ATS 3</td>
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<td>N</td>
<td>Nimbus 1</td>
<td>Y</td>
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</tr>
<tr>
<td>BE-B</td>
<td>Y</td>
<td>Y</td>
<td>Nimbus 2</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>BE-C</td>
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<td>Y</td>
<td>Nimbus 3</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DMSP 5B/F2</td>
<td>N</td>
<td>N</td>
<td>Nimbus 4</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DMSP 5B/F3</td>
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<td>N</td>
<td>Nimbus 5</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DMSP 5B/F4</td>
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<td>Nimbus 6</td>
<td>Y</td>
<td>N</td>
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<tr>
<td>DMSP 5B/F5</td>
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<td>N</td>
<td>Nimbus 7</td>
<td>Y</td>
<td>N</td>
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<tr>
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<td>N</td>
<td>NOAA 9</td>
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<tr>
<td>DMSP 5C/F2</td>
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<tr>
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<td>N</td>
<td>Skylab</td>
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<td>N</td>
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<tr>
<td>DMSP 5D-1/F2</td>
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<td>N</td>
<td>SMS 1</td>
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<td>N</td>
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<tr>
<td>DMSP 5D-1/F3</td>
<td>N</td>
<td>N</td>
<td>SMS 2</td>
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<td>N</td>
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<tr>
<td>DMSP 5D-1/F4</td>
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<td>STS 2/OSTA-1</td>
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<tr>
<td>Echo 2</td>
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<td>Y</td>
<td>STS-41G</td>
<td>N</td>
<td>N</td>
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<tr>
<td>EOLE 1</td>
<td>Y</td>
<td>N</td>
<td>STS-51B/Spacelab 3</td>
<td>N</td>
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<td>ERBS</td>
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<td>N</td>
<td>TIROS 2</td>
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<td>Gemini 5</td>
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<td>N</td>
<td>TIROS 3</td>
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<td>TIROS 7</td>
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<td>GOES 1</td>
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<tr>
<td>HCMM</td>
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<td>N</td>
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## APPENDIX D
DIRECTORY OF SELECTED IMAGE DATA SETS

<table>
<thead>
<tr>
<th>Spacecraft</th>
<th>Sensor</th>
<th>Data Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apollo</td>
<td>Cameras</td>
<td>EROS Data Center&lt;br&gt;Sioux Falls, SD 57198&lt;br&gt;(605) 594-6511&lt;br&gt;Technical Applications Center&lt;br&gt;University of New Mexico&lt;br&gt;Albuquerque, NM 87131&lt;br&gt;(505) 277-3662</td>
</tr>
<tr>
<td>DMSP</td>
<td>OLS</td>
<td>World Data Center A for Glaciology&lt;br&gt;National Snow and Ice Data Center&lt;br&gt;Cooperative Institute for Research in Environmental Science (CIRES)&lt;br&gt;Campus Box 449&lt;br&gt;University of Colorado&lt;br&gt;Boulder, CO 80309&lt;br&gt;(303) 492-5171</td>
</tr>
<tr>
<td>Gemini</td>
<td>Hand-held cameras</td>
<td>EROS Data Center&lt;br&gt;Sioux Falls, SD 57198&lt;br&gt;(605) 594-6511&lt;br&gt;Technical Applications Center&lt;br&gt;University of New Mexico&lt;br&gt;Albuquerque, NM 87131&lt;br&gt;(507) 277-3662</td>
</tr>
<tr>
<td>GOES/SMS</td>
<td>VISSR</td>
<td>NSSDC</td>
</tr>
<tr>
<td></td>
<td>VAS</td>
<td>NOAA/NESDIS&lt;br&gt;Satellite Data Services Division&lt;br&gt;World Weather Building, Room 100&lt;br&gt;Washington, DC 20233&lt;br&gt;(301) 763-8111&lt;br&gt;Space Science and Engineering Center&lt;br&gt;University of Wisconsin&lt;br&gt;1225 W. Dayton St.&lt;br&gt;Madison, WI 53706&lt;br&gt;(608) 262-3762</td>
</tr>
<tr>
<td>HCMM</td>
<td>HCMR</td>
<td>NSSDC</td>
</tr>
<tr>
<td>Skylab</td>
<td>EREP</td>
<td></td>
</tr>
<tr>
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<tr>
<td>MOMS</td>
<td>HRV</td>
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<tr>
<td>SIR-A</td>
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<td></td>
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<td>SIR-B</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Browse at NSSDC**

**MOMS**
DFVLR Remote Sensing Data Center  
Oberpfaffenhofen  
D-8031 Post Wessling  
Federal Republic of Germany

**SIR-A**
NSSDC

**SIR-B**
NSSDC & private company to be selected

**Skylab**
JPL SIR-B Data Center  
Mail Stop 300-233  
Jet Propulsion Laboratory  
California Institute of Technology  
4800 Oak Grove Dr.  
Pasadena, CA 91109  
(818) 354-2386

**EREPO**
EROS Data Center  
Sioux Falls, SD 57198  
(605) 394-6511

**Technical Applications Center**  
University of New Mexico  
Albuquerque, NM 87131  
(505) 277-3662

**SPOT**
Domestic requesters contact:  
SPOT Image Company  
1897 Preston White Dr.  
Reston, VA 22091-4326  
(703) 620-2200

Overseas requesters contact:  
SPOT Image Company  
16 Avenue Edouard Belin  
31030 Toulouse Cedex  
France
APPENDIX E

NASA CLIMATE DATA SYSTEM

The NASA Climate Data System (NCDS), formerly known as the Pilot Climate Data System (PCDS), is an advanced information and data system for researchers in the earth sciences. With this system a scientist can locate, access, manipulate, and display climate-related data. Its extensive online capabilities include:

- An inventory of NCDS data holdings
- A range of data set selection capabilities to select desired data according to time or geographic area
- A variety of accessible data sets
- A variety of data manipulation utilities
- A flexible set of graphics display utilities
- An interface to statistical software
- An easy-to-use, flexible user interface

The online catalog provides information about selected climate parameter data sets and the associated sensor measurements from which they were derived. The descriptions include the characteristics, processing status, availability, and names of people to contact for further information, as well as information about planned data sets.

Many of the data sets described in the online catalog are products of NASA missions, but several associated NOAA data sets and related ground-based data sets are also described. Data sets described in the catalog contain experimental data for a diverse range of climate parameters extending from upper atmospheric trace constituents to sea air boundary measurements.

The online catalog was developed by the Data Management Systems Facility (Code 634), NASA/Goddard Space Flight Center, which is part of the National Space Science Data Center. NSSDC does not envision reproducing the entire catalog in hard copy format because of the volume of information but will occasionally publish a summary report.

Data sets from both satellite and conventional sources are provided by NCDS and include data from the First Global Atmospheric Research Program (GARP) Global Experiment, the World Monthly Surface Climatology data set, and several data sets generated by the International Satellite Cloud Climatology Project (ISCCP) and the First ISCCP Regional Experiment (FIRE). The data sets currently available to NCDS users are listed in the table that follows. It indicates the data set name, parameters, temporal and spatial characteristics, storage media, and output options. For cross-reference, NSSDC IDs used in other sections of this volume are also provided wherever appropriate.

NASA-sponsored climate researchers at universities and government agencies can access NCDS remotely over the Space Physics Analysis Network (SPAN) and by dial-in lines (GTE Telenet). Interested researchers may contact the NCDS User Support staff members at (301) 286-3209 or NCF::NCDSUSO.
## DATA SETS AVAILABLE VIA NCDS
(as of 5/23/89)

### ATMOSPHERIC COMPOSITION

<table>
<thead>
<tr>
<th>Data Set</th>
<th>Parameters</th>
<th>Temporal Coverage Resolution</th>
<th>Spatial Coverage Resolution</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEM-2 SAGE Profiles 79-013-A-01C</td>
<td>Aerosols, nitrogen dioxide, ozone</td>
<td>02/21/79 - 11/18/81, only sunset data after 6/79; full coverage every 18 days</td>
<td>Global from 72 deg N to 72 deg S, above cloud tops; horizontal: 1 km x 250 km; vertical: 1 km for heights below 25 km and 5 km for those above</td>
<td>185 Mbytes 33 tapes, CDF Reprocessed ozone to be available in late 1989</td>
</tr>
<tr>
<td>ERBS SAGE II Profiles 84-108B-02B</td>
<td>Aerosols, ozone, humidity, nitrogen dioxide</td>
<td>10/24/84 - 11/30/87, ongoing; full coverage every 18 days for aerosols and ozone only, ongoing</td>
<td>Global from 80 deg N to 80 deg S, above cloud tops; horizontal: 1 km x 250 km; vertical: 1 km for heights below 25 km and 5 km for those above</td>
<td>62 Mbytes 6 tapes, CDF Humidity, nitrogen dioxide to be available in late 1989</td>
</tr>
<tr>
<td>Nimbus 4 BUV CPOZ 70-025A-05P</td>
<td>Albedo, ozone</td>
<td>04/10/70 - 05/06/77, daylight only; 14 days for global coverage, 32 sec/observation</td>
<td>Global: 100 - 0.5 mb; horizontal: 200 km x 200 km; vertical: 8 km for heights above 25 km and 15 km for those below</td>
<td>214 Mbytes 4 tapes, CDF</td>
</tr>
<tr>
<td>Nimbus 7 LIMS Map Archival Tapes 78-098A-01C</td>
<td>Height, humidity, nitric acid, nitrogen dioxide, ozone, temperature</td>
<td>10/01/78 - 05/06/79; daily (ascending, descending, and combined nodes)</td>
<td>Global from 84 deg N to 64 deg S; vertical: 100 - 0.05 mb at 1.5 km intervals</td>
<td>151 Mbytes 8 tapes, CDF</td>
</tr>
<tr>
<td>Nimbus 7 SAM II BANAT 78-098A 06B</td>
<td>Aerosols</td>
<td>11/01/78 - 04/30/87, ongoing; full latitude coverage in 3 months</td>
<td>Global from 64 deg N to 80 deg S, horizontal: 1 km x 250 km, vertical: 1 km</td>
<td>719.3 Mbytes 102 tapes, CDF</td>
</tr>
<tr>
<td>Nimbus 7 SBUV CPOZ 78-098A-09Q</td>
<td>Albedo, ozone</td>
<td>10/31/78 - 02/29/88, daylight only; 14 days for global coverage</td>
<td>Global: 100 - 0.3 mb; horizontal: 200 km x 200 km; vertical: 8 km for heights above 25 km and 15 km for those below</td>
<td>1.21 Gbytes 12 tapes, CDF</td>
</tr>
<tr>
<td>Nimbus 7 SBUV Ozone 78-098A-09D</td>
<td>Ozone</td>
<td>10/31/78 - 03/01/88, ongoing; 14 days for global coverage</td>
<td>Global: 100 - 0.3 mb; horizontal: 200 km x 200 km; vertical: 8 km for heights above 25 km and 15 km for those below</td>
<td>3.12 Gbytes 43 tapes, CDF</td>
</tr>
<tr>
<td>Nimbus 7 TOMS Gridded Data 78-098A-09R</td>
<td>Ozone, reflectivity</td>
<td>10/30/78 - 03/31/89, ongoing, daylight only; daily, monthly, and seasonal averages</td>
<td>Global: horizontal: varies from 1 deg latitude x 1.25 deg longitude at low latitudes to 1 deg latitude x 5 deg longitude at higher latitudes</td>
<td>546 Mbytes 11 tapes, CDF, optical disk</td>
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<tr>
<td>Nimbus 7 TOMS Ozone 78-098A-09D</td>
<td>Ozone</td>
<td>10/31/78 - 08/28/88, daylight only, ongoing; 200 msec/observation</td>
<td>Global: horizontal: 50 km x 50 km at nadir to 130 km x 300 km at scan extremes</td>
<td>17.98 Gbytes 172 tapes, CDF</td>
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<tr>
<td>Data Set Name</td>
<td>Parameters</td>
<td>Temporal Coverage</td>
<td>Spatial Coverage</td>
<td>Remarks</td>
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<td>---------------</td>
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<td>-----------------</td>
<td>---------</td>
</tr>
<tr>
<td>Angell's Global Temperature Deviations</td>
<td>Temperature (deviations)</td>
<td>01/58 - 10/88, ongoing; seasonal deviations from the mean</td>
<td>Global; averages over 7 latitude zones (2 polar, 2 temperate, 2 subtropic, equatorial), tropical averages, hemispheric averages, and global averages; vertical: surface to stratosphere</td>
<td>38 Kbytes Online CDF</td>
</tr>
<tr>
<td>Climate Analysis Center's in situ Sea Surface Temperatures</td>
<td>Sea surface temperature</td>
<td>01/01/70 - 12/31/84, discontinued; monthly</td>
<td>40 deg S to 60 deg N; 2 deg x 2 deg</td>
<td>13 Mbytes Online CDF</td>
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<tr>
<td>Climate Analysis Center's in situ Sea Surface Temperatures blended with AVHRR derived data</td>
<td>Sea surface temperature</td>
<td>01/82 - 03/89, ongoing; monthly</td>
<td>Global; extrapolated above 80 deg N and below 80 deg S; 2 deg x 2 deg</td>
<td>13 Mbytes Online CDF</td>
</tr>
<tr>
<td>COADS Monthly Summary Trimmed Groups</td>
<td>Wind, temperature, clouds, heat flux, humidity, pressure, SST</td>
<td>1946 - 1979; monthly</td>
<td>Global; 2 deg x 2 deg</td>
<td>432 Mbytes 4 tapes, CDF</td>
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<tr>
<td>FGGE II-b Restructured Data</td>
<td>Clouds, humidity, pressure, salinity, sea surface temperature, temperature, wind</td>
<td>12/04/78 - 12/01/79; mainly at 0000, 0600, 1200, 1800 GMT though varies with source</td>
<td>Global; horizontal: 500 km for soundings; vertical: 4 tropospheric levels plus 3 stratospheric levels</td>
<td>2.63 Gbytes 90 tapes</td>
</tr>
<tr>
<td>FGGE III-b Analyses from ECMWF</td>
<td>Height, humidity, pressure, temperature, vertical motion, wind</td>
<td>12/01/78 - 11/30/79; at 0000 and 1200 GMT, plus 0600 and 1800 during special observing periods</td>
<td>Global: 1000 - 10 mb; horizontal: 1.875 deg grid; vertical: 15 levels</td>
<td>2.96 Gbytes 82 tapes, CDF</td>
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<tr>
<td>FGGE III-b Reanalyzed from ECMWF</td>
<td>Height, humidity, pressure, temperature, vertical motion, wind</td>
<td>01/01/79 - 03/05/79 and 05/05/79 - 07/05/79; at 0000, 0600, 1200, 1800 GMT</td>
<td>Global: 1000 - 10 mb; horizontal: 1.875 deg grid; vertical: 19 levels</td>
<td>2.19 Gbytes 21 tapes, CDF</td>
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<tr>
<td>Fleet Numerical Oceanographic Center's Analyses</td>
<td>Height, humidity, pressure, sea surface temperature, temperature, wind</td>
<td>01/01/73 - 06/30/87, ongoing; 12 hours</td>
<td>Global: 2.5 deg x 2.5 deg and 63 x 63 North Polar Stereographic Grid</td>
<td>3.97 Gbytes 37 tapes, CDF</td>
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<tr>
<td>Hellerman Wind Stress Data Set</td>
<td>Wind stress</td>
<td>1870 - 1976 Monthly climatology</td>
<td>Global; 2 deg x 2 deg</td>
<td>1.6 Mbytes Online CDF</td>
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<tr>
<td>Levitus Climatologies</td>
<td>Temperature, salinity, dissolved oxygen, mixing depth, specific volume</td>
<td>1900s - 1978 Monthly, seasonal, annual climatology</td>
<td>Global; 1 deg x 1 deg and 5 deg x 5 deg</td>
<td>168 Mbytes Online CDF</td>
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<tr>
<td>Max Planck Institute Heat Fluxes</td>
<td>Heat flux</td>
<td>01/01/50 - 12/31/79; monthly climatology</td>
<td>Global; 2 deg x 2 deg</td>
<td>16 Mbytes 3 tapes, CDF</td>
</tr>
<tr>
<td>Multichannel Sea Surface Temperatures from AVHRR on NOAA satellites</td>
<td>Sea surface temperature</td>
<td>01/01/79 - 12/31/87, ongoing; monthly</td>
<td>Global; 2.5 deg x 2.5 deg</td>
<td>9 Mbytes Online CDF, 9 tapes</td>
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<tr>
<td>NMC Gridded Wind Data</td>
<td>Wind</td>
<td>07/01/76 - 06/30/86; ongoing</td>
<td>Global; 2.5 deg x 2.5 deg</td>
<td>906 Mbytes 4 tapes, CDF</td>
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<tr>
<td>World Monthly Surface Station Climatology</td>
<td>Height, humidity, precipitation, pressure, solar flux</td>
<td>01/01/1731 - 01/01/1987, ongoing; monthly</td>
<td>Global; 100 km to 200 km</td>
<td>100 Mbytes 1 tape (through 1987), CDF (through 1985)</td>
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## CLOUDS AND RADIATION

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<th>Spatial Coverage Resolution</th>
<th>Remarks</th>
<th>Volume</th>
<th>Media</th>
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<tbody>
<tr>
<td>FIRE Cirrus in Standard Data Format</td>
<td>Clouds, humidity, radiation budget, stability, temperature, wind</td>
<td>10/13/86 - 11/02/86; variable with data source</td>
<td>Wisconsin FIRE Network; 30 km - 70 km</td>
<td>45 Mbytes</td>
<td>4 tapes, CDF</td>
<td></td>
</tr>
<tr>
<td>FIRE Marine Stratuscumulus in Standard Data Format</td>
<td>Clouds, humidity, temperature, wind</td>
<td>06/29/87 - 07/19/87; variable with data source</td>
<td>29 - 34 deg N to 119 - 125 deg W</td>
<td>45 Mbytes</td>
<td>4 tapes, CDF</td>
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<tr>
<td>GOES VISSR for FIRE ETO</td>
<td>Radiance</td>
<td>04/05/86 - 07/31/87</td>
<td>Global; 0.9 km for visible, 8 km for IR</td>
<td>300 Gbytes</td>
<td>(approx.) 182 tapes</td>
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<tr>
<td>ISCCP Stage B3</td>
<td>Clouds, radiance</td>
<td>06/30/83 - 02/25/88, ongoing through at least 1990; twice daily nominal imaging frequency, orbital period for NOAA satellites of 102 min</td>
<td>Global; nominal 24 km sampling resolution</td>
<td>54.93 Gbytes</td>
<td>456 tapes Coverage not continuous for all satellites</td>
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<tr>
<td>ISCCP C1</td>
<td>Clouds, optical depth, ozone, pressure, reflectance, temperature</td>
<td>07/01/83 - 06/30/84, ongoing through at least 1990; 3 hourly averages</td>
<td>Global; 250 km x 250 km</td>
<td>3.3 Gbytes</td>
<td>22 tapes, CDF</td>
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<tr>
<td>ISCCP Ice/Snow</td>
<td>Ice, snow</td>
<td>07/03/83 - 01/03/87, ongoing until at least 1990; daily</td>
<td>Global; 1 deg x 1 deg</td>
<td>300 Mbytes</td>
<td>2 tapes, CDF</td>
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<tr>
<td>ISCCP TOVS Atmosphere Data Set</td>
<td>Clouds, humidity, ozone, temperature</td>
<td>07/01/83 - 12/31/88, ongoing through June 1990</td>
<td>Global; 2.5 deg x 2.5 deg</td>
<td>450 Mbytes</td>
<td>3 tapes, CDF</td>
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<tr>
<td>Nimbus-7 ERB-Matrix 78-098A-07C</td>
<td>Radiation budget</td>
<td>11/16/78 - 05/05/87, ongoing; daily, 6-day, and monthly average</td>
<td>Global; 500 km x 500 km</td>
<td>352.2 Mbytes</td>
<td>98 tapes, CDF</td>
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</tr>
<tr>
<td>Nimbus 7 ERB Seasonal Averages 78-098A-07I</td>
<td>Radiation budget</td>
<td>12/02/78 - 03/01/86; seasonal</td>
<td>Global; 500 km x 500 km</td>
<td>12 Mbytes</td>
<td>29 tapes, CDF</td>
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<tr>
<td>Nimbus 7 ERB Solar Analysis Tapes 78-098A-07L</td>
<td>Plage, solar flux, sunspot</td>
<td>11/16/78 - 03/30/86, ongoing; daily averages of solar activity indicators, daily and orbital averages of solar flux</td>
<td>Full solar disk</td>
<td>4.33 Mbytes</td>
<td>1 tape, CDF</td>
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<tr>
<td>Nimbus 7 THIR CMATRIX 78-098A-10F</td>
<td>Clouds, radiance, reflectivity, snow, temperature</td>
<td>04/01/79 - 03/31/85; daily and monthly (ascending, descending, and combined)</td>
<td>Global; 500 km x 500 km</td>
<td>1.31 Gbytes</td>
<td>97 tapes, CDF</td>
<td></td>
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<tr>
<td>NOAA 7, 8, 9, 10 AVHRR GAC, HRPT, LAC for FIRE ETO</td>
<td>Radiance</td>
<td>04/05/86 - 04/88 (discontinuous coverage)</td>
<td>30 deg N to 50 deg N; 140 deg W to 60 deg E; 1 km for LAC and HRPT, 4 km for GAC</td>
<td>90 Gbytes</td>
<td>(approx.) 523 tapes</td>
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<tr>
<td>NOAA TOVS HIRS/MSU/SSU for FIRE ETO</td>
<td>Radiance</td>
<td>04/05/86 - 04/88 (discontinuous coverage)</td>
<td>30 deg N to 50 deg N; 140 deg W to 60 deg E; 109.3 km for MSU, 147.3 km for SSU, 17.4 km for HIRS</td>
<td>10 Gbytes</td>
<td>81 tapes</td>
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<tr>
<td>NOAA Heat Budget from SR on NOAA 2, 3, 4, 5 and AVHRR on NOAA 6, 7, 8, 9, 10, 11</td>
<td>Radiation budget</td>
<td>06/01/74 - 05/31/88, ongoing; daily products</td>
<td>Global; 125 x 125 polar stereographic grids and 2.5 deg x 2.5 deg Mercator grids</td>
<td>443 Mbytes</td>
<td>44 tapes, CDF</td>
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### SOLAR IRRADIANCES

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<th>Parameters</th>
<th>Temporal Coverage</th>
<th>Spatial Coverage</th>
<th>Remarks</th>
</tr>
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<tbody>
<tr>
<td>ERBE Solar Flux from ERBS, NOAA 9, and NOAA 10</td>
<td>Solar flux</td>
<td>10/25/84 - 02/03/88, ongoing; averages of the instantaneous values during 1 orbit every 2 weeks</td>
<td>Full solar disk</td>
<td>46 Kbytes Online CDF</td>
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<td>84-108B-01D</td>
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<td>84-123A-05D</td>
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<tr>
<td>Nimbus 7 ERB Solar Irradiances 78-098A-07Q</td>
<td>Solar flux</td>
<td>11/16/78 - 04/30/88</td>
<td>Full solar disk</td>
<td>45 Kbytes Online CDF</td>
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<tr>
<td>SMM ACRIM Daily Means of Solar Flux</td>
<td>Solar flux</td>
<td>02/80 - 12/31/88, ongoing; daily averages</td>
<td>Full solar disk</td>
<td>79 Kbytes Online CDF</td>
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### MISCELLANEOUS

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<tr>
<th>Data Set</th>
<th>Parameters</th>
<th>Temporal Coverage</th>
<th>Spatial Coverage</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td>GISS Global Soils Data Set</td>
<td>Soils (type, texture, slope)</td>
<td>1974 FAO soil map of the world and Matthews' 1984 vegetation data set</td>
<td>Global, excluding Antarctica; 1 deg x 1 deg</td>
<td>527 Kbytes Online CDF</td>
</tr>
<tr>
<td>GISS Global Vegetation Data Set</td>
<td>Albedo, cultivation intensity, vegetation</td>
<td>01/01/60 - 12/01/79; albedo provided by season</td>
<td>Global, excluding Antarctica; 1 deg x 1 deg</td>
<td>1.31 Mbytes Online CDF</td>
</tr>
<tr>
<td>National Geophysical Data Center's Regions of Solar Activity</td>
<td>Plage, sunspot</td>
<td>12/68 - 08/82; 1 or 2 observations for each clear day</td>
<td>Full disk; 1 degree solar latitude and longitude</td>
<td>3 Mbytes 1 tape, CDF 3.6 Mbytes Online CDF</td>
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<tr>
<td>Seasat Altimeter Gridded Elevation Data</td>
<td>Ice sheet surface elevation</td>
<td>03/01/78 - 10/10/78</td>
<td>Greenland and Antarctica; 5 min</td>
<td>150 Mbytes 3 tapes, available by special request</td>
</tr>
</tbody>
</table>
DOCUMENT AND DATA REQUEST FORMS
NSSDC/WDC-A-R&S DOCUMENT REQUEST FORM

Researchers WITHIN the United States send order to:

NATIONAL SPACE SCIENCE DATA CENTER
CODE 633.4
GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771

Researchers OUTSIDE the United States send order to:

WORLD DATA CENTER A
ROCKETS AND SATELLITES
CODE 630.2
GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771 U.S.A.

REQUESTER INFORMATION  (Please print)

NAME  TITLE

ORGANIZATION

ADDRESS

CITY  STATE

ZIP CODE OR COUNTRY

TELEPHONE (Area Code) (Number) (Ext.)

DATE OF REQUEST  DATE DESIRED

(Our average processing time for a request is 3 to 4 weeks after receipt of request. Please allow ample time for delivery. We will notify you if we cannot meet the date specified.)

INTENDED USE OF MATERIAL  (Check all that apply)

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☐ Support of a U.S. Government effort (other than NASA)
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☐ Educational purposes (explain below)
☐ Preparation of Master's thesis
☐ Preparation of Doctoral thesis
☐ Exhibit or display
☐ Reference material
☐ Use in publication
☐ Other:

DOCUMENT DISTRIBUTION CATEGORIES

Please indicate the document(s) you wish to receive on routine distribution by placing an X in the box next to the specific category desired. Use the reverse side of this form to order specific documents.

☐ Documents describing the operation of NSSDC and WDC-A-R&S
☐ Documents describing the availability of satellite experiment data
  - NSSDC Data Listing
  - Astronomy
  - Geodesy and Gravimetry
  - Ionospheric Physics
  - Meteorology
  - Report on Active and Planned Spacecraft and Experiments
  - Spacecraft Program Bibliographies
  - Reports on Models of the Near-Earth Environment
  - World Data Center A for Rockets and Satellites Launch Summaries
  - SPACEWARN Bulletin
  - NSSDC Newsletter
  - Crustal Dynamics mailings
  - Pilot Climate mailings
  - Pilot Land mailings

633-82 (3/86)
## SPECIFIC DOCUMENTS

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Researchers WITHIN the United States send order to:

NATIONAL SPACE SCIENCE DATA CENTER
CODE 633.4
GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771

Researchers OUTSIDE the United States send order to:

WORLD DATA CENTER A
ROCKETS AND SATELLITES
CODE 630.2
GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771 U.S.A.

## REQUESER INFORMATION (Please print)

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  - [ ] Meteorology
  - [ ] Particles and Fields
  - [ ] Planetary Atmospheres
  - [ ] Planetology
  - [ ] Solar Physics
  - [ ] Earth Resources Survey

- [ ] Report on Active and Planned Spacecraft and Experiments
- [ ] Spacecraft Program Bibliographies
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- [ ] World Data Center A for Rockets and Satellites Launch Summaries
- [ ] SPACEWARN Bulletin
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</table>
# NSSDC DATA REQUEST FORM*

**Requesters** WITHIN the United States send order to:

NATIONAL SPACE SCIENCE DATA CENTER  
CODE 633.4  
GODDARD SPACE FLIGHT CENTER  
GREENBELT, MARYLAND 20771

**Scientists OUTSIDE the United States send order to:**  
WORLD DATA CENTER A  
ROCKETS AND SATELLITES  
CODE 630.2  
GODDARD SPACE FLIGHT CENTER  
GREENBELT, MARYLAND 20771, USA

## REQUESTER INFORMATION (Please print)

<table>
<thead>
<tr>
<th>NAME (First, Middle Initial, Last)</th>
<th>TITLE/POSITION (Dr., Prof., Mr., Ms., Graduate Student, Research Associate, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIVISION/BRANCH/DEPARTMENT</td>
<td>MAIL CODE</td>
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<td>ORGANIZATION</td>
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<td>DATE OF REQUEST</td>
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</tbody>
</table>

(Our average processing time for a request is 3 to 4 weeks. Please allow ample time for delivery. We will notify you if we cannot meet the date specified.)

## INTENDED USE OF DATA (check all that apply)

- [ ] Support of a NASA effort (project, study, etc.): Contract No. __________
- [ ] Support of a U.S. Government effort (other than NASA)
- [ ] Research and analysis project (individual or company sponsored)
- [ ] Educational purposes (explain below)
- [ ] Preparation of Master's thesis
- [ ] Preparation of Doctoral thesis
- [ ] Other: __________
- [ ] Exhibit or display
- [ ] Reference material
- [ ] Use in publication

NSSDC requests the submission of all publications resulting from studies in which data supplied by NSSDC have been used. Please state briefly the research projects in which you are engaged and if you plan to prepare any articles based on this research.

---

*This form supersedes all other NSSDC Data Request Forms.*

633-28 (2/85)
The purpose of the National Space Science Data Center (NSSDC) is to provide data and information from space science flight experiments in support of additional studies beyond those performed by the principal investigators. Therefore, NSSDC will provide data and information upon request to any individual or organization resident in the United States. In addition, the same services are available to scientists outside the United States through the World Data Center A for Rockets and Satellites (WDC-A-R&S). (The addresses for both NSSDC and WDC-A-R&S are given on the reverse side.) Normally, a charge is made for the requested data to cover the cost of reproduction and the processing of the request. The requester will be notified of the cost, and payment must be received prior to processing the request. However, the Director of NSSDC may waive, as resources permit, the charge for modest amounts of data when they are to be used for scientific studies or for specific educational purposes and when they are requested by an individual affiliated with (1) NASA installations, NASA contractors, or NASA grantees; (2) other U.S. Government agencies, their contractors, or their grantees; (3) universities or colleges; (4) state or local governments; and (5) nonprofit organizations.

### DATA REQUESTED

<table>
<thead>
<tr>
<th>NSSDC DATA SET ID NUMBER</th>
<th>Spacecraft, Experiment, and Data Set Names</th>
<th>Form of Data* (e.g., 16mm microfilm) or Size of Reproduction (e.g., contact, 8x10, etc.)</th>
<th>Data Take No., FDS/DAS Times, Mission Frame No., Timespan Needed, Film Frame Numbers, etc.</th>
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Additional Specifications (Negatives, Positives, Paper Prints, etc.)

*If requesting data on magnetic tape, please supply the necessary information below.

- Density
  - 800 bpi
  - 1600 bpi
  - 6250 bpi

- Mode
  - BIN
  - EBCDIC
  - BCD
  - ASCII

- No. of Tracks
  - 7
  - 9

- Computer (Type/Model)
  - Maximum block size

- New tapes will be supplied prior to processing.
- Original NSSDC tapes will be returned.
- I shall pay for new tapes.
**NSSDC DATA REQUEST FORM**

<table>
<thead>
<tr>
<th>Requesters WITHIN the United States send order to:</th>
<th>Scientists OUTSIDE the United States send order to:</th>
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<td>NATIONAL SPACE SCIENCE DATA CENTER</td>
<td>WORLD DATA CENTER A</td>
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<tr>
<td>CODE 633.4</td>
<td>ROCKETS AND SATELLITES</td>
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<td>GODDARD SPACE FLIGHT CENTER</td>
<td>CODE 630.2</td>
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______________________________________________________________________________
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**Additional Specifications (Negatives, Positives, Paper Prints, etc.)**

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<tr>
<th>Density</th>
<th>Mode</th>
<th>No. of Tracks</th>
<th>Computer (Type/Model)</th>
<th>New tapes will be supplied prior to processing.</th>
<th>Original NSSDC tapes will be returned.</th>
<th>I shall pay for new tapes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>800 bpi</td>
<td>BIN</td>
<td>7</td>
<td>EBCDIC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1600 bpi</td>
<td>BCD</td>
<td>9</td>
<td>ASCII</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6250 bpi</td>
<td></td>
<td></td>
<td>Maximum block size</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>