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NASA-Ames Summer High School Apprenticeship Research Program

**Final Report
June 13-August 19, 1983**

Coordinated by Patricia Powell

SHARP "83" FINAL REPORT

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ACKNOWLEDGMENTS

The 1983 NASA Ames SHARP student trainees are grateful to the many staff members at Ames Research Center who made this historic summer of scientific exploration and research possible. They took time from their busy schedules to offer assistance, information, and encouragement to 20 SHARP student trainees. An extra special expression of thanks goes to each Ames Research Center scientist or engineer (mentor) who worked on a daily basis with their assigned SHARP student trainee.

We acknowledge with appreciation the support given by the Equal Opportunity Programs Office, Graphics and Exhibits Branch, Photographic Technology Branch, Personnel Management Branch, Public Affairs Office, Publications Branch, Records and Reports Branch, Security Branch, and the Training and Special Programs Branch.

Special recognition must be given to all the staff members at NASA Headquarters in Washington, D.C., for the birth of this program and the work they did to transform SHARP from an idea into a reality. We particularly want to mention Curtis Graves, Roscoe Monroe, and Ken Wiggins, for their dedicated service on the national level.

Local participation here at Ames Research Center is so numerous we cannot mention everyone individually. However, we need to commend and be cognizant of Garth Hull, John Leveen, and Meredith Moore for providing special assistance in the selection process of the 20 SHARP student trainees. These three dedicated and devoted staff members provided helpful comments and suggestions, spent hours reviewing, evaluating, and critiquing SHARP, and serving as an advisory team throughout the entire program.

We must thank Tom Clausen, Bill Horvath, and Clarice Lolich for their work with SHARP and responsibility for the educational component of SHARP. We express gratitude to Mwezo Kudumu who coordinated a very enriching visits with Toastmasters Club No. 2624. The entire staff membership in the Training and Special Programs Branch must be commended for their teamwork and ability to coordinate all aspects of SHARP, sometimes with very short notice.

It is impossible to reveal in words the loyal service and commitment given by so many people to SHARP '83. So to each and every one who had any major or minor part in the SHARP '83 production we say, "THANK YOU!"

SUMMARY REPORT OF THE SUMMER HIGH SCHOOL APPRENTICESHIP
RESEARCH PROGRAM (SHARP) 1983

The space age has seen the frontiers of knowledge and technology extended beyond the wildest dreams of our forefathers. Today's science fiction will seem commonplace in the twenty-first century. The engineer of today and tomorrow will face incredible and fascinating challenges. SHARP has its purpose the goal of enabling women and minorities to be a vital part of the engineering team that will solve these challenges.

The function of SHARP is to recognize high school juniors who have demonstrated unusually high promise for success in mathematics and science. Students who were accepted to participate in this 10-week summer program earn as they learn. Twenty academically talented students who will be seniors in high school in September were chosen to participate in SHARP "83". Mentors were selected to provide students with "first-hand" experiences in a research and development environment in order that each student may "try out" his or her tentative professional career choice. The student trainees in SHARP made important and very significant contributions to the ongoing research here at ARC, as well as providing additional staff where needed. Some special features of SHARP included field trips to private industries doing similar and related research, special lectures on topics of research here at ARC, individual and group counseling sessions, written research papers and oral reports, and primarily the opportunity to be exposed to the present frontiers in space exploration and research. The long-range goal of SHARP is to contribute to the future recruitment of needed scientists and engineers.

Four years ago in October 1979, President Carter signed an Executive Order appropriating special funds for SHARP. President Reagan, recognizing the inherent merits of SHARP, gave it his seal of approval for continued success by re-funding SHARP. Pursuant to the President's directive, Ames Research Center conducted its fourth SHARP for minority youth.

This final report is a summary of all the phases of the planning and implementation of the 1983 Summer High School Apprenticeship Research Program (SHARP) for high school students at NASA Ames Research Center, Moffett Field, California. This composite report is in the format of a sectional directory of all the major developments, decisions, activities, and participants. It is not the purpose of this report to assess, evaluate, or make future recommendations for SHARP.

"83" SHARP Staff Development And Planning

1983 SUMMER HIGH SCHOOL APPRENTICESHIP PROGRAM (SHARP)

Faculty Coordinators Planning Conference (Held in Conjunction
with the 16th Annual National Congress on Aerospace Education)

Aladdin Hotel
Las Vegas, Nevada

April 5-7, 1983

WEDNESDAY, APRIL 6, 1983

12:00 Noon	-	5:00 p.m.	REGISTRATION - National Congress*
6:30 p.m.	-	8:30 p.m.	RECEPTION - National Congress (Emerald Rooms 1 and 2)
9:00 p.m.	-	11:00 p.m.	NASA RECEPTION - NASA SUITE

THURSDAY, APRIL 7, 1983

8:30 a.m.	-	12:00 Noon	GENERAL ASSEMBLY - National Congress (Diamond Room)
12:00 Noon	-	1:30 p.m.	LUNCHEON with exhibitors in the Exhibit Area. FC's are to make themselves avail- able for staffing the NASA Booth at selected times during the conference
1:30 p.m.	-	5:00 p.m.	CONCURRENT SESSIONS All FC's are expected to attend the "Laser Disc in The Classroom" Workshop (Emerald Room 2)
6:10 p.m.	-	12:00 Midnight	BARONS BASH (Emerald Room 1)

FRIDAY, APRIL 8, 1983

8:00 a.m.	-	12:00 Noon	GENERAL ASSEMBLY - National Congress
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* FC's are requested to contact ROSCOE MONROE in his room at the Aladdin Hotel
between 6:00-7:00 p.m. on WEDNESDAY, APRIL 6.

FRIDAY, APRIL 8, 1983 (CONTINUED)

12:00 Noon	-	1:00 p.m.	LUNCH
1:15 p.m.	-	5:00 p.m.	SHARP PLANNING CONFERENCE - NASA SUITE
1:15 p.m.	-	1:30 p.m.	INTRODUCTIONS AND REMARKS Roscoe Monroe SHARP Program Manager
1:30 p.m.	-	2:00 p.m.	OVERVIEW OF ACADEMIC SERVICES & PUBLIC AFFAIRS Curtis M. Graves Deputy Director for Academic Services Public Affairs Division
2:00 p.m.	-	3:00 p.m.	HIGHLIGHTS OF '82 SHARP PROGRAMS 10 Minute presentations by each Faculty Coordinator
3:00 p.m.	-	3:15 p.m.	BREAK
3:15 p.m.	-	3:45 p.m.	SHARP '83 OPERATING PLAN & REPORTING REQUIREMENTS - Roscoe Monroe Sharp Program Manager
3:45 p.m.		4:30 p.m.	DEVELOPING AN AGENCY-WIDE FOLLOW-UP PROGRAM ON SHARP STUDENTS - Evalyn W. Humphrey - Sharp Program Coordinator
4:30 p.m.	-	5:00 p.m.	SHARP PROGRAM MANAGEMENT Dr. Kenneth Wiggins Project Manager Aerospace Education Services Project Oklahoma State University

SATURDAY, APRIL 9, 1983

8:30 a.m.	-	12:00 Noon	GENERAL ASSEMBLY
10:20 a.m.	-	11:00 a.m.	ASTRONAUT JOHN CREIGHTON - Speaker on NASA's Transportation System
12:00 Noon			END OF CONGRESS

SUMMER HIGH SCHOOL APPRENTICESHIP RESEARCH PROGRAM

(SHARP '83)

Below is the program design for implementing SHARP '83 at NASA installations to expose approximately 150 youngsters to a research facility. The approach which follows maximizes the use of local resources, center resources, and existing NASA principal investigators at colleges and universities while minimizing the difficulty which students may have accumulating themselves to a technical research environment.

The overall direction of the program is under the Deputy Director for Academic Services in the Division of Public Affairs at NASA Headquarters. At each field center involved in the program the Center Educational Programs Officer (CEPO) is designated as the "Center Liaison Coordinator" with the authority to direct the center programs activities and report to the Community Services Officer in the Educational Community Services Branch at NASA Headquarters. At NSTL which does not have a CEPO one of the aerospace specialists may be assigned to serve as a full-time liaison coordinator for the director of the SHARP program.

The first priority of the CEPO is to locate a faculty coordinator (FC) preferably a local high school teacher or guidance counselor with some experience in managing programs. It is recommended that the FC be a member of a minority group who is presently employed in a high school where some of the students will be selected. The second priority is to find NASA engineering or scientific mentors in the various laboratories of the Centers. These mentors, designated student advisors (SA) will usually be located at NASA facilities. However, the SA could be a principal investigator doing research on a college campus if the school is within a reasonable commuting distance for the student.

The FC functions are as follows:

1. Pre-select the students.
2. Conduct orientation sessions relevant to their investigation into the center environment.
3. Interview each student to obtain information about their career goals, their expectations about the summer research program and judge their seriousness about the experience.
4. Talk to each of the prospective SA's about their responsibilities.
5. Conduct weekly report sessions to obtain information concerning the students involvement in the work of the student advisor.
6. Make the best marriage between a student and student advisor.
7. Arrange for spacemobile lecture demonstration workshops to be conducted the first and second weeks of the program.

8. Arrange follow-up lecture sessions with spacemobile specialist.
9. Handle problems on a day-to-day basis between students and the SA.
10. Work closely with the Center Coordinator to keep the program working smoothly.

The brightest students from local high schools should be selected not later than mid-April, 1983 from the local communities surrounding the designated field centers. We would suggest only students entering their junior or senior high school year because of maturity and stability. They must be U.S. citizens, who will be at least 16 years old by June, 1983. Our recommendation is that students should not be removed from their home environment because of logistical problems involving living, discipline, close school contacts, etc.). Sons and daughters of NASA personnel are not eligible for this program except at DFRF where OPM has approved a remote location exception.

At least two orientation sessions will be conducted on a Saturday to inform students about their responsibilities, prepare them for a highly technical work environment, better understand the aspirations of the students and introduce them to their student advisors.

The programs will begin as soon as school ends in installations areas. Students should work a regular 40-hour shift each week. The first two weeks of the program the students will alternate a day with the SA and a day of lectures by a spacemobile specialist on all phases of NASA research and development programs.

The intent of this is to give the widest possible exposure to the student in hopes of finding a research and development area which is of interest.

The third week should start the regular four-day research, one-day reporting and review cycle of activities. Each student will be required to make a presentation to his peers at one of the reporting and review meetings on the research which is being conducted in his/her assigned areas. The SA should be encouraged to attend the session involving his/her student and give feedback to the student after the presentation. Students should be encouraged to produce graphics, slides, reports, etc., which will enhance their presentation.

After the successful completion of the summer program the students should be encouraged to work on a part-time basis (not more than 20 hours a week) during the school year. If the student is entering his junior or senior year the program and exposure would have enough time to affect his aspirations, career choices, and help him to find a university which will fulfill his new goals.

We allocate the following distribution of 150 students among field centers based on local populations and availability of research opportunities:

ARC	- 20	LARC	- 15
DFRF	- 10	LERC	- 20
GSFC	- 25	MSFC	- 15
JSC	- 15	NSTL	- 10
KSC	- 15	WFC	- 5

At those field centers where there is no Center Educational Programs Officer, a spacemobile lecturer will be used in this capacity.

FUNCTIONAL TIMELINE

1. PLANNING PHASE

From now until the students are brought onboard plans should be made for the implementation of the program.

- A. Faculty Coordinators (FC) should be recruited but should not begin work before March 15, 1983
- B. Mentors should be chosen and receive orientation regarding the goals and objectives of the program. A mentor is required for each student.
- C. Limited office space should be found for the FC. Meeting rooms for the groups' Friday meetings; meeting rooms for pre-employment as well as other orientation sessions should be obtained.
- D. Attempts should be made to work out any personnel problems which may evolve.
- E. A decision must be made about the beginning and ending dates for the program which do not conflict with regular school.

2. EMPLOYMENT OF FACULTY COORDINATOR

The FC should have his/her work assignment well defined and plan to attend the SHARP 83 Planning Conference in Las Vegas, Nevada, April 5-7, 1983 which is being held in conjunction with the National Congress on Aerospace Education.

- A. Part-time employment of the FC could start as early as March 15, 1983. Up to 210 hours of part-time employment is possible.
- B. The Center Educational Programs Officer (CEPO) will decide when the FC becomes full-time and how long they are expected to work during the summer.
- C. The CEPO should arrange for a period of part-time employment in late August and September in order to properly evaluate the program and prepare a final report.

3. RECRUITMENT OF STUDENTS

The FC should visit the schools and talk to principals and teachers to find the best applicants. Personnel has obtained a waiver from the Office of Personnel Management for the students to be recruited directly from the high schools without regard to their family's economic condition.

4. PRE-EMPLOYMENT ORIENTATION OF STUDENTS

One or two Saturday meetings should be held with students during late May or early June to explain to students and parents the program and requirements. Attempts should be made to introduce the student to his/her mentor and fill out all paper work on each student so they can be brought onboard on your starting date.

5. STUDENT WORK PHASE

The first two weeks of the program should be divided between lectures and all aspects of the NASA programs, research and development. This should be given by one of the Aerospace Education Services Project lecturers. The other half of the time would be spent with their mentors. A close relationship should exist between the FC and the student so that beginning adjustment problems can be worked out. From week 3 to the completion of the program students would work at their assigned stations Monday through Thursday, and have report sessions on Friday. Each CEPO should plan with the FC to present the best programs on each of these Fridays.

6. STUDENT REPORTING PHASE

The last 2 or 3 Fridays should be devoted to reports by the students about the research he/she is involved. Each student will be required to make such a report before the end of the summer. Students should be encouraged to use any audio-visual or aids to better explain the research he/she has been exposed to. Where possible the mentor should attend his/her students report and give the student feedback (after the presentation) regarding their report.

7. EVALUATION OF RESULTS

An evaluation is due at Oklahoma State University by September 30, 1983. The evaluation should be written by the FC with the concurrence of the CEPO. Part-time employment should be used for this purpose.

SUMMER HIGH SCHOOL APPRENTICESHIP RESEARCH PROGRAM

FUNCTIONAL TIMELINE

SHARP '83

	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT
PLANNING Headquarters		←			→					
EMPLOYMENT OF FACULTY COORDINATOR			←						→	
RECRUITMENT OF STUDENTS			←		→					
PRE-EMPLOYMENT ORIENTATION OF STUDENTS					↔					
STUDENT WORK PHASE						←		→	-----	
STUDENT REPORTING PHASE							←	→		
EVALUATION OF RESULTS								←	→	

"83" SHARP Recruitment Announcement And Application Packet

SUMMER HIGH SCHOOL APPRENTICESHIP RESEARCH PROGRAM

THE AMES RESEARCH CENTER
IS PLEASED TO ANNOUNCE
THE 1983 SUMMER HIGH SCHOOL
APPRENTICESHIP RESEARCH PROGRAM

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Though engineering enrollments are on the rise in universities across the nation, the shortage of graduate engineers continues. Women and minorities will be significantly underrepresented in the engineering profession for many years to come. As one means of attacking this problem, the Summer High School Apprenticeship Research Program (SHARP) was created two years ago. Federal agencies with scientific and technological challenges of the future were asked to participate in a program designed to provide an engineering experience for gifted female and minority high school students at an age when they could still make career and education decisions.

The purpose of SHARP is to recognize high school juniors (women and minorities) who are U.S. citizens and who have demonstrated unusually high promise for success in mathematics and science through outstanding performance academically in their high school. Students who are accepted to participate in this summer program will earn as they learn. Each student will be required to work eight hours per day in a five-day work week. Some special features of this work-study program are weekly field trips, lectures, oral and written reports, and job experience in a field related to the student's career interest.

For more information about the Research Apprenticeship Program for high school juniors and for application forms, please write:

NASA AMES RESEARCH CENTER
Training and Special Programs Branch
Moffett Field, California 94035
Attn: Ms. Patricia Powell M/S 241-3
(415) 855-8298
(415) 965-5649

AMES RESEARCH CENTER
OFFICE OF THE COORDINATOR
TRAINING AND SPECIAL PROGRAMS BRANCH

Announcing and acquainting you with our high school programs for students interested in engineering, mathematics, and science related fields.

I. Federal Junior Fellowship Program

Participants - Graduating high school seniors interested in engineering, computer science, physical science, mathematics, and statistics. For more information contact:

Ms. Meredith Moore M/S 241-3
NASA-Ames Research Center
Training and Special Programs Branch
Moffett Field, CA 94035
(415) 965-5624

II. Pre-Coop Program

Participants - Graduating high school seniors interested in work experience to earn money and gain on-the-job training in a field related to their vocational choice. The major areas for job placement are in engineering, mathematics, and science related fields. Interested students should contact:

Ms. Meredith Moore M/S 241-3
NASA-Ames Research Center
Training and Special Programs Branch
Moffett Field, CA 94035
(415) 965-5624

III. Summer High School Apprenticeship Research Program (SHARP)

Participants - SHARP is designed to provide an engineering and computer science related experience for gifted female and minority high school students. High school juniors who are U.S. citizens and in the top 10% of their class are eligible for SHARP. The person to contact for more information is:

Ms. Patricia Powell M/S 241-3
NASA-Ames Research Center
Training and Special Programs Branch
Moffett Field, CA 94035
(415) 855-8298
(415) 965-5649

Reply to Attn of: APT:241-3

February 11, 1983

TO: Guidance Staff Member and Student Applicant
FROM: Patricia Powell, Counselor and Employee Development Specialist
SUBJECT: Summer High School Apprenticeship Research Program (SHARP)

The enclosed application packet is for a NASA sponsored program to encourage underrepresented minorities and females to consider mathematics-, engineering-, and physical science-related professions. Please promote awareness and encourage students from your high school who are juniors and U.S. citizens to acquire an application and mail the completed packet to me immediately.

Students who are accepted to participate in this 10-week summer program will earn as they learn. They will be involved in a 5-day week of 8 hours per day. This work-study program may continue during the school term if the student is interested and develops an interest in a project he or she would like to continue.

The Summer High School Apprenticeship Research Program (SHARP) will start on Monday, June 13, 1983, and end on Friday, August 19, 1983. An orientation session is scheduled for students and their parents on May 21, 1983, in the morning. You may report to work on June 13 or June 20, 1983 depending on when your school year ends.

Applications are due on March 15, 1983. Please return the completed forms to:

Ms. Patricia Powell
NASA-Ames Research Center
Training and Special Programs Branch M/S 241-3
Moffett Field, CA 94035

Applicants will be informed regarding their acceptance in SHARP between April 15 and May 1, 1983.

May I thank you in advance for your cooperation and support. I will expect to receive some application packets from your students in your school. Please feel free to contact me if you need additional information or clarification (415) 855-8298 or (415) 965-5649. I am available to visit your school and talk to interested students about SHARP.

Patricia Powell

Enclosure

Reply to Attn of: APT:241-3

TO: Student Applicant
FROM: SHARP Faculty Coordinator

Applications are due on March 15, 1983.

Please return the completed forms to:

Ms. Patricia Powell
NASA-Ames Research Center
Training and Special Programs Branch M/S 241-3
Moffett Field, California 94035

Before mailing, please check to see that the following items are included:

Application Packet

- ☐ Part 1, Student's Section (Required)
- ☐ Part 2, Parent's Section (Required)
- ☐ Part 3, Counselor's Report (Required)
- ☐ Copy of Transcript (Required)
- ☐ Any additional information that would be helpful (Optional)

You must be a U.S. CITIZEN to participate in the Summer High School
Apprenticeship Research Program (SHARP) and completing your JUNIOR year
in high school by June 1983.

NASA-AMES RESEARCH CENTER

SUMMER HIGH SCHOOL APPRENTICESHIP RESEARCH PROGRAM APPLICATION

ALL INFORMATION ON THIS APPLICATION WILL BE KEPT STRICTLY CONFIDENTIAL WITH THE SELECTION COMMITTEE

Due Date: March 15

PART I: STUDENT'S SECTION

Name of Applicant _____

Last

First

Middle

Social Security Number _____ Sex M F

Street _____ City _____ Zip _____

Telephone _____ Counselor _____

Age _____ Grade as of this past September _____

Name of high school _____

1. Educational Goal:

2. Educational Plan:

3. Special Talents or Hobbies:

NASA-AMES RESEARCH CENTER
SUMMER HIGH SCHOOL APPRENTICESHIP RESEARCH PROGRAM

PART II: PARENT'S SECTION

Name of Applicant _____

To be completed by the parent or guardian. ALL INFORMATION WILL BE HELD IN
CONFIDENCE BY THE SELECTION COMMITTEE.

1. Father's Name _____

Occupation _____

Employer _____

2. Mother's Name _____

Occupation _____

Employer _____

3. List number and ages of children in the family dependent upon family income.
Indicate college year if anyone is in college.

a. _____ d. _____

b. _____ e. _____

c. _____ f. _____

PARENT VERIFICATION: I verify that I will attend one orientation and provide
transportation for my child to and from NASA-Ames during the 10-week summer
program.

Parent's Signature _____

Date _____

NASA-AMES RESEARCH CENTER

SUMMER HIGH SCHOOL APPRENTICESHIP RESEARCH PROGRAM

TO: Counselor

FROM: Patricia Powell

Please complete and return to:

Name of Applicant: _____ Date: _____

1. Grade Point Average: _____ (Attach transcript)
2. How seriously do you see this student's interest in engineering - prep (mathematics and science):

3. How motivated is this student to continue his/her education: _____

4. Please make your recommendation for the program by checking one of the following:

Strongly recommend _____ Recommend with reservation _____ Do not recommend _____

If you have reservations about this student and wish to share these concerns with the committee, please explain.

5. Please attach a copy of the student's official transcript complete through the first semester of this school year.

(Signature of Counselor)

(Please use reverse side of form to provide additional information that would be helpful to Selection Committee)

"83" SHARP Participants

EOD

JUNE 20, 1983

[REDACTED]
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JUNE 13, 1983

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SHARP

[illegible]

*Revised 06-29-83, previous editions are obsolete.

SHARP

NAME

SOCIAL SECURITY #

[illegible]

[REDACTED]

SUMMER HIGH SCHOOL APPRENTICE RESEARCH PROGRAM
(SHARP 83)

<u>CENTERS</u>	Total No. of Students	Average Age	Average Grade Level	Total Male/ Female	Total Black Male	Total Black Female	Total Hispanic Male	Total Hispanic Female	Total American Indian Male	Total American Indian Female	Total Asian American Pacific Islander Male	Total AA/PI Female	Total White Male	Total White Female
Ames Res. Ctr.	20	16.35	11	20	3	1	2	1	0	0	3	5	0	5
Dryden Res. Ctr.														
Goddard Space Flight Ctr.														
Johnson Space Ctr.														
Kennedy Space Ctr.														
Langley Res. Ctr.														
Lewis Res. Ctr.														
Marshall Space Flight Ctr.														
National Space Tech. Lab.														

Summer High School Apprenticeship Research Program (SHARP)

SEX	EOD DATE	Minority Code Designation					TOTAL
		A	B	C	D	E	
Female	6-13-83	0	1	0	1	3	5
	6-20-83	0	4	1	1	2	8
	Subtotal	0	5	1	2	5	13
Male	6-13-83	0	0	0	1	0	7
	6-20-83	0	3	3	0	0	7
	Subtotal	0	3	3	1	0	7
TOTAL		0	8	4	3	5	20

If you have questions please contact Pat Powell at extension 5649.

Reply to Attn of: APT:241-3

August 1, 1983

TO: Records and Reports Branch, APX:241-5
FROM: Patricia Powell, SHARP Faculty Coordinator
RE: Personnel Action for SHARP Student Trainees

<u>Name</u>	<u>Code</u>	<u>Action</u>	<u>Date</u>	<u>Contact</u>
[REDACTED]	EEL	Resignation	8/19/83	Jan Holt
[REDACTED]	SSA	Resignation	8/19/83	Sharon Scharmen
[REDACTED]	LBE	Resignation	8/19/83	Sharon Scharmen
[REDACTED]	LB	Resignation	8/19/83	Sharon Scharmen
[REDACTED]	LXL	Resignation	8/19/83	Sharon Scharmen
[REDACTED]	LB	Resignation	8/19/83	Sharon Scharmen
[REDACTED]	EEM	Resignation	8/26/83	Jan Holt
[REDACTED]	SSA	Resignation	9/9/83	Sharon Scharmen
[REDACTED]	EEE	Resignation	8/26/83	Jan Holt
[REDACTED]	SSA	Resignation	8/19/83	Sharon Scharmen
[REDACTED]	SSA	Resignation	9/9/83	Sharon Scharmen
[REDACTED]	SSP	Resignation	8/19/83	Sharon Scharmen
[REDACTED]	LB	Resignation	8/19/83	Sharon Scharmen
[REDACTED]	LB	Resignation	8/26/83	Sharon Scharmen
[REDACTED]	LXL	Resignation	8/19/83	Sharon Scharmen
[REDACTED]	LB	Resignation	8/19/83	Sharon Scharmen
[REDACTED]	FSS	Resignation	8/19/83	Susan Paulson
[REDACTED]	LX	Resignation	8/19/83	Sharon Scharmen
[REDACTED]	LXL	Resignation	8/26/83	Sharon Scharmen
[REDACTED]	FSS	Resignation	9/2/83	Susan Paulson

"83" SHARP Activities And Ten Week SHARP Calendar

Reply to Attn of: APT:241-3

July 7, 1983

List of Activities Scheduled for SHARP Student Trainees

<u>Date</u>	<u>Activity</u>
Friday, June 24, 1983	Tour of University of Santa Clara and Stanford University Medical Center
Friday, July 1, 1983	Blue Angels, the Navy's Flight Demonstration Squadron, Moffett Field
Friday, July 8, 1983	Tour of Stanford Linear Accelerator Center and Stanford University
Monday, July 11, 1983	Lunch with the Jetstream Toastmasters Club #2624
Friday, July 15, 1983	Tour of Lockheed
Monday, July 18, 1983	Lunch with the Jetstream Toastmasters Club #2624
Friday, July 22, 1983	Tour of Hewlett Packard
Monday, July 25, 1983	Lunch with the Jetstream Toastmasters Club #2624
Friday, July 29, 1983	Presentation by Tom Clausen
Friday, August 5, 1983	Tour of IBM
Friday, August 12, 1983	Rocketry with Bill Horvath
Monday, August 9, 10, 11, 15, 16, 17, 18, 1983	Presentation of oral reports by SHARP Student Trainees, Coordinated by Tom Clausen, Bill Horvath, Clarice Lolic and Patricia Powell.
Thursday, August 18, 1983	Annual SHARP Banquet



Ames Research Center

SHARP / PATRICIA POWELL, COORDINATOR, MS 241-3

National Aeronautics and
Space Administration

MONTHLY SCHEDULE

MONTH JUNE YEAR 1983

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
		1	2	3
6	7	8	9	10
13 SHARP ORIENTATION 8:30 AM ROOM 147/BLD 241 REPORT TO WORK SITE	14 WORK	15 WORK	16 WORK	17 8:30 AM SHARP STUDENTS CHECK IN WITH P. POWELL ROOM 148/BLD 241 REPORT TO WORK SITE
20 SHARP ORIENTATION 8:30 AM ROOM 113/BLD 241 REPORT TO WORK SITE	21 WORK	22 WORK	23 WORK	24 8:30 AM SHARP MEETING ROOM 147/BLD 241 FIELD TRIP UNIV. OF SANTA CLARA STANFORD MEDICAL CENTER
27 WORK	28 WORK	29 WORK	30 WORK	1 8:30 AM SHARP MEETING ROOM 147/BLD 241 FIELD TRIP IBM

MONTHLY SCHEDULE

MONTH JULY YEAR 1983

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
				1 8:30 a.m. Room 147/Bldg. 241 Field Trip - International Business Machine (IBM)
4 Holiday	5 Work	6 Work	7 Work	8 8:30 a.m. Room 147/Bldg. 241 Field Trip - Stanford University & Stanford Linear Accelerator Center
11 Work	12 Work	13 Work	14 Work	15 8:30 a.m. Room 147/Bldg. 241 Field Trip - Lockheed
18 Work	19 Work	20 Work	21 Work	22 8:30 a.m. Room 147/Bldg. 241 Field Trip - Hewlett Packard
25 Work	26 Work	27 Work	28 Work	29 8:30 a.m. Room 147/Bldg. 241 Space Mobile Lecture - Demonstration Clarice Lolich



National Aeronautics and
Space Administration

Ames Research Center

MONTHLY SCHEDULE

MONTH AUGUST YEAR 1983

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1 Work	2 Work	3 Work	4 Work	5 8:30 a.m. Room 147/Bldg. 241 SHARP Students Oral Reports
8 Work	9 Work	10 Work	11 Work	12 8:30 a.m. Room 147/Bldg. 241 SHARP Students Oral Reports
15 Work	16 Work	17 Work	18 Work SHARP BANQUET, 6:00PM	19 8:30 a.m. Room 147/Bldg. 241 SHARP Check-out
22 Work	23 Work	24 Work	25 Work	26 8:30 a.m. Room 147/Bldg. 241 SHARP Check-out
29	30	21		

"83" SHARP Agenda And Schedules

AGENDA

ORIENTATION SESSION

Saturday, May 21, 1983

8:30 a.m. - 12:30 p.m.

- I. Introductions - Patricia Powell
- II. Movies/Garth Hull
- III. Educational Component - Garth Hull
Bill Horvath
Clarice Lolich

Break - Refreshments

- IV. Program - John Leveen
 - A. Staff Introductions
 - B. Student and Parent Introductions
 - C. Overview and History of NACA, NASA, and Ames Research Center
 - D. Questions and Answers Period
- V. Tour - Garth Hull

AGENDA

ORIENTATION SESSION

Saturday, May 21, 1983

8:30 a.m. - 12:30 p.m.

- I. Introductions - Patricia Powell
- II. Completion of Paper Work
Job Interviews - Meredith Moore
Patricia Powell
- III. Educational Component - Garth Hull
Bill Horvath
Clarice Lolich

Break - Refreshments

- IV. Program - John Leveen
 - A. Staff Introductions
 - B. Student and Parent Introductions
 - C. Overview and History of NACA, NASA, and Ames Research Center
 - D. Questions and Answers Period
- V. Tour - Garth Hull

Reply to Attn of: APT:241-3

June 24, 1983

FRIDAY MEETING

8:30 A.M.

AGENDA

8:30 - Group Discussion

1. How things are working out in each job placement
2. When and how you would use your SHARP counselor
(Ms. Patricia Powell, Building 241, Room 148, x5649)
3. Weekly information packet, calendar, educational
component, etc....

9:30 - Leave for field trip to the University of Santa Clara

12:00 - Lunch

1:00 - Leave for tour of Stanford Medical Center

4:00 - Rap session on today's field trip

4:30 - Adjourn to home and a relaxing weekend

Reply to Attn of: APT:241-3

July 7, 1983

TO: "83" SHARP Student Trainees
FROM: Patricia Powell, SHARP Coordinator
SUBJECT: List of Activity Dates and Times for SHARP Educational Component

<u>Project</u>	<u>Date</u>
1. Job Description	July 22, 1983
2. Individual Conferences on Oral five and twenty minute reports and research paper (see schedule)	July 18-21, 1983
3. Video Taping/5 minute Lunch time, 11:30 a.m. to 1:00 p.m. (see schedule)	July 25-28, 1983
4. Special Day of Activities by Aerospace lecturer Tom Clausen	July 29, 1983
5. Twenty Minute Oral Reports (see schedule)	August 9-18, 1983
6. Final copy of research paper due	August 15, 1983
7. Fourth Annual SHARP Recognition Banquet	August 18, 1983, 6:00 p.m. to 9:00 p.m.

Reply to Attn of: APT:241-3

July 8, 1983

FRIDAY MEETING

8:30 A.M.

AGENDA

8:30. - Topics for discussion with SHARP Student Trainees

1. Student trainee update on job placement, attendance, payment checks, etc.
2. Review calendar dates and list of activities schedule for SHARP student trainees.
3. Educational component-follow outline and deadlines

9:00 - Group picture taken in front of Building 200

9:30 - Leave for field Trip to Stanford University

10:00- Talk by the Stanford University Admissions Counselor

11:00- Tour of Stanford University

12:00- Lunch, Tresidder Union

1:00 - Leave for Stanford Linear Accelerator Center (SLAC)

1:30 - Tour of SLAC

3:30 - Return to NASA Ames Research Center, Building 241, Room 147

4:00 - Discussion of today's activities and any other items of interest or concern to the SHARP student trainees

4:30 - Adjourn for weekend of REST

Reply to Attn of: APT:241-3

July 8, 1983

TO: "83" SHARP Student Trainee
FROM: Patricia Powell, Faculty Coordinator
SUBJECT: Schedule for NASA Ames Summer High School Apprenticeship Research Program (SHARP) student trainees to participate in the Jetstream Toastmasters Club No. 2624 Monday Luncheon

Please be present at 11:30 a.m. in Building 241, Room 148 to depart to the CPO Club for lunch with the members of Jetstream Toastmasters Club No. 2624 as indicated below.

Monday, July 11, 1983



Monday, July 18, 1983



Monday, July 25, 1983



Luncheon Selections: Chef Salad, French Dipped Sandwich, British Burger, Beef Stroganoff.

Cost: \$2.00

Patricia Powell
Patricia Powell
SHARP Faculty Coordinator

Reply to Attn of APT:241-3

July 8, 1983

TO: "83" SHARP Student Trainees
FROM: Patricia Powell, SHARP Coordinator
SUBJECT: Schedule for five (5) minute Videotaping/July 25-28, 1983/
Lunch time; 11:30 A.M. to 1:00 P.M.

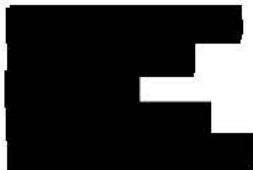
Monday, July 25, 1983/Clarice Lolich

<u>Name</u>	<u>Time</u>
	11:30 A.M.
	11:45 A.M.
	12:00 P.M.
	12:15 P.M.
	12:30 P.M.

Tuesday, July 26, 1983/Clarice Lolich

<u>Name</u>	<u>Time</u>
	11:30 A.M.
	11:45 A.M.
	12:00 P.M.
	12:15 P.M.
	12:30 P.M.

Wednesday, July 27, 1983/Tom Clausen

<u>Name</u>	<u>Time</u>
	11:30 A.M.
	11:45 A.M.
	12:00 P.M.
	12:15 P.M.
	12:30 P.M.

Thursday, July 28, 1983/Bill Horvath

<u>Name</u>	<u>Time</u>
	11:30 A.M.
	11:45 A.M.
	12:00 P.M.
	12:15 P.M.
	12:30 P.M.

Reply to Attn of: APT:241-3

July 8, 1983

TO: "83" SHARP Student Trainee
FROM: Patricia Powell, Faculty Coordinator
SUBJECT: Schedule for Individual Conferences with Clarice Lolich
July 18-21, 1983

The following schedule has been arranged for you to discuss your oral reports and research paper. Please have as much of the content of your paper as you can complete at that time. The finish copy of your paper is due on August 1, 1983. Please deliver your research paper to Patricia Powell on Monday, August 1, 1983. Clarice Lolich will critique each paper and contact you regarding her commentary. Any suggested changes or corrections must be done before August 15, 1983. The final copy of your research paper must be turned in to Patricia Powell on Monday August 15, 1983.

Please get in touch with me if you have any questions. Please inform your supervisor that you will be away from your work site at the time indicated below for this conference to review your research paper and oral reports.

MONDAY, JULY 18, 1983

Name

[REDACTED]

Time

8:00 a.m. - 9:00 a.m.
9:15 a.m. - 10:15 a.m.
10:30 a.m. - 11:30 a.m.
1:00 p.m. - 2:00 p.m.
2:15 p.m. - 3:15 p.m.

TUESDAY, JULY 19, 1983

Name

[REDACTED]

Time

8:00 a.m. - 9:00 a.m.
9:15 a.m. - 10:15 a.m.
10:30 a.m. - 11:30 a.m.
1:00 p.m. - 2:00 p.m.
2:15 p.m. - 3:15 p.m.

WEDNESDAY, JULY 20, 1983

Name

[REDACTED]

Time

8:00 a.m. - 9:00 a.m.
9:15 a.m. - 10:15 a.m.
10:30 a.m. - 11:30 a.m.
1:00 p.m. - 2:00 p.m.
2:15 p.m. - 3:15 p.m.

THURSDAY, JULY 21, 1983

Name

[REDACTED]

Time

8:00 a.m. - 9:00 a.m.
9:15 a.m. - 10:15 a.m.
10:30 a.m. - 11:30 a.m.
1:00 p.m. - 2:00 p.m.
2:15 p.m. - 3:15 p.m.

Patricia Powell

Patricia Powell

Reply to Attn of: **APT:241-3**

July 15, 1983

FRIDAY MEETING

8:30 A.M.

AGENDA

8:30 - Movie - Women at NASA

9:00 - Topics for discussion with SHARP student Trainees

- 1.) Part-time employment during the school year - procedure for consideration.
- 2.) Reminder - Jetstream Toastmasters Club No.2624 Monday Luncheon
- 3.) Educational component (research papers, oral reports, field trips, etc.) - questions and answers

9:30 - Leave for Field trip to Lockheed Missiles & Space Company, Inc.

10:00- Tour of Lockheed

12:00- Lunch/Lockheed Cafeteria

12:30- Tour of Lockheed continues

2:00 - Return to NASA Ames Research Center, Building 241, Room 147

2:30 - College and Career Planning Systems Seminar presented by Patricia Powell

4:00 - Movie - Where Dreams Come True

4:30 - Adjourn for a weekend of RELAXATION

Reply to Attn of: APT:241-3

July 22, 1983

FRIDAY MEETING

8:30 A.M.

AGENDA

8:30 - Viewing of Video Tapes of SHARP "80" and SHARP "81"

9:30 - Topics for discussion with SHARP Student Trainees

- 1.) Collect job-descriptions
- 2.) Reminder- Jetstream Toastmaster Club No.2624, Change to Monday, August 1, 1983.
- 3.) Part-time employment and resignation forms due Friday, August 29, 1983
- 4.) Educational component, conference with Clarice Lolich
- 5.) Schedule for five (5) Minutes Videotaping / July 25-28, 1983/
Lunch time, 11:30 A.M. to 1:00 P.M.
- 6.) Fourth Annual SHARP Recognition Banquet / Thursday, August 18, 1983, 6:00 P.M. to 9:00 P.M., Reserve the date.

10:30- College Financial Aid Seminar presented by Patricia Powell

11:30- Leave for Field Trip to Hewlett Packard, Computer Systems Division.

12:00- Lunch and Tour of Hewlett Packard

4:00 - Return to NASA Ames Research Center, Building 241, Room 147

4:30 - Adjourn for weekend (6 weeks completed, how time flies when you are enjoying what you do)

• Reply to Attn of **APT:241-3**

July 29, 1983

FRIDAY MEETING

8:30 A.M.

AGENDA

8:30 - Topics for discussion with SHARP Student Trainees

- 1.) Reminder - Jetstream Toastmaster Club No.2624 - Monday, August 1, 1983
- 2.) Part-time employment and resignation forms due TODAY
- 3.) Impressions of Dryden SHARP Student Trainees
- 4.) Responses from Ames SHARP Student Trainees on their experience of being Video taped
- 5.) Schedule for twenty (20) Minute oral reports/August 9-18, 1983/
11:30-1:00/Building 233, Room 172
- 6.) Fourth Annual SHARP Recognition Banquet Invitation Distribution

9:00 - Space mobile Lecture Demonstration, Tom Clausen

12:00- Lunch

1:00 - Space mobile Lecture Demonstration, Tom Clausen

4:00 - Adjourn for home and work on oral report and research paper

Reply to Attn of: **APT:241-3**

July 29, 1983

TO: "83" SHARP Student Trainees
FROM: Patricia Powell, SHARP Coordinator
**SUBJECT: Schedule for twenty (20) Minutes oral reports/August 9-18, 1983/
Building 233, Room 172**

Tuesday, August 9, 1983

[REDACTED]

Facilitator - Clarice Lolich

11:00 A.M.
11:30 A.M.
12:00 P.M.

Wednesday, August 10, 1983

[REDACTED]

Facilitator - Bill Horvath

11:30 A.M.
12:00 P.M.
12:30 P.M.

Thursday, August 11, 1983

[REDACTED]

Facilitator - Tom Clausen

11:00 A.M.
11:30 A.M.

Monday, August 15, 1983

[REDACTED]

Facilitator - Tom Clausen

11:00 A.M.
11:30 A.M.
12:00 A.M.
12:30 P.M.

Tuesday, August 16, 1983

[REDACTED]

Facilitator - Bill Horvath

11:00 A.M.
11:30 A.M.
11:30 A.M.
12:00 P.M.

Wednesday, August 17, 1983

[REDACTED]

Facilitator - Clarice Lolich

11:30 A.M.
12:00 P.M.
12:30 P.M.
12:00 P.M.

Thursday, August 18, 1983, Facilitator - Patricia Powell, Evaluations

Reply to Attn of: APT:241-3

August 5, 1983

FRIDAY MEETING

8:30 A.M.

AGENDA

8:30 - Group Discussion

- 1.) Five (5) Minutes Videotaping Comments, reactions etc. Premier showing schedule for August 19, 1983 at 8:30 A.M. in Bldg. 241, Room 149.
- 2.) Twenty (20) minutes oral reports begin, Tuesday, August 9, 1983 at 11:30 A.M. in Building 241, Room 149 check schedule for your date, place, and time.
- 3.) Arrangements and final details for the Fourth Annual SHARP Recognition Banquet, Thursday, August 18, 1983, 6:00 P.M. to 9:00 P.M.
- 4.) Research papers, first draft complete and turned in today to Clarice Lolich.
- 5.) Discussion of any concerns, problems or questions you might have regarding your job description and/or research paper.
- 6.) Dryden visit has been reschedule for August 9, 1983.

9:15 - Leave for Field Trip to IBM

12:30- Lunch, on your own

1:00 - Return to NASA-Ames Research Center, Building 241, Room 147

1:45 - Return to work site or use time allotted for final work on Research papers and preparation for oral twenty (20) minute report.

4:30 - Adjourn for weekend

"83" SHARP Evaluation Forms

Student's Name

Use a () to indicate the rating that best describes your working relationship with your SHARP advisor, Patricia Powell. 1 denotes the lowest rating and 10 denotes the highest rating.

1 2 3 4 5 6 7 8 9 10

Helpful_____

Concerned/Caring_____

Enthusiastic/Interested_____

Fair/Understanding_____

Challenging/Industrious_____

Available/Dependable_____

Cooperative_____

Knowledgeable_____

Motivating/Inspiring_____

OVERALL RATING:

Use the space below to write any additional comments concerning your experience with Patricia Powell.

Reply to Attn of: **APT:241-3**

Student's Name

**STUDENT EVALUATION
OF SUMMER HIGH SCHOOL APPRENTICESHIP RESEARCH PROGRAM**

Directions: Write in the space provided your response to the questions and statements concerning your participation in SHARP "83."

1. What do you consider to be the most rewarding activity of the summer workstudy program? Why?

2. Briefly describe a problem encountered by you as a participant. How did you resolve the problem?

3. What changes (if any) would you recommend for the program if it is continued? Why?

4. How has this experience helped you?

5. Additional comments concerning the program.

EVALUATION OF STUDENT AID

NAME OF STUDENT _____ DATE _____

SUPERVISOR _____ BRANCH _____

COMMENTS:

	OUTSTANDING	GOOD	ACCEPTABLE	UNACCEPTABLE	DOES NOT APPLY
GENERAL JOB PERFORMANCE					
ACCURACY OF WORK PRODUCED					
QUANTITY OF WORK PRODUCED					
ABILITY TO WORK WITHOUT UNDUE SUPERVISION					
ABILITY TO WORK UNTIL TASK IS COMPLETED					
ABILITY TO WORK UNDER PRESSURE					
ABILITY TO ORGANIZE WORK EFFICIENTLY					
WILLINGNESS TO FOLLOW DIRECTIONS					
WILLINGNESS TO ACCEPT CONSTRUCTIVE CRITICISM					
SELF-EXPRESSION, VERBAL OR WRITTEN					
ABILITY TO WORK WITH OTHERS					
CARE OF EQUIPMENT AND SUPPLIES					
PUNCTUALITY AND ATTENDANCE					
OTHER (SPECIFY)					

REMEMBER TO FILL OUT THE BACK

COMMENTS:

HAVE YOU DISCUSSED THE EMPLOYEE'S PROGRESS WITH HIM/HER?

YES _____

NO _____

SIGNATURE OF SUPERVISOR _____

SIGNATURE OF STUDENT (Optional) _____

PLEASE RETURN THIS FORM TO:

Ms. Patricia Powell
SHARP Faculty Coordinator and Counselor
Training and Special Programs Branch, 241-3