



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LYNDON B. JOHNSON SPACE CENTER
HOUSTON, TEXAS 77058

**NATIONAL
AERONAUTICS
AND
SPACE
ADMINISTRATION**

REPLY TO
ATTN OF:

TN3-73-5-18

TN3-73-5-18

TO:

TO: Distribution

JUN 06 1973

FROM: TA/Director of Science and Applications

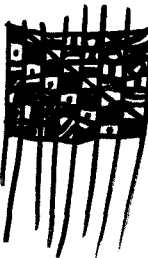
SUBJECT: Minutes of Post-Apollo Lunar Science Program Review,
May 9, 1973

The Post-Apollo Lunar Science Program Review was held on May 9, 1973, at NASA Johnson Space Center. The meeting was cochaired by William T. O'Bryant, Director of Lunar Programs, NASA Headquarters, and Anthony J. Calio, Director of Science and Applications, JSC. The meeting agenda is presented in enclosure 1 and the attendees are listed in enclosure 2. Enclosures 3 through 9 describe the items discussed.

The resulting decisions, actions, and recommendations were as follows:

a. The Geology Branch, Planetary and Earth Sciences Division, presented a summary of the Preliminary Evaluation Team (PET) report for Apollo 17 (enclosure 3). A brief listing of the total 110.5 kg sample was given, and more detailed descriptions were made of selected individual samples. No significant problem areas were defined and no action items resulted.

b. The Apollo 17 Preliminary Science Report submittal date to NASA Headquarters is June 18, 1973, as established through the Lunar Programs Office. Additional time is now required to complete submission of the report because conflicting activities (e.g., science conferences, Skylab, and other program priorities) have delayed initial principal investigator contributions, as well as subsequent revision of those contributions. In addition, limited photographic and data processing resources have curtailed distribution of the material necessary for preparation of the science report. As of May 9, 1973, approximately 90% of the contributions to the Apollo 17 Preliminary Science Report had been received and reviewed. Approximately 60% of the papers received are undergoing revision by the authors. The review process indicates that most of the remaining papers will also require revision. It is estimated that initial review and the resulting revisions will be completed in early June. Editing, graphics preparation, and final revision will require approximately two months. Based on incremental processing and submission, it is anticipated that approximately 50% of



the report will be forwarded to NASA Headquarters by the original submittal date (June 18, 1973) and the remainder before August 1, 1973 (see enclosure 4). W. T. O'Bryant concurred and will formalize the recommendation through the Apollo Program Director.

c. Publication of the proceedings of the Fourth Lunar Science Conference was discussed (enclosure 5). Approximately 230 papers are expected to be published. Subsequent to the meeting, it has been learned that Pergamon Press has offered a bid (letter of agreement dated May 1, 1973, received by the Lunar Science Institute (LSI) on May 10, 1973) to publish by December 1, 1973, at a charge of \$45 per page. A modified agreement between the LSI and Pergamon Press has been mailed to Pergamon Press for signature. The modifications do not affect the initial cost and schedule statements. Informal response from M.I.T. Press indicated that they could meet a substantially later publication date, at a \$35 per page charge. The required publication date of December 1, 1973, cannot be met by M.I.T. Press, and they formally withdrew from the bidding by telephone on May 15, 1973. A formal letter of withdrawal was promised and is expected shortly. The Apollo 17 principal investigators are prepared to absorb \$35 per page charge in their respective contracts. At least half of the additional \$10 per page charge required for Pergamon Press will be absorbed by the LSI, and work is proceeding to establish the source(s) for the remainder.

d. The next (5th) Lunar Science Conference (LSC) was discussed. The call for papers will be issued in November and December 1973; abstracts will be due in February 1974; and the conference will be held in March 1974. No estimate of the expected number of papers is available. In discussing the LSI's upcoming contract renewal, it was decided to initially write the new contract to permit the LSI to perform the entire LSC job and then delete contractual requirements if deemed prudent. Also, Noel Hinnners and John Pomeroy were recommended as NASA Headquarters representatives on the Program Planning Committee.

e. Owing to the current hands-off policy with respect to NASA Headquarters/USRA contract for the lunar support of LSI, Headquarters stated the contract monitor in Washington had been unable to exert any particular degree of direction over the Institute. Both NASA Headquarters and JSC expressed an opinion that the Institute ought to be independent of NASA and that working relationship between individuals of JSC and the Institute was the only way to insure cooperative programs and activities. JSC pointed out that they have no desire to manage the Institute, but feel that they should be permitted to make recommendations to the Institute in carrying out their tasks.

f. The current status of curatorial projects was reviewed (enclosure 6). The problems of receiving information from PI's were discussed with respect to completion of PI inventories and documentation of returned samples. More effort than anticipated is now being placed on personal contacts with PI's to increase the information flow. Both JSC and NASA Headquarters expressed strong interest in establishing a plan for broader access to certain types of lunar materials by a wider range of users, especially for educational purposes. JSC will prepare a recommendation, based on advice from NASA Headquarters and the scientific community, which will spell out how a program could be implemented, how lunar sample security would be maintained, and what costs would be involved.

g. JSC views the Lunar Sample Review Panel (LSRP) as having been a very successful mechanism for providing advice on the scientific merit of proposals submitted to the lunar sample program, and depends strongly on that group. The administrative chores of technically monitoring contracts and grants are very much reduced due to the quality of the LSRP review. All (as many as 200 lunar sample PI's simultaneously) have been administered by a single monitor. NASA Headquarters views the LSRP as successful, but anomalous in the management scheme. The Associate Administrator appears to be concerned that the expansion of scope of the LSRP to include review of the Synthesis Program will diminish the ability of NASA to direct its own program. JSC believes that this has proven to be a very successful proposal assessment and indeed provides an overall understanding and balance of the scientific program and, consequently, should be followed for the implementation of the synthesis proposal evaluations. However, JSC realizes that this is a NASA Headquarters decision.

h. Computation and Analysis Division presented a summary of computer support for the lunar exploration program, including the status of data processing activities for SIM, subsatellite, and ALSEP data (enclosure 7). Two problem areas were discussed, relative to PI data support and priority of ALSEP data collection and processing. CAD expressed the need for more timely response from principal investigators, following delivery of magnetic tape data by CAD, as to the quality and adequacy of the tape data. Recent requests from some ALSEP and SIM experiment PI's to the Science Requirements Branch have asked for retransmittal or retrieval of data that is over a year old. In the case of principal investigators with large volumes of data, prompt verification upon receipt of all data tapes is not feasible. The Science Requirements Branch accepted an action item to request principal investigator notification to JSC as to the quality and completeness of data within 30 days of receipt. The question of duration of collection and processing of ALSEP data was raised by CAD, as regards competition for

resources with other programs. Reduction of ALSEP data processing, to be significant to CAD, must be made in steps of total ALSEP packages. NASA Headquarters and JSC/S&AD accepted an action item to determine the priority of continued collection and processing of ALSEP data in cases of conflict with competing programs. FCD presented a telemetry and command priority list implemented by the Goddard Space Flight Center for satellite tracking (enclosure 8). The source and rationale for this list were questioned. Because of this priority, some ALSEP data have not been recorded due to the higher priority ERTS. Also, there was discussion as to dropping some Skylab routine coverage for ALSEP coverage.

i. The Science Requirements Branch discussed the status of Apollo principal investigator contracts. In the area of photographic analysis, only one problem area was mentioned. Contract S-211 with Dudley Observatory (Mercer) is in an overrun condition, and questions have been raised, from official Dudley progress reports, concerning financial accounting irregularities. Verbal and written communications are underway with Dudley, directing immediate resolution. Status of the cartographic program was given as follows:

- 1:250,000 scale map program is essentially established, with minor revisions in preparation.
- 1:50,000 scale map program is in process of defining at least seven new areas.
- Profile program is established, and awaiting evaluation of first profile products prior to defining any additional profile requirements.

Photographic processing for Apollo 17 orbital science experiments and objectives has been completed; processing for Apollo 17 surface science experiments and objectives was expected by May 15. Photographic analysis support data for the Apollo 15 and 16 laser altimeter and S-band transponder experiments have been completed and distributed. Corresponding support data for Apollo 17 are to be completed by July 1. The majority of Apollo 15 and 16 orbital science PI contracts are being extended at no cost through June 1973. All other contracts are being extended with funding as required. Two open problem areas are (1) the cost of the surface electrical properties contract, which has not been finalized, and (2) the lunar sounder contract, for which definition of the digital processing plan and a 6-month extension are incomplete. With the exception of Apollo 17, the major part of both orbital and surface science data for Apollo missions has been provided to NSSDC.

j. The question of the transfer of Strangway's laboratory to the University of Toronto was raised. Calio indicated that he did not intend to replace the capability for geophysical studies on lunar samples within JSC. He expressed the view that keeping the laboratory with Strangway at the University of Toronto would lead undoubtedly to a much greater contribution to the lunar science program than retaining it or rebuilding it at JSC. An orderly phasedown of this work is planned for the coming year and elements of this work will be retained at JSC during FY74. NASA Headquarters/Lunar Programs Office and JSC/S&AD accepted an action to investigate the problems involved in transferring this equipment to a foreign institution, the University of Toronto.


Anthony J. Calio

9 Enclosures

LUNAR PROGRAM REVIEW

May 9, 1973

9:00 a.m.

Rm. 193 - Bldg. 31

S&AD SCIENCE OPERATIONS

| | |
|--------------------------------------|---------|
| PET | Phinney |
| Apollo 17 Preliminary Science Report | Baldwin |
| Proceedings - 4th Conference | Phinney |
| Plans for 5th Conference | Calio |
| LSI Relationships | Calio |
| Problems | |

CURATORIAL OPERATIONS

Duke

Manpower
Schedules
Security
Browsing Privileges
Problems

SAMPLE PROGRAM

Duke

Proposal Review Schedules
Allocation Policy
Problems

APOLLO FLIGHT P.I.'s

Eichelman

Funding
Contract Schedules
Archiving
Annual Review of Experiment Operations
P.I. Participation in Future Reviews?
Problems

F.O.D. OPERATIONS

Eichelman/FOD & C&AD

ALSEP Tracking
Computer Priorities
Problems

PHOTO P.I. PROGRAM

Hardee

Cartographic Support
Funding
Contract Schedules
Photo Support
Problems

UNMANNED LUNAR POLAR ORBITING SATELLITE

Strangway

LIST OF ATTENDEES
POST-APOLLO LUNAR SCIENCE PROGRAM REVIEW
May 9, 1973

| | |
|------------------|--------------------|
| R. J. Allenby | NASA Hqs., SM |
| R. R. Baldwin | JSC/TN3 |
| J. R. Bates | JSC/TN3 |
| R. P. Bryson | NASA Hqs., SM |
| A. J. Calio | JSC/TA |
| M. B. Duke | JSC/TL4 |
| W. F. Eichelman | JSC/TN3 |
| F. Fulton | JSC/FD5 |
| S. N. Hardee | JSC/TN3 |
| J. W. Harris | JSC/TL4 |
| L. Haskin | Univ. of Wisconsin |
| N. W. Hinnners | NASA Hqs., SM |
| J. W. Holland | JSC/JL3 |
| K. K. Kundel | JSC/FC9 |
| P. E. Lafferty | JSC/TN3 |
| W. T. O'Bryant | NASA Hqs., SM |
| W. D. Poates | JSC/FD5 |
| W. C. Phinney | JSC/TN6 |
| J. H. Pomeroy | NASA Hqs., SM |
| F. I. Roberson | NASA Hqs., SM |
| D. Senich | NASA Hqs., SM |
| D. W. Strangway | JSC/TN2 |
| A. T. Strickland | NASA Hqs., SM |

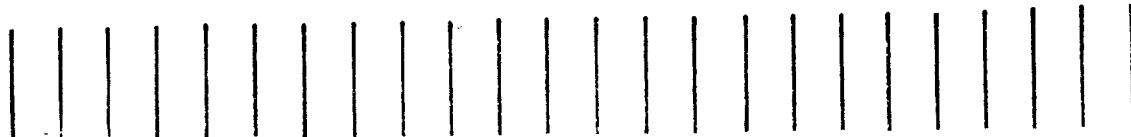
PET SUMMARY

110.5 Kg TOTAL SAMPLE

- 335 ROCKS (OVER 1 CM)
- 73 SOILS (OVER 50 GMS)
- 8 DRIVE TUBES
- DEEP DRILL CORE
- SESC

ROCKS

- 132 IN 6 RAKE SAMPLES
- 15 OVER 1 Kg
- ONLY 2 SMALL ROCKS NOT DESCRIBED
- 35 THIN SECTIONS
- 13 CHEMICAL ANALYSES
- 17 GAMMA RAY COUNTING



• SEVERAL BOULDERS SAMPLED

- LM AREA - BOULDER 1 - 1 SAMPLE
BOULDER 2 - 1 SAMPLE
- STATION 1 - BOULDER 1 - 2 SAMPLES
BOULDER 2 - 2 SAMPLES
- STATION 2 - BOULDER 1 - 4 SAMPLES
BOULDER 2 - 5 SAMPLES
BOULDER 3 - 2 SAMPLES
- STATION 4 - BOULDER 1 - 1 SAMPLE
- STATION 5 - BOULDER 1 - 1 SAMPLE
BOULDER 2 - 1 SAMPLE
BOULDER 3 - 1 SAMPLE
BOULDER 4 - 1 SAMPLE
- STATION 6 - BOULDER 1 - 7 SAMPLES
- STATION 7 - BOULDER 1 - 4 SAMPLES
- STATION 8 - BOULDER 1 - 2 SAMPLES
- STATION 9 - BOULDER 1 - 2 SAMPLES
BOULDER 2 - 1 SAMPLE

- ROCKS CLASSIFIED INTO 8 BROAD GROUPS
 - BASALTS
 - DARK MATRIX BRECCIAS
 - AGGLUTINATES
 - GREEN-GRAY BRECCIAS
 - BLUE-GRAY BRECCIAS
 - LAYERED, FOLIATED, LIGHT-GRAY BRECCIAS
 - BRECCIATED ANORTHOSITIC TO GABBROIC ROCKS
 - MISCELLANEOUS

SOILS

- 64 SIEVED
- 17 CHEMICAL ANALYSES
- 22 GAMMA RAY COUNTING
- 18 STUDIED IN MORE DETAIL BY FURTHER SIEVING AND PETROGRAPHY
- CLASSIFIED INTO 3 GROUPS
 - DARK MANTLE
 - MASSIF - LIGHT MANTLE
 - ORANGE AND BLACK GLASS

DRIVE TUBES AND CORE

- X-RADIOGRAPHY OF ALL AVAILABLE SECTIONS
- DISSECTION OF BIT AND ONE SECTION FROM CORE
- SMALL SAMPLES FROM ENDS OF CORE SECTIONS AND ONE DRIVE TUBE

Enclosure 4

[illegible]

56

51

46

35

11

JUNE 4 159

15%

40%

40%

20%

20%

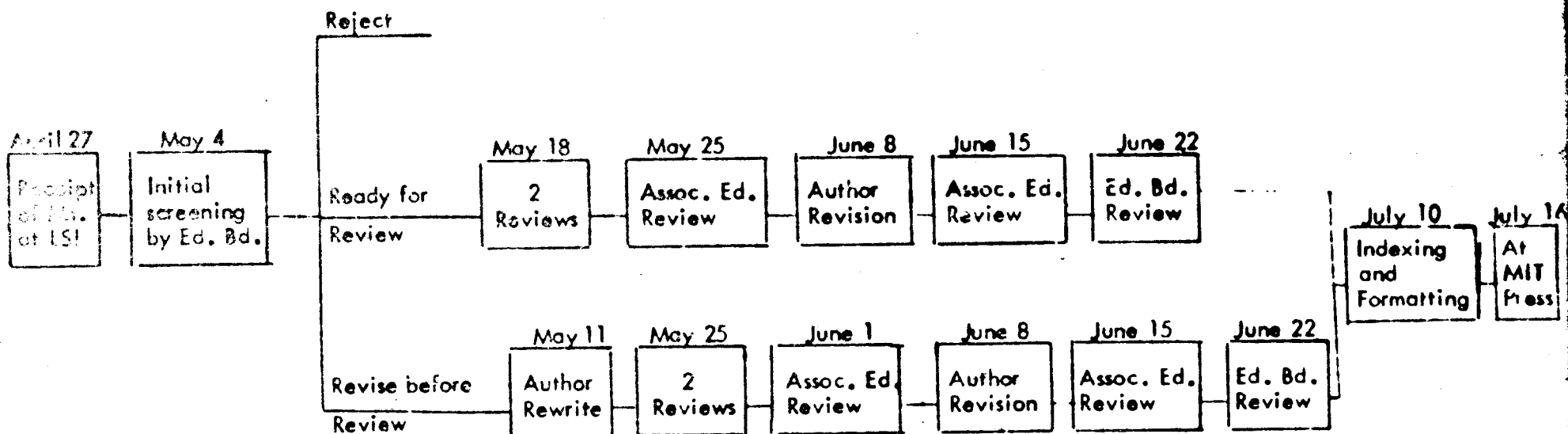
25% (100%)

25% (100%)

FLOW CHART OF SCHEDULE

(Dates given are absolute deadlines for each activity)

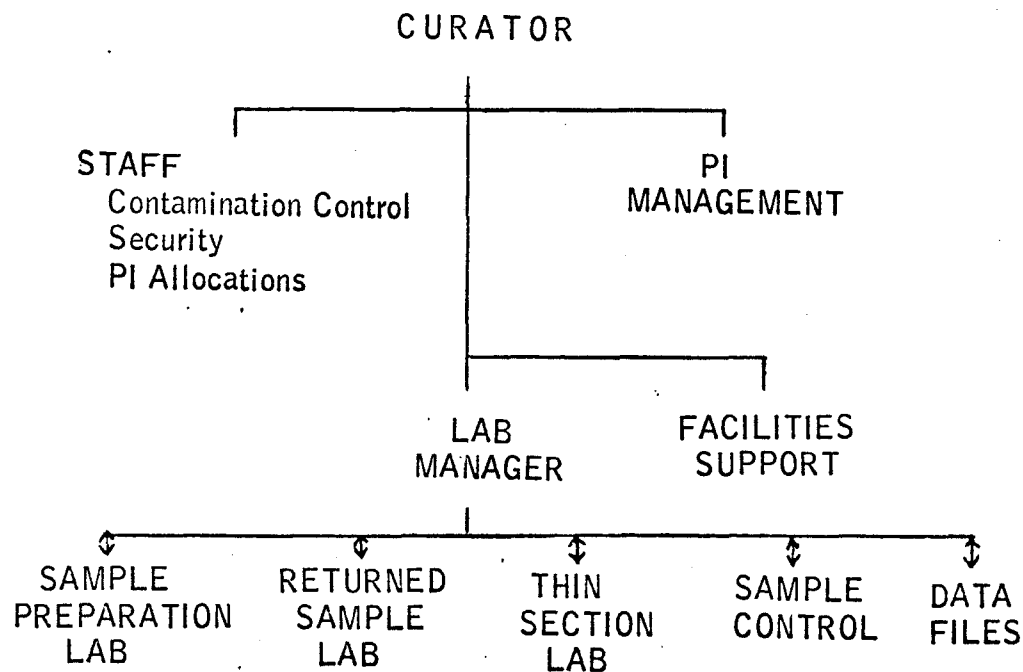
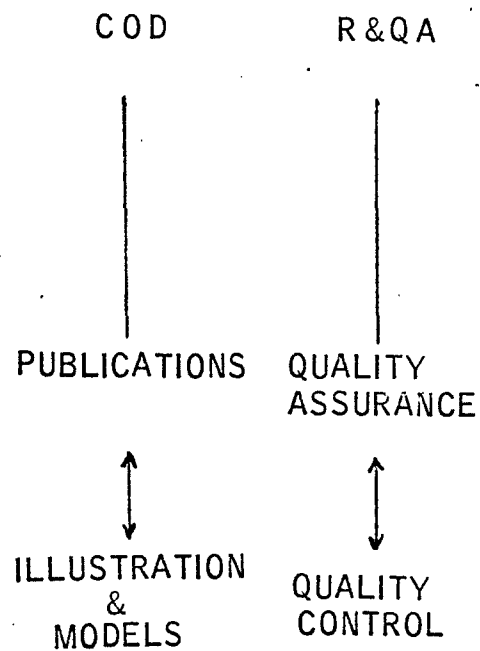
(For Dec. 1 Publication)



PROCEEDINGS VOLUMES - PRESENT STATUS

- 223 PAPERS RECEIVED
- 138 SENT OUT FOR REVIEW
- 3 RETURNED TO AUTHORS
- 4 MORE LATE MANUSCRIPTS EXPECTED
- REMAINDER OF REVIEW COPIES TO BE MAILED TO REVIEWERS BY MAY 10
- PERGAMON PRESS CAN PUBLISH BY DEC. 1, 1973 FOR \$45 PAGE CHARGE - CONTRACT EXPECTED IN TODAY'S MAIL.
- MIT PRESS HAS NOT YET RESPONDED OFFICIALLY ON MEETING DEC. 1 DEADLINE AND \$45 PAGE CHARGE.

CURATOR'S OFFICE



CONTRACTOR
SUPPORT
INTERFACES



STATUS
OF
CURATORIAL TASKS

Enclosure 6
(2 of 3)

| | | |
|------------------------------|---|--|
| ● Apollo 16 Allocation | 95 % Complete | Complete by June 30, 1973 |
| ● Apollo 17 Allocation | | |
| Fines | 75 % Complete (660) | Complete by May 31, 1973 |
| Rocks | 5 % Complete (780) | Complete by November 1, 1973 |
| Boulder Consortia | Descriptions Begun | Continuing through FY 74 |
| Cores | Initiated | Continuing through Fy 74 |
| Walnuts | Scheduled for July-August | Complete by November 1, 1973 |
| ● Returned Sample Inventory | | |
| Samples with Adequate Data | 700 Sample Backlog | Current (no backlog) by June 30, 1973 |
| Samples with Inadequate Data | 3500 Sample Backlog | Current (as histories received) |
| ● Remote Storage Facility | Cabinets Ordered, Site to be selected | Propose to Transfer Samples in Early 1974 |
| ● Move from LRL | All samples except boulders moved from LRL | Complete by June 30, 1973 |

**CURATORIAL SECURITY
STATUS**

| | | |
|--|---|--|
| ● Contractor Employee Investigations | Plan in Contractor's Legal Review | Deliver to NASA by May 31 |
| ● Designation of Curatorial Facility as Limited Area | JSC Security to Transmit Plan | Transmit to Headquarters by May 18 |
| ● Sample Security and Operations Plan | JSC First Draft in Preparation | First Draft Complete by May 11 |
| ● PI Quarterly Inventory (March) | 70 percent Response after 6 weeks | Complete by Time of June Inventory (?) |
| ● PI Spot Checks | 19 PIs visited since January 1, 1973 | Continuing |
| ● Public Display Spot Checks | JSC Security Branch Plan transmitted to Headquarters Security | Continuing |

Enclosure 7
(6 sheets)

LUNAR SCIENCE
DATA PROCESSING

SIM

SIM 15

STATUS: LAST 32 HOURS OF DATA COMPLETED ON MAY 4, 1973
(CONTAINED GAMMA RAY, X-RAY, AND MASS
SPECTROMETER).

SIM 16

STATUS: LAST OF SIM 16 DATA COMPLETED PRIOR TO
MARCH 1, 1973

SIM 17

STATUS: COMPLETE WITH EXCEPTIONS:

- a. IR DATA REPROCESSED (HARDWARE)
- b. MISSING IR DATA REPORTED
- c. TIME DISCREPANCIES (R/T vs R/T)
- d. COMPUTER WORD DATA GAPS

COMMENTS:

- . NO MAJOR PROBLEMS ENCOUNTERED
- . ITEMS ABOVE ARE BEING WORKED
- . SOME MARGINAL COMPUTER WORD DATA

P&FS

P&FS 15

STÁTUS:

- a. BASIC PROCESSING TO SECOND MALFUNCTION
HAS BEEN COMPLETED.
- b. PARTICLE SHADOWS DATA FROM JUNE '72
THROUGH JANUARY '73 IS IN PROGRESS.
- c. MAGNETOMETER ANALYSIS PROGRAM NEAR
COMPLETE.

P&FS 16

STATUS:

- a. BASIC PROCESSING COMPLETE.
- b. ADDITION OF MILLISECOND RESOLUTION
TO DUMP DATA IS PLANNED.
- c. MAGNETOMETER ANALYSIS PROCESSING PENDING.

ALSEP

STATUS:

| <u>PACKAGE</u> | <u>DAYS BACKLOG</u> |
|----------------|---------------------|
| ALSEP 17 | 50 |
| ALSEP 16 | 53 |
| ALSEP 15 | 53 |
| ALSEP 14 | 43 |
| ALSEP 12 | 41 |

COMMENTS:

- a. BACKLOGS REFLECT INCREASE DUE TO NEW GUIDELINES FOR SHIPPING TAPES.
- b. PI's SHOULD ATTEMPT TO VERIFY DATA PROMPTLY.
- c. DO WE CONTINUE PROCESSING DATA WHEN PI CONTRACTS EXPIRE?

LSEP

(NAVIGATION DATA ONLY)

STATUS:

- a. BASIC PROGRAM COMPLETE AND DATA PROCESSED.
- b. EDIT PROGRAM COMPLETE.
- c. PROCESSED DATA WILL BE EDITED WHEN
EDIT INFORMATION IS PROVIDED.

SUMMARY OF
SIM 17 PROCESSING

| | <u>SIM EXP (64 KBS)</u> | <u>CSM CMC (51.2 KBS)</u> |
|-------------------|-----------------------------|-------------------------------|
| NO. RANGE TAPES: | 500 | 350 |
| PI TAPES SHIPPED: | 600 | 350 |
| COMPUTER HOURS | | |
| | <u>1108</u> | <u>3200</u> |
| SIM EXP | 900 | 1100 |
| DEVELOPMENT | 50 | 70 |
| CSM CMC & LSEP | <u>300</u> | <u>180</u> |
| TOTAL | 1250 | 1350 |

TRACKING STATIONS UTILIZATION

| 1. PREPARED BY | 2. NEW REV NO. | 3. REPORT NAME | 4. PROG. NO. | 5. PROJ. NO. | 6. RELEASED | 7. FORM NO. | 8. COPIES | 9. | 10. |
|---------------------|---|----------------|--------------|--------------|-------------|-------------|-----------|----|-----|
| | | | | | | | | | |
| 13. COMMENTS | 1700 8 1900 8 2000 8 2100 8 2200 8 2300 8 2400 8 2500 8 2600 8 2700 8 2800 8 2900 8 3000 8 3100 8 3200 8 3300 8 3400 8 3500 8 3600 8 3700 8 3800 8 3900 8 4000 8 4100 8 4200 8 4300 8 4400 8 4500 8 4600 8 4700 8 4800 8 4900 8 5000 8 5100 8 5200 8 5300 8 5400 8 5500 8 5600 8 5700 8 5800 8 5900 8 6000 8 6100 8 6200 8 6300 8 6400 8 6500 8 6600 8 6700 8 6800 8 6900 8 7000 8 7100 8 7200 8 7300 8 7400 8 7500 8 7600 8 7700 8 7800 8 7900 8 8000 8 8100 8 8200 8 8300 8 8400 8 8500 8 8600 8 8700 8 8800 8 8900 8 9000 8 9100 8 9200 8 9300 8 9400 8 9500 8 9600 8 9700 8 9800 8 9900 8 10000 8 | | | | | | | | |
| MIL SKYLAB ALSEP | | | | | | | | | |
| BDA SKYLAB ALSEP | | | | | | | | | |
| MAD SKYLAB ALSEP | | | | | | | | | |
| CYI SKYLAB ALSEP | | | | | | | | | |
| HSK SKYLAB ALSEP | | | | | | | | | |
| CRO SKYLAB ALSEP | | | | | | | | | |
| GWM SKYLAB ALSEP | | | | | | | | | |
| HAW SKYLAB ALSEP | | | | | | | | | |
| GDS SKYLAB ALSEP | | | | | | | | | |
| TEX SKYLAB ALSEP | | | | | | | | | |
| VAN SKYLAB ALSEP | | | | | | | | | |
| ACN SKYLAB ALSEP | | | | | | | | | |

Enclosure 8
(1 of 4)

Enclosure 8
(2 of 4)

TRACKING STATIONS UTILIZATION

Enclosure 8
(3 of 4)

TELEMETRY AND COMMAND PRIORITY LIST

| NBR | SUPIDEN | NAME |
|-----|---------|---|
| 1 | A0498 | OSO-7 (SOLAR FLARE ALERT) |
| 2 | L1015 | PIONEER-G (LAUNCH PLUS 7 DAYS) |
| 3 | M1023 | SKYLAB-2 (ORBITAL) |
| 4 | M1017 | SKYLAB-1 (ORBITAL) |
| 5 | | KSC PAD SUPPORT (USB AT MILA ONLY) |
| 6 | A0504 | OA0-C |
| 7 | A0690 | ERTS-A |
| 8 | A1010 | NIMBUS-5 |
| 9 | M0785 | ALSEP-5 |
| 10 | M0783 | ALSEP-3 |
| 11 | M0782 | ALSEP-2 |
| 12 | M0784 | ALSEP-4 |
| 13 | M0781 | ALSEP-1 |
| 14 | M0791 | P&FS-1 |
| 15 | | SKYLAB PRELAUNCH ACTIVITIES (PREMISSION, MISSION PERIODS) |
| 16 | | SIMULATIONS (UNMANNED, LAUNCH MINUS 10 DAYS) |
| 17 | A1006 | SAS-B |
| 18 | A0498 | OSO-7 |
| 19 | F1007 | AEROS |
| 20 | A1002 | IMP-7 |
| 21 | A0679 | SSS-A |
| 22 | A0469 | IMP-6 (PCM DATA) |
| 23 | A0305 | SAS-1 |
| 24 | A0593 | UK-4 |
| 25 | A0476 | NIMBUS-4 |
| 26 | F1003 | ESRO IV |
| 27 | A0469 | IMP-6 (U01 DATA) |
| 28 | Y1001 | NOAA-2 |
| 29 | A0408 | ATS-5 |
| 30 | A0502 | ISIS-2 |
| 31 | A0306 | EOLE |
| 32 | L1005 | MTS |
| 33 | F0677 | HEOS-A2 |
| 34 | A0403 | ATS-3 |
| 35 | A0458 | AIMP-E |
| 36 | A0414 | ATS-1 |
| 37 | F0519 | TD-1A |
| 38 | F0359 | D2A TOURNESOL |
| 39 | A0405 | GEOS-2 (TIME MONITOR) |
| 40 | A0685 | ISIS-1 |
| 41 | A0405 | GEOS-2 |
| 42 | | SIMULATIONS |
| 43 | P0146 | CAL PLANE PASSES |
| 44 | | STSV |
| 45 | L1015 | PIONEER G |
| 46 | Y0683 | ESSA-9 |
| 47 | Y0478 | ESSA-8 |
| 48 | D0588 | OV5-6 |

APOLLO PROGRAM REVIEW

EXPERIMENTS AND OPERATIONS SUMMARY

MAY 9, 1973

AGENDA

A. PI STATUS

- SURFACE PI'S EICHELMAN
- ORBIT PI'S EICHELMAN
- PHOTO ANALYSIS HARDEE
- FUNDING EICHELMAN

B. OPERATIONS

- ALSEP STATUS/A17 TEMP EXPERIENCE EICHELMAN
- B X A OPERATION EICHELMAN
- DATA PROCESSING STATUS FULTON
- ALSEP/SUBSATELLITE DATA COLLECTION KUNDEL

C. SUPPORT

- CARTOGRAPHIC HARDEE
- PHOTO PROCESSING HARDEE
- PHOTOGRAPHIC SUPPORT DATA HARDEE

D. DATA ARCHIVING

EICHELMAN

E. OTHERS

OPEN DISCUSSION

- PI PARTICIPATION
- ALSEP EXPERIMENT ANNUAL OPERATION REVIEW

| | | | | | |
|------------------------------|--|---|--|-------------------------|---|
| NAME: W. F. Eichelman | | MANNED SPACE FLIGHT SCHEDULE LUNAR SURFACE EXPERIMENTS | | (LEVEL) | ORIGINAL SCHEDULE APPROVAL: 3-30-73 (DATE) (NO.) (INITIALS) |
| RESPONSIBILITY: | | CONTRACTOR: | | PROJECT SCHED. NO.: | |
| STATUS AS OF: | | (DATE) (NO.) (INITIALS) | | (DATE) (NO.) (INITIALS) | |

| MILESTONES | | CY 1973 | | | | | | | | | | | | CY 1974 | | | | | | | | | | | | CY 1975 | | | | | | | | | | | |
|------------|---------------------------|---------|---|---|---|---|---|---|---|---|---|---|---|---------|---|---|---|---|---|---|---|---|---|---|---|---------|---|---|---|---|---|---|---|---|---|---|---|
| | | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
| 1 | S031 U of T NAS 9-13143 → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | MIT 9-12334 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | S033 Stanford 9-5632 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | S203 " | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | S034 Ames Intra-Center | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | U of Ariz. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | S035 JPL RD50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | S036 Rice Univ. 9-5911 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | S037 Lamont-Doh. 9-6037 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | S038 Rice Univ. 9-5884 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | S058 U of T 9-5964 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

NOTES:

Proposed Extension ■■■■■■■■■■

NC
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|--|-----------------------------|---|---|--------------------|---|---|---|---|---|---|---|---|---|-----------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|---|---|---|---|---|---|---|---|---|---|
| SCHEDULE RESPONSIBILITY W. F. Eichelman | | MANNED SPACE FLIGHT SCHEDULE LUNAR SURFACE EXPERIMENTS | | (LEVEL) (DATE) | | ORIGINAL SCHEDULE APPROVAL 3-30-73 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STATUS RESPONSIBILITY _____ | | | | | | LAST SCHEDULE CHANGE _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONTRACTOR _____ | | PROJECT SCHD. NO. _____ | | STATUS AS OF _____ | | (DATE) (INITIALS) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MILESTONES | | CY 19 73 | | | | | | | | | | | | CY 19 74 | | | | | | | | | | | | CY 19 75 | | | | | | | | | | | |
| | | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
| 1 | S078 NAS 9-11025 → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | S080 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | S152 GE 9-11468 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Washington U. 9-11895 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | UofC, Berkeley 9-12005 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | S059 USGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | S199 Lamont Doh. 9-11751 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | S200 UofC, Berkeley 9-11266 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | CIT 9-11454 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | MSFC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | S201 NRL T-91885 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOTES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|--|----------------------|------------------------------|--|---|--|
| SCHEDULE RESPONSIBILITY <u>W. F. Eichelman</u> | | MANNED SPACE FLIGHT SCHEDULE | | ORIGINAL SCHEDULE APPROVAL <u>3-30-73</u> (DATE) | |
| STATUS RESPONSIBILITY _____ | | LUNAR ORBIT EXPERIMENTS | | LAST SCHEDULE CHANGE _____ (DATE) (NO.) (INITIALS) | |
| | | CONTRACTOR: _____ | | PROJECT SCHO. NO. _____ | |
| MILESTONES | | CY 19 <u>73</u> | | CY 19 <u>74</u> | |
| | | J F M A M J J A S O N D | | J F M A M J J A S O N D | |
| 1 | S160 GSFC → | ██████████ | | | |
| 2 | | | | | |
| 3 | JPL RD79 | ██████████ | | | |
| 4 | | | | | |
| 5 | UofC, SD NAS 9-10670 | ██████████ | | | |
| 6 | | | | | |
| 7 | S161 AS&E 9-9983 | ██████████ | | | |
| 8 | | | | | |
| 9 | GSFC | ██████████ | | | |
| 10 | | | | | |
| 11 | S162 AS&E 9-9982 | ██████████ | | | |
| 12 | | | | | |
| 13 | S164 JPL RD87 | ██████████ | | | |
| 14 | | | | | |
| 15 | S165 UTD 9-10410 | ██████████ | | | |
| 16 | | | | | |
| 17 | S169 JHU 9-11528 | ██████████ | | | |
| 18 | | | | | |
| 19 | GSFC | Completed | | | |
| 20 | | | | | |
| NOTES | | | | | |

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|--|--|--|--|--|---|
| SCHEDULE RESPONSIBILITY <u>W. F. Eichelman</u> | | | MANNED SPACE FLIGHT SCHEDULE LUNAR ORBIT EXPERIMENTS | | ORIGINAL SCHEDULE APPROVAL <u>3-30-73</u> (DATE) |
| STATUS RESPONSIBILITY _____ | | | PROJECT SCHD. NO. _____ | | LAST SCHEDULE CHANGE _____ (DATE) (NO.) (INITIALS) |
| CONTRACTOR: _____ | | | STATUS AS OF _____ (DATE) (INITIALS) | | LEVEL |

| MILESTONES | | | CY 1973 | | | | | | | | | | | | CY 1974 | | | | | | | | | | | | CY 1975 | | | | | | | | | | | |
|------------|------|------------------------|---------|---|---|---|---|---|---|---|---|---|---|---|---------|---|---|---|---|---|---|---|---|---|---|---|---------|---|---|---|---|---|---|---|---|---|---|---|
| | | | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
| 1 | S170 | Stanford NAS 9-10579 → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | S171 | Rice U. 9-10428 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | S173 | UofC, Berk. 9-10509 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | S174 | UCLA 9-12236 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | S177 | SUNY 9-11640 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | S178 | GSFC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | S209 | JPL RD88 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | U of Utah 9-12168 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | USGS T-573B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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|--|----------------------|---|--|----------------------------|---|
| SCHEDULE RESPONSIBILITY <u>W. F. Eichelman</u> | | MANNED SPACE FLIGHT SCHEDULE LUNAR SURFACE EXPERIMENTS | | (LEVEL) | ORIGINAL SCHEDULE APPROVAL <u>3-30-73</u> (DATE) |
| STATUS RESPONSIBILITY _____ | | CONTRACTOR _____ | | PROJECT SCHD. NO. _____ | LAST SCHEDULE CHANGE _____ (DATE) (NO.) (INITIALS) |
| MILESTONES | | CY 19 73 | | CY 19 74 | CY 19 75 |
| | | J F M A M J J A S O N D | | J F M A M J J A S O N D | J F M A M J J A S O N D |
| 1 | S202 GSFC → | | | | |
| 2 | | | | | |
| 3 | S205 UTD NAS 9-12074 | | | | |
| 4 | | | | | |
| 5 | GSFC | | | | |
| 6 | | | | | |
| 7 | S032 U of M 9-5886 | | | | |
| 8 | | | | | |
| 9 | S204 MIT 9-11540 | | | | |
| 10 | | | | | |
| 11 | S229 CIT 9-12585 | | | | |
| 12 | | | | | |
| 13 | Rover Traverse GSFC | | | | |
| 14 | | | | | |
| 15 | BxA | | | | |
| 16 | | | | | |
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| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| NOTES | | | | | |

LUNAR SURFACE SCIENCE

PI STATUS

1
PSE
S-031 - NAS 9-13143

- CONTRACT EXTENDED THROUGH 9/74 AT 432K. 19mo.
- GOVERNMENT SURPLUS 1410 COMPUTER ACQUISITION PLAN SUBMITTED FOR APPROVAL.
- APPROVAL GRANTED TO ATTEND COSPAR.
- LSPE CO-INVESTIGATOR TRANSFERRED TO U OF T. (Joe Watkins - Vol North & Caroli)

Tokoz
NAS 9-12334

- CONTRACT EXTENDED THROUGH 10/74 AT 99K.
- PREVIOUS CONTRACT UNDERRAN \approx 20K.

S-033 - NAS 9-5632

- 3 Active Seismology
LSPE
- CONTRACT EXTENDED AT NO ADDITIONAL VALUE THROUGH 12/73.
 - LSPE LISTENING MODE PROPOSAL.
 - POWER SPECTRAL ANALYSIS.

S-034 - ARC INTERCENTER AGREEMENT

Palmer Dyk
Tri Axis
Magnetometer

- FY73 BULK DATA PROCESSING CHANGE FROM 5-15/5-16 TO 9-15/1-16.
- APOLLO 15 COHERENCE PROBLEM.
- APOLLO 12 AND 15 NOISE REMOVED/TAPES.
- FY74 BULK PROCESSING.
- UNIVERSITY OF ARIZONA PROPOSAL BEING REVIEWED.

S-035 - RD50

Solar Wind
Snyder

- NSSDC DATA PROCESSING.

S-036 - NAS 9-5911

SIDE
Freeman

- RICE DIRECTED TO TRANSMIT MICROFILM TO NSSDC.
- DATAPACKING IMPACT 200 bpi VS. 800 bpi.
- APOLLO 14 ANOMALY INVESTIGATION.

S-037 - NAS 9-6037

Head Flow

- PRELIMINARY NEGOTIATION OF EXTENSION THROUGH 12/74 AT 137K.
- APOLLO 15/17 TEMPERATURE ACCURACIES.

S-038 - NAS 9-5884

CPLER

- DATA SUBMITTED TO NSSDC.
- COMPUTER CHANGEOVER.

S-058 - NAS 9-5964

CC 18

- CONTRACT EXTENDED TO 12/74 AT NO ADDITIONAL COST.
- DATA PLOTS (MICROFILM) SUBMITTED TO NSSDC.

S-078 - NAS 9-11025

LRRR

- FINAL REPORT PENDING.
- NO-COST EXTENSION TO 6/73 DISAPPROVED.

S-152 - NAS 9-11468/NAS 9-11895/NAS 9-12005

Cosmic Ray
Detector

- APOLLO 17 FINDINGS.
- U OF C, BERKELEY REQUESTING EXTENSION.
- CONTRACTS TERMINATED; FINAL REPORT PENDING

S-059 - T-

LGI

- FY74 EXTENSION IN PROCESS AT 600K.
- APOLLO 14/15 FINAL REPORT COMPLETED AND IN REPRODUCTION.
- APOLLO 16/17 REPORT TO BE COMPLETED IN FY74.
- APOLLO 17 TRAVERSE.
- GSFC TRAVERSE, EVA 1 COMPLETED.
- LSPE/TRAVERSE GRAVIMETER PRODUCTS.

S-199 - NAS 9-11751

*Lyman
Hartley
Traverse*

- MIT TEST RESULTS.
- TRANSFER OF MODELS TO LAMONT-DOHERTY
- SAMPLE DENSITY.

S-200 - NAS 9-11266

*Soil
Mechanics*

S-201 - TR-91885

*Far UV
Carroll*

- CONTRACT EXTENDED TO 6/73.
- FILM DATA DIGITAL PROCESSING.

S-202 - GSFC INTERCENTER AGREEMENT

LEAM

- EQUIPMENT TRANSFERRED.
- LEAM OPERATION.
- MAG. 134 PHOTO TRANSPARENCIES.

S-032 - NAS 9-5886

- JSC DATA PROCESSING.
- SEISMIC EVENTS MEASURED DURING TERMINATOR CROSSING.
- LUNAR/EARTH DATA COMPARISON.
- DECOMMUTATION PROCESSOR.
- PRINCETON INVOLVEMENT.

*(2) ~~LS~~
LSJ*

Phinney

S-204 - NAS 9-12585

SEP

- RATHEON FINALIZATION
- MIT SCIENCE PROGRAM.
- UNIVERSITY OF TORONTO EFFORT.
- MODEL TESTING.

S-229 - NAS 9-12585

?

- POTASSIUM BROMIDE DATA.

S-205 -

LACE


John Hoffman

- PROTOTYPE.
- CALIBRATION.

LUNAR ORBIT SCIENCE

PI STATUS

S-160 - NAS 9-10670

- 
- REQUESTED NO-COST EXTENSION TO 8/73
 - APPROXIMATE 18K UNDERRUN
 - PERSONNEL ARRANGEMENT
 - NaI DATA

GSFC INTERCENTER AGREEMENT

- NaI DATA PROCESSING FOR GALACTIC ANALYSIS

JPL - RD79

- EXTENDED TO 6/73 AT NO COST
- REQUESTING COST EXTENSION THROUGH 8/73 AT 18K
- NSSDC DATA PROCESSING

S-161 - NAS 9-9983

- CONTRACT TERMINATED 4/30/73. FINALIZE BILLING.
- CO-INVESTIGATOR FUNDING VIA GSFC.
- SPARE EQUIPMENT TRANSFERRED TO GSFC.

GSFC INTERCENTER AGREEMENT

- APOLLO 15 DATA SUBMITTED TO NSSDC.
- APOLLO 16 GALACTIC DATA MERGING FOR NSSDC.
- NO-COST EXTENSION TO 6/30/73.

S-162 - NAS 9-9982

- TRAVEL TO COSPAR DISAPPROVED.
- NO-COST EXTENSION TO 6/73.

S-164 - RD87

- APOLLO 15 SATELLITE RESTRICTED TO TRACKING TWICE WEEKLY.
- SATELLITE BATTERY CHARGE INADEQUATE TO COLLECT P&F DATA.
- UNDERRUNNING BY \approx 90K (435 VS. 529)
- EXTENDED TO 6/74.
- APOLLO 17 CSM/LM DATA REDUCTION COMPLETE.
- DENSE TRACKING DATA (NOV. '72 AND FEB. '73)

S-165 - NAS 9-10410

- ONE-YEAR FUNDED EXTENSION DISAPPROVED.
- NO-COST EXTENSION TO 6/73 APPROVED.

S-169 - NAS 9-11528

- OVERRUN PROPOSAL
- LUNAR ALBEDO SOLAR/EARTH/SC ATMOSPHERE AND ASTRONOMY
- FINALIZING OVERALL CONTRACT COST (PI - HARDWARE)

S-170 - NAS 9-11579

- NO-COST EXTENSION TO 6/30/73.
- ALL DATA AT NSSDC.
- NSSDC DATA REPORT COMPLETED.

S-171 - NAS 9-10428

- CONTRACT BEING FULLY FUNDED.
- BARNES ENGINEERING CALIBRATION.
- PROROTYPE PERFORMANCE CHARACTERISTICS TEST SETUP PROBLEM.

S-173 - NAS 9-10509

- PERIOD OF PERFORMANCE CHANGED TO 12/31/73.
- DATA PROCESSING CONTINUING NORMALLY.
- APOLLO 15 DATA GAPS.

S-174 - NAS 9-12236

- UNABLE TO CONDUCT STATISTICAL STUDIES.
- LIMITED SCALE STUDY OF PHENOMENA.
- JSC DATA PROCESSING INCOMPLETE.

S-177 - NAS 9-11640

- NO-COST EXTENSION TO 6/30/73.

S-178 - GSFC INTERCENTER AGREEMENT

- NO-COST EXTENSION.

S-209 - RD88/T-573B/NAS 9-12168

- PROGRAM REVIEW.
- DIGITAL PROCESSING/EXTENSION.
- PRELIMINARY IMAGE FILMS OF ALL DATA.
- HOLOGRAMS COMPLETED THIS WEEK.
- HF-1 GLOBAL PROFILE IMAGERY GENERATED.
- PILOT DATA PROCESSING PROGRAM.
- DIGITAL PROCESSING

| | |
|--------|------------|
| U OF M | 142 |
| JPL | 185 |
| USGS | 30 |
| U OF U | <u>125</u> |
| | 480 |

✓ Sample

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|--|---------------------------|--|--|---|--|--|--|--|--|--|--|--|--|-------------------------|--|--|--|--|--|--|--|--|--|--|--|-------------------------|--|--|--|--|--|--|--|--|--|--|--|
| SCHEDULE RESPONSIBILITY _____ STATUS RESPONSIBILITY _____ | | MANNED SPACE FLIGHT SCHEDULE APOLLO PHOTO DATA ANALYSIS | | ORIGINAL SCHEDULE APPROVAL _____ (DATE) LAST SCHEDULE CHANGE _____ (DATE) (NO.) (INITIALS) STATUS AS OF _____ (DATE) (INITIALS) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | CONTRACTOR: _____ PROJECT SCHED. NO. _____ | | (LEVEL) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MILESTONES | | CY 1973 | | | | | | | | | | | | CY 1974 | | | | | | | | | | | | CY 19 | | | | | | | | | | | |
| | | J F M A M J J A S O N D | | | | | | | | | | | | J F M A M J J A S O N D | | | | | | | | | | | | J F M A M J J A S O N D | | | | | | | | | | | |
| 1 | | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | S-210 | → | | | | | | | | | | | | ▼ | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | OBSERVATOIRE DE PARIS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | LETTER OF AGREEMENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | S-211 | → | | | | | | | | | | | | ▼ | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | DUDLEY OBSERVATORY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 9-12557 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | S-212 | → | | | | | | | | | | | | ▼ | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | HIGH ALTITUDE OBSERVATORY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | LETTER OF AGREEMENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | S-213 | | | | | | | | | | | | | → | | | | | | | | | | | | ▼ | | | | | | | | | | | |
| 15 | NOAA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | T-1168B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | S-214 | → | | | | | | | | | | | | ▼ | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | UNIVERSITY OF VIRGINIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 9-12752 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOTES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|--|--------------------------|--|--|---|---|--|--|--|--|--|--|--|--|-------------------------|--|--|--|--|--|--|--|--|--|--|--|-------------------------|--|--|--|--|--|--|--|--|--|--|--|
| SCHEDULE RESPONSIBILITY _____ STATUS RESPONSIBILITY _____ | | MANNED SPACE FLIGHT SCHEDULE APOLLO PHOTO DATA ANALYSIS | | <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> LEVEL </div> | ORIGINAL SCHEDULE APPROVAL _____ (DATE) LAST SCHEDULE CHANGE _____ (DATE) (NO.) (INITIALS) STATUS AS OF _____ (DATE) (INITIALS) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | CONTRACTOR: _____ | | PROJECT SCHD. NO. _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MILESTONES | | CY 1973 | | | | | | | | | | | | CY 1974 | | | | | | | | | | | | CY 1975 | | | | | | | | | | | |
| | | J F M A M J J A S O N D | | | | | | | | | | | | J F M A M J J A S O N D | | | | | | | | | | | | J F M A M J J A S O N D | | | | | | | | | | | |
| 1 | | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | S-215 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | LANGLEY RESEARCH CENTER | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | INTER-CENTER | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | S-216 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | JPL RD-149 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | S-217 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | JPL RD-148 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | S-218 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | UCLA 9-12757 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | S-219 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | WOODS HOLE OCEANOGRAPHIC | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 9-12563 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOTES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| SCHEDULE RESPONSIBILITY _____ STATUS RESPONSIBILITY _____ | | MANNED SPACE FLIGHT SCHEDULE APOLLO PHOTO DATA ANALYSIS | | <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> LEVEL </div> | | ORIGINAL SCHEDULE APPROVAL _____ (DATE) LAST SCHEDULE CHANGE _____ (DATE) (NO.) (INITIALS) STATUS AS OF _____ (DATE) (INITIALS) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | CONTRACTOR: _____ | | PROJECT SCHD. NO. _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MILESTONES | | CY 19 73 | | | | | | | | | | | | CY 19 74 | | | | | | | | | | | | CY 19 75 | | | | | | | | | | | |
| | | J F M A M J J A S O N D | | | | | | | | | | | | J F M A M J J A S O N D | | | | | | | | | | | | J F M A M J J A S O N D | | | | | | | | | | | |
| 1 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | S-220 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | STATE UNIVERSITY OF N.Y. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 9-12770 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | S-221 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | UNIVERSITY OF ARKANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 9-13196 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | S-222 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | USGS T-11678 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | S-223 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | WOODS HOLE OCEANOGRAPHIC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 9-12564 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | S-224 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | AMES RESEARCH CENTER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | INTER-CENTER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOTES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| SCHEDULE RESPONSIBILITY _____ STATUS RESPONSIBILITY _____ | | MANNED SPACE FLIGHT SCHEDULE APOLLO PHOTO DATA ANALYSIS CONTRACTOR: _____ PROJECT SCHD. NO. _____ | | ORIGINAL SCHEDULE APPROVAL _____ (DATE) LAST SCHEDULE CHANGE _____ (DATE) (NO.) (INITIALS) STATUS AS OF _____ (DATE) (INITIALS) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MILESTONES | | CY 1973 | | CY 1974 | | CY 1975 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
| 1 | | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | S-225 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | JSC INTER-CENTER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | S-226 | → | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | MSFC INTER-CENTER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOTES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

APOLLO PHOTO DATA ANALYSIS EXPERIMENTS

S-210 SOLAR CORONA INVESTIGATION

DR. DOLLFUS

- RECEIVED APOLLO 17 SOLAR CORONA FILM
- CONTINUING ANALYSIS OF ALL APOLLO SOLAR CORONA PHOTOGRAPHY IN CONJUNCTION WITH S-212

S-211 LOW BRIGHTNESS IMAGE ANALYSIS

MR. MERCER

- RECEIVED DATA ANALYSIS & HANDLING PLAN IN APRIL AND ARE GIVING TENTATIVE APPROVAL
- CONTRACT IN OVERRUN CONDITION AND EXPERIENCING SERIOUS FINANCIAL MANAGEMENT AND ACCOUNTING PROBLEMS
- LETTER TO DUDLEY REQUIRING IMMEDIATE RESOLUTION IS BEING FORWARDED
- GSFC'S INTERCENTER AGREEMENT FINANCIAL STATUS IS GOOD

S-212 APOLLO CORONA PHOTO ANALYSIS

DR. MAC QUEEN

- COMPILED BULK OF ANALYSIS ON APOLLO 15 & 16 PHOTOGRAPHY
- SUBMITTED PAPER FOR PRELIMINARY SCIENCE REPORT ON APOLLO 17 PHOTOGRAPHY BUT REALLY JUST BEGINNING ANALYSIS OF THIS EXCEPTIONAL PHOTOGRAPHY

APOLLO PHOTO DATA ANALYSIS CONTRACTS

S-213 SELENOCENTRIC REFERENCE SYSTEM

DR. SCHMID

- CONTRACT ESTABLISHED EFFECTIVE 4/1/73

S-214 LUNAR ALTITUDE PROFILE

DR. JUNKINS

- RECEIVED AND ANALYZING ALL APOLLO 15 & 16 LASER DATA
- MERGING PHOTOGRAMMETRIC TRIANGULATION - DETERMINED DATA INTO THEIR ANALYSIS

S-215 LUNAR ALTIMETRY: RADII/GRAVITY

MR. COMPTON

- RECEIVED AND ANALYZING ALL OF APOLLO 15 & 16 DATA
- COMPLETED AND HAVE OPERATIONAL ALL SOFTWARE PROGRAMS
- PUBLICATION DUE IN MID-JUNE CONSOLIDATING APOLLO 15 & 16, AND LUNAR ORBITER DATA

S-216 LASER ALTIMETRY SELENODESY

DR. SJOGREN

- PRESENTLY AT AN IMPASSE IN PROCESSING EPHEMERIS DATA - STILL GETTING SIGNIFICANT INCONSISTENCIES
- FUNDING THROUGH SCHEDULED CONTRACT IS QUESTIONABLE

S-217 IR/RADAR STUDY

DR. THOMPSON

- FINALIZING WORK IN STUDY AREA II - IMBRIUM FLOWS
- INITIATED WORK IN STUDY AREAS III & IV - CRATERS DELISLE & DIOPHANTUS AND MARE SERENITATIS (PROCEEDING AHEAD OF SCHEDULE)
- CO-I, D. SHORTHILL, IS FINALLY UNDER CONTRACT

APOLLO PHOTO DATA ANALYSIS CONTRACTS

S-218 PHOTO/ALTIMETRY ANALYSES

DR. KAULA

- RECEIVED AND ANALYZING ALL APOLLO 15 & 16 LASER DATA
- MORE SLOPE ANALYSES HAS BEEN EMPHASIZED
- FINALLY AUTHORIZED COSPAR TRAVEL TO MADRID UNDER S-218

S-219 GRAVITY/CRUSTAL STRUCTURE

DR. BOWIN

- RECEIVED AND ANALYZING ALL PLANNED APOLLO 15 & 16 LASER
AND GRAVITY DATA
- JSC IN PROCESS OF PROVIDING ADDITIONAL GRAVITY DATA PER REQUEST

S-220 LUNAR GEOLOGY - EASTERN MARIA

DR. YOUNG

- ANALYZING APOLLO J-MISSION PHOTOGRAPHY
- PRESENTLY EMPHASIZING ANALYSIS OF MARE SMYTHII AREA

S-221 GEOLOGIC STRUCTURE OF SHALLOW MARIA

DR. DeHON

- PRELIMINARY THICKNESS MEASUREMENTS FOR MARES TRANQUILLITATIS
& FECUNDITATIS ARE COMPLETE
- EVALUATING APOLLO J-MISSION PHOTOGRAPHY

S-222 PHOTOGEOLOGY: APOLLO 14-17

DR. MOORE

- OPERATING WITHIN BUDGET
- ANALYZING ALL J-MISSION PHOTOGRAPHY

APOLLO PHOTO DATA ANALYSIS CONTRACTS

S-223 VOLCANOLOGY & MORPHOLOGY

DR. BRYAN

- ANALYZING APOLLO J-MISSION PHOTOGRAPHY
- PRESENTLY EMPHASIZING WRINKLE-RIDGES STUDY IN CONJUNCTION WITH S-219

S-224 SURFACE STRUCTURE & PROCESSES

DR. OBERBECK

- ANALYZING APOLLO J-MISSION PHOTOGRAPHY
- PRESENT EMPHASIS ON HERRINGBONE PATTERN AND SECONDARY CRATERS

S-225 MORPHOLOGY & GENESIS OF LUNAR CRATER CHAINS

DR. HEIKEN

- AWAITING TOPOGRAPHIC DATA

S-226 CONTAMINATION PHOTOGRAPHY

DR. CRAVEN

- COMPLETED DIGITIZING OF APOLLO 16 16 & 35-MM CONTAMINATION PHOTOGRAPHY
FRAMES
- PERFORMING ANALYSIS OF SELECTED FRAMES

BUDGET STATUS

| | OBLIGATED 3/31/73 | APOLLO REQMTS 12/73 | PR'S IN PROCESS |
|----------------|----------------------|---------------------------|--------------------|
| LUNAR SURFACE | 176,190,100 | 178,368,100 | 1,848,400 |
| LUNAR ORBIT | 22,814,800 | 24,052,300 | 245,849 |
| PHOTO ANALYSIS | 1,304,600 | 1,404,300 | 100,000 |
| TOTAL | 200,309,500 | 203,724,700 | 2,194,249 |

NOTE: INCLUDES SOUNDER DIGITAL PROCESSING

~ 500,000

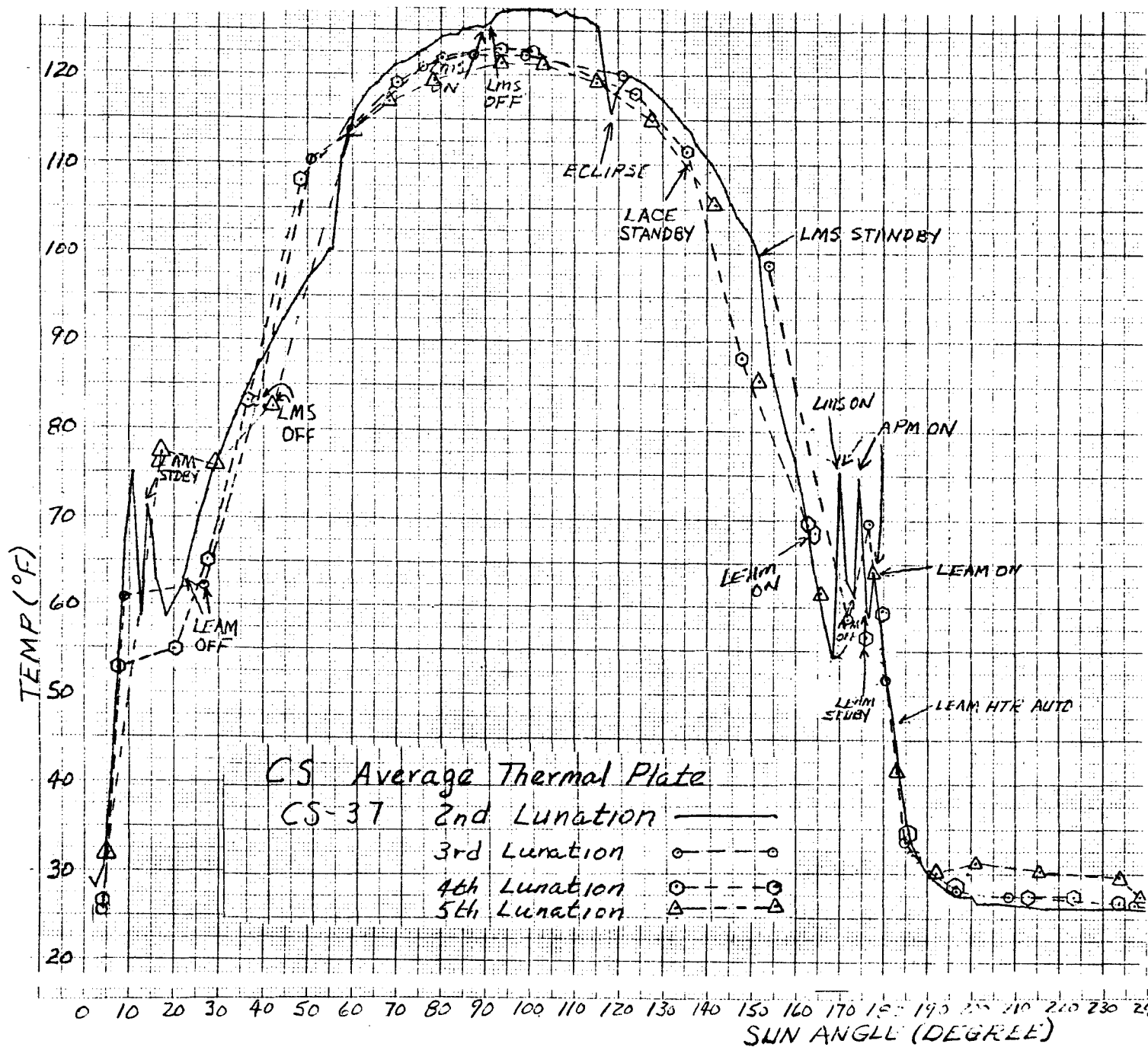
ADDITIONAL REQUIREMENTS

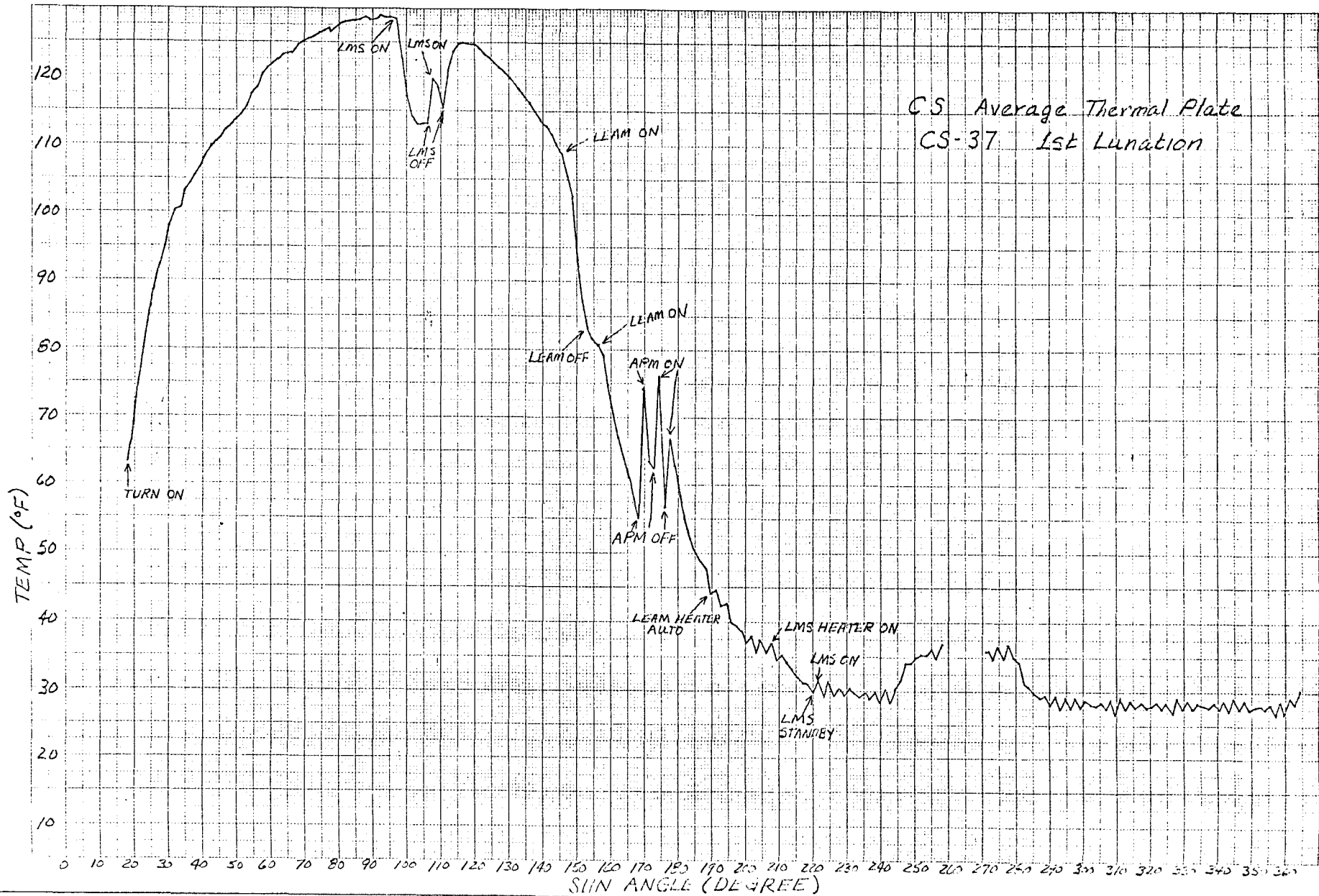
| | |
|---------------------------|---------|
| o LUNAR SOUNDER EXTENSION | 250,000 |
| BENDIX OPERATION | 75,000 |
| WOLLENHAUPT | 320,000 |

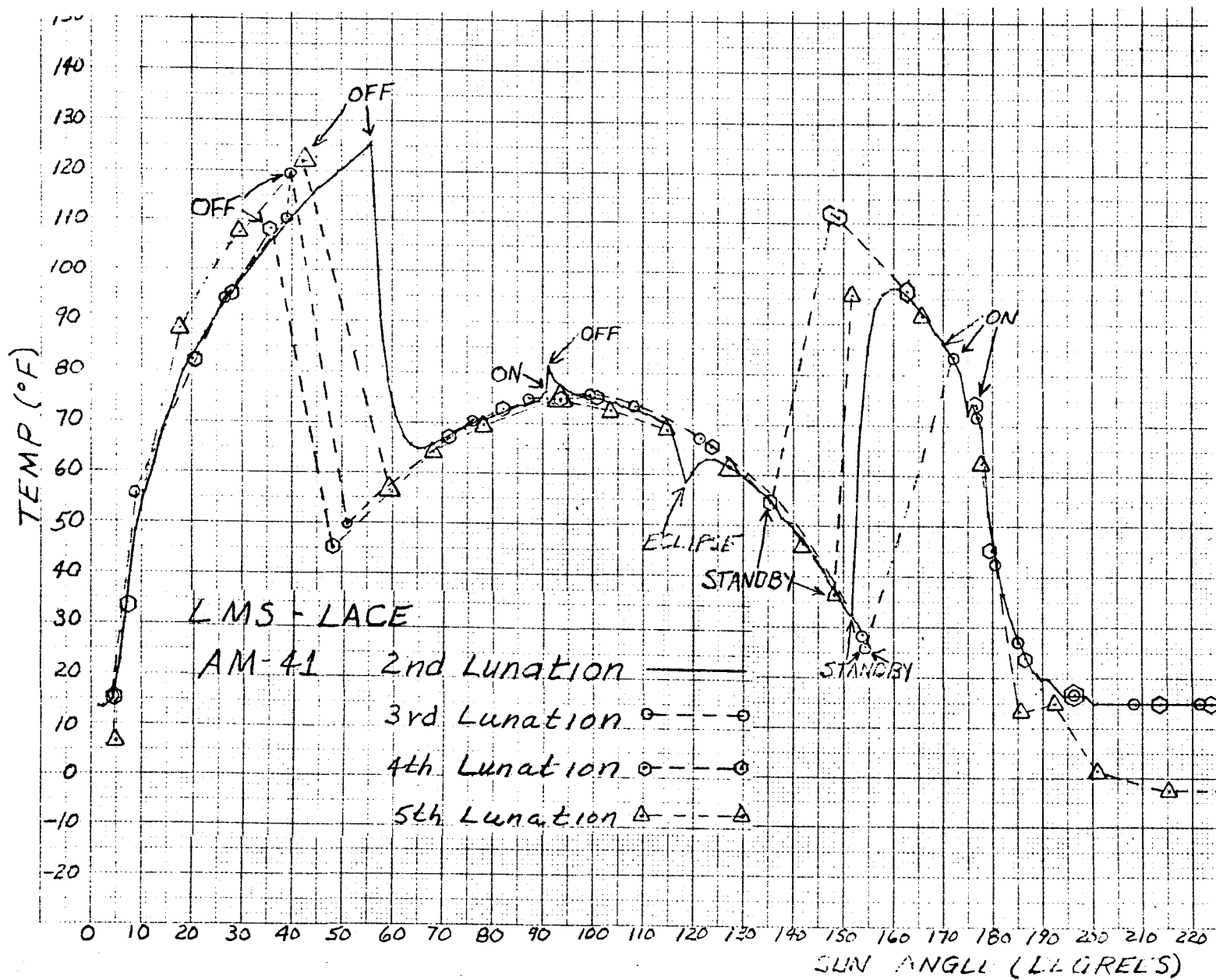
LUNAR SURFACE OPERATIONS
ALSEP STATUS

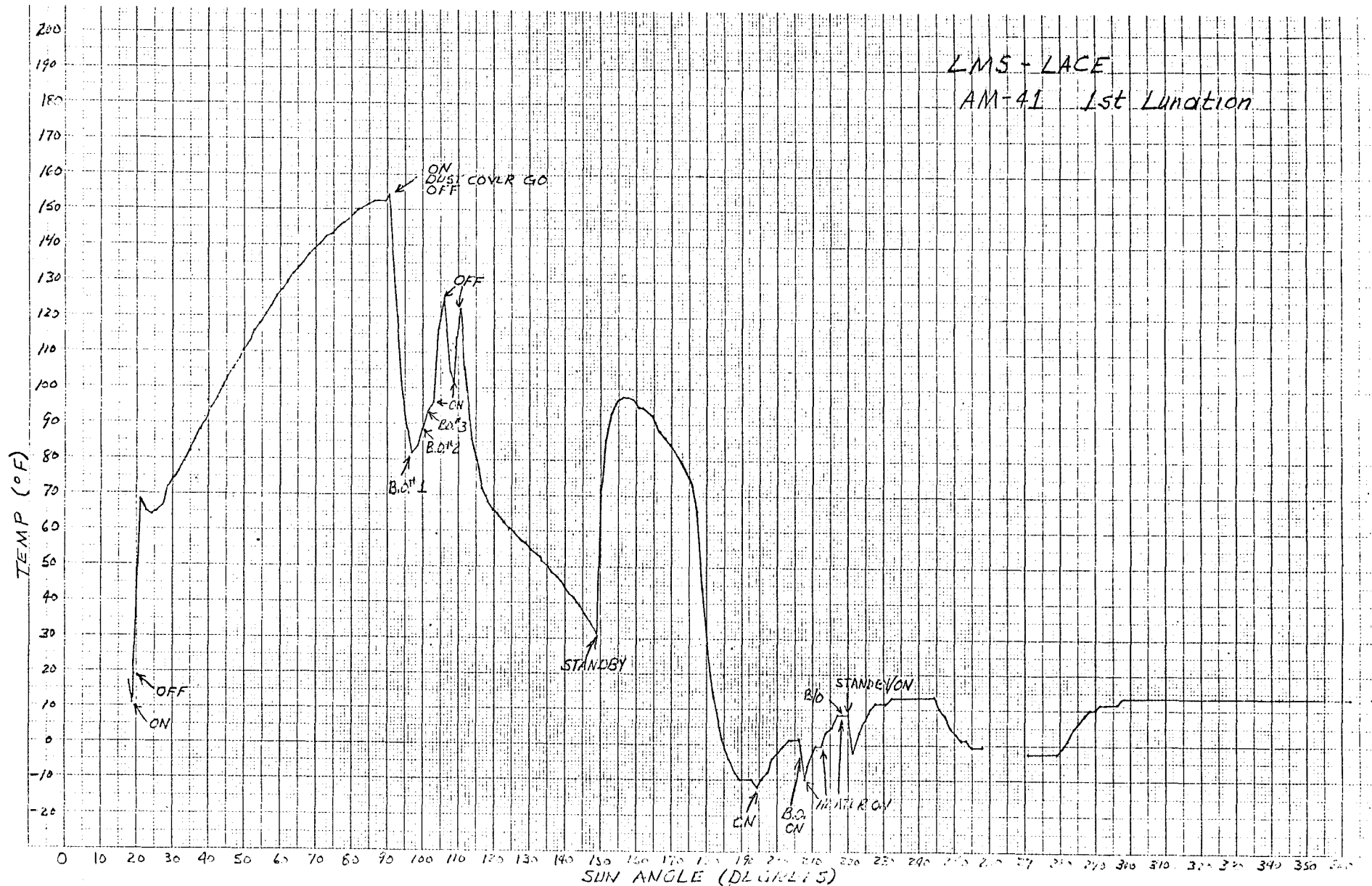
| | A12 | A14 | A15 | A16 | A17 |
|--------------|--|---|---|---|-----|
| S031 PSE | SP-Z AXIS MALFUNCTION Z DRIVE MOTOR REQUIRED @ NIGHT FOR OPERATION | LP-Z AXIS, Y AXIS DIFFICULT TO LEVEL | LP-X BULKY LP-Y LEVEL ON AT NIGHT | NORMAL | |
| S033 ASE | | HPR FOR 30 MIN/WK ABOVE -60°C. #3 GEOPHONE NOISY SINCE 3/30/71. DATA RECOVERABLE. MASTERS RETAINED | | LAUNCHED 3 MORTARS. HPR 30 MIN/WK | |
| S034 LSM | DATA INVALID SINCE 6/4/72. FLIP CAL DISCONTINUED 6/26/72 | | NO FLIP CAL ABOVE 62°C. Y AXIS STATIC 9/72 | SCIENCE DATA STATIC SINCE 2/73 | |
| S035 SWS | SUM CUP MODULATION INTERMITTENT | | STANDBY - 8/72 TM OUT OF SYNC EXCESSIVE POWER DRAIN. PERIODIC CHECK- ING | | |
| S036 SIDE | CYCLIC COMMANDING REQUIRED. HIGH VOLTAGE ARCING ABOVE 55°C | -3.5V POWER SUPPLY DEGRADED. A/D CONVERTER FAILED - VOLTAGE & TEMP DATA MISSING. STANDBY OPERATION | OPERATION NORMAL | | |
| S037 | | | TREF 2 OFFSCALE HIGH 8/71 6 MODE II 0 MODE III | 8 MODE II E1 MODE III THERMAL ACCURACY BEING EVALUATED | |

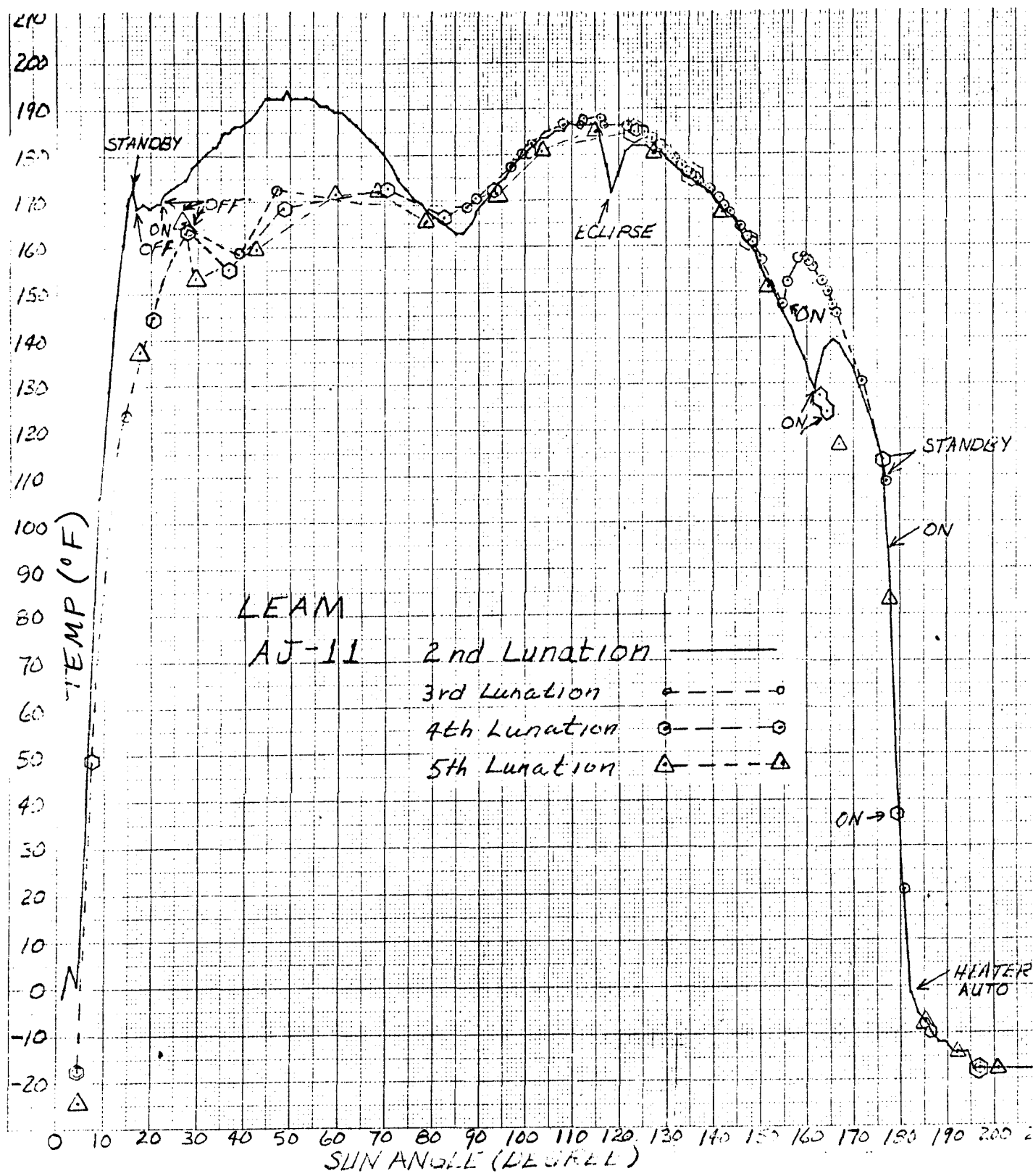
| | A12 | A14 | A15 | A16 | A17 |
|--------------|--------------------------------|--------|--------|-----|--|
| S058CC1G | FAILED 15 HRS AFTER TURN ON | NORMAL | NORMAL | | |
| S202 LEAM | | | | | OPERATE DURING TERMINATOR. INCREASING TEMPERATURE 5°C INCREMENTS EACH DURATION |
| S203 | | | | | 30 MIN OPERATION PER WK LSG/LSPE SEQUENTIAL OPERATION FOR CORRELATION |
| S205 | | | | | THERMAL PROBLEM 125°F TURN OFF 30° OFF 140°ON MASS DATA TEMP NOISE ON ALL CHANNELS EXPERIENCED MODE CHANGES |
| S207 | | | | | GAIN STEP 11 INTEGRATOR SHORTED BIAS OUT. SEISMIC HIGH GAIN MADE OPEN LOOP |

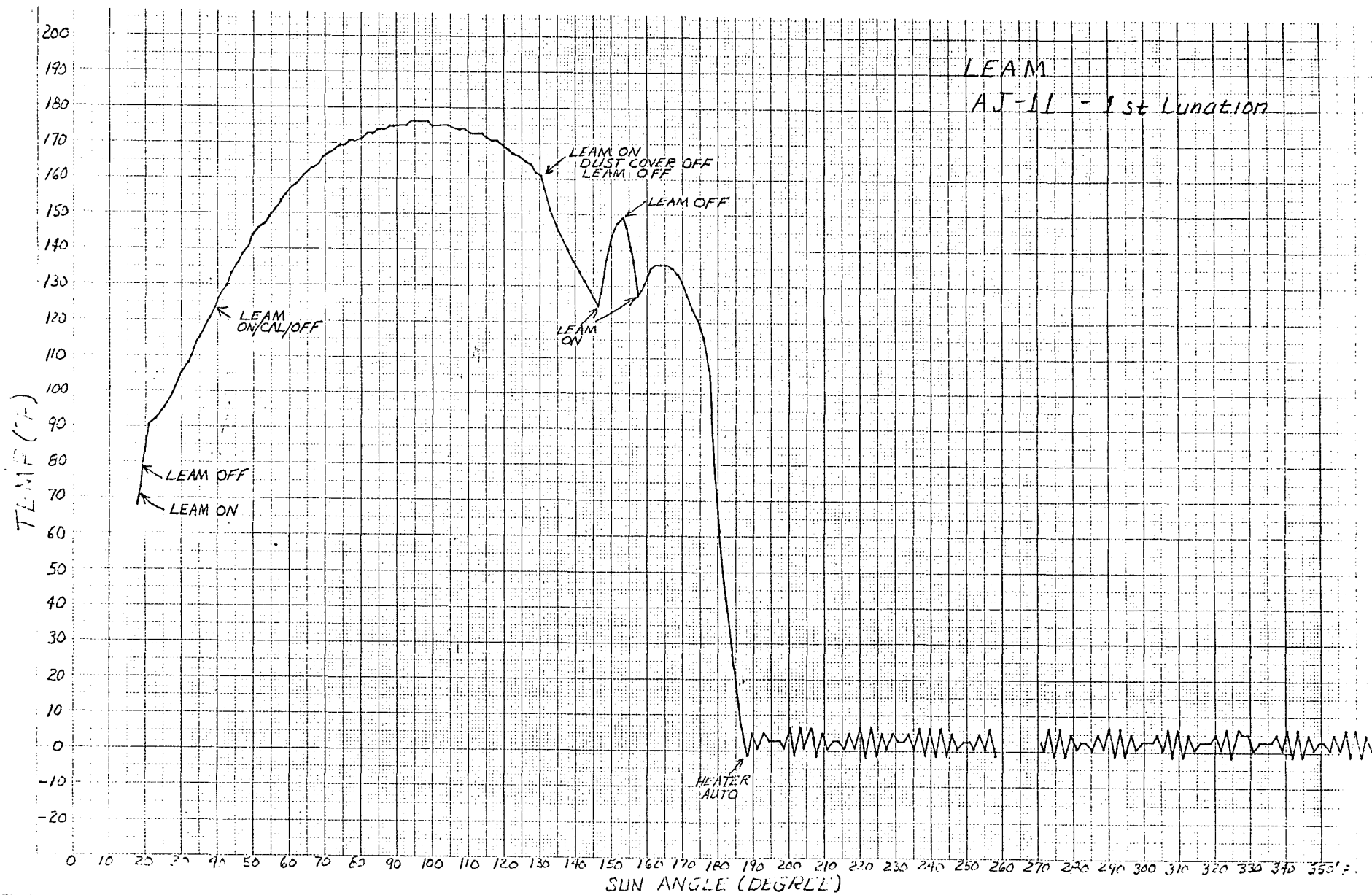


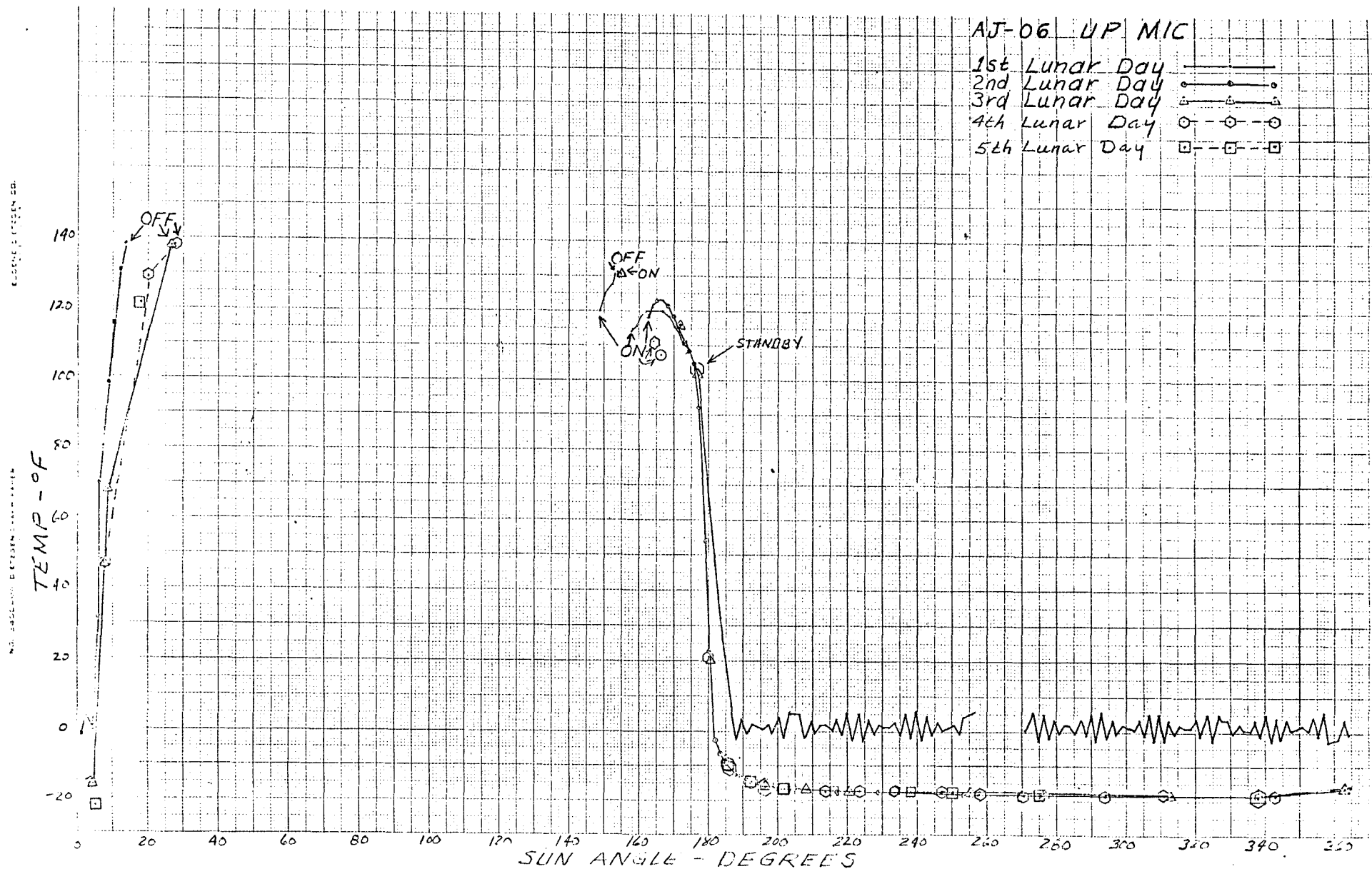


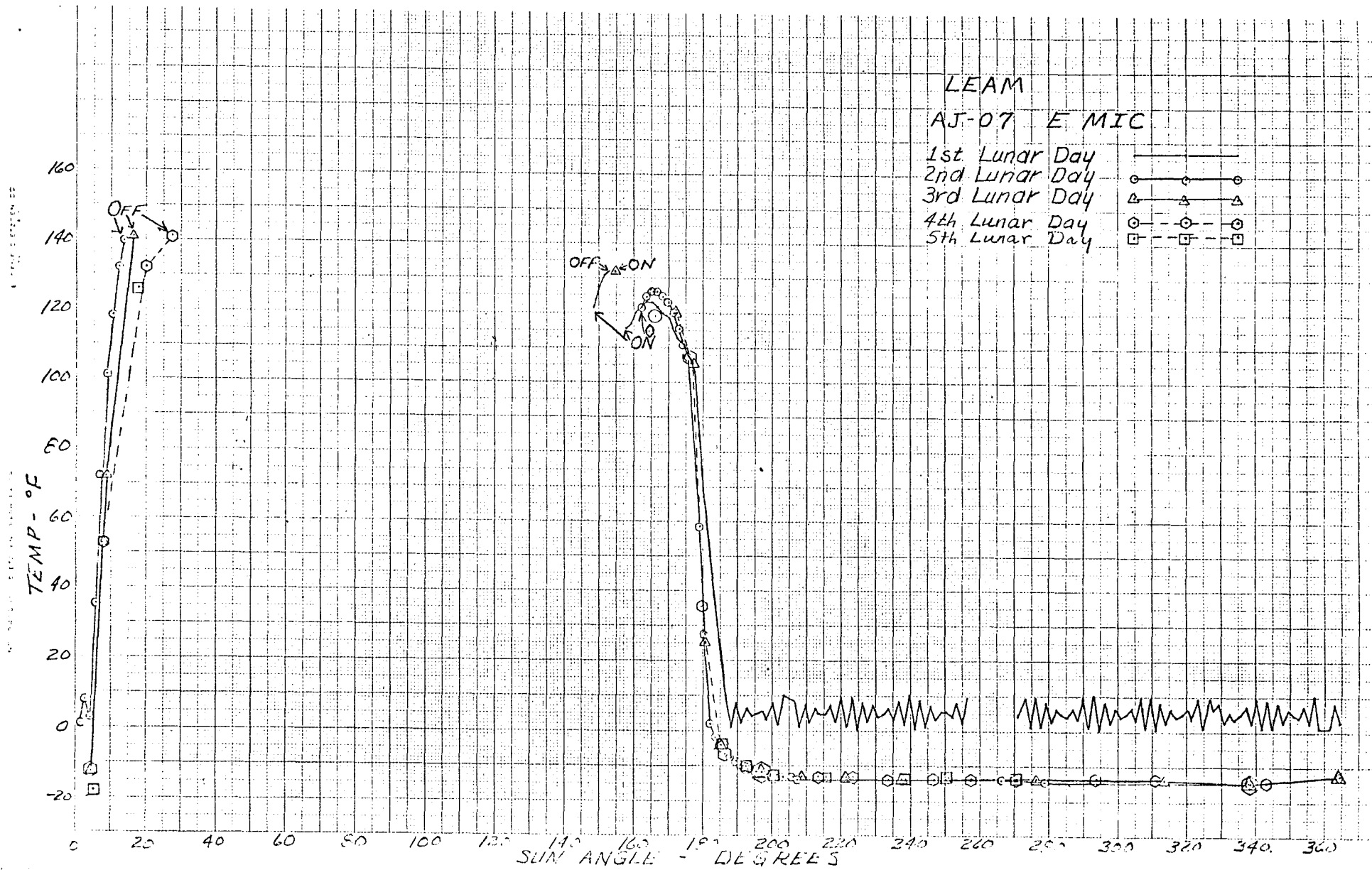






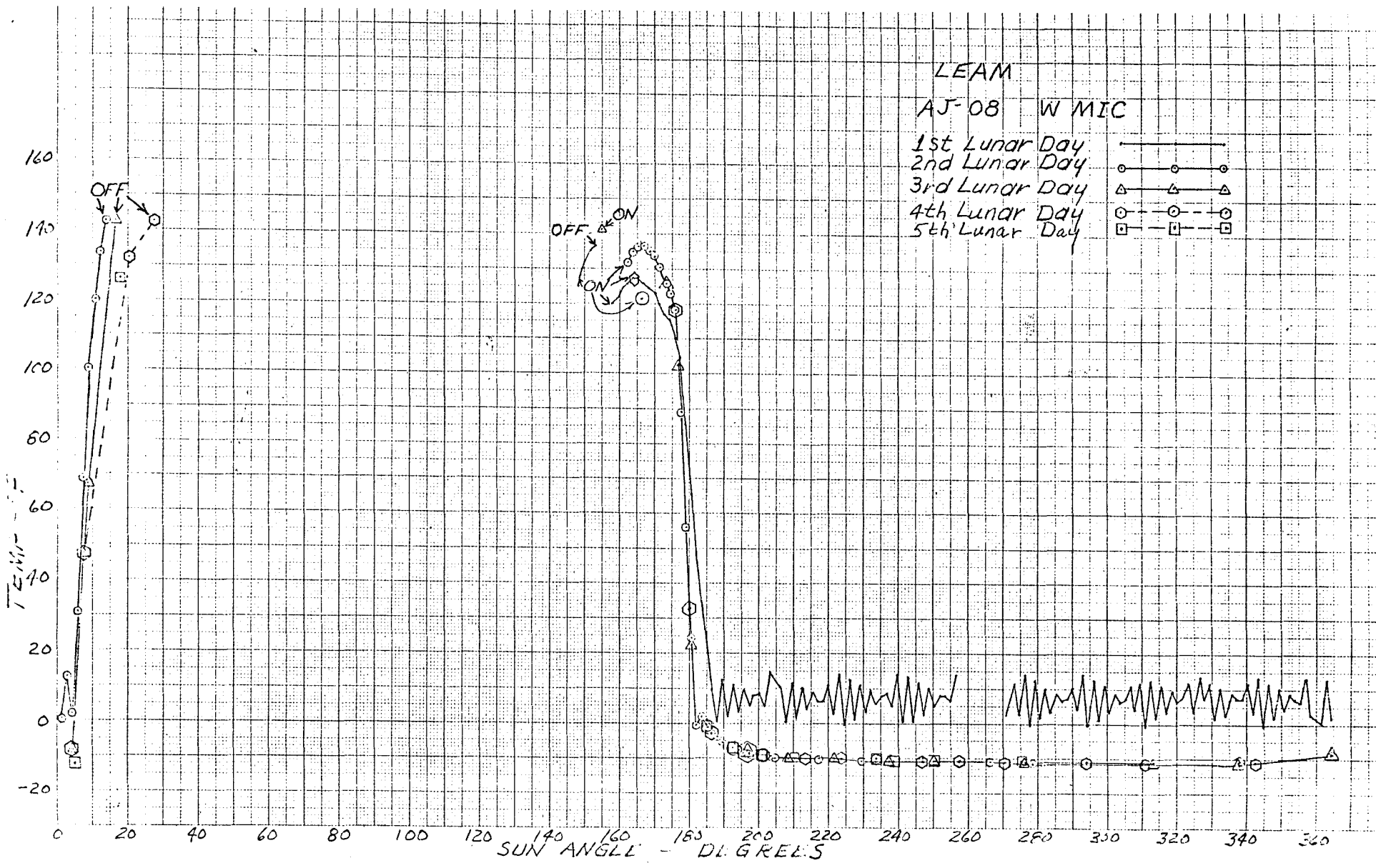






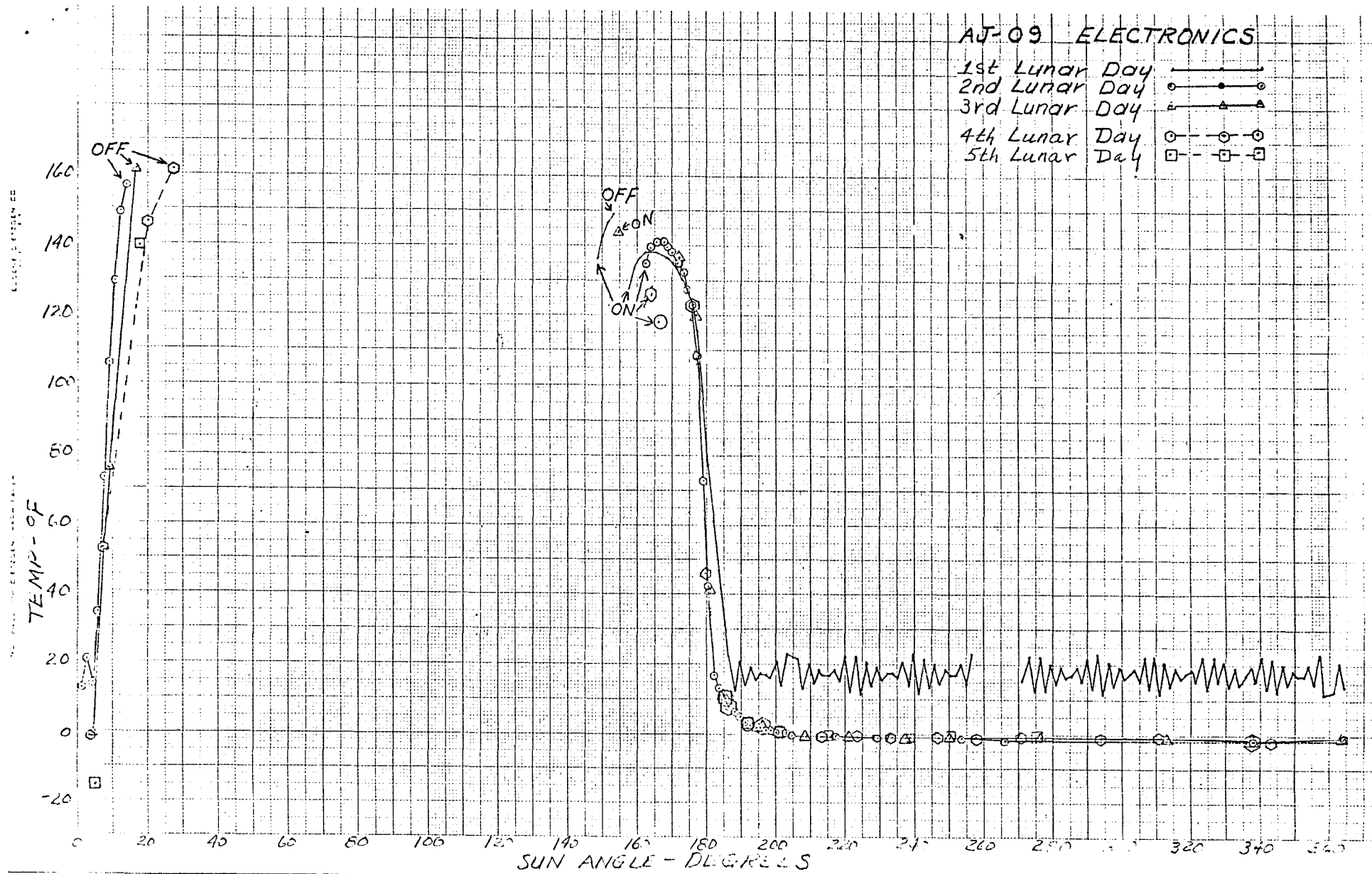
LEAM
AJ-08 W MIC

- 1st Lunar Day —————
- 2nd Lunar Day ○ — ○ — ○
- 3rd Lunar Day △ — △ — △
- 4th Lunar Day ○ — ○ — ○
- 5th Lunar Day □ — □ — □



AJ-09 ELECTRONICS

- 1st Lunar Day ———
- 2nd Lunar Day ○—○—○
- 3rd Lunar Day △—△—△
- 4th Lunar Day ⊙—⊙—⊙
- 5th Lunar Day □—□—□



BENDIX OPERATION

- TASK IMPLEMENTATION POLICY (ASTIR)
- HANGAR QUEEN
 - ANOMALY INVESTIGATION
 - OPERATIONAL STATUS
- ALSEP TASKS
 - ASTIR'S ORIGINATED 33
 - APPROVED 20
 - COMPLETED 7
 - PRIORITY OF TASKS
- HANGAR QUEEN EXPERIENCE/RECOMMENDATIONS



SCHEDULE

Title

ALSEP Tasks

Issued

Update

| Item | MAY | | | | | JUNE | | | | JULY | | | |
|--------------------------|-----|----|----|----|---|------|----|----|----|------|----|----|----|
| | 4 | 11 | 18 | 25 | 1 | 8 | 15 | 22 | 29 | 6 | 13 | 20 | 27 |
| A16 PSE Funct Changes | X | X | X | X | | | | | | | | | |
| A16 Xmtr Failure | X | X | X | X | | | | | | | | | |
| A14 SIDE Night Oper Temp | X | X | | | | | | | | | | | |
| LSG Noise Checks | X | X | X | | | | | | | | | | |
| A14 SIDE ARC Analysis | X | X | X | X | | | | | | | | | |
| HFE Thermal Analysis | X | X | X | X | X | X | X | X | X | | | | |
| HFE Verification Testing | X | X | X | X | X | X | X | X | X | | | | |
| A14 CPLEE Operations | X | X | X | X | | | | | | | | | |
| A17 LACE Noise | X | X | X | X | | | | | | | | | |
| A17 LACE Mode Changes | X | X | X | X | X | X | X | X | X | X | X | X | |
| ALSEP Long Term Ops Plan | X | X | X | X | X | X | X | X | X | X | X | X | X |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

REMOTE SITE
ALSEP DATA NOT RECORDED

| DATE | SITE | GMT | VEHICLE | TIME LOST |
|--------|---------|-------------|-----------|---------------------------------|
| 1973 | | LOS 12/1513 | A15-16-17 | 18 ^m |
| 12 FEB | GWM/ACN | AOS 12/1531 | | |
| | | LOS 25/0139 | A12 | 21 ^m |
| 25 FEB | GWM/CYI | AOS 25/0200 | | |
| | | LOS 25/0100 | A14 | 1 ^h 00 ^m |
| 25 FEB | GWM/CYI | AOS 25/0200 | | |
| | | LOS 26/0228 | A12 | 22 ^m |
| 26 FEB | GWM/CYI | AOS 26/0250 | | |
| | | LOS 28/0006 | A12 | 04 ^h 21 ^m |
| 28 FEB | HAW/CYI | AOS 28/0427 | | |
| | | LOS 02/0951 | A12 | 21 ^m |
| 02 MAR | MAD/MIL | AOS 02/1021 | | |
| | | LOS 03/0918 | A16 | 01 ^h 04 ^m |
| 03 MAR | ACN | AOS 03/1022 | | |
| | | LOS 04/0642 | A12 | 17 ^m |
| 04 MAR | HSK/CYI | AOS 04/0659 | | |
| | | LOS 04/0926 | A15 | 19 ^m |
| 04 MAR | ACN/CYI | AOS 04/0945 | | |
| | | LOS 05/0942 | A12 | 02 ^h 12 ^m |
| 05 MAR | CYI/MIL | AOS 05/1154 | | |
| | | LOS 06/0955 | A12 | 02 ^h 32 ^m |
| 06 MAR | CYI/MIL | AOS 06/1227 | | |
| | | LOS 07/1203 | A12 | 25 ^m |
| 07 MAR | CRO/CYI | AOS 07/1228 | | |
| | | LOS 09/1500 | A12 | 50 ^m |
| 09 MAR | ACN | AOS 09/1550 | | |
| | | LOS 14/1315 | A12 | 35 ^m |
| 14 MAR | HSK/ACN | AOS 14/1350 | | |

APOLLO CARTOGRAPHIC PROGRAM

- I. 1:250,000 SCALE MAPS
- II. 1:50,000 SCALE MAPS
- III. PROFILES AT 1:250,000 SCALE

1:250,000 SCALE MAPS

- 200 MAPS HAVE BEEN DEFINED BY PRIORITY (180 MAPS ARE BUDGETED)
- REVISION TO THIS LISTING IS IN PREPARATION TO INCLUDE SOME
NEW APOLLO 17 COVERAGE
- JSC WILL ADVISE WHERE APOLLO 15, 16, OR 17 PHOTOGRAPHY IS
PREFERRED IN AREAS OF REDUNDANT COVERAGE
- DISTRIBUTION PRODUCTS HAVE BEEN DEFINED BY JSC IN COORDINATION
WITH NASA HEADQUARTERS.

1:50,000 SCALE MAPS

- 8 MAP SHEETS HAVE BEEN DEFINED
- 7 ADDITIONAL MAP SHEETS ARE BEING DEFINED BY JSC
- DISTRIBUTION PRODUCTS HAVE BEEN DEFINED IN COORDINATION WITH NASA HEADQUARTERS
- JSC PREFERS TO DELAY DEFINITION OF THE 10 REMAINING MAP SHEETS (TOTAL OF 25 BUDGETED) FOR FY74 AS LATE AS POSSIBLE. THIS WILL ALLOW THE PI'S TO WORK WITH THE 1:250,000 SCALE MAPS AND COMPARE THEM WITH THE FIRST 1:50,000 SCALE PRODUCTS, THEREBY ESTABLISHING A MUCH BETTER BASIS FOR SELECTION OF THE LIMITED REMAINING AREAS.

PROFILES

- 8 PROFILE AREAS HAVE BEEN DEFINED FOR THE FIRST FOUR PRIORITY AREAS
- FORMATS FOR THE PROFILES HAVE BEEN ESTABLISHED WITH DMATC
- ADDITIONAL PROFILE REQUIREMENTS FOR THE REMAINING PRIORITY AREAS
WILL BE CONSIDERED AFTER EVALUATION OF THE FIRST PROFILE PRODUCTS

PHOTOGRAPHY PROCESSING

A. LUNAR SURFACE PHOTOS

- POS. AND NEG. TRANSPARENCIES: COMPLETE, NO PROBLEMS.
- COLOR AND B&W PRINTS:

PROCESSING VERY SLOW; APPROX. 80% COMPLETE.

ESTIMATE DISTRIBUTION COMPLETION ON MAY 15.

B. ORBITAL PHOTOGRAPHY

- ALL APOLLO 17 FILM HAS BEEN PROCESSED.
- APOLLO 17 PAN CAMERA FILM RECTIFICATION IS AWAITING PHOTO SUPPORT DATA.
- APOLLO 16 RECTIFIED PAN CAMERA PRINTS, POSITIVES AND NEGATIVES COMPLETE;
NOW IN INSPECTION AND DISTRIBUTION CYCLE.

PHOTO ANALYSIS SUPPORT DATA

LASER & GRAVITY DATA

- APOLLO 15 & 16 DATA HAS BEEN COMPLETED AND DISTRIBUTED
- APOLLO 17 DATA IS SCHEDULED TO BE COMPLETED BY MID-JUNE 1973

PHOTO SUPPORT DATA

- FOR APOLLO 17 PAN CAMERA TO BE COMPLETED BY JUNE 1, 1973
- FOR APOLLO 17 MAPPING CAMERA TO BE COMPLETED BY MID-JUNE 1973
- FOR APOLLO 17 PAN & MAPPING CAMERAS IN MICROFILM FORM TO BE COMPLETED BY JULY 1, 1973.

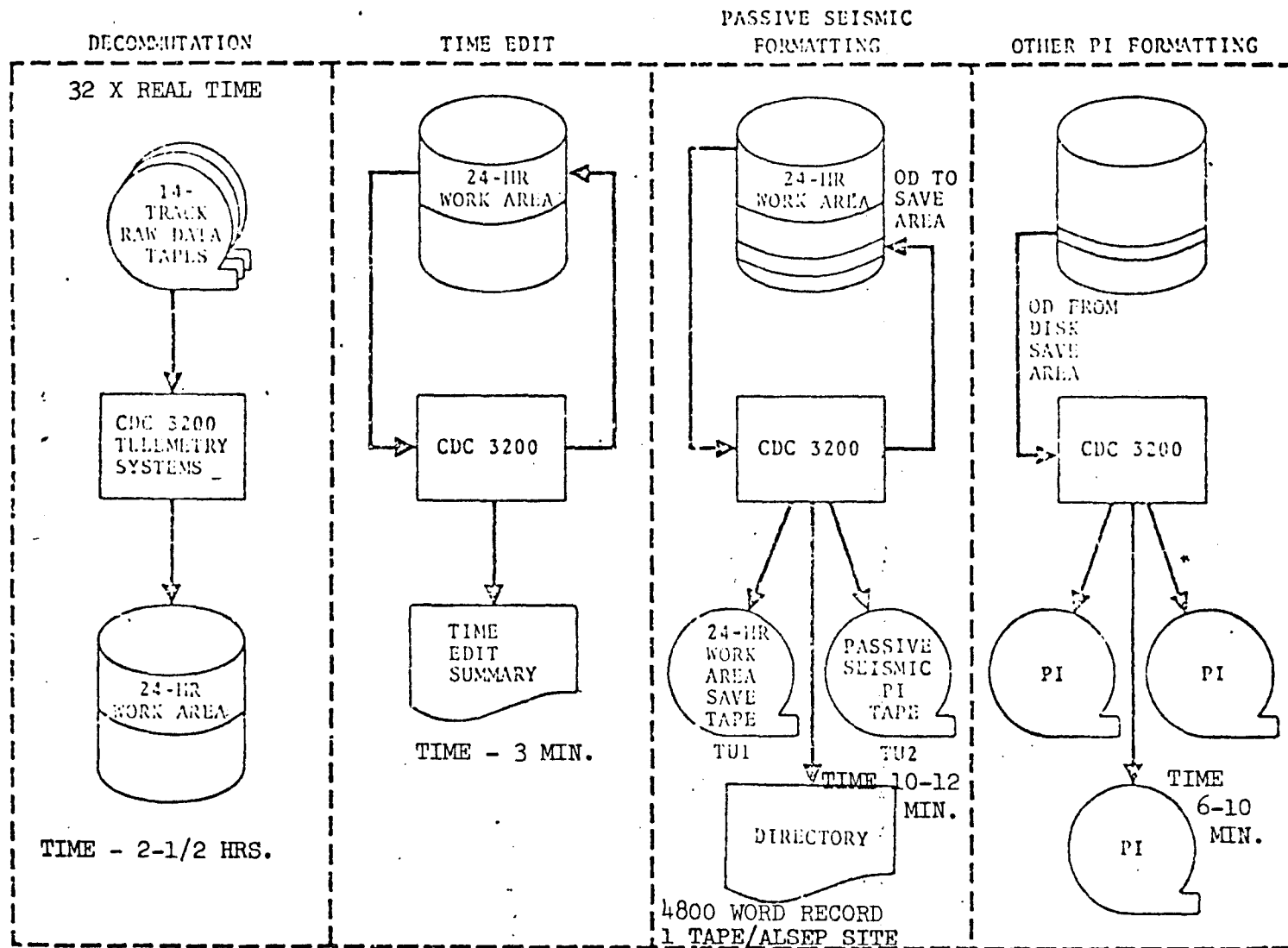
LUNAR DATA ARCHIVING

- ORBITAL
 - A 15/16 DATA @ NSSDC
 - GAMMA RAY, S-BAND & SUBSATELLITE PARTIAL
 - A12 REQUIRED BY 12/30/74
- SURFACE
 - PARTIAL DATA FOR ALL EXPERIMENTS
- ARCHIVING MEETING
 - 1ST MEETING 4/13/73
 - 2ND MEETING 5/24-25/73
 - NSSDC LIMITATIONS

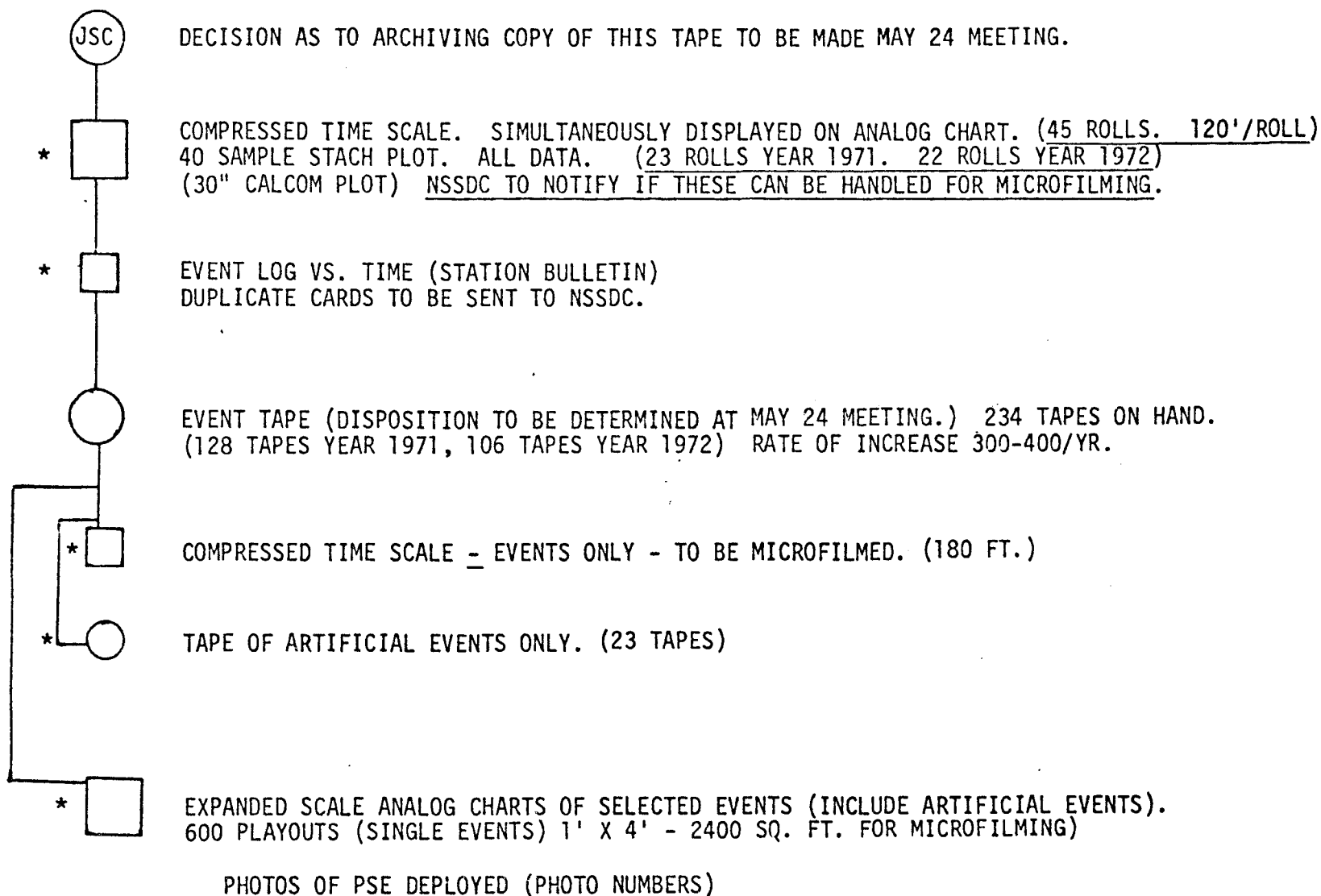
SUMMARY OF APOLLO INSTRUMENTS

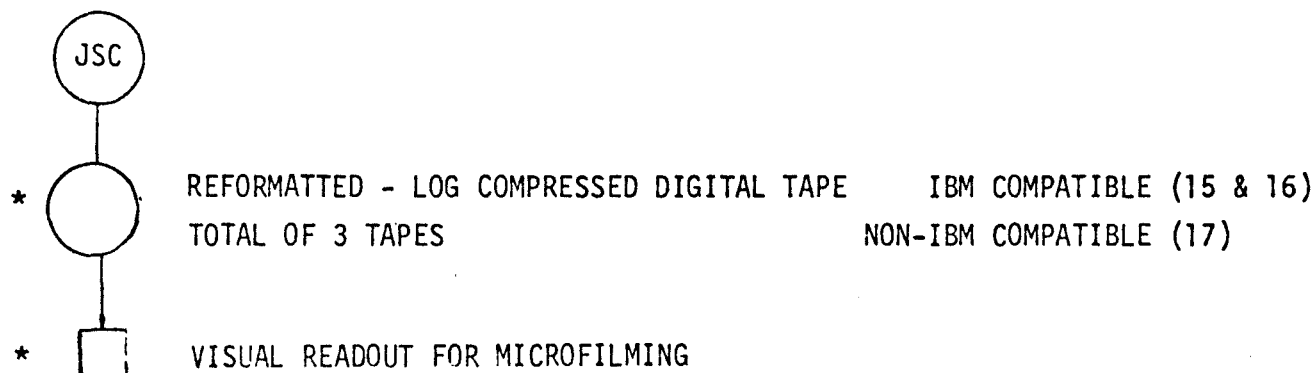
(DATA PROCESSING ONLY)

5-1-73



- ALSEP data processing flow chart.



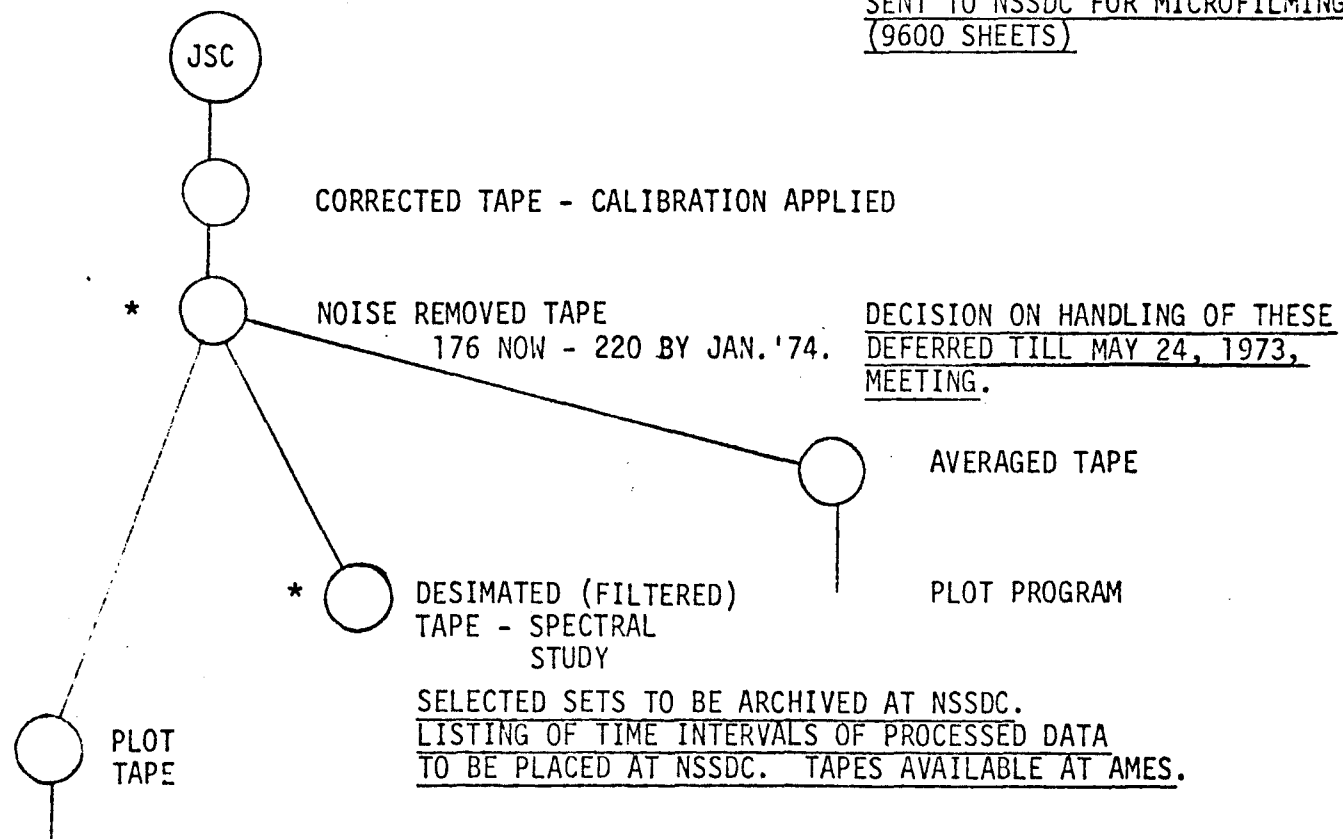


DOCUMENTATION :

- (1) USE PRELIMINARY SCIENCE REPORT FOR INSTRUMENT DESCRIPTION.
- (2) USE GEOTECH CALIBRATION DATA PACK
- (3) PROGRAM DESCRIPTION

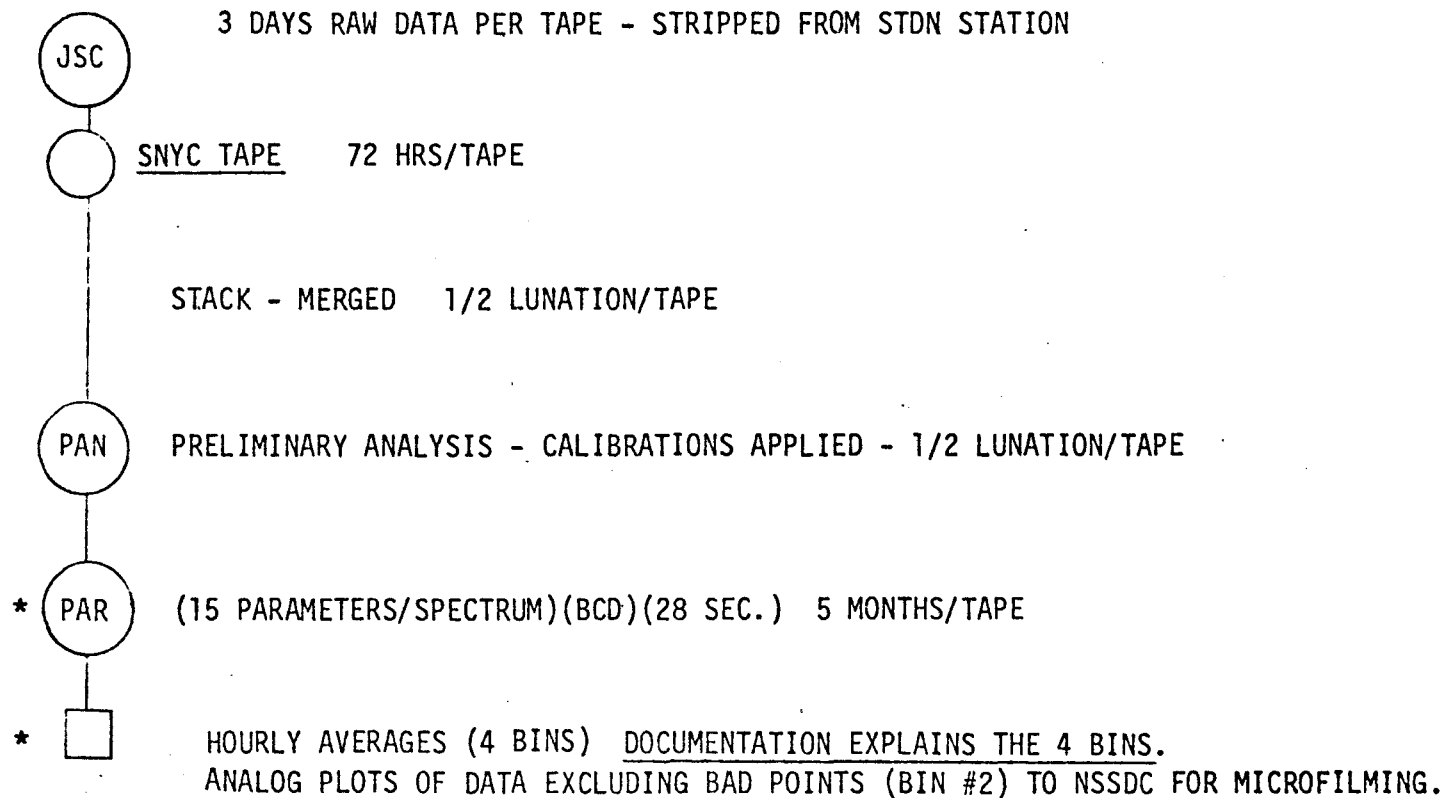
* LONG-TERM STORAGE WITH DOCUMENTATION

CORRELATED DATA PLOTS TO BE
SENT TO NSSDC FOR MICROFILMING.
(9600 SHEETS)



THESE PLOTS PRESENTLY
GOING TO NSSDC
MICROFILM

* LONG-TERM STORAGE WITH DOCUMENTATION



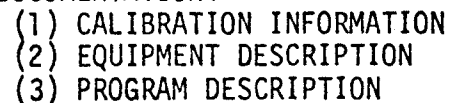
DOCUMENTATION:

- (1) CALIBRATION
- (2) PROGRAM DESCRIPTION
- (3) EQUIPMENT DESCRIPTION

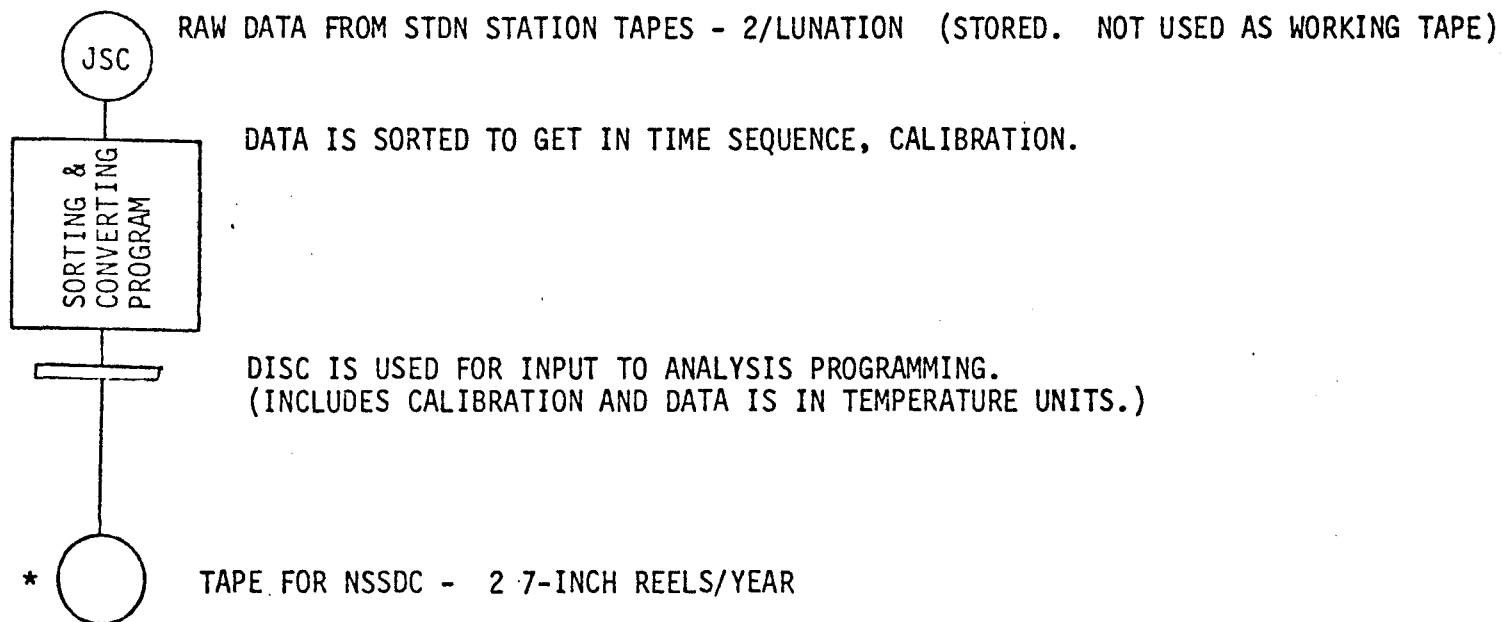
1971 MATERIAL SENT TO NSSDC APRIL 1973.

1972 MATERIAL SCHEDULED FOR NSSDC JULY 1973.

* LONG-TERM STORAGE WITH DOCUMENTATION



* LONG-TERM STORAGE WITH DOCUMENTATION



DOCUMENTATION:

- (1) DESCRIPTION OF COMPUTER PROGRAM AND CALIBRATION INFO.
- (2) LIST OF PHOTOS, BY FRAME NUMBER, OF INTEREST TO HFE.
- (3) CALIBRATION INFORMATION.

* LONG-TERM STORAGE WITH DOCUMENTATION



JSC

* REFORMATTED INTO CPLEE DATA CYCLES OF 19.2 SECONDS, REAL TIME, EACH (50-60 TAPES)

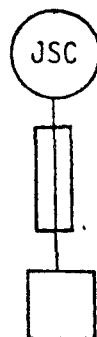
5 MIN AVE PLOTS FOR MICROFILMING (11" X 14" SHEETS - 16 SHEETS)

DOCUMENTATION:

- (1) DESCRIPTION OF INSTRUMENT
- (2) CALIBRATION
- (3) OPERATIONAL HISTORY
- (4) DATA TAPE FORMAT
- (5) PUBLISHED REPORTS

30 TAPES AT NSSDC
REMAINING 30 TAPES SCHEDULED FOR JULY 1973

* LONG-TERM STORAGE WITH DOCUMENTATION



PLOT PROGRAM

35mm FILM PRESENTING PLOTS OF LUNAR ATMOSPHERIC DENSITY
AND GAUGE TEMPERATURE.

EACH FRAME COVERS \approx 15 HOURS OF TIME.

APOLLO 14 & 15 DATA AT NSSDC THROUGH DECEMBER 1972

DOCUMENTATION:

- (1) PROGRAM DESCRIPTION
- (2) EXPERIMENT DESCRIPTION

1971 & 1972 DATA AT NSSDC.

1. CATALOG OF PICTURES TAKEN ON THE LUNAR SURFACE DURING EACH OF THE APOLLO MISSIONS
2. DOCUMENTATION AND ENVIRONMENT OF THE APOLLO SAMPLES
3. TRAVERSE INFORMATION - TRACK
4. USGS PUBLICATIONS
5. CORRELATION OF PAN AND ORBITER

S-078

LASER RANGING RETRO-REFLECTOR

DR. J. E. FALLER

PREPRINTS

REPORTS

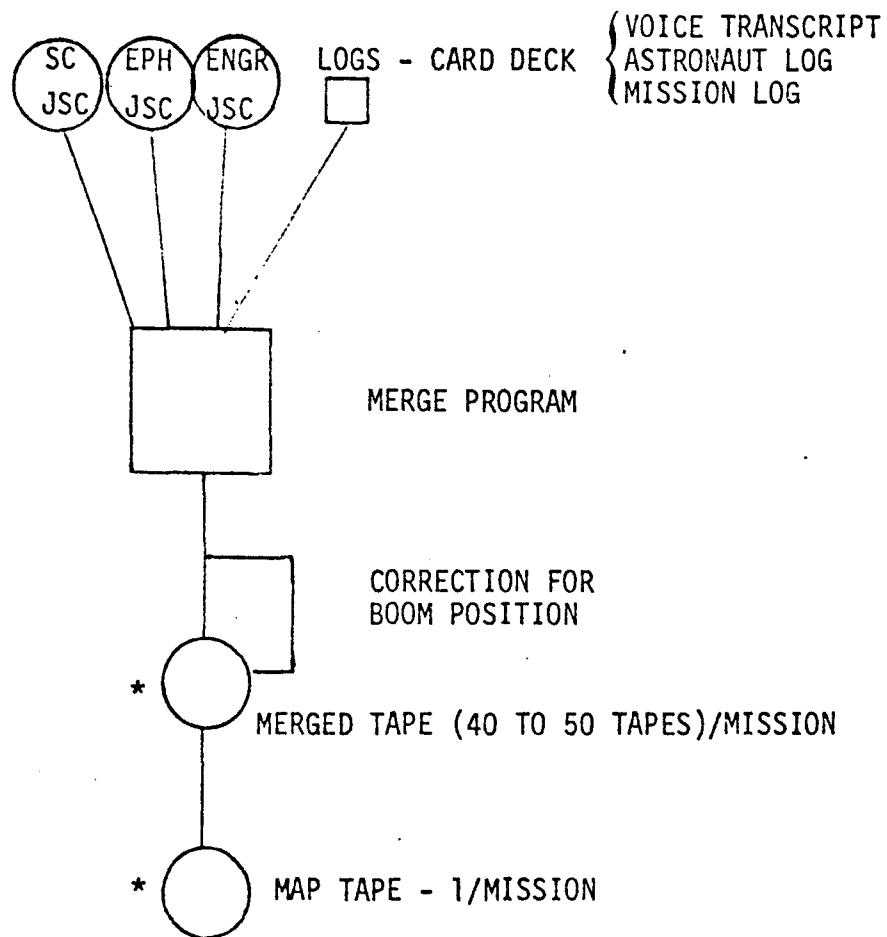
HEADQUARTERS TO PLACE REQUIREMENT ON
LASER REFLECTOR TEAM.

(SPECIMEN WILL BE IN STORAGE IN JSC CURATORIAL FACILITIES.)

WRITTEN REPORT WILL BE SENT TO NSSDC.

(THE TEST SHEETS MUST BE REFRIGERATED FOR ARCHIVING.)

(TEST SHEETS WILL BE IN STORAGE AT JSC CURATORIAL FACILITIES.)



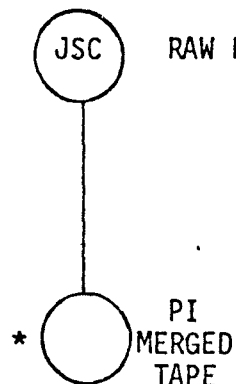
{ VOICE TRANSCRIPT
ASTRONAUT LOG
MISSION LOG

DATA SCHEDULED TO NSSDC
IN MID-1974

DOCUMENTATION:

- (1) PROGRAM DESCRIPTION
- (2) INSTRUMENT DESCRIPTION

* LONG-TERM STORAGE WITH DOCUMENTATION



RAW DATA FROM STDN STATION TAPES

ONE REEL @ 1600 BPL - X-RAY, EPHEMERIS & HOUSEKEEPING DATA
MERGED IN TIME SEQUENCE.

THE TAPE WILL BE ACCOMPANIED BY SOFTWARE AND COMPLETE
DOCUMENTATION.

APOLLO 15 DATA IS IN NSSDC AND DOCUMENTATION SCHEDULED
FOR APRIL 15, 1973.

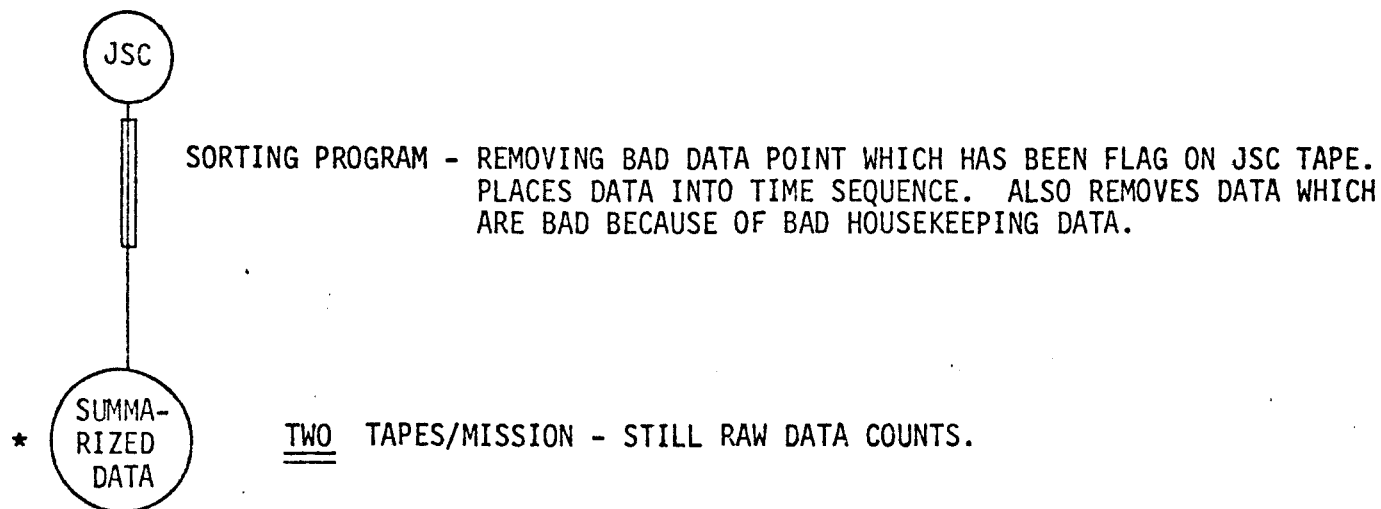
APOLLO 16 DATA AND DOCUMENTATION SCHEDULED TO BE PRESENTED
BY JULY 1973.

X-RAY AND ALPHA WILL PUBLISH A COMBINED REPORT ON
ENGINEERING INFORMATION.

GALACTIC TAPE SHOULD BE MERGED BY APRIL 17, 1973.

PUBLISHED REPORT.

LARGE SCALE MAPS.



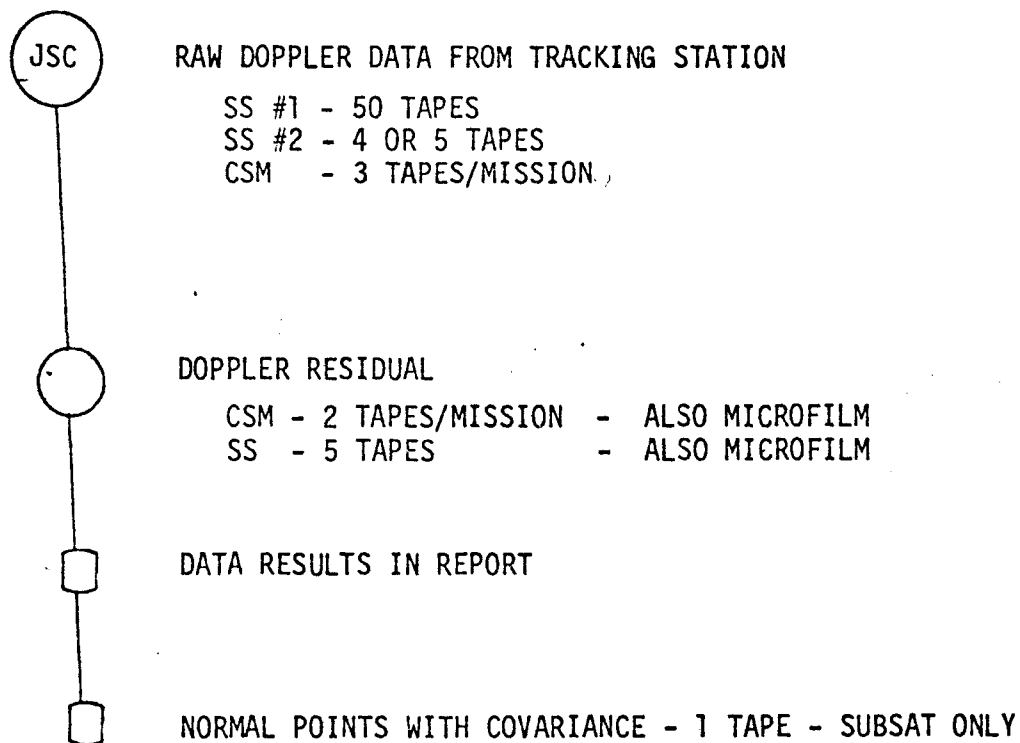
DISC FOR FURTHER PROCESS FOR ANALYSIS

DOCUMENTATION:

- (1) GAIN VS. TEMP. CORRECTIONS
- (2) LIVE TIME (TIME TO HEIGHT CONVERTER)(THC)
- (3) EXPLANATION OF THC
- (4) CALIBRATION SOURCE
- (5) O&H MANUAL

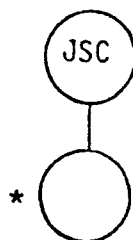
DATA NOW IN NSSDC

* LONG-TERM STORAGE WITH DOCUMENTATION



DOCUMENTATION

MATERIAL IN PREPARATION FOR NSSDC



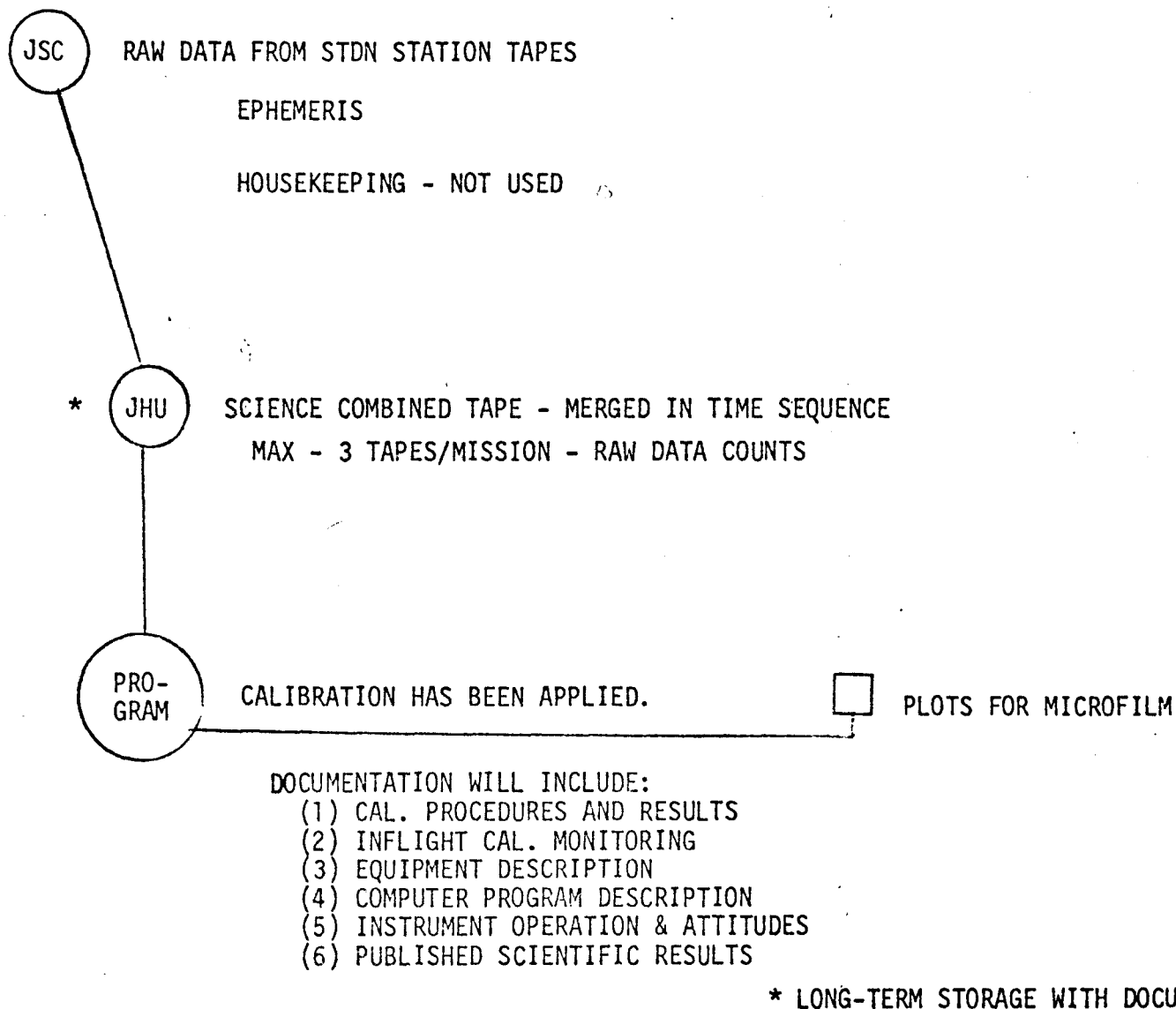
DATA SYNC, DATA BLOCKED, TIME GAPS FILLED WITH ZEROS, EPHEMERIS MERGED, HOUSEKEEPING DATA MERGED, AND SCIENCE DATA CORRECTED FOR BACKGROUND.

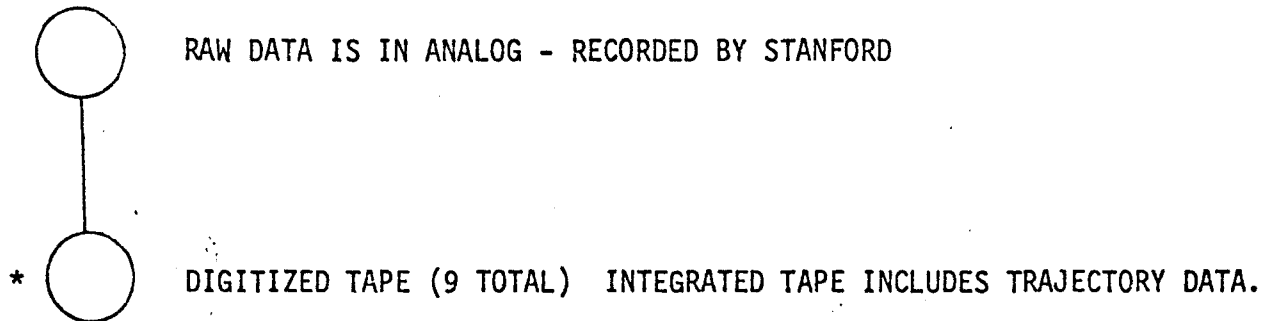
9 TAPES

8 MICROFILM

DOCUMENTATION:

- (1) DATA PACK
- (2) CALIBRATION
- (3) DESCRIPTION OF PROGRAM USED IN IDENTIFYING PEAKS





DOCUMENTATION:

- (1) FLOW DIAGRAM OF DATA SHOWING COLLECTION (ANALOG)
PROCESSING STEPS THROUGH TO PLOTS.

MATERIAL SCHEDULED TO NSSDC APRIL 1973

* LONG-TERM STORAGE WITH DOCUMENTATION



MERGED TAPE. EPHEMERIS AND CALIBRATION. 30 TAPES (ALSO MICROFILM)

IMAGE RECONSTRUCTION TAPE - 10 TO 15 TAPES (ALSO MICROFILM)

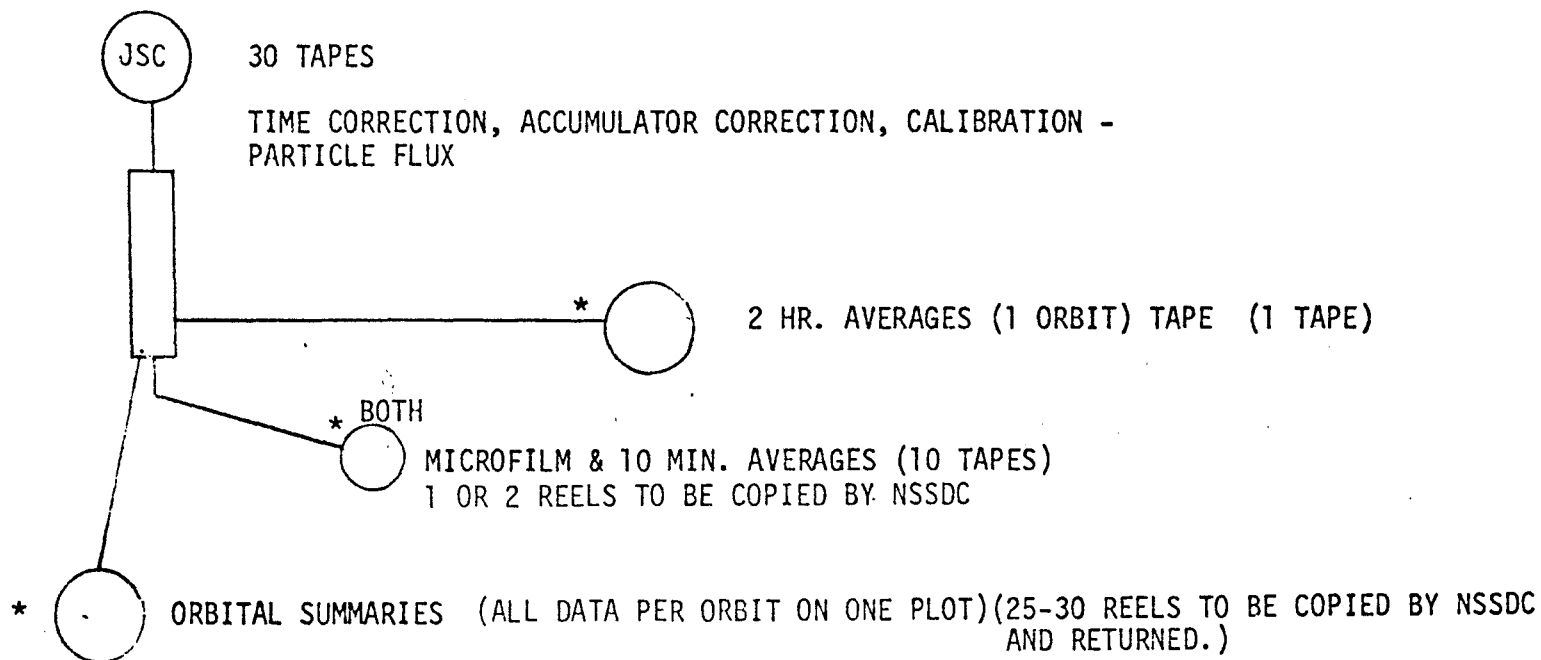
THERMAL PROPERTY MAP TAPE - 2 OR 3 TAPES (MAPS)

DOCUMENTATION:

(1) CALIBRATION

(2) EQUIPMENT DESCRIPTION

TENTATIVE SCHEDULE TO NSSDC JANUARY 1974

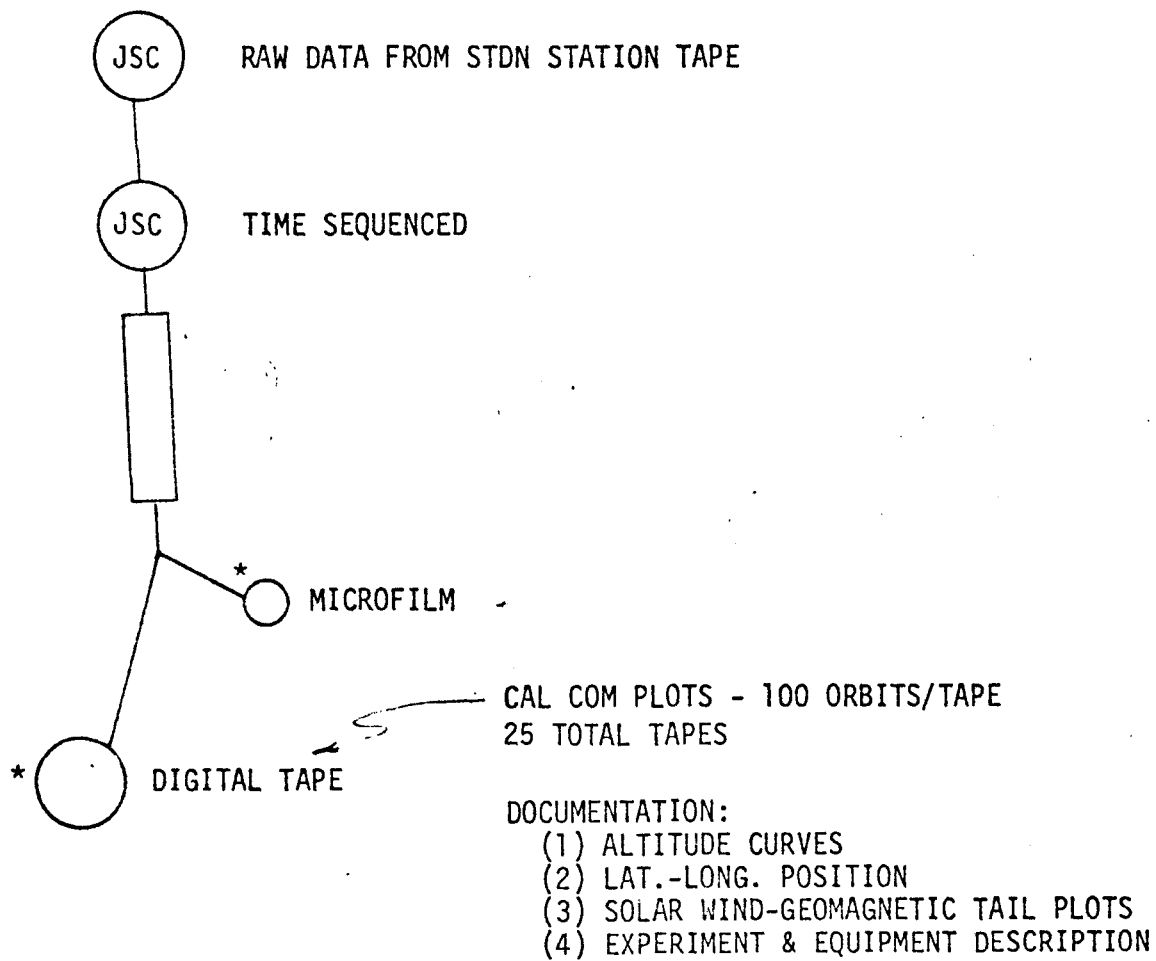


DOCUMENTATION:

- (1) TIME CORRECTION PROCEDURE
- (2) ACCUMULATION CORRECTION PROCEDURE
- (3) CALIBRATION INFORMATION
- (4) INSTRUMENT DESCRIPTION
- (5) HISTORY OF EXPERIMENT

UCLA WILL INCLUDE FIELD OF VIEW DATA.

* LONG-TERM STORAGE WITH DOCUMENTATION



SCHEDULED TO NSSDC DECEMBER 1973

TABULATED DATA

MANUFACTURER'S REPORT FOR CALIBRATION

FINAL SCIENCE REPORT

LISTING OF SURFACE PHOTOS AT EACH STATION

TABLES OF SOIL STRESS (FORCE VS. DEPTH)

CALIBRATION INFORMATION

PENETROMETER TRACES REPRODUCED TO SCALE

TABLES OF DATA REMOVED FROM DRUM

THE DRUM IS STORED BY PI AT BERKELEY.

LIST OF PHOTOS USED IN ANALYSIS.

MATERIAL IN NSSDC

SECOND GENERATION NEGATIVE OF FLIGHT FILM - JANUARY 1973

25 REELS OF 9-CHANNEL DIGITIZED-SCAN MAGNETIC TAPE - APRIL 1973

CATALOG OF ALL FAR UV OBJECTS DETECTED IN 10 FIELDS OF THE SKY - MAY 1973

20 CONTOUR CHARTS - MAY 1973

PUBLISHED ARTICLES - JUNE-DECEMBER 1973

JSC

RAW DATA FROM STDN STATION TAPES

COMPLETE READING OF THE TAPES FOR DEFINITION OF IMPACT


READ

* M MICROFILM OF ALL CHANGES-TABULATION-
FROM BASELINE

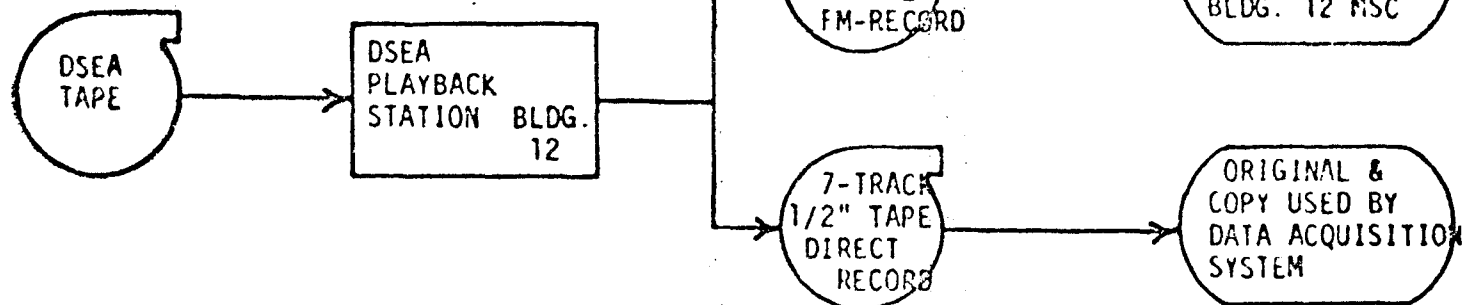
*

EVENT TAPE, DISC, OR CARDS *

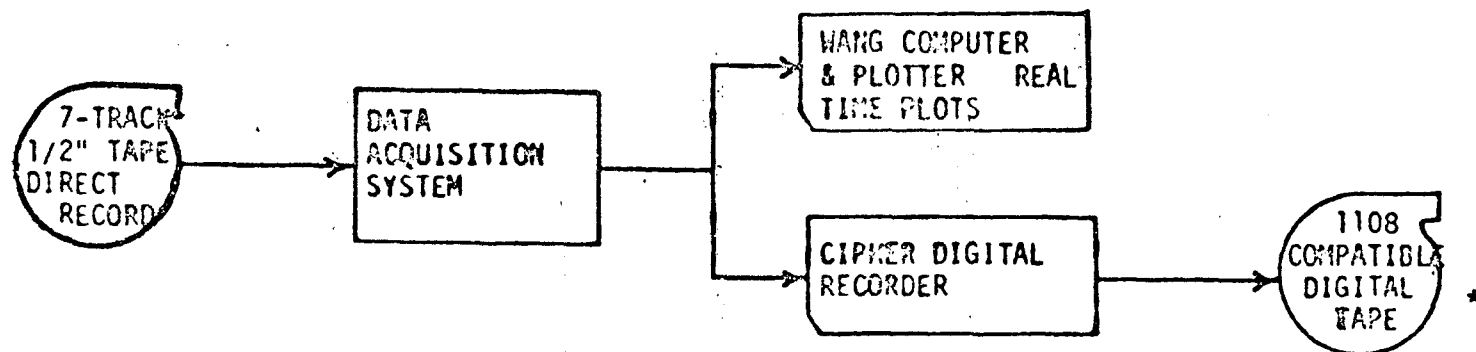
NO SCHEDULE OF DELIVERY TO NSSDC

* LONG-TERM STORAGE WITH DOCUMENTATION

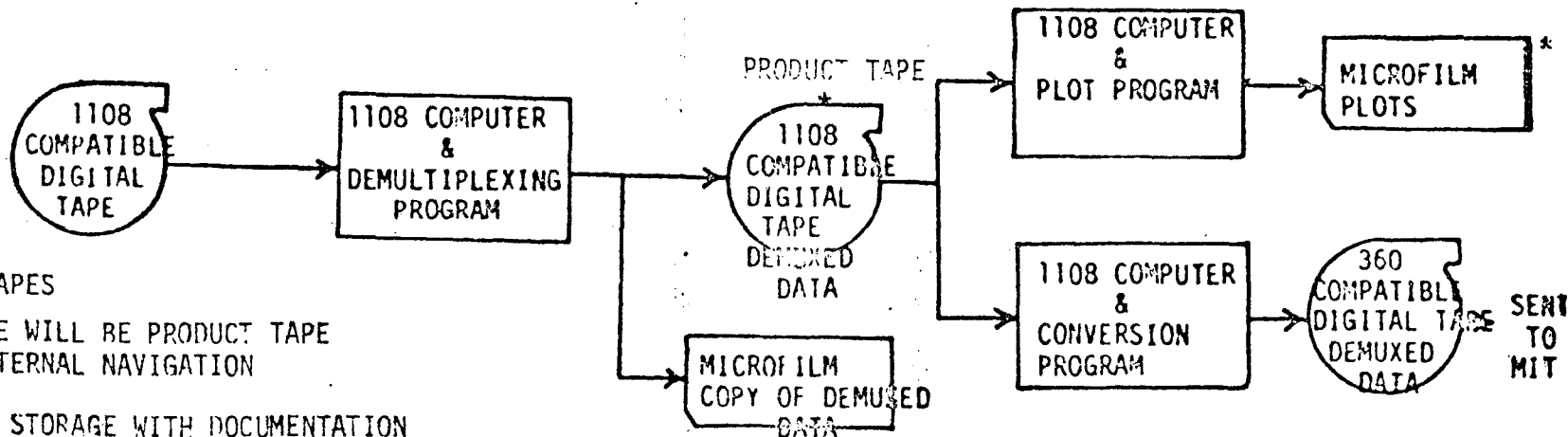
PRODUCTION OF
ANALOGUE COPY
OF DSEA TAPE



PRODUCTION OF
MULTIPLYED
DIGITAL TAPE



PRODUCTION OF
DEMULTIPLYED
DIGITAL TAPE



4 - TOTAL TAPES

4TH TAPE WILL BE PRODUCT TAPE
WITH EXTERNAL NAVIGATION

* LONG-TERM STORAGE WITH DOCUMENTATION

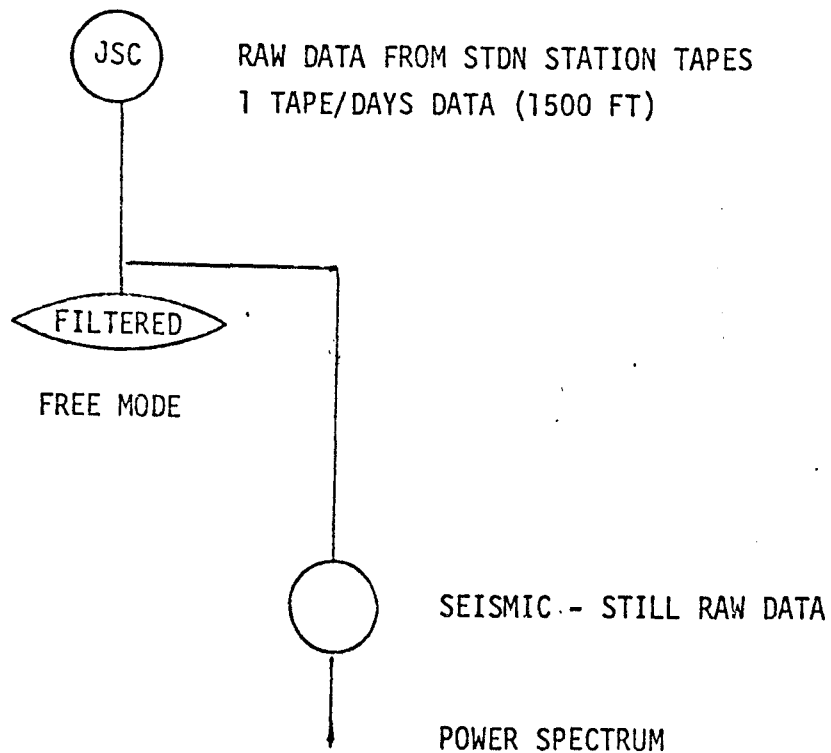
SEP DATA REDUCTION

JSC

PEAK SUMMARY TAPE

PLOTS OF PEAK SUMMARIES FOR MICROFILMING

DOCUMENTATION



HAVING PROBLEMS PROCESSING DATA. ACTION DEFERRED.

NO DELIVERY SCHEDULE

JSC

RAW DATA FROM STDN STATION TAPES

FILM FROM SOUNDER RECORDER (STORED AT JSC.)

- * DUPLICATION OF SIGNAL FILM
- RADAR IMAGES IN PHOTO FORM
- HOLOGRAPHIC RADAR IMAGES
- DIGITAL FILE OF RADAR IMAGERY
- LUNAR PROFILE DATA
- AMBIENT NOISE MEASUREMENT

TENTATIVE SCHEDULE TO NSSDC 12/73 TO 6/74.

* LONG-TERM STORAGE WITH DOCUMENTATION

SCIENCE REPORT

(STORAGE OF SPECIMEN REQUIRES REFRIGERATION.)

(SPECIMEN TO BE STORED AT JSC CURATORIAL FACILITIES.)

RAW DOPPLER - TIME SEQUENCED - 3 TO 5 TAPES/MISSION

RAW ATTITUDE - TIME SEQUENCED - 2 TO 3 TAPES/MISSION

RAW LASER ALTIMETER - TIME SEQUENCED - 1 TO 2 TAPES TOTAL

P&FS

RAW DOPPLER DATA - TIME SEQUENCED - 800 TAPES

ORBITAL PLOTS WITH DOCUMENTATION

TENTATIVE DELIVERY TO NSSDC:

STARTING JULY 1973, COMPLETED DECEMBER 1973.

THIS DOES NOT INCLUDE ALL OF APOLLO 15 P&FS IF STILL OPERATING.

GENERAL INFORMATION

MICROFILM OF VOICE TRANSCRIPTS/EACH MISSION

LISTING OF REF. AND/OR PUBLICATIONS

LAYOUT FOR EACH ALSEP

LISTING OF ACTUAL SUNRISE AND SUNSET AT EACH ALSEP SITE

MATRIX OF COORDINATE TRANSFORMATIONS

PHOTO PAN OF EACH ALSEP SITE