ALSEP Performance Summary Reports

1975

ALSEP Performance Summary Reports 1975
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ALSEP PERFORMANCE SUMMARY REPORT

3 January 1975
G.m.t.: 1300

This report covers the two week period from 20 December 1974 to 3 January 1975.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
12 to 17	*18 Dec 74*	*2102/2111*	09^m	*AGO*	*Station Problem*
12 to 17	*19 Dec 74*	*0421/0445*	24^m	*N/A*	*Schedule Problem*
12	*22 Dec 74*	*2207/2357*	01^h50^m	*GDS*	*Station Problem*
12 to 17	*23 Dec 74*	*0947/1004*	17^m	*GWM*	*Station Problem*

Sunset of the scientific station's 26th lunation occurred on 2 January 1975 at the Taurus Littrow site. Downlink signal strength is reported at -137.5± 2.5 dbm from transmitter A. Automatic power management continues to distribute power for optimum thermal control. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 2 January 1975 the lunar surface temperature, as measured by the HFE thermocouples, was 150 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.5K at probe #1 and 256.8K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, *post amplifier gain at increment 14,* the coarse and fine screws driven to the extreme lower position, and sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON). *At the beginning of real-time support on 2 January 1975 it was observed the seismic signal (DG-01) data was abnormal and the post amplifier appeared to be saturated. The experiment was reset to post amplifier gain at increment 14 and the seismic signal (DG-01) data returned to normal.*

The Lunar Seismic Profiling Experiment is currently in STANDBY. The next 4-day high bit rate passive listening period is planned for sun angles 331.0° to 024° on dates yet to be determined.

The Lunar Atmospheric Composition Experiment is ON but it is not processing scientific data. The instrument is configured to discriminator level, LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON.

ALSEP PERFORMANCE SUMMARY REPORT (continued)

3 January 1975
G.m.t.: 1300

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface for the remainder of this lunation. The LEAM was commanded ON at 1618 G.m.t., 30 December 1974, for lunar night operation. The Mirror Temperature (AJ-11) was observed at 200.0°F on 28 December 1974.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 20 December 1974, to 1300 G.m.t., 3 January 1975

Central station	Noon of the 34th lunation occurred on 27 December 1974. The DSS-1 heater (10 watts) is OFF for lunar day operation. The 18-hour timer output pulses continue to be inhibited. The 30-foot antenna tracking stations report a signal strength between -134.0 and -139.0 dbm from transmitter B.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). The instrument's sensor temperature (DL-07) indicated offscale HIGH at the beginning of real-time support on 25 December 1974 (sun angle 66.3°). It is predicted the temperature will return onscale on 3 January 1975. No significant seismic events were noted during the periodic real-time support periods.
Lunar surface magnetometer experiment	The LSM is currently ON and recording data as the moon passes through the earth's geomagnetic tail and magnetopause. 914 flip calibration sequences have been executed and verified by the experiment's engineering data since activation.
Active seismic experiment	The Active Seismic Experiment is currently OFF. *The instrument was commanded to high bit rate ON at 2225 G.m.t., 23 December 1974, to verify operational status. Operation was satisfactory at this time. The check was performed per Apollo 16 ALSEP, SMEAR 27. A significant event was in progress during the operational check.*

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 20 December 1974, to 1300 G.m.t., 3 January 1975

Central Station	Noon of the stations's 43rd lunation occurred on 28 December 1974. Transmitter A downlink signal strength was reported at -135.5 ± 2.5 dbm from the 30-foot antenna tracking stations. *At 0423 G.m.t., 22 December 1974, the Central station experienced a spurious functional change (octal 150, Timer Reset) as verified in the ALSEP downlink by the Guam Tracking Station. Also between 1116 and 1255 G.m.t., 23 December 1974, another functional change occurred over the Tananarive Tracking Station (octal 150, Timer Reset). As the 2nd functional change occurred during the Tananarive support time the timer was reset by mission control at 1500 G.m.t., 31 December 1974 and was confirmed to be operating properly at 0916 G.m.t., 1 January 1975, by the Hawaii Tracking Station.*
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument's uncage-arm circuitry has been cycling per the normal 18 hour timer output pulse functions. At the beginning of real-time support on 26 December 1974 it was noted that DL-07 (sensor temperature) was off-scale HIGH at a sun angle of 66.5^{o} and returned on-scale 01 January 1975 (DL-07= 137.7^{o}F, sun angle 141.5^{o}). No significant seismic events were noted during the periodic real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is currently ON. The experiment was cycled ON/STANDBY from 25 December to 30 December 1974. Automatic sequencing of the experiment was initiated on 30 December 1974. (Apollo 15 ALSEP, SMEAR 47). On 31 December 1974 the electronics temperature (T2) was observed to be 90.86^{o}C and the instrument was commanded OFF at 1502 G.m.t., to cooldown. At 1647 G.m.t., the SIDE was commanded ON in the automatic sequence (0-127 frames) at a temperature of 84.25^{o}C for the remainder of this lunation.
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 308.5^{o}K on 2 January 1975 as indicated by the cable thermocouples. The subsurface temperature was 253.5^{o}K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.0^{o}K at its lowest point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 20 December 1974, to 1300 G.m.t., 3 January 1975 (continued)

Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 20 December 1974, to 1300 G.m.t., 3 January 1975

Central station	Noon of the 49th lunation at the Apollo 14 site occurred on 30 December 1974. Transmitter A signal strength was reported between -137.0 and -144.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) if OFF for lunar day operations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). *At the start of real-time support 1500 G.m.t., 25 December 1974, a spurious functional change was observed (PSE feedback loop filter IN, octal 101). At 1523 G.m.t., 25 December 1974, the PSE was returned by command (octal 101) to its normal configuration,filter OUT.* The instrument's heater is in FORCED OFF for lunar day operation. No significant seismic events were noted during the periodic real-time support periods.
Active seismic experiment	The experiment is currently in STANDBY. *The instrument was commanded to high bit rate ON, 23 December 1974, to verify operational status. The output of geophones #2 and #3 appeared abnormal as had initially been observed on 3 January 1974. The status check was performed per Apollo 14 ALSEP, SMEAR 86.*
Suprathermal ion detector/cold cathode gauge experiment	The instrument has been in STANDBY since 1926 G.m.t., 14 December 1974. *During real-time support on 23 and 24 December 1974, over 175 commands were transmitted in an attempt to activate the SIDE, without success. Further attempts to turn the experiment ON will be initiated at the discretion of mission control.*
Charged particle lunar environmental experiment	The experiment is currently in STANDBY. *At 0311 G.m.t., 20 December 1974, the CPLEE responded to a spurious command (octal 120, Channeltron Voltage Increase) as observed by the Guam Tracking Station. During real-time support at 1509 G.m.t., 20 December 1974, the experiment was commanded back to its normal night time operational mode. The maximum voltage obtained during the voltage increase was 3013.0 vdc.* At 1525 G.m.t., 25 December 1974, the experiment was commanded to STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 20 December 1974, to 1300 G.m.t., 3 January 1975

Central station

Noon of the 64th lunar day occurred on 30 December 1974. The DSS-1 heater (10 watts) is OFF for lunar day operations. *At 0524 G.m.t., 01 January 1975, the Ascension Tracking Station observed a command verification word (CVW) in the downlink signal (octal 062, Power Conditioner Unit #2 SELECT). This was confirmed during real-time support and the central station was reconfigured by command to the normal mode (octal 060, Power Conditioner Unit #1 SELECT) at 1850 G.m.t., 01 January 1975.* A signal strength of -140.5 ± 3.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations.

Passive seismic experiment

The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. *On 30 December 1974 between 1418 and 1448 G.m.t. a spurious functional change occurred (octal 065, short period calibration ON). At 1918 G.m.t. 01 January 1975, during real-time support the short period calibration was commanded OFF (octal 065).* The sensor temperature (DL-07) had been offscale LOW 12 through 23 December 1974 and sun angles of 229.0° through 4.8°. On 30 December 1974 the sensor temperature was noted to be offscale HIGH at a sun angle of 87.6°. No significant seismic events were noted during the periodic real-time support periods of this instrument.

Solar wind spectrometer experiment

The instrument is ON and in the normal gain mode recording solar wind plasma data.

Suprathermal ion detector experiment

The SIDE is currently OFF. The instrument was commanded OFF during real-time support on 24 December 1974, when the internal temperature was 40.0°C. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day. *During real-time support on 29, 30, and 31 December 1974, the SIDE experienced unexpected mode changes to command register X10 at temperatures of 56.5°C, 56.5°C, and 55.6°C respectively. The mode changes were cleared by commanding the instrument to OFF for cooldown prior to turn ON during the next support periods.*

Lunar surface magnetometer experiment

Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 2 January 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1870	1427	1251	986
Total Commands to Date	22515	14693	26375	14420
Sun Angle	124.8°	130.8°	151.9°	163.8
Input Power	60.9w	64.1w	66.9w	66.7w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	LSM/SIDE OFF	ASE/CPLEE/SIDE Stby	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	92.5°F	100.9°F	95.4°F	68.5°F
PSE Sensor Temp (DL-07)	Offscale HIGH	138.1°F	130.2°F	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	41.4°C
SWS Module 300 Temp (DW-13)	64.3°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	Standby	78.0°	N/A
CCGE Temp (DI-04)	OFF	Standby	331.5°K	N/A
CPLEE Elect Temp (AC-06)	N/A	Standby	N/A	N/A
ASE GLA Temp (AS-03)	N/A	80.4°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	312.3°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	751
Total Commands to Date	15450
Sun Angle	179.0°
Input Power	74.8w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSPE Stby
Avg Thermal Plate Temp	64.2°F
LACE Temp (AM-41)	72.9°F
LEAM Temp (AJ-11)	76.2°F
HFE Temp Ref 1 (DH-13)	286.4°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	66.6°F

DEC 8/342	9/343	10/344	11/345	12/346	13/347	14/348
0830-1230 ALSEP 12 C/S HTR ON PSE Z MTR ON	0800-1100 ALSEP 15 NEG X POS Y FLIP CAL HFE RBS	0900-1100	0900-1100 FLIP CAL HFE RBS	0900-1100 ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON
DEC 15/349	**16/350**	**17/351**	**18/352**	**19/353**	**20/354**	**21/355**
NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR OFF FLIP CAL HFE RBS	0900-1100	0900-1100 ALSEP 17 ALSEP 16 AUTO X FLIP CAL HFE RBS	NO SUPPORT ALSEP 16	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST FLIP CAL HFE RBS	0900-1100
DEC 22/356	**23/357**	**24/358**	**25/359**	**26/360**	**27/361**	**28/362**
0900-1100 ALSEP 14 ALSEP 17 LACE STBY LEAM OFF	1300-1700 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF ASE CHK Y PROC CHK ALSEP 16 ASE CHK FLIP CAL HFE RBS	0800-1000 ALSEP 12 SIDE OFF	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 14 CPLEE STBY ALSEP 15 SIDE STBY ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 14 PSE HTR OFF ALSEP 16 NEG Z	0500-0900 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 16 NEG Z

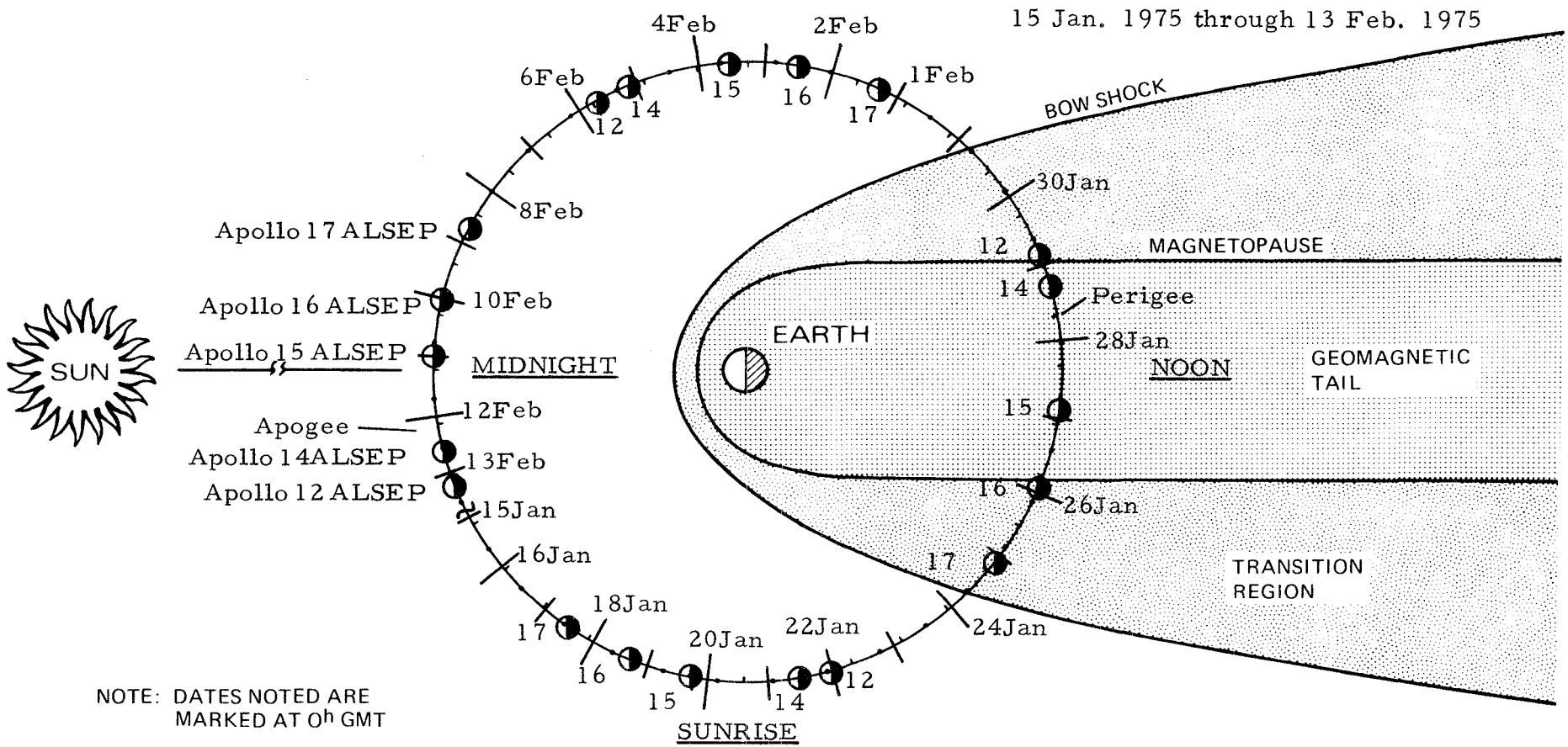
1974 DEC 29/363	30/364	31/365	1975 JAN 1/001	2/002	3/003	4/004
0900-1100 ALSEP 16 NEG Z	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LEAM ON FLIP CAL RBS HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE	1300-1500 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON FLIP CAL HFE RBS	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z 2000-2100 ALSEP 16 POS Z	0500-0600 ALSEP 16 C/S HTR ON POS Z ALSEP 14 PSE HTR ON 1400-1600 ALSEP 16 POS Z FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z
JAN 5/005	6/006	7/007	8/008	9/009	10/010	11/011
0900-1100 ALSEP 12 CYCLE SIDE	0800-1000 ALSEP 14 C/S HTR ON CPLEE ON SIDE ON FLIP CAL HFE RBS 2200-2400 ALSEP 12 C/S HTR ON PSE Z MTR ON	0000-0200 1000-1200	0900-1100 FLIP CAL HFE RBS	0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT
JAN 12/012	13/013	14/014	15/015	16/016	17/017	18/018
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 ALSEP 17 FLIP CAL HFE RBS	NO SUPPORT ALSEP 16

Bendix Aerospace Systems Division

Prepared By: Warren Tosh

MOON POSITIONS RELATIVE TO EARTH-SUN LINE

15 Jan. 1975 through 13 Feb. 1975



NOTE: DATES NOTED ARE MARKED AT 0^h GMT

APOLLO	DAY/HOUR(GMT)				
(ALSEP)	Midnight	Sunrise	Lunation/Noon	Sunset	Midnight
17	10Jan/0329	17Jan/1246	(27)24Jan/2230	1Feb/0833	8Feb/1802
16	11Jan/0931	18Jan/1846	(35)26Jan/0439	2Feb/1439	10Feb/0001
15	12Jan/0852	19Jan/1812	(44)27Jan/0407	3Feb/1404	10Feb/2322
14	14Jan/0227	21Jan/1154	(50)28Jan/2155	5Feb/0743	12Feb/1656
12	14Jan/1406	22Jan/0001	(65)29Jan/0938	5Feb/1819	13Feb/0435

ALSEP PERFORMANCE SUMMARY REPORT

10 January 1975
G.m.t.: 1300

During real-time support on 3 January a significant seismic event was observed on all Passive Seismic Experiments and the Lunar Surface Gravimeter Experiment. The event was first noted at 0147 G.m.t., on the Apollo 12 ALSEP and at 0149 G.m.t., on the Apollo 16 ALSEP. Observation on the analog recorders indicated that the seismic signal (DG-01) of the LSG was at approximately 90% full scale output with the Post Amplifier Gain set at increment 14. The Passive Seismic Experiments were noted on the analog recorders as being at approximately 95% full scale output on the short period axes and at 40% full scale output on the long period axes. The event was still being observed on all ALSEPS at the close of real-time support at 0230 G.m.t., 3 January.

Remote site coverage for recording of ALSEP downlink data was not available during the following period. It must be noted that this data loss is non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
16	*08 Jan 75*	*0640/0644*	*04^m*	*MAD*	*Station Problem*

Apollo 17 ALSEP

Midnight of the scientific station's 26th lunation occurred today, 10 January, at the Taurus Littrow site. Downlink signal strength was reported at -141.5 ± 2.5 dbm from transmitter A by the tracking stations with 30-foot antennas. Automatic power management continues to distribute power for optimum thermal control. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 9 January lunar surface temperature, as measured by the HFE thermocouples, was 108 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.8°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

ALSEP PERFORMANCE SUMMARY REPORT (continued)

10 January 1975
G.m.t.: 1300

On 7 January the sensor beam was repositioned to near center by utilizing the North/South and East/West tilt servo motors. The seismic signal voltage (DG-01) was reading 0.0030 vdc when the beam was centered in the Seismic Gain Low mode. The bias was checked IN and OUT and the signal response appeared normal at this time. The LSG was then reconfigured for operation as indicated above.

The Lunar Seismic Profiling Experiment is currently in STANDBY. The next 4-day high bit rate listening period is planned for sun angles 331.0^{o} to 024.0^{o} at a yet to be determined date.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. *On 8 January, between 0659 G.m.t., and 1524 G.m.t., the experiment was turned OFF to conduct a cold soak test. During the test it is estimated the electronics temperature (AM-41) decreased from -0.5^{o}F to -35.9^{o}F. The instrument was later left ON to allow the electronics temperature to warm up. On 9 January the electronics temperature (AM-41) had increased to -6.1^{o}F. The cold soak was accomplished at the Principal Investigator's request prior to initiating operational checks of the instrument on 8 and 9 January. The LACE's telemetry data did not indicate any improvement from previous (16 and 18 December 1974) operational checks (Multiplier High Voltage Power Supply, ON). The instrument was reconfigured after each test to discriminator level, LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON.*

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 3 January 1975, to 1300 G.m.t., 10 January 1975

Central Station	Sunset at the Descartes Site occurred on 4 January for the 34th lunation. The DSS-1 heater (10 watts) was commanded ON at 1959 G.m.t., 3 January, for lunar night operations when the average thermal plate temperature decreased to 41.2^{o}F. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -136.0 $\pm$ 2.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter OUT). The instrument's assembly temperature (DL-07 = 138.4^{o}F) returned onscale, 3 January, at a sun angle of 177.8^{o}. *A seismic event was observed this report period.*
Lunar surface magnetometer experiment	The LSM is ON and recording data. 920 flip calibration sequences have been executed and verified by the experiment's engineering data since activation.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 3 January 1975, to 1300 G.m.t., 10 January 1975

Central station	Sunset of the station's 43rd lunation occurred at the Hadley Rille Site on 4 January. Transmitter A downlink signal strength is reported between -133.0 and -138.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. *A seismic event was observed during this report period.*
Suprathermal ion detector/cold cathode gauge	The instrument is ON and operating with the Channeltron high voltages commanded ON and in the full automatic stepping sequence (0-127 frames) (Apollo 15 ALSEP, SMEAR 47).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 90.6°K on 9 January, as indicated by the cable thermocouples. The subsurface temperature was 253.5°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically. *At 0641 G.m.t., 9 January, the Ascension Tracking Station reported a CVW (octal 146, HFE Subsequence No. 3) in the Apollo 15 ALSEP downlink. As the command can have an operational effect on subsequent commanding to the HFE the CVW was cleared by executing an octal 141 (HFE Full Sequence Select) command through mission control at 1502 G.m.t., 9 January.*
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 3 January 1975, to 1300 G.m.t., 10 January 1975

Central station	Sunset at the Apollo 14 site occurred on 6 January for the 49th lunation. Transmitter A signal strength was reported between -135.0 and -143.5 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been ON for lunar night operations since 1415 G.m.t., 6 January.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument's heater is in AUTO ON for lunar night operations. *A seismic event was observed during this report period.*
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge	*The instrument is OFF. At 1536 G.m.t., 6 January, three commands were transmitted to the SIDE to turn it ON for lunar night operation. However, the instrument continued to intermittently return to the static condition (following ON commands) from 6 to 8 January. During real-time support on 8 January, twenty-three additional commands were executed without success to turn the instrument ON. Engineering data available during some of the ON periods indicate a malfunction in the negative Analog to Digital Convertor. At this time it cannot be determined whether the science data is valid. No further attempts to turn the instrument ON are planned until after the next lunar sunset on 5 February 1975.*
Charged particle lunar environment experiment	The experiment is operating in the manual mode at the -35 vdc range and automatic thermal control mode since 1554 G.m.t., 5 January. It is planned to leave the experiment in this configuration pending possible degradation of AC-03, analyzer A voltage, to 2280 vdc, at which time the instrument will be commanded to STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 3 January 1975, to 1300 G.m.t., 10 January 1975

Central station	Sunset of the 64th lunation occurred on 7 January. The DSS-1 heater (10 watts) was commanded ON for lunar night operation on 7 January. A signal strength of -136.0 to -144.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument's assembly temperature (DL-07 = 136.7^{o}) returned onscale at a sun angle of 172.3^{o} on 6 January. The Z-axis drive motor was commanded ON, 7 January, to maximize heating in the instrument during lunar night. *A seismic event was observed during this report period.*
Solar wind spectrometer experiment	The instrument remains in the normal gain mode and is recording solar wind plasma data.
Suprathermal ion detector experiment	The side has been ON in the full automatic stepping sequence (0-127) with Channeltron high voltages ON since 1445 G.m.t., 5 January. *On 3 January the SIDE experienced a reduction of high energy calibrations and data counts due probably to a loss of amplifier gain. During the support period on 4 January the calibrations and data counts were again normal.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1877	1434	1258	993
Total Commands to Date	22697	15009	26470	14550
Sun Angle	210.0°	215.9°	237.1°	248.9°
Input Power	60.6w *(61.3w)*	63.9 *(64.0w)*	66.9 *(67.4w)*	67.6 *(67.6w)*
Heater and Power Dumps	All ON	All ON	All OFF	All On
Experiment Status	LSM OFF	SIDE/ASE STDBY	LSM/OFF	ASE OFF
Avg Thermal Plate Temp	11.6°F	31.7°F	10.4°F	33.8°F
PSE Sensor Temp (DL-07)	126.2°F	124.1°F	124.6°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-9.0°C
SWS Module 300 Temp (DW-13)	-14.8°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.8°C	STANDBY	7.2°C	N/A
CCGE Temp (DI-04)	HIGH	STANDBY	112.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	-50.0°C	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-65.0°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.6°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	758
Total Commands to Date	19912
Sun Angle	264.2°
Input Power	73.5w *(73.9w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STDBY
Avg Thermal Plate Temp	22.9°F
LACE Temp (AM-41)	-6.1°F
LEAM Temp (AJ-11)	-17.4°
HFE Temp Ref 1 (DH-13)	285.2°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	24.0°F

Values in parentheses indicate RTG outputs during last lunation at a similar sun angle.

DEC 29/363	30/364	31/365	JAN 1/001	2/002	3/003	4/004
0900-1100 ALSEP 16 NEG Z	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LEAM ON FLIP CAL RBS HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE	1300-1500 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON FLIP CAL HFE RBS	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z 2000-2100 ALSEP 16 POS Z	0500-0600 ALSEP 16 C/S HTR ON POS Z ALSEP 14 PSE HTR ON 1400-1600 ALSEP 16 POS Z FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z

JAN 5/005	6/006	7/007	8/008	9/009	10/010	11/011
0900-1100 ALSEP 12 CYCLE SIDE	0800-1000 ALSEP 14 C/S HTR ON CPLEE ON SIDE ON FLIP CAL HFE RBS 2200-2400 ALSEP 12 C/S HTR ON PSE Z MTR ON	0000-0200 1000-1200	0900-1100 FLIP CAL HFE RBS	0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT

JAN 12/012	13/013	14/014	15/015	16/016	17/017	18/018
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 ALSEP 17 FLIP CAL HFE RBS	NO SUPPORT ALSEP 16

ALSEP PERFORMANCE SUMMARY REPORT

17 January 1975
G.m.t.: 1300

Remote site coverage for recording of ALSEP downlink data was not available during the following period. It must be noted that this data loss is non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
12 to 17	*08 Jan 75*	*0640/0644*	*04^m*	*MAD*	*Station Problem*

Apollo 17 ALSEP

Midnight of the scientific station's 26th lunation occurred on 10 January at the Taurus Littrow site. Downlink signal strength was reported at -137.3 ± 2.3 dbm from transmitter A by the tracking stations with the 30-foot antennas. Automatic power management continues to distribute power for optimum thermal control. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 15 January lunar surface temperature, as measured by the HFE thermocouples, was 106 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is in STANDBY. The next 4-day high bit rate passive listening period is planned for sun angles 331.0° - 024° at a yet to be determined date.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. The instrument is configured to discriminator level, LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON. *Between the hours of 1200 and 1503 G.m.t., 10 January, the instrument was OFF for further cold soaking prior to an operational check. There was no improvement compared to the checks performed on 8 and 9 January. Two additional checks were conducted on 13 and 15 January. A significant improvement was observed when all sweep voltages were at normal values with the electronic multipliers in LOW. However, when the electronic multipliers were in HIGH a failure appeared to occur in the power supply and upon the return of the electronic multipliers to LOW the power reduced to zero. On the initial check with the electronic*

ALSEP PERFORMANCE SUMMARY REPORT (continued)

17 January 1975
G.m.t.: 1300

multipliers in LOW, discriminator level LOW, high voltage power supply ON, filament #2 ON, and in automatic sweep the engineering and science data observed gave all the normal indications of the data received prior to the 17 October 1973 power supply failure. After each check the LACE was returned to its present operational mode as indicated above.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 10 January 1975, to 1300 G.m.t., 17 January 1975

Central station	Midnight at the Descartes Site occurred on 11 January for the 34th lunar night. The DSS-1 heater (10 watts) is ON for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at - 135.0 ± 3.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the limited real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. 926 flip calibration sequences have been executed and verified by the experiment's engineering data.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 10 January 1975, to 1300 G.m.t., 17 January 1975

Central station	Midnight of the station's 43rd lunation occurred on 12 January at the Hadley Rille Site. Transmitter A downlink signal strength is reported at -135.5 ± 2.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. No significant seismic events were observed during the limited real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 85.3°K on 15 January, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.0°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 10 January 1975, to 1300 G.m.t., 17 January 1975

Central station	Midnight at the Apollo 14 site occurred on 14 January for the 49th lunation. Transmitter A signal strength was reported at -140.0 ± 3.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) is ON for lunar night operations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument's heater is in AUTO ON for lunar night operations. No significant seismic events were observed during the periodic real-time support periods.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86). *Between the hours of 0540 and 0924 G.m.t., 10 January the ASE experienced a functional change to OFF (octal 044). As the Tananarive Tracking Station was supporting ALSEP during these times and does not monitor experiment status (parameter AB-04) the change was not reported until the Canary Tracking Station began support at 0920 G.m.t., 10 January. The instrument was returned to its normal operating configuration, STANDBY Power ON (octal 043), by Mode I command at 0943 G.m.t., 10 January, through the Canary Tracking Station.*
Suprathermal ion detector/cold cathode gauge experiment	The instrument is in STANDBY.
Charged particle lunar environment experiment	The experiment is operating in the manual mode at the -35 vdc range and automatic thermal control mode.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 10 January 1975, to 1300 G.m.t., 17 January 1975

Central station	Midnight of the 64th lunation occurred on 14 January. The DSS-1 heater (10 watts) is ON for lunar night operations. A signal strength between -136.5 and -141.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument's assembly temperature (DL-07) was offscale LOW at a sun angle of 221.5° on 10 January. The Z-axis drive motor is ON to maximize heating in the instrument during lunar night. No significant seismic events were noted during the real-time support periods.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode.
Suprathermal ion detector experiment	The SIDE is in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 15 January 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1883	1440	1264	999
Total Commands to Date	22715	15025	26548	14600
Sun Angle	283.1°	289.1°	310.2°	322.1°
Input Power	60.1w *(61.3w)*	63.9w *(64.0w)*	66.9w *(67.4w)*	67.5w *(67.5w)*
Heater and Power Dumps	All ON	All ON	All OFF	All ON
Experiment Status	LSM OFF	SIDE/ASE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	9.7°F	30.5°F	9.7°F	33.4°F
PSE Sensor Temp (DL-07)	Offscale LOW	124.0°F	124.3°F	125.8°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-8.9°C
SWS Module 300 Temp (DW-13)	-15.6°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STANDBY	6.5°C	N/A
CCGE Temp (DI-04)	HIGH	STANDBY	108.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	-22.7°C	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-71.1°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	764
Total Commands to Date	20215
Sun Angle	337.3°
Input Power	73.5w *(73.9w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	20.9°F
LACE Temp (AM-41)	-2.3°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	285.4°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	22.7°F

Value in parenthesis indicates RTG output during last lunation at a similar sun angle.

ALSEP PERFORMANCE SUMMARY REPORT

24 January 1975
G.m.t.: 1300

Remote site coverage for recording of ALSEP downlink data was not available during the following period. It must be noted that this data loss is non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
12 to 17	*20 Jan 75*	*1153/1155*	*02^m*	*TAN*	*Station Problem*

Apollo 17 ALSEP

Sunrise of the scientific station's 27th lunation occurred on 17 January at the Taurus Littrow site. Downlink signal strength is reported between -134.5 and -143.0 dbm from transmitter A. Automatic power management continues to distribute power for optimum thermal control. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 23 January the lunar surface temperature, as measured by the HFE thermocouples, was 370 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. The next 4-day passive listening period is planned for sun angles 331° to 024° at a date yet to be determined.

The Lunar Atmospheric Composition Experiment is in STANDBY. *Operational checks of the experiment were performed on 17 and 21 January with the same results as indicated on 15 January, i.e. the normal operation observed on 13 January could not be repeated.*

The Lunar Ejecta and Meteorites Experiment was commanded OFF at 1539 G.m.t., 20 January, for the remainder of this lunar day.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 17 January 1975, to 1300 G.m.t., 24 January 1975

Central station	Sunrise at the Descartes Site occurred on 18 January for the 35th lunar day. The DSS-1 heater (10 watts) was commanded OFF for lunar day operations on 19 January. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported between -133.0 and -138.5 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the limited real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON and recording data as it approaches the bow shock of the earth's geomagnetic tail. The instrument has accomplished 932 flip calibration sequences.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27). *Due to the condition of the Mortar Box, the experiment will not be checked until further notice as agreed upon by the Science Requirements Branch and Flight Control Division.*

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 17 January 1975, to 1300 G.m.t., 24 January 1975

Central station	Sunrise of the station's 44th lunation occurred at the Hadley Rille Site on 19 January. Transmitter A downlink signal strength is reported at -136.0 ± 3.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. No significant seismic events were observed during the limited real-time support periods.
Suprathermal ion detector/cold cathode gauge	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames). *During real-time support on 20 January it was noted the instrument received an octal 107 (Load 4, SIDE Master Reset) between the support periods of 19 and 20 January. A command verification word (CVW) had not been reported in the ALSEP 15 downlink. Octals 104, 105, and 106 were sent to the instrument and the command register was cleared at 1509 G.m.t., 20 January, with octal 110 (execution command).*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 350.0°K on 23 January, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 17 January 1975, to 1300 G.m.t., 24 January 1975

Central station	Sunrise at the Apollo 14 site (50th lunation) occurred on 21 January. Transmitter A signal strength was reported at -139.5 ± 3.5 dbm. The DSS-1 heater (10 watts) was commanded OFF for lunar day operation on 22 January.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). No significant seismic events have been noted during this report period.
Active seismic experiment	The experiment is currently in STANDBY. *The instrument was commanded to high bit rate ON, 22 January, to verify operational status. The output of geophones #2 and #3 appeared abnormal as had initially been observed on 3 January 1974. The status check was performed per Apollo 14 ALSEP, SMEAR 86.*
Suprathermal ion detector/cold cathode gauge experiment	The instrument has not been operating since 6 January 1975 when the monitored telemetry parameter, Word 15, became static. Many commands were transmitted to the instrument to turn it ON but it would not remain ON for a sufficient time before Word 15 became static again. *No further attempts to turn the instrument ON are planned until the next lunar sunset on 6 February 1975.*
Charged particle lunar environmental experiment	The experiment was commanded to STANDBY at 1511 G.m.t., 23 January, for the remainder of this lunar day.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 17 January 1975, to 1300 G.m.t., 24 January 1975

Central station	Sunrise of the 65th lunar day occurred on 22 January at the ALSEP site in the Ocean of Storms. A signal strength of 140.0 ± 2.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) was commanded OFF for lunar day operations on 22 January.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument's assembly temperature (DL-07) returned onscale (DL-07 = 126.4°F, sun angle = 4.6°) on 22 January. The Z-axis drive motor was commanded OFF on 22 January to minimize heating in the instrument during the lunar day. No significant seismic events were noted during the periodic real-time support periods of this instrument.
Solar wind spectrometer experiment	The instrument is ON and in the normal gain mode.
Suprathermal ion detector experiment	The instrument was commanded OFF during real-time support on 23 January. Cyclic commanding of the instrument from the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day to avoid inadvertent mode changes due to high temperatures.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 23 January 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1891	1448	1272	1007
Total Commands to Date	22792	15158	26652	14734
Sun Angle	20.4°	26.4°	47.5°	59.4°
Input Power	60.6w	63.6w	66.0w	66.3w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	CPLEE/SIDE/ASE STDBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	76.1°F	82.1°F	100.3°F	98.3°F
PSE Sensor Temp (DL-07)	126.1°F	125.0°F	133.7°F	138.0°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	41.4°C
SWS Module 300 Temp (DW-13)	37.9°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STDBY	81.7°C	N/A
CCGE Temp (DI-04)	OFF	STDBY	364.0°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STDBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	19.1°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	316.6°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	772
Total Commands to Date	20356
Sun Angle	74.6°
Input Power	71.5w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LACE/LSPE STDBY, LEAM OFF
Avg Thermal Plate Temp	97.5°F
LACE Temp (AM-41)	148.0°F
LEAM Temp (AJ-11)	182.0°F
HFE Temp Ref 1 (DH-13)	329.0°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	98.0°F

19[illegible] DEC 29/3[illegible]	30/364	31/365	19[illegible] JAN 1/001	2/002	3/003	4/004
0900-1100 ALSEP 16 NEG Z	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LEAM ON FLIP CAL RBS HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE	1300-1500 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON FLIP CAL HFE RBS	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z 2000-2100 ALSEP 16 POS Z	0500-0600 ALSEP 16 C/S HTR ON POS Z ALSEP 14 PSE HTR ON 1400-1600 ALSEP 16 POS Z FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z
JAN 5/005	6/006	7/007	8/008	9/009	10/010	11/011
0900-1100 ALSEP 12 CYCLE SIDE	0800-1000 ALSEP 14 C/S HTR ON CPLEE ON SIDE ON FLIP CAL HFE RBS 2200-2400 ALSEP 12 C/S HTR ON PSE Z MTR ON	0000-0200 1000-1200	0900-1100 FLIP CAL HFE RBS	0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT
JAN 12/012	13/013	14/014	15/015	16/016	17/017	18/018
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 ALSEP 17 FLIP CAL HFE RBS	NO SUPPORT ALSEP 16

TIMES - CST

ALSEP SUPPORT SCHEDULE/EVENTS

PSE CALS DAILY

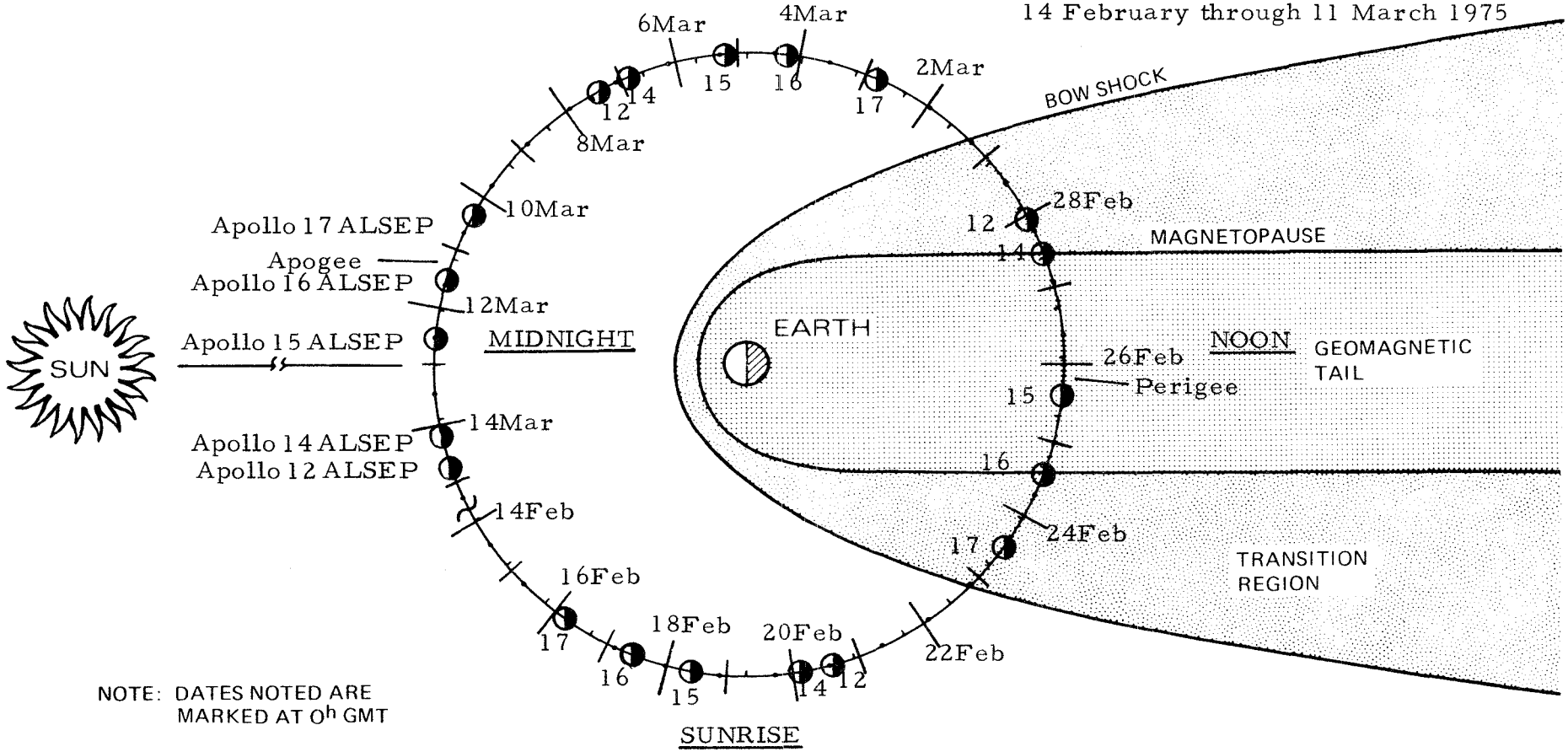
JAN 19/019	20.020	21/021	22/022	23/023	24/024	25/025
0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST	0900-1100 FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 14 ALSEP 17 LACE STBY LEAM OFF	0300-0700 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF ASE CHK Y PROC CHK ALSEP 16 ASE CHK FLIP CAL HFE RBS 1800-1900	0900-1100 ALSEP 12 SIDE OFF ALSEP 14 CPLEE STBY ALSEP 16 NEG Z	1100-1300 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STBY ALSEP 16 NEG Z FLIP CAL HFE RBS	1600-2000 ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR OFF ALSEP 15 SIDE SPRT ALSEP 16 NEG Z
JAN 26/026	**27/027**	**28/028**	**29/029**	**30/030**	**31/031**	**FEB 1/032**
0900-1100 ALSEP 12 & 15 CYCLE SIDES	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 16 POS Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON FLIP CAL HFE RBS 2200-2300 ALSEP 16 POS Z	0900-1100 ALSEP 17 ALSEP 16 POS Z 2200-2300 ALSEP 16 POS Z
FEB 2/033	**3/034**	**4/035**	**5/036**	**6/036**	**7/037**	**8/039**
0900-1100 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR ON	0900-1100 ALSEP 15 ALSEP 12 SIDE ON FLIP CAL HFE RBS	0900-1100 ALSEP 14 C/S HTR ON CPLEE ON SIDE ON	1400-1800 ALSEP 12 & 14 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS	0700-0900	0900-1200 FLIP CAL HFE RBS	NO SUPPORT

Bendix Aerospace Systems Division

Prepared by: Warren Tosh

MOON POSITIONS RELATIVE TO EARTH-SUN LINE

14 February through 11 March 1975



NOTE: DATES NOTED ARE MARKED AT 0^h GMT

APOLLO	DAY/HOUR(GMT)				
(ALSEP)	Midnight	Sunrise	Lunation/Noon	Sunset	Midnight
17	8Feb/1802	16Feb/0312	(28)23Feb/1247	2Mar/2242	10Mar/0759
16	10Feb/0001	17Feb/0913	(36)24Feb/1856	4Mar/0446	11Mar/1357
15	10Feb/2322	18Feb/0836	(45)25Feb/1823	5Mar/0409	12Mar/1316
14	12Feb/1656	20Feb/0216	(51)27Feb/1209	6Mar/2146	14Mar/0648
12	13Feb/0435	20Feb/1427	(66)27Feb/2352	7Mar/0819	14Mar/1826

ALSEP PERFORMANCE SUMMARY REPORT

31 January 1975
G.m.t.: 1300

Remote site coverage for recording of ALSEP downlink data was not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
All	*23 Jan 75*	*1120/1155*	*35^m*	*HAW/TAN*	*Station Problem (ORR)*
16	*23 Jan 75*	*2223/2226*	*03^m*	*MIL*	*Station Problem*
17	*26 Jan 75*	*0913/1002*	*49^m*	*GDS/ORR*	*Station Problem*
12 & 15	*26 Jan 75*	*0914/1002*	*48^m*	*GDS/ORR*	*Station Problem*
14 & 16	*26 Jan 75*	*0920/1002*	*42^m*	*GDS/ORR*	*Station Problem*
12	*27 Jan 75*	*1012/1034*	*22^m*	*GWM/ORR*	*Station Problem (GDS)*
All	*28 Jan 75*	*1612/1615*	*03^m*	*HAW*	*Station Problem*

Apollo 17 ALSEP

Noon of the scientific station's 27th lunation occurred on 24 January at the Taurus Littrow site. Downlink signal strength is reported between -135.5 and -143.0 dbm from transmitter A. Automatic power management continues to distribute power for optimum thermal performance. Since August of 1974, all commanding has been accomplished through Uplink B. Automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulse is inhibited by routine transmission of command octal 174 (Delay uplink switchover) during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being accomplished on a periodic basis: nominally three (3) times each week. On 30 January the lunar surface temperature, as measured by the HFE thermocouples, was 253 $\pm$ 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for date collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. *The next High Bit Rate passive listening mode will extend from a sun angle of 331° to 024° and is scheduled for 13 to 18 April 1975.*

The Lunar Atmospheric Composition Experiment is in STANDBY. An operational check was performed on 28 January. Results were the same as those previously reported with the continuing indication of a high voltage failure. Another check is presently scheduled for 4 February.

The Lunar Ejecta and Meteorites Experiment was commanded ON at 1518 G.m.t., 29 January, for the remainder of this lunation.

ALSEP PERFORMANCE SUMMARY REPORT (CONTINUED)

31 January 1975
G.m.t.: 1300

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 24 January 1975, to 1300 G.m.t., 31 January 1975

Central station	Noon of the 35th lunation occurred on 26 January 1975. The DSS-1 heater (10 watts) is OFF for lunar day operation. The 18-hour timer output pulses continue to be inhibited. The 30-foot antenna tracking stations report a signal strength between -134.5 and -139.5 dbm from transmitter B.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). The instrument's sensor temperature (DL-07) indicated offscale HIGH on 24 January at a sun angle of 71.9°. No significant seismic events were noted during the periodic real-time support periods.
Lunar surface magnetometer experiment	The LSM is currently ON and recording data as the moon passes through the earth's geomagnetic tail and magnetopause. 940 flip calibration sequences have been executed and verified by the experiment's engineering data since activation.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 24 January 1975, to 1300 G.m.t., 31 January 1975

Central station	Noon of the station's 44th lunation occurred on 27 January. Transmitter A downlink signal strength was reported at -136.0 ± 3.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18 hour timer output pulse functions. The instrument's sensor temperature (DL-07) went offscale high on 25 January at a sun angle of 74.1°. No significant seismic events were noted during the periodic real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames).
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 351.0°K on 30 January as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974. *At 0956 G.m.t., 25 January, the SWS experienced a spurious Operate Power ON Command (octal 045) as reported by the Goldstone Tracking Station. During real-time support later on 25 January, the experiment was turned OFF by transmission of the Standby select and the Standby OFF Commands (octals 046 and 050) at 2055 G.m.t. No change was seen in system reserve power when the Standby Select Command was transmitted; however, an increase of 3.9 watts was observed when the instrument was commanded to Standby OFF.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974. *At 1515 G.m.t., 29 January, the instrument was inadvertently turned ON by transmission of the Operate Select Command (octal 042). It was commanded to Standby and Standby OFF (octals 043 and 044) approximately 2 minutes later. The system reserve power decreased by approximately 6 watts when the instrument went ON and returned to its original level when the instrument went OFF.*

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 24 January 1975, to 1300 G.m.t., 31 January 1975

Central station	Noon of the 50th lunation at the Apollo 14 site occurred on 28 January. Transmitter A signal strength was reported between -136.0 and -140.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) is OFF for lunar day operations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument's heater is in FORCED OFF for lunar day operation. No significant seismic events were noted during the periodic real-time support periods.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument has not been operating since 6 January 1975 when the monitored telemetry parameter, Word 15, became static. Many commands were transmitted to the instrument to turn it ON but it would not remain ON for a sufficient time before Word 15 became static again. *No further attempts to turn the instrument ON are planned until after the next lunar sunset on 5 February 1975.*
Charged particle lunar environmental experiments	The CPLEE has been in STANDBY since 1511 G.m.t., 23 January 1975.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 24 January 1975, to 1300 G.m.t., 31 January 1975

Central station	Noon of the 65th lunar day occurred on 29 January. The DSS-1 heater (10 watts) is OFF for lunar day operations. A signal strength of -140.0 ± 4.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument's assembly temperature (DL-07) went offscale high on 29 January at a sun angle of 92.6° No significant seismic events were noted during the periodic real-time support periods of this instrument.
Solar wind spectrometer experiment	The instrument is ON and in the normal gain mode recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 30 January 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1898	1455	1279	1014
Total Commands to Date	22876	15193	26795	14854
Sun Angle	104.8°	110.8°	131.9°	143.8°
Input Power	60.5w	63.8w	66.4w	66.7w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	LSM/SIDE OFF	ASE/CPLEE/SIDE STDBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	93.3°F	113.6°F	110.6°F	87.5°F
PSE Sensor Temp (DL-07)	Offscale HIGH	138.0°F	Offscale HIGH	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	42.4°C
SWS Module 300 Temp (DW-13)	67.9°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STANDBY	355.6°K	N/A
CCGE Temp (DI-04)	OFF	STANDBY	89.5°C	N/A
CPLEE Elect Temp (AC-06)	N/A	STANDBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	82.0°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	324.7°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	779
Total Commands to Date	20516
Sun Angle	159°
Input Power	71.5w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LACE/LSPE STDBY
Avg Thermal Plate Temp	58.6°F
LACE Temp (AM-41)	110.5°F
LEAM Temp (AJ-11)	176.0°F
HFE Temp Ref 1 (DH-13)	301.1°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	58.7°F

JAN 19/019	20.020	21/021	22/022	23/023	24/024	25/025
0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST	0900-1100 FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 14 ALSEP 17 LACE STBY LEAM OFF	0300-0700 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF ASE CHK Y PROC CHK ALSEP 16 ASE CHK FLIP CAL HFE RBS 1800-1900	0900-1100 ALSEP 12 SIDE OFF ALSEP 14 CPLEE STBY ALSEP 16 NEG Z	1100-1300 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STBY ALSEP 16 NEG Z FLIP CAL HFE RBS	1600-2000 ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR OFF ALSEP 15 SIDE SPRT ALSEP 16 NEG Z
JAN 26/026	**27/027**	**28/028**	**29/029**	**30/030**	**31/031**	**FEB 1/032**
0900-1100 ALSEP 12 & 15 CYCLE SIDES	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 16 POS Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON FLIP CAL HFE RBS 2200-2300 ALSEP 16 POS Z	0900-1100 ALSEP 17 ALSEP 16 POS Z 2200-2300 ALSEP 16 POS Z
FEB 2/033	**3/034**	**4/035**	**5/036**	**6/036**	**7/037**	**8/039**
0900-1100 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR ON	0900-1100 ALSEP 15 ALSEP 12 SIDE ON FLIP CAL HFE RBS	0900-1100 ALSEP 14 C/S HTR ON CPLEE ON SIDE ON	1400-1800 ALSEP 12 & 14 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS	0700-0900	0900-1200 FLIP CAL HFE RBS	NO SUPPORT

ALSEP PERFORMANCE SUMMARY REPORT

7 February 1975
G.m.t.: 1300

Remote site coverage for recording of ALSEP downlink data was not available during the following period. It must be noted that this data loss is non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
17	*12 Dec 74*	*0216/0704*	04^h48^m	*TAN*	*Station Problem*

Apollo 17 ALSEP

Sunset of the scientific station's 27th lunation occurred 1 February at the Taurus Littrow site. Downlink signal strength was reported at -140.5 ± 2.5 dbm from transmitter A by the tracking stations with 30-foot antennas. Automatic power management continues to distribute power for optimum thermal control. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 6 February the lunar surface temperature, as measured by the HFE thermocouples, was 111 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. The next 4-day high bit rate listening period is planned for sun angles 331.0° to 024.0° from 13 to 18 April 1975.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. *On 5 February, between 1946 G.m.t., and 2246 G.m.t., the experiment was turned OFF to conduct a cold soak test. During the test it is estimated the electronics temperature (AM-41) decreased from -0.5°F to -29.0°F. The instrument was left ON to allow the electronics temperature to warm up. On 6 February the electronics temperature (AM-41) had increased to -8.0°F. The cold soak was accomplished at the Principal Investigator's request prior to initiating an operational check of the instrument on 6 February. The LACE's telemetry data did not indicate any improvement from previous (13 January) operational checks. The instrument was reconfigured after the test to discriminator level, LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON. The next opera-*

ALSEP PERFORMANCE SUMMARY REPORT (continued)

7 February 1975
G.m.t.: 1300

tional check will be conducted on 27 February.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 31 January 1975, to 1300 G.m.t., 7 February 1975

Central station	Sunset at the Descartes Site occurred on 2 February for the 35th lunation. The DSS-1 heater (10 watts) was commanded ON at 1452 G.m.t., 2 February, for lunar night operations when the average thermal plate temperature decreased to 32.9°F. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -136.0 ± 2.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter OUT). The instrument's assembly temperature (DL-07 = 130.4°F) returned onscale, 2 February, at a sun angle of 180.1°. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 944 flip calibration sequences have been executed and verified by the experiment's engineering data.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 31 January 1975, to 1300 G.m.t., 7 February 1975

Central station	Sunset of the station's 44th lunation occurred at the Hadley Rille Site on 3 February. Transmitter A downlink signal strength is reported at -137.0 ± 3.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames) (Apollo 15 ALSEP, SMEAR 47).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 93.4°K on 6 February, as indicated by the cable thermocouples. The subsurface temperature was 253.5°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 31 January 1975, to 1300 G.m.t., 7 February 1975

Central station	Sunset at the Apollo 14 site occurred on 5 February for the 50th lunation. Transmitter A signal strength was reported at -138.5 ± 1.5 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been ON for lunar night operations since 1504 G.m.t., 4 February.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument's heater is in AUTO ON for lunar night operations. No significant seismic events were noted during real-time support this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge	*The instrument is OFF. On 4 and 5 February, 43 commands were transmitted to the SIDE to turn it ON for lunar night operation. However, the instrument continued to intermittently return to the static condition following each ON command. On 6 February 20 additional commands were executed without success to turn the instrument ON. Engineering and science data available during some of the ON periods were not valid. No further attempts to turn the instrument ON are planned at this time.*
Charged particle lunar environment experiment	The experiment is operating in the manual mode at the -35 vdc range and automatic thermal control mode since 1511 G.m.t., 4 February. It is planned to leave the experiment in this configuration pending possible degradation of AC-03, analyzer A voltage, to 2280 vdc, at which time the instrument will be commanded to STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 31 January 1975, to 1300 G.m.t., 7 February 1975

Central station	Sunset of the 65th lunation occurred on 5 February. The DSS-1 heater (10 watts) was commanded ON for lunar night operation on 5 February. A signal strength of -139.5 to -143.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations. *At 1302 G.m.t., 5 February, the Goldstone Tracking Station reported a CVW (octal 017, 7-watt PDR ON) in the Apollo 12 ALSEP downlink. The PDR was commanded OFF (octal 021) by Mode I, through Goldstone, at the direction of mission control. During real-time support, later, 5 February, it was confirmed the 7-watt PDR was OFF.*
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument's assembly temperature (DL-07 = 141.5°) returned onscale at a sun angle of 165.3° on 4 February. The Z-axis drive motor was commanded ON, 5 February, to maximize heating in the instrument during lunar night. No significant seismic events were noted during the real-time support this report period.
Solar wind spectrometer experiment	The instrument remains in the normal gain mode and is recording solar wind plasma data.
Suprathermal ion detector experiment	The side has been ON in the full automatic stepping sequence (0-127 frames) with Channeltron high voltages ON since 1436 G.m.t., 3 February.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1400 G.m.t., 6 February 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1905	1462	1286	1021
Total Commands to Date	22982	15351	26904	14999
Sun Angle	188.8°	195.0°	216.5°	228.3°
Input Power	60.5w	63.9w	66.9w	67.5w
Heater and Power Dumps	All ON	All ON	All OFF	All ON
Experiment Status	LSM OFF	SIDE/ASE STDBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	14.4°F	32.3°F	10.3°F	34.0°F
PSE Sensor Temp (DL-07)	126.7°F	124.1°F	124.6°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-8.9°C
SWS Module 300 Temp (DW-13)	-7.3°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STDBY	7.2°C	N/A
CCGE Temp (DI-04)	HIGH	STDBY	116.5°K	N/A
CPLEE Elect Temp (AC-06)	N/A	-21.9°C	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-35.6°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.7°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	786
Total Commands to Date	20749
Sun Angle	242.9°
Input Power	73.5w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STDBY
Avg Thermal Plate Temp	22.6°F
LACE Temp (AM-41)	-8.0°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	285.9°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	24.0°F

ALSEP SUPPORT SCHEDULE/EVENTS

JAN 19/019	20.020	21/021	22/022	23/023	24/024	25/025
0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST	0900-1100 FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 14 ALSEP 17 LACE STBY LEAM OFF	0300-0700 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF ASE CHK Y PROC CHK ALSEP 16 ASE CHK FLIP CAL HFE RBS 1800-1900	0900-1100 ALSEP 12 SIDE OFF ALSEP 14 CPLEE STBY ALSEP 16 NEG Z	1100-1300 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STBY ALSEP 16 NEG Z FLIP CAL HFE RBS	1600-2000 ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR OFF ALSEP 15 SIDE SPRT ALSEP 16 NEG Z

JAN 26/026	27/027	28/028	29/029	30/030	31/031	FEB 1/032
0900-1100 ALSEP 12 & 15 CYCLE SIDES	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 16 POS Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON FLIP CAL HFE RBS 2200-2300 ALSEP 16 POS Z	0900-1100 ALSEP 17 ALSEP 16 POS Z 2200-2300 ALSEP 16 POS Z

FEB 2/033	3/034	4/035	5/036	6/036	7/037	8/039
0900-1100 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR ON	0900-1100 ALSEP 15 ALSEP 12 SIDE ON FLIP CAL HFE RBS	0900-1100 ALSEP 14 C/S HTR ON CPLEE ON SIDE ON	1400-1800 ALSEP 12 & 14 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS	0700-0900	0900-1200 FLIP CAL HFE RBS	NO SUPPORT

FEB 9/040	10/041	11/042	12/043	13/044	14/045	15/046
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT ALSEP 17

FEB 16/047	17/048	18/049	19/050	20/051	21/052	22/053
NO SUPPORT	1400-1600 ALSEP 16 C/S HTR OFF FLIP CAL HFE RBS	1100-1300 ALSEP 15 TIMER RST ALSEP 16 TIMER RST	0800-1000 ALSEP 14 ALSEP 17 LACE STBY LEAM OFF FLIP CAL HFE RBS 2300-2400	1300-1700 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF Y PROC CHK	0700-0900 ALSEP 14 CPLEE STBY FLIP CAL HFE RBS	0900-1100 ALSEP 12 SIDE OFF

FEB 23/054	24/055	25/056	26/057	27/058	28/059	MAR 1/060
0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STBY ALSEP 16 NEG Z	0700-1100 ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR OFF ALSEP 15 SIDE SPRT ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 16 NEG Z	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LEAM ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON 2300-2400 ALSEP 16 POS Z

ALSEP PERFORMANCE SUMMARY REPORT

14 February 1975
G.m.t.: 1300

Remote site coverage for recording of ALSEP downlink data was not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*06 Feb 75*	*2215/2322*	$01^h 07^m$	*N/A*	*SMS-B Launch*
ALL	*07 Feb 75*	*0044/0100*	16^m	*HAW/BUR*	*Station Problem*
ALL	*10 Feb 75*	*2344/2348*	04^m	*HAW*	*Station Problem*

Apollo 17 ALSEP

Midnight of the scientific station's 27th lunation occurred on 8 February at the Taurus Littrow site. Downlink signal strength was reported at -139.0 ± 3.0 dbm from transmitter A by the tracking stations with the 30-foot antennas. Automatic power management continues to distribute power for optimum thermal control. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 12 February lunar surface temperature, as measured by the HFE thermocouples was 106 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is in STANDBY. The next 4-day high bit rate passive listening period is planned for sun angles 331° to 024° from 13 to 18 April 1975.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. The instrument is configured to discriminator level, LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON. *An operational check was performed on 7 February. Results were the same as those previously reported with the continuing indication of a high voltage failure. The next check is scheduled for 27 February.*

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 7 February 1975, to 1300 G.m.t., 14 February 1975

Central station	Midnight at the Descartes Site occurred on 10 February for the 35th lunar night. The DSS-1 heater (10 watts) is ON for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -136.5 ± 2.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the limited real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. 950 flip calibration sequences have been executed and verified by the experiment's engineering data.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 7 February 1975, to 1300 G.m.t., 14 February 1975

Central station	Midnight of the station's 44th lunation occurred on 10 February at the Hadley Rille Site. Transmitter A downlink signal strength is reported between -134.5 and -138.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. No significant seismic events were observed during the limited real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 86.4°K on 12 February, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 7 February 1975, to 1300 G.m.t., 14 February 1975

Central station	Midnight at the Apollo 14 site occurred on 12 February for the 50th lunation. Transmitter A signal strength was reported at -141.0 $\pm$ 2.5 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) is ON for lunar night operations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument's heater is in AUTO ON for lunar night operations. No significant seismic events were observed during the periodic real-time support periods.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument is in STANDBY.
Charged particle lunar environment experiment	The experiment is operating in the manual mode at the -35 vdc range and automatic thermal control mode.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 7 February 1975, to 1300 G.m.t., 14 February 1975

Central station	Midnight of the 65th lunation occurred on 13 February. The DSS-1 heater (10 watts) is ON for lunar night operations. A signal strength between -137.5 and -142.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument's assembly temperature (DL-07) was offscale LOW at a sun angle of 238.6° on 10 February. The Z-axis drive motor is ON to maximize heating in the instrument during lunar night. No significant seismic events were noted during the real-time support periods.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode.
Suprathermal ion detector experiment	The SIDE is in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 12 February 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1911	1468	1292	1027
Total Commands to Date	23010	15376	26984	15053
Sun Angle	263.1°	269.1°	290.3°	302.0°
Input Power	59.7w *(60.1w)*	63.5w *(63.9w)*	66.4w *(66.9w)*	67.5w *(67.5w)*
Heater and Power Dumps	All ON	All ON	All OFF	All ON
Experiment Status	LSM OFF	SIDE/ASE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	9.1°F	30.5°F	9.4°F	33.4°F
PSE Sensor Temp (DL-07)	Offscale LOW	124.0°F	124.4°F	125.8°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-15.6°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STANDBY	7.2°C	N/A
CCGE Temp (DI-04)	HIGH	STANDBY	108.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	-22.7°C	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-70.7°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	792
Total Commands to Date	20874
Sun Angle	317.8°
Input Power	73.1w *(73.5w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	19.8°F
LACE Temp (AM-41)	-2.3°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.1°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	21.4°F

Value in parenthesis indicates RTG output during last lunation at a similar sun angle.

ALSEP SUPPORT SCHEDULE/EVENTS

JAN 19/019	20.020	21/021	22/022	23/023	24/024	25/025
0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST	0900-1100 FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 14 ALSEP 17 LACE STBY LEAM OFF	0300-0700 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF ASE CHK Y PROC CHK ALSEP 16 ASE CHK FLIP CAL HFE RBS 1800-1900	0900-1100 ALSEP 12 SIDE OFF ALSEP 14 CPLEE STBY ALSEP 16 NEG Z	1100-1300 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STBY ALSEP 16 NEG Z FLIP CAL HFE RBS	1600-2000 ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR OFF ALSEP 15 SIDE SPRT ALSEP 16 NEG Z
JAN 26/026	**27/027**	**28/028**	**29/029**	**30/030**	**31/031**	**FEB 1/032**
0900-1100 ALSEP 12 & 15 CYCLE SIDES	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 16 POS Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON FLIP CAL HFE RBS 2200-2300 ALSEP 16 POS Z	0900-1100 ALSEP 17 ALSEP 16 POS Z 2200-2300 ALSEP 16 POS Z
FEB 2/033	**3/034**	**4/035**	**5/036**	**6/036**	**7/037**	**8/039**
0900-1100 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR ON	0900-1100 ALSEP 15 ALSEP 12 SIDE ON FLIP CAL HFE RBS	0900-1100 ALSEP 14 C/S HTR ON CPLEE ON SIDE ON	1400-1800 ALSEP 12 & 14 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS	0700-0900	0900-1200 FLIP CAL HFE RBS	NO SUPPORT

TIMES - CST CST to 23 FEB 75 CDT from 23 FEB 75

ALSEP SUPPORT SCHEDULE/EVENTS

PSE CALS DAILY

FEB 9/040	10/041	11/042	12/043	13/044	14/045	15/046
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT ALSEP 17
FEB 16/047	17/048	18/049	19/050	20/051	21/052	22/053
NO SUPPORT	1400-1600 ALSEP 16 C/S HTR OFF FLIP CAL HFE RBS	1100-1300 ALSEP 15 TIMER RST ALSEP 16 TIMER RST	0800-1000 ALSEP 14 ALSEP 17 LACE STBY LEAM OFF FLIP CAL HFE RBS 2300-2400	1300-1700 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF Y PROC CHK	0700-0900 ALSEP 14 CPLEE STBY FLIP CAL HFE RBS	0900-1100 ALSEP 12 SIDE OFF
FEB 23/054	24/055	25/056	26/057	27/058	28/059	MAR 1/060
0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STBY ALSEP 16 NEG Z	0700-1100 ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR OFF ALSEP 15 SIDE SPRT ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 16 NEG Z	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LEAM ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON 2300-2400 ALSEP 16 POS Z

ALSEP PERFORMANCE SUMMARY REPORT

21 February 1975
G.m.t.: 1300

Remote site coverage for recording of ALSEP downlink data was not available during the following period. It must be noted that this data loss is non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
12	*13 Feb 75*	*0450/0716*	$2^h 26^m$	*GWM*	*Station Problem*

Apollo 17 ALSEP

Sunrise of the scientific station's 28th lunation occurred on 16 February at the Taurus Littrow site. Downlink signal strength is reported between -134.5 and -141.0 dbm from transmitter A. Automatic power management continues to distribute power for optimum thermal control. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods. *Telemetry parameter AB-04, which reports the status of the Lunar Atmospheric Composition and the Lunar Ejecta and Meteorite Experiments, is indicating an OT (out of tolerance) condition. The LACE is in STANDBY and the LEAM is OFF currently. The invalid indication by AB-04 is similar to the failure of status parameter AB-11 for the Lunar Seismic Profiling Experiment which initially occurred on 26 September 1973. AB-04 status was first noted on 19 February.*

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 20 February the lunar surface temperature, as measured by the HFE thermocouples, was 299 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. The next 4-day High Bit Rate passive listening mode will extend from a sun angle of 331° to 024° and is scheduled for 13 to 18 April 1975.

The Lunar Atmospheric Composition Experiment was commanded to STANDBY at 2100 G.m.t., 17 February.

The Lunar Ejecta and Meteorites Experiment was commanded OFF at 1436 G.m.t., 19 February, for the remainder of this lunar day.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 14 February 1975, to 1300 G.m.t., 21 February 1975

Central station	Sunrise at the Descartes Site occurred on 17 February for the 36th lunar day. The DSS-1 heater (10 watts) was commanded OFF for lunar day operations on 17 February. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported between -132.5 and -138.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the limited real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. The instrument has accomplished 956 flip calibration sequences.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 14 February 1975, to 1300 G.m.t., 21 February 1975

Central station	Sunrise of the station's 45th lunation occurred at the Hadley Rille Site on 18 February. Transmitter A downlink signal strength is reported at -136.5 ± 2.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. No significant seismic events were observed during the limited real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames). *During real-time support on 19 February it was noted the instrument command register was reading SIDE Load 11, High Energy Curve Plate Analyzer High Voltage ON/OFF. Command verification words (CVWs) had not been reported in the ALSEP 15 downlink. Octals 104, 105, and 107 were assumed to have been generated internally in the instrument. Therefore octals 106 and 110 (execution command) were sent to the instrument and the command register was cleared at 1352 G.m.t., 19 February.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 290.1°K on 20 February, as indicated by the cable thermocouples. The subsurface temperature was 253.5°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.0°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 14 February 1975, to 1300 G.m.t., 21 February 1975

Central station	Sunrise at the Apollo 14 site (51st lunation) occurred on 20 February. Transmitter A signal strength was reported at -139.5 ± 2.5 dbm. The DSS-1 heater (10 watts) was commanded OFF for lunar day operation on 20 February.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). No significant seismic events have been noted during this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument has not been operating since 6 January 1975 when the monitored telemetry parameter, Word 15, became static. No further attempts to turn the instrument ON are planned at this time.
Charged particle lunar environmental experiment	The experiment is ON and will be commanded to STANDBY on 21 February for the remainder of this lunar day.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 14 February 1975, to 1300 G.m.t., 21 February 1975

Central station	Sunrise of the 66th lunar day occurred on 20 February at the ALSEP site in the Ocean of Storms. A signal strength of -139.5 $\pm$ 2.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) was commanded OFF for lunar day operations on 20 February.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument's assembly temperature (DL-07) returned onscale (DL-07 = 126.2°F, sun angle = 2.3°) on 20 February. The Z-axis drive motor was commanded OFF on 20 February to minimize heating in the instrument during the lunar day. No significant seismic events were noted during the periodic real-time support periods of this instrument.
Solar wind spectrometer experiment	The instrument is ON and in the normal gain mode. *On 19 February (1340 G.m.t.) it was noted that the data output of the sum cups levels 1 through 14 during the instrument's ac calibrate measurements (sequence 15) were LOW. Throughout the 19 February support period the ac calibration measurements appeared intermittently LOW. The ac calibrate measurements were valid at the beginning of real-time support on 20 February. This anomaly was initially noted on 19 June 1972.*
Suprathermal ion detector experiment	The instrument is ON and in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 0500 G.m.t., 20 February 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1919	1476	1300	1035
Total Commands to Date	23018	15392	27093	15118
Sun Angle	355.4°	1.4°	22.6°	34.1°
Input Power	59.3w	63.5w	66.0w	66.3w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	LSM OFF	SIDE/ASE STDBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	8.1°F	29.8°F	73.7°F	79.1°F
PSE Sensor Temp (DL-07)	Offscale LOW	124.0°F	126.0°F	127.1°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	37.3°C
SWS Module 300 Temp (DW-13)	-16.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STDBY	54.6°C	N/A
CCGE Temp (DI-04)	HIGH	STDBY	339.4°K	N/A
CPLEE Elect Temp (AC-06)	N/A	-22.6°C	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-71.1°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	299.8°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	800
Total Commands to Date	20992
Sun Angle	49.6°
Input Power	71.1w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LACE/LSPE STDBY, LEAM OFF
Avg Thermal Plate Temp	84.4°F
LACE Temp (AM-41)	129.0°F
LEAM Temp (AJ-11)	182.0°F
HFE Temp Ref 1 (DH-13)	319.6°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	84.3°F

TIMES - CST | CST to 23 FEB 75 / CDT from 23 FEB 75 | ALSEP SUPPORT SCHEDULE/EVENTS | PSE CALS DAILY

FEB 9/040	10/041	11/042	12/043	13/044	14/045	15/046
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT ALSEP 17
FEB 16/047	**17/048**	**18/049**	**19/050**	**20/051**	**21/052**	**22/053**
NO SUPPORT	1400-1600 ALSEP 16 C/S HTR OFF FLIP CAL HFE RBS	1100-1300 ALSEP 15 TIMER RST ALSEP 16 TIMER RST	0800-1000 ALSEP 14 ALSEP 17 LACE STBY LEAM OFF FLIP CAL HFE RBS 2300-2400	1300-1700 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF Y PROC CHK	0700-0900 ALSEP 14 CPLEE STBY FLIP CAL HFE RBS	0900-1100 ALSEP 12 SIDE OFF
FEB 23/054	**24/055**	**25/056**	**26/057**	**27/058**	**28/059**	**MAR 1/060**
0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STBY ALSEP 16 NEG Z	0700-1100 ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR OFF ALSEP 15 SIDE SPRT ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 16 NEG Z	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LEAM ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON 2300-2400 ALSEP 16 POS Z

ALSEP PERFORMANCE SUMMARY REPORT

28 February 1975
G.m.t.: 1300

Apollo 17 ALSEP

Noon of the scientific station's 28th lunation occurred on 23 February at the Taurus Littrow site. Downlink signal strength as reported by the 30-foot antenna tracking stations is between -136.0 and -144.0 dbm from transmitter A. Automatic power management continues to distribute power for optimum thermal performance. Automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulse is inhibited by routine transmission of command octal 174 (Delay uplink switchover) during real-time support periods. Telemetry parameter AB-04, which reports the status of the Lunar Atmospheric Composition and the Lunar Ejecta and Meteorite Experiments continues to indicate an OT (out of tolerance) condition. The experiment's current status is LACE in STANDBY and the LEAM is OFF.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being accomplished on a periodic basis. On 27 February the lunar surface temperature, as measured by the HFE thermocouples, was 338 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. The next passive listening mode is scheduled for 13 to 18 April 1975.

The Lunar Atmospheric Composition Experiment is in STANDBY. *During real-time support on 27 February the experiment was turned ON to check the Ion pump current per the Principal Investigator's request. The results of the test indicated that the Ion pump was functioning properly and the experiment was returned to its normal STANDBY condition for lunar day.*

The Lunar Ejecta and Meteorites Experiment is currently OFF.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 21 February 1975, to 1300 G.m.t., 28 February 1975

Central station	Noon of the 36th lunation occurred on 24 February 1975. The DSS-1 heater (10 watts) is OFF for lunar day operation. The 18-hour timer output pulses continue to be inhibited. The 30-foot antenna tracking stations report a signal strength between -133.5 and -138.0 dbm from transmitter B.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). The instrument's sensor temperature (DL-07) indicated offscale HIGH on 23 February, at a sun angle of 75.4°. No significant seismic events were noted during the periodic real-time support periods.
Lunar surface magnetometer experiment	The LSM is currently ON and recording data as the moon passes through the earth's geomagnetic tail and magnetopause. 962 flip calibration sequences have been executed and verified by the experiment's engineering data since activation.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 21 February 1975, to 1300 G.m.t., 28 February 1975

Central station	Noon of the station's 45th lunation occurred on 25 February 1975. Transmitter A downlink signal strength was reported at -134.5 ± 3.5 dbm from the 30-foot antenna tracking stations. *At 2258 G.m.t., 23 February 1975, the central station experienced a spurious functional change (octal 150, Timer Reset) as verified in the ALSEP downlink by the Guam Tracking Station. The timer was confirmed to be operating properly during real-time support on 25 February 1975.*
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18 hour timer output pulse functions. The instrument's sensor temperature (DL-07) went offscale high on 24 February, at a sun angle of 74.5°. No significant seismic events were noted during the periodic real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is currently in STANDBY. Cyclic commanding of the experiment was initiated for the remainder of this lunar day on 22 February (Apollo 15 ALSEP, SMEAR 47).
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 365.7°K on 27 February as indicated by the cable thermocouples. The subsurface temperature was 253.5°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 21 February 1975, to 1300 G.m.t., 28 February 1975

Central station	Noon of the 51st lunation at the Apollo 14 site occurred on 27 February. Transmitter A signal strength was reported between -136.0 and -140.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) is OFF for lunar day operations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument's heater is in FORCED OFF for lunar day operation. *During real-time support on 27 February the long period Y axis failed to respond to the ON calibration command (octal 066), however it did respond normally to the OFF calibration command.* No significant seismic events were noted during the periodic real-time support periods.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument has not been operating since 6 January 1975 when the monitored telemetry parameter, Word 15, became static. No further attempts to turn the instrument ON are planned at this time.
Charged particle lunar environmental experiments	The CPLEE has been in STANDBY since 1519 G.m.t., 22 February 1975.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 21 February 1975, to 1300 G.m.t., 28 February 1975

Central station	Noon of the 66th lunar day occurred on 27 February. The DSS-1 heater (10 watts) is OFF for lunar day operations. A signal strength of -140.0 ± 2.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. No significant seismic events were noted during the periodic real-time support periods of this instrument.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. The experiment was operated in the extended range mode due to observation of high particle counts from 1452 G.m.t., 23 February to 1325 G.m.t., 24 February.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 27 February 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1926	1483	1307	1042
Total Commands to Date	23137	15439	27210	15255
Sun Angle	86°	91.9°	113.1°	124.9°
Input Power	60.5w	63.6w	66.0w	66.3w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	LSM/SIDE OFF	ASE/CPLEE/SIDE STBY	LSM/SWS OFF,SIDE STBY	ASE OFF
Avg Thermal Plate Temp	95.5°F	117.8°F	116.3°F	98.6°F
PSE Sensor Temp (DL-07)	141.9°F	133.9°F	Offscale HIGH	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	43.5°C
SWS Module 300 Temp (DW-13)	67.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STANDBY	STANDBY	N/A
CCGE Temp (DI-04)	OFF	STANDBY	STANDBY	N/A
CPLEE Elect Temp (AC-06)	N/A	STANDBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	78.8°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	330.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	807
Total Commands to Date	21164
Sun Angle	140.2°
Input Power	71.1w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LACE/LSPE STBY & LEAM OFF
Avg Thermal Plate Temp	84.8°F
LACE Temp (AM-41)	132.7°F
LEAM Temp (AJ-11)	186.5°F
HFE Temp Ref 1 (DH-13)	316.3°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	85.6°F

TIMES - CST CST to 23 FEB 75 CDT from 23 FEB 75

ALSEP SUPPORT SCHEDULE/EVENTS

PSE CALS DAILY

FEB 9/040	10/041	11/042	12/043	13/044	14/045	15/046
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT ALSEP 17

FEB 16/047	17/048	18/049	19/050	20/051	21/052	22/053
NO SUPPORT	1400-1600 ALSEP 16 C/S HTR OFF FLIP CAL HFE RBS	1100-1300 ALSEP 15 TIMER RST ALSEP 16 TIMER RST	0800-1000 ALSEP 14 ALSEP 17 LACE STBY LEAM OFF FLIP CAL HFE RBS 2300-2400	1300-1700 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF Y PROC CHK	0700-0900 ALSEP 14 CPLEE STBY FLIP CAL HFE RBS	0900-1100 ALSEP 12 SIDE OFF

FEB 23/054	24/055	25/056	26/057	27/058	28/059	MAR 1/060
0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STBY ALSEP 16 NEG Z	0700-1100 ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR OFF ALSEP 15 SIDE SPRT ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 16 NEG Z	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LEAM ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON 2300-2400 ALSEP 16 POS Z

TIMES - CDT

ALSEP SUPPORT SCHEDULE/EVENTS

PSE CALS DAILY

MAR 2/061	3/062	4/063	5/064	6/065	7/066	8/067
1200-1300 ALSEP 17 2100-2200	0600-0700 ALSEP 16 1500-1700 ALSEP 16 C/S HTR OFF ALSEP 14 PSE HTR ON ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE	09-1100 ALSEP 12 SIDE ON ALSEP 14 CPLEE ON FLIP CAL HFE RBS	0900-1100 ALSEP 14 C/S HTR ON SIDE ON	0430-0830 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS 1800-1900	0900-1100
MAR 9/068	**10/069**	**11/070**	**12/071**	**13/072**	**14/073**	**15/074**
0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT
MAR 16/075	**17/076**	**18/077**	**19/078**	**20/079**	**21/080**	**22/081**
NO SUPPORT	2100-2300 ALSEP 17 FLIP CAL HFE RBS	NO SUPPORT ALSEP 16	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST FLIP CAL HFE RBS	0900-1100 ALSEP 17 LACE STDBY LEAM OFF	0900-1100 ALSEP 12 ALSEP 14 FLIP CAL HFE RBS	0800-1200 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ASE CHK ALSEP 14 C/S HTR OFF Y PROC CHK 2000-2100

ALSEP PERFORMANCE SUMMARY REPORT

7 March 1975
G.m.t.: 0900

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that this data loss is non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
14	*01/05 Mar*	*0008/0306*	$4^d 02^h 58^m$	*ALL*	*ALSEP Station Problem*

The Apollo 14 ALSEP loss of downlink signal (LOS) was abrupt and unexpected. A playback of the data just prior to LOS appears normal with no indications as to the cause of the anomaly. The reacquisition of the downlink (AOS) 4 days, 3 hours later was also unexpected, however, it was predicted that certain failure modes offered the possibility of recovery. Since AOS, there has been no uplink command capability to the station. Details of the data loss are covered in the Apollo 14 section of this report.

Apollo 17 ALSEP

Sunset of the scientific station's 28th lunation occurred on 2 March at the Taurus Littrow site. Downlink signal strength is reported between -136.0 and -146.5 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The AB-04 anomaly reported last week, which indicated OTs for the status of the LACE and LEAM experiments apparently returned to normal indications when the LEAM was turned on 28 February. Subsequent monitoring of AB-04, however, revealed that the status indications are erroneous and should not be used. Both the LACE and LEAM are currently ON.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 6 March the lunar surface temperature, as measured by the HFE thermocouples, was 112 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.8°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. The next 4-day passive listening period is planned for 13 to 18 April 1975.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. The instrument is configured to discriminator level,

ALSEP PEROFRMANCE SUMMARY REPORT (continued)

7 March 1975
G.m.t.: 0900

LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON since turn ON 0404 G.m.t., 4 March 1975.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 28 February 1975, to 0900 G.m.t., 7 March 1975

Central station	Sunset at the Descartes Site occurred on 4 March for the 36th lunation. The DSS-1 heater (10 watts) was commanded ON at 1943 G.m.t., 3 March, for lunar night operations when the average thermal plate temperature decreased to 46.7°F. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -135 ± 2.3 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter OUT). The instrument's assembly temperature (DL-07 = 142.3°F) returned onscale, 3 March, at a sun angle of 175.4°. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 968 flip calibration sequences have been executed and verified by the experiment's engineering data. *Since 3 March the Z-axis data has failed. The problem is being investigated.*
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 28 February 1975, to 0900 G.m.t., 7 March 1975

Central station	Sunset of the station's 45th lunation occurred at the Hadley Rille Site on 5 March. Transmitter A downlink signal strength is reported at -135.5 ± 2.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. No significant seismic events were noted during real-time support thjs report period.
Suprathermal ion detector/cold cathode gauge	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames) (Apollo 15 ALSEP, SMEAR 47).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 97.8°K on 6 March as indicated by the cable thermocouples. The subsurface temperature was 253.5°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 28 February 1975, to 0900 G.m.t., 7 March 1975

Central station

The Ascension (ACN) Island Tracking Station reported loss of the downlink telemetry signal (LOS) from Apollo 14 ALSEP at 0008:42 G.m.t. on 1 March. Nine commands were sent Mode I by ACN to turn the transmitters on, but there was no response. Additional commands were sent during real-time support on 1 March, again without response. A playback of the data just prior (5 minute period) to LOS showed normal values for all housekeeping parameters. There were no indications as to why the data stopped abruptly at 0008:33 G.m.t.

Two likely possibilities were considered: 1.) The SIDE was ON and developed a short and the circuit breaker failed to open, in which case there might be a possibility of recovery. 2.) The timer, which has been considered inoperative for sometime, timed out to its 4 years ± 30 days setting. This would shut off power to the transmitters and is non-recoverable.

The Madrid (MAD) Tracking Station reported reacquisition of the Apollo 14 downlink signal (AOS) at 0306:45 G.m.t. on 5 March. The signal strength was normal at -131 db on the 85 foot dish. An emergency support period was called and real time data was received at JSC ALSEP Control starting about 0500 G.m.t. This data indicated the ALSEP Central Station had switched to PCU #2, was still in transmitter A and the receiver data parameters were offscale low. The PSE was on with heater status FORCED OFF, the X-axis was offscale low and the Y-axis offscale high, temperature DL-07 = 111°F.

Numerous commands were sent via MAD using 10 kw of power into the 85 foot antenna. All command attempts resulted in spacecraft rejects and no functional responses were evident. At this time it is believed that the circuit breaker in the 12 v. line to the receiver is open. This circuit breaker is designed to be reset by the 12 hour timer pulses, should the timer start operating and generate a pulse.

Sunset at the Apollo 14 site occurred on 6 March for the 50th lunation. The DSS-1 heater (10 watts) is OFF. Transmitter A signal strength is reported at -138.3 ± 2.8 dbm at tracking stations using 30-foot antennas.

Passive seismic experiment

The instrument is configured as noted above. Since the PSE cannot be leveled, those periods when the X and/or Y-axes are onscale will be reported in future weekly status reports. No significant seismic events were noted during real-time support this report period.

Apollo 14 ALSEP (continued)

Operational status from 1300 G.m.t., 28 February 1975, to 0900 G.m.t., 7 March 1975

Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge	The instrument status is unknown.
Charged particle lunar environment experiment	The experiment has been in STANDBY since 1519 G.m.t., 22 February 1975.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 28 February 1975, to 0900 G.m.t., 7 March 1975

Central station	Sunset of the 66th lunation occurred on 7 March. A signal strength of -140.5 ± 2.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument's assembly temperature (DL-07 = 136.7°F) returned onscale at a sun angle of 170.0° on 6 March. No significant seismic events were noted during the real-time support this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. The experiment was operated in the extended range mode due to observation of high particle counts from 1356 G.m.t., 1 March to 1047 G.m.t., 2 March.
Suprathermal ion detector experiment	The side has been ON in the full automatic stepping sequence (0-127 frames) with Channeltron high voltages ON since 1313 G.m.t., 5 March. *During real-time support on 28 February 1975, the SIDE experienced an unexpected mode change to command register X10 at a temperature of 54.6°C. The mode change was cleared by commanding the instrument to OFF for cooldown prior to turn ON during the next support period.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 6 March 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1933	1490	1314	1049
Total Commands to Date	23221	15475	27368	15400
Sun Angle	171.1°	177.1°	198.2°	210.1°
Input Power	60.6w	64.6w	66.5w	67.6w
Heater and Power Dumps	All OFF	All OFF	All OFF	All ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	56.8°F	45.5°F	11.3°F	34.7°F
PSE Sensor Temp (DL-07)	136.7°F	Offscale LOW	124.8°F	126.0°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-8.9°C
SWS Module 300 Temp (DW-13)	33.7°C	N/A	OFF	N/A
SIDE Temp (DI-05)	42.4°C	STBY	7.2°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	121.0°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	66.9°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	284.0°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	814
Total Commands to Date	21343
Sun Angle	225.3°
Input Power	73.1w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	20.1°F
LACE Temp (AM-41)	-0.5°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	285.9°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	21.4°F

FEB 9/040	10/041	11/042	12/043	13/044	14/045	15/046
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT ALSEP 17

FEB 16/047	17/048	18/049	19/050	20/051	21/052	22/053
NO SUPPORT	1400-1600 ALSEP 16 C/S HTR OFF FLIP CAL HFE RBS	1100-1300 ALSEP 15 TIMER RST ALSEP 16 TIMER RST	0800-1000 ALSEP 14 ALSEP 17 LACE STBY LEAM OFF FLIP CAL HFE RBS 2300-2400	1300-1700 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF Y PROC CHK	0700-0900 ALSEP 14 CPLEE STBY FLIP CAL HFE RBS	0900-1100 ALSEP 12 SIDE OFF

FEB 23/054	24/055	25/056	26/057	27/058	28/059	MAR 1/060
0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STBY ALSEP 16 NEG Z	0700-1100 ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR OFF ALSEP 15 SIDE SPRT ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 16 NEG Z	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 16 NEG Z FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LEAM ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 16 POS Z ALSEP 17 LACE ON 2300-2400 ALSEP 16 POS Z

MAR 2/061	3/062	4/063	5/064	6/065	7/066	8/067
1200-1300 ALSEP 17 2100-2200	0600-0700 ALSEP 16 1500-1700 ALSEP 16 C/S HTR OFF ALSEP 14 PSE HTR ON ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE	09-1100 ALSEP 12 SIDE ON ALSEP 14 CPLEE ON FLIP CAL HFE RBS	0900-1100 ALSEP 14 C/S HTR ON SIDE ON	0430-0830 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS 1800-1900	0900-1100
MAR 9/068	**10/069**	**11/070**	**12/071**	**13/072**	**14/073**	**15/074**
0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT
MAR 16/075	**17/076**	**18/077**	**19/078**	**20/079**	**21/080**	**22/081**
NO SUPPORT	2100-2300 ALSEP 17 FLIP CAL HFE RBS	NO SUPPORT ALSEP 16	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST FLIP CAL HFE RBS	0900-1100 ALSEP 17 LACE STDBY LEAM OFF	0900-1100 ALSEP 12 ALSEP 14 FLIP CAL HFE RBS	0800-1200 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ASE CHK ALSEP 14 C/S HTR OFF Y PROC CHK 2000-2100

ALSEP PERFORMANCE SUMMARY REPORT

14 March 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that this data loss is non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*07 Mar 75*	*1022/1028*	*06^m*	*ACN/BUR*	*Schedule Problem*
A14	*10 Mar 75*	*0220/0242*	*22^m*	*ORR*	*Station Capability*

Apollo 17 ALSEP

Midnight of the scientific station's 28th lunation occurred on 10 March at the Taurus Littrow site. Downlink signal strength was reported at -136.5 ± 1.7 dbm from transmitter A by the tracking stations with the 30-foot antennas. Transmission of command octal 174 (delay uplink switch-over), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods. Investigation into the erroneous indication of experiment status (AB-04) as previously reported continues.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 12 March lunar surface temperature, as measured by the HFE thermocouples was 109 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.8°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. The next 4-day passive listening period is planned for 13 to 18 April 1975.

The Lunar Atmospheric Composition Experiment is currently ON but is not processing scientific data. On 9 March 1975 the instrument was configured to discriminator level, LOW; filament, OFF; high voltage power supply, ON; and backup heater, OFF. *An operational check was performed on 7 March, following a 9 hour cold soak period. Results obtained were the same as those previously reported with the continuing indication of a high voltage failure. On 9 March, an octal 132 was observed in the command register. Several attempts were made to clear the register without success. On 9 March it was verified that the 132 command entry is functional and results in limited command capability to the LACE.*

ALSEP PERFORMANCE SUMMARY REPORT (continued)

14 March 1975
G.m.t.: 1300

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 15 ALSEP

Operational status from 0900 G.m.t., 7 March 1975, to 1300 G.m.t., 14 March 1975

Central station	Midnight of the station's 45th lunation occurred on 12 March at the Hadley Rille Site. Transmitter A downlink signal strength is reported between -134.5 and -139.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. No significant seismic events were observed during the limited real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 87.5°K on 12 March, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 16 ALSEP

Operational status from 0900 G.m.t., 7 March 1975, to 1300 G.m.t., 14 March 1975

Central station	Midnight at the Descartes Site occurred on 11 March for the 36th lunar night. The DSS-1 heater (10 watts) is ON for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -136.5 ± 2.5 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the limited real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. 968 flip calibration sequences have been executed and verified by the experiment's engineering data. The static Z axis science data and offscale low temperature anomaly continued this week and is still under investigation. *No flip calibrations of the instrument will be performed until the Z-axis temperature returns onscale per the P. I. request.*
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 14 ALSEP

Operational status from 0900 G.m.t., 7 March 1975, to 1300 G.m.t., 14 March 1975

Central station	Midnight at the Apollo 14 site occurred today for the 56th lunation. Transmitter A signal strength was reported at -140.2 ± 2.2 dbm from the 30-foot antenna tracking stations. Since 5 March 1975 when the downlink signal returned, numerous commands have been transmitted to the central station without success.
Passive seismic	The instrument is ON. Since the PSE cannot be leveled, those periods when the X, Y, and/or Z axes are onscale, also (DL-07) the internal temperature, will be reported in future weekly status reports. These parameters were all offscale during this report period. The instrument's heater remains in the Forced OFF configuration as previously reported. Because of the present offscale condition of the instrument's sensor axes it is doubtful that seismic events can be observed.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environment experiment	The CPLEE is in STANDBY.

Apollo 12 ALSEP

Operational status from 0900 G.m.t., 7 March 1975, to 1300 G.m.t., 14 March 1975

Central station	Midnight of the 66th lunation will occur later today. The DSS-1 heater (10 watts) is ON for lunar night operations. A signal strength between -138.5 and -142.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument's assembly temperature (DL-07) was offscale LOW at a sun angle of 218.7° on 10 March. The Z-axis drive motor is ON to maximize heating in the instrument during lunar night. No significant seismic events were noted during the real-time support periods.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 12 March 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1939	1496	1320	1055
Total Commands to Date	23317	15489	27443	15445
Sun Angle	244.3°	250.3°	271.4°	283.3°
Input Power	59.8w	63.8w	65.9w	67.1w
Heater and Power Dumps	All ON	All OFF	All OFF	All ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	9.1°F	9.8°F	9.1°F	33.4°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.6°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-15.6°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.2°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	108.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-70.3°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.6°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	820
Total Commands to Date	21497
Sun Angle	298.5°
Input Power	72.7w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	18.4°F
LACE Temp (AM-41)	-0.5°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	285.9°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	20.1°F

ALSEP SUPPORT SCHEDULE/EVENTS

MAR 2/061	3/062	4/063	5/064	6/065	7/066	8/067
1200-1300 ALSEP 17 2100-2200	0600-0700 ALSEP 16 1500-1700 ALSEP 16 C/S HTR OFF (ALSEP 14 PSE HTR ON) ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE	09-1100 ALSEP 12 SIDE ON (ALSEP 14 CPLEE ON) FLIP CAL HFE RBS	0900-1100 (ALSEP 14 C/S HTR ON)	0430-0830 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS 1800-1900	0900-1100
MAR 9/068	**10/069**	**11/070**	**12/071**	**13/072**	**14/073**	**15/074**
0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT
MAR 16/075	**17/076**	**18/077**	**19/078**	**20/079**	**21/080**	**22/081**
NO SUPPORT	2100-2300 ALSEP 17 FLIP CAL HFE RBS	NO SUPPORT ALSEP 16	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST FLIP CAL HFE RBS	0900-1100 ALSEP 17 LACE STDBY LEAM OFF	1700-1900 ALSEP 12 ALSEP 14 FLIP CAL HFE RBS	0800-1200 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ASE CHK (ALSEP 14 C/S HTR OFF Y PROC CHK) 2000-2100

ALSEP PERFORMANCE SUMMARY REPORT

21 March 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses may not be recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*11 Feb 75*	*0725/0815*	*50^m*	*TAN*	*Communications Cut Off*
ALL	*12 Feb 75*	*0828/0915*	*47^m*	*TAN*	*Communications Cut Off*
12,15,16	*19 Mar 75*	*1147/1150*	*03^m*	*BUR*	*Station Problem*
14	*20 Mar 75*	*1032/1131*	*59^m*	*ORR*	*Not Scheduled*

Apollo 17

Sunrise of the scientific station's 29th lunation occurred on 17 March at the Taurus Littrow site. Downlink signal strength is reported between -134.5 and -140.0 dbm from transmitter A. Automatic power management continues to distribute power for optimum thermal control. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods. *Telemetry parameter AB-04, which reports the status of the Lunar Atmospheric Composition and the Lunar Ejecta and Meteorite Experiments, is indicating an OT (out of tolerance) condition with the LACE in STANDBY and the LEAM in OFF. The AB-04 anomaly recurred on 20 March and was first noted on 19 February.*

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 20 March the lunar surface temperature, as measured by the HFE thermocouples, was 271 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.8°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. The next 4-day High Bit Rate passive listening mode will extend from a sun angle of 331° to 024° and is scheduled for 13 to 18 April 1975.

The Lunar Atmospheric Composition Experiment was commanded to STANDBY at 1507 G.m.t., 20 March. *An operational check was performed 17 March. Results were the same as those previously reported with the continuing indication of a high voltage failure. As previously reported, octal 132 was still in the command register. During the 17 March operational check it was noted that the command register was clear after execution of the Filament #2 OFF command (octals 123, 132, and 134). On 19 March, the command register again contained octal 132 and was cleared on 20 March by loading the register with octals 123, 124, 125, 127, 132, 133, and execution command octal 134.*

ALSEP PERFORMANCE SUMMARY REPORT (continued)

21 March 1975
G.m.t.: 1300

The Lunar Ejecta and Meteorites Experiment was commanded off at 1501 G.m.t., 20 March, for the remainder of this lunar day.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 14 March 1975, to 1300 G.m.t., 21 March 1975

Central station	Sunrise at the Descartes Site occurred on 18 March for the 37th lunar day. The DSS-1 heater (10 watts) was commanded OFF for lunar day operations on 19 March. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported between -133.5 and -138.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the limited real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. The instrument has accomplished 970 flip calibration sequences.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 14 March 1975, to 1300 G.m.t., 21 March 1975

Central station	Sunrise of the station's 46th lunation occurred at the Hadley Rille Site on 19 March. Transmitter A downlink signal strength is reported at -136.0 ± 1.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. No significant seismic events were observed during the limited real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames). *At the beginning of real-time support on 20 March it was noted the instrument command register was reading SIDE Load 15, Reset Command Register. Command verification words (CVWs) had not been reported in the ALSEP 15 downlink. Octals 104, 105, 106, and 107 were assumed to have been generated internally in the instrument. Octal 110 (execution command) was sent to the instrument and the command register was cleared at 1424 G.m.t. Later in the support period SIDE Load 10 (octals 105 and 107), Low Energy Curved Plate Analyzer HIGH Voltage ON/OFF, was noted in the command register. Octals 104, 106, and execution command octal 110 were sent and the command register was cleared at 1518 G.m.t., 20 March.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 244.3°K on 20 March, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 250.0°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 14 March 1975, to 1300 G.m.t., 21 March 1975

Central station	Sunrise at the Apollo 14 site (52nd lunation) will occur later today, 21 March. Transmitter A signal strength was reported at -139.5 ± 2.5 dbm from the 30-foot antenna tracking stations. Since 5 March 1975 when the downlink signal returned, numerous commands have been transmitted to the central station without success. *Although the DSS-1 heater (10 watts) has been OFF, the average thermal plate temperature stabilized at 9.7°F during this lunar night. Previous lunar night average thermal plate temperature had been 29.8°F.*
Passive seismic experiment	The instrument is ON. Since the PSE cannot be leveled, those periods when the X, Y, and/or Z axes are onscale, also (DL-07) the internal temperature, will be reported in future weekly status reports. These parameters were all offscale during this report period. The instrument's heater remains in the Forced OFF configuration as previously reported. Because of the present offscale condition of the instrument's sensor axes it is doubtful that seismic events can be observed.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 14 March 1975, to 1300 G.m.t., 21 March 1975

Central station	Sunrise of the 67th lunar day will occur on 22 March at the ALSEP site in the Ocean of Storms. A signal strength of -135.0 to -141.5 dbm, from transmitter B, was reported by the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) will be commanded OFF for lunar day operations on 22 March.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument's assembly temperature (DL-07) remains offscale LOW. The Z-axis drive motor will be commanded OFF on 22 March to minimize heating in the instrument during the lunar day. No significant seismic events were noted during the periodic real-time support periods of this instrument.
Solar wind spectrometer experiment	The instrument is ON and in the normal gain mode. *On 12 March and 18 March it was noted that the data output of the sum cups levels 1 through 14 during the instrument's ac calibrate measurements (sequence 15) were LOW. The ac calibrate measurements were valid at the beginning of real-time support on 14 March and 20 March. This anomaly was previously noted on 19 June 1972 and 19 February 1975.*
Suprathermal ion detector experiment	The instrument is ON and in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 20 March 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1947	1504	1328	1063
Total Commands to Date	23326	15509	27531	15493
Sun Angle	341.2°	347.4°	8.5°	20.4°
Input Power	59.6w	63.3w	64.7w	66.6w
Heater and Power Dumps	DSS-1 ON (10w)	All OFF	All OFF	All OFF
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	8.1°F	10.1°F	12.2°F	79.4°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.8°F	126.5°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	32.8°C
SWS Module 300 Temp (DW-13)	-16.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.8°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	183.1°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-71.1°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	291.3°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	828
Total Commands to Date	21621
Sun Angle	35.6°
Input Power	70.7w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LACE/LSPE STBY, LEAM OFF
Avg Thermal Plate Temp	62.7°F
LACE Temp (AM-41)	114.2°F
LEAM Temp (AJ-11)	186.5°F
HFE Temp Ref 1 (DH-13)	309.7°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	62.2°F

ALSEP SUPPORT SCHEDULE/EVENTS

MAR 2/061	3/062	4/063	5/064	6/065	7/066	8/067
1200-1300 ALSEP 17 2100-2200	0600-0700 ALSEP 16 1500-1700 ALSEP 16 C/S HTR OFF (ALSEP 14 PSE HTR ON) ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE	09-1100 ALSEP 12 SIDE ON (ALSEP 14 CPLEE ON) FLIP CAL HFE RBS	0900-1100 (ALSEP 14 C/S HTR ON)	0430-0830 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS 1800-1900	0900-1100
MAR 9/068	**10/069**	**11/070**	**12/071**	**13/072**	**14/073**	**15/074**
0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT
MAR 16/075	**17/076**	**18/077**	**19/078**	**20/079**	**21/080**	**22/081**
NO SUPPORT	2100-2300 ALSEP 17 FLIP CAL HFE RBS	NO SUPPORT ALSEP 16	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST FLIP CAL HFE RBS	0900-1100 ALSEP 17 LACE STDBY LEAM OFF	1700-1900 ALSEP 12 ALSEP 14 FLIP CAL HFE RBS	0800-1200 ALSEP 12 C/S HTR OFF PSE Z MTR OFF 2000-2100

MAR 23/082	24/083	25/084	26/085	27/086	28/086	29/087
0900-1100 ALSEP 12 SIDE OFF	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS	2100-2400 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0000-0100 ALSEP 15 SIDE SPRT 0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES

MAR 30/089	31/090	APR 1/091	2/092	3/093	4/094	5/095
0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2100-2200	0700-0900 ALSEP 17 ALSEP 12 CYCLE SIDE 1600-1700	0100-0200 1000-1200 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR ON FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 12 SIDE ON ALSEP 14 CPLEE ON FLIP CAL HFE RBS	1700-2100 ALSEP 14 C/S HTR ON ALSEP 12 C/S HTR ON PSE Z MTR ON

APR 6	7/097	8/098	9/099	10/100	11/101	12/102
0600-0800	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT

ALSEP PERFORMANCE SUMMARY REPORT

27 March 1975
G.m.t.: 1300

Apollo 17 ALSEP

Noon of the scientific station's 29th lunation occurred on 24 March at the Taurus Littrow site. Downlink signal strength as reported by the 30-foot antenna tracking stations is between - 138.0and -144.5 dbm from transmitter A. Automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulse in inhibited by routine transmission of command octal 174 (Delay uplink switchover) during real-time support periods. Telemetry parameter AB-04, which reports the status of the Lunar Atmospheric Composition and the Lunar Ejecta and Meteorite Experiments continues to indicate an invalid condition.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being accomplished on a periodic basis. On 26 March the lunar surface temperature, as measured by the HFE thermocouples, was 378 $\pm$ 8°K. At a depth of 230 cm, the subsurface temperatures were 256.6°K at probe #1 and 256.8°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. On 22 March 1975 the experiment was turned ON and to High Bit Rate for a 2 minute operational check to validate the software. The next passive listening mode is scheduled for 13 to 18 April 1975.

The Lunar Atmospheric Composition Experiment is in STANDBY.

The Lunar Ejecta and Meteorites Experiment is OFF.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 21 March 1975, to 1300 G.m.t., 27 March 1975

Central station	Noon of the 37th lunation occurred on 26 March 1975. The DSS-1 heater (10 watts) is OFF for lunar day operation. The 18-hour timer output pulses continue to be inhibited. The 30-foot antenna tracking stations report a signal strength between -134.5 and -139.0 dbm from transmitter B.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). The instrument's sensor temperature (DL-07) indicated offscale HIGH on 24 March, at a sun angle of 68.3°. No significant seismic events were noted during the periodic real-time support periods.
Lunar surface magnetometer experiment	The LSM is currently ON and recording data as the moon passes through the transition region and geomagnetic tail. 962 flip calibration sequences have been executed by the sensor heads.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 21 March 1975, to 1300 G.m.t., 27 March 1975

Central station	Noon of the station's 46th lunation occurred today 27 March. Transmitter A downlink signal strength was reported at -136.0 ±2.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18 hour timer output pulse functions. The instrument's sensor temperature (DL-07) was offscale HIGH on 26 March, at a sun angle of 74.7°. No significant seismic events were noted during the periodic real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is currently in STANDBY. Cyclic commanding of the experiment was initiated for the remainder of this lunar day on 26 March (Apollo 15 ALSEP, SMEAR 47).
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 368.6°K on 26 March as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 21 March 1975, to 1300 G.m.t., 27 March 1975

Central station	Sunrise at the Apollo 14 site (52nd lunation) occurred on 21 March. Transmitter A signal strength was reported at -138.0 $\pm$ 3.0 dbm from the 30-foot antenna tracking stations. Since 5 March 1975 when the downlink signal returned, numerous commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.
Passive seismic experiment	The instrument is ON. Since the PSE cannot be leveled, those periods when the X, Y, and/or Z axes are onscale, also (DL-07) the internal temperature, will be reported in future weekly status reports. These parameters were all offscale during this report period. The instrument's heater remains in the Forced OFF configuration as previously reported. Because of the present offscale condition of the instrument's sensor axes it is doubtful that seismic events can be observed. The PSE heater has been in Forced OFF since 24 February 1975.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 21 March 1975, to 1300 G.m.t., 27 March 1975

Central station	Sunrise of the 67th lunar day occurred on 22 March. The DSS-1 heater (10 watts) is OFF for lunar day operations. A signal strength of -139.5 ± 2.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument assembly temperature (DL-07) returned onscale shortly after sunrise. The Z motor was commanded OFF on 22 March to minimize heating in the instrument. No significant seismic events were noted during the periodic real-time support periods of this instrument.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. *From 21 March to 24 March it was noted that the data output of the sum cups levels 1 through 14 during the instrument's ac calibrate measurements (sequence 15) were intermittently LOW. The ac calibrate measurements were valid at the beginning of real-time support on 26 March. This anomaly was previously noted on 19 June 1972, 19 February, 12 March, and 18 March 1975.*
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF in order to prevent mode changes at temperatures of 55°C began on 24 March for the remainder of this lunar day.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.M.T., 26 March 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1953	1510	1334	1069
Total Commands to Date	23406	15529	27648	15587
Sun Angle	54.4°	60.3°	81.5°	93.3°
Input Power	60.2w	63.7w	65.5w	66.7w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	LSM/SIDE OFF	ASE/CPLEE/SIDE STBY	LSM/SWS OFF, SIDE STBY ASE OFF	
Avg Thermal Plate Temp	92.7°F	112.1°F	113.1°F	104.2°F
PSE Sensor Temp (DL-07)	127.9°F	Offscale LOW	Offscale HIGH	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	47.0°C
SWS Module 300 Temp (DW-13)	62.6°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STANDBY	STANDBY	N/A
CCGE Temp (DI-04)	OFF	STANDBY	STANDBY	N/A
CPLEE Elect Temp (AC-06)	N/A	STANDBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	68.3°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	329.4°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	834
Total Commands to Date	21758
Sun Angle	108.6°
Input Power	70.7w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LACE/LSPE STBY & LEAM OFF
Avg Thermal Plate Temp	96.5°F
LACE Temp (AM-41)	149.7°F
LEAM Temp (AJ-11)	194.0°F
HFE Temp Ref 1 (DH-13)	327.4°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	97.3°F

MAR 2/061	3/062	4/063	5/064	6/065	7/066	8/067
1200-1300 ALSEP 17 2100-2200	0600-0700 ALSEP 16 1500-1700 ALSEP 16 C/S HTR OFF (ALSEP 14 PSE HTR ON) ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE	09-1100 ALSEP 12 SIDE ON (ALSEP 14 CPLEE ON) FLIP CAL HFE RBS	0900-1100 (ALSEP 14 C/S HTR ON)	0430-0830 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS 1800-1900	0900-1100
MAR 9/068	**10/069**	**11/070**	**12/071**	**13/072**	**14/073**	**15/074**
0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT
MAR 16/075	**17/076**	**18/077**	**19/078**	**20/079**	**21/080**	**22/081**
NO SUPPORT	2100-2300 ALSEP 17 FLIP CAL HFE RBS	NO SUPPORT ALSEP 16	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST FLIP CAL HFE RBS	0900-1100 ALSEP 17 LACE STDBY LEAM OFF	1700-1900 ALSEP 12 ALSEP 14 FLIP CAL HFE RBS	0800-1200 ALSEP 12 C/S HTR OFF PSE Z MTR OFF 2000-2100

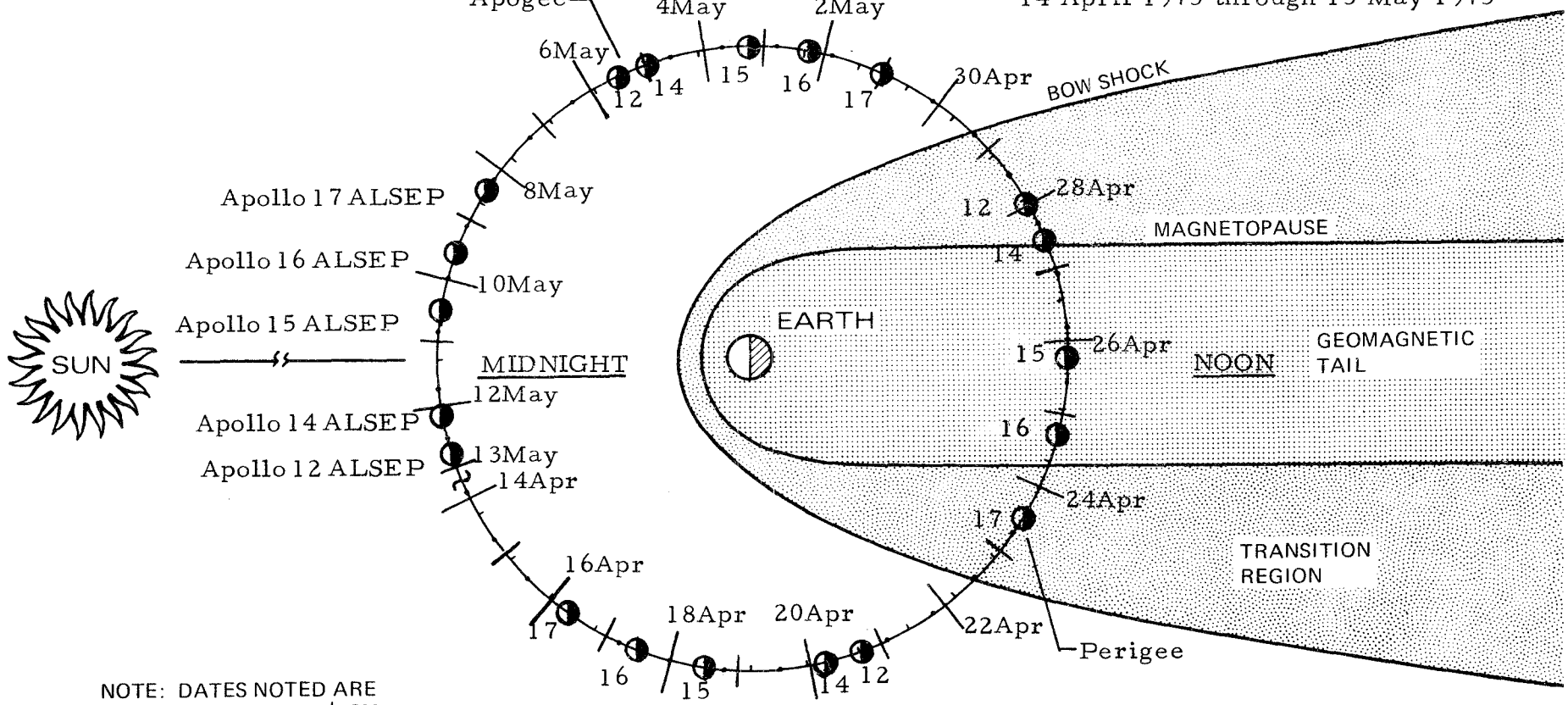
MAR 23/082	24/083	25/084	26/085	27/086	28/086	29/087
0900-1100 ALSEP 12 SIDE OFF	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS	2100-2400 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0000-0100 ALSEP 15 SIDE SPRT 0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES
MAR 30/089	**31/090**	**APR 1/091**	**2/092**	**3/093**	**4/094**	**5/095**
0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2100-2200	0700-0900 ALSEP 17 ALSEP 12 CYCLE SIDE 1600-1700	0100-0200 1000-1200 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR ON FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 12 SIDE ON ALSEP 14 CPLEE ON FLIP CAL HFE RBS	1700-2100 ALSEP 14 C/S HTR ON ALSEP 12 C/S HTR ON PSE Z MTR ON
APR 6	**7/097**	**8/098**	**9/099**	**10/100**	**11/101**	**12/102**
0600-0800	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT

Bendix Aerospace Systems Division

Prepared by: Warren Tosh

MOON POSITIONS RELATIVE TO EARTH-SUN LINE

14 April 1975 through 13 May 1975



NOTE: DATES NOTED ARE MARKED AT 0^h GMT

APOLLO	DAY/HOUR(GMT)				
(ALSEP)	Midnight	Sunrise	Lunation/Noon	Sunset	Midnight
17	8Apr/2103	16Apr/0547	(30)23Apr/1456	1May/0020	8May/0910
16	10Apr/0259	17Apr/1144	(38)24Apr/2059	2May/0619	9May/1504
15	11Apr/0217	18Apr/1103	(47)25Apr/2022	3May/0538	10May/1419
14	12Apr/1944	20Apr/0437	(53)27Apr/1401	4May/2309	12May/0744
12	13Apr/0722	20Apr/1640	(68)28Apr/0142	5May/0950	12May/1920

NASA-JSC

ALSEP PERFORMANCE SUMMARY REPORT

4 April 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
14	*12 Dec 74*	*1408/1434*	28^m	*ORR*	*Station Problem*
12	*01 Jan 75*	*2053/2252*	$1^h 59^m$	*ORR*	*Station Problem*

Apollo 17 ALSEP

Sunset of the scientific station's 29th lunation occurred on 1 April at the Taurus Littrow site. Downlink signal strength is reported at -139.5 ± 2.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods. Telemetry parameter AB-04, which reports the status of the Lunar Atmospheric Composition and the Lunar Ejecta and Meteorite Experiments is indicating a valid condition with the LACE and LEAM ON.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 3 April the lunar surface temperature, as measured by the HFE thermocouples, was 118 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.4°K at probe #1 and 256.8°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON). *On 2 April a check was made of the natural frequency response of the beam. The instrument was commanded to Seismic Gain LOW, Bias IN, Integrator NORMAL, Bias OUT, Seismic Gain HIGH, Integrator SHORT, and Bias IN. The frequency was determined to be 1.6 Hz which is near the 1.5 Hz reading established on 30 November 1973. The instrument was then returned to its normal operating configuration.*

The Lunar Seismic Profiling Experiment is currently in STANDBY. The next 4-day passive listening period is planned for 13 to 18 April 1975.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. The instrument is configured to discriminator level, LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

4 April 1975
G.m.t.: 1300

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 27 March 1975, to 1300 G.m.t., 4 April 1975

Central station	Sunset at the Descartes Site occurred on 2 April for the 37th lunation. The DSS-1 heater (10 watts) was commanded ON at 1335 G.m.t., 3 April, for lunar night operations when the average thermal plate temperature decreased to 13.1°F. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -136 ± 2.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter OUT). The instrument's assembly temperature (DL-07 = 134.1°F) returned onscale, 2 April, at a sun angle of 178.4°. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 982 flip calibration sequences have been executed and verified by the experiment's engineering data. *Science data from the Z-axis has been intermittent since 3 March 1975. Flip calibrations have been discontinued for this lunar night because of the low temperatures of the Z-axis sensor head.*
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 27 March 1975, to 1300 G.m.t., 4 April 1975

Central station	Sunset of the station's 46th lunation occurred at the Hadley Rille Site on 3 April. Transmitter A downlink signal strength is reported between -133.5 and -138.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames) (Apollo 15 ALSEP, SMEAR 47).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 143.6°K on 3 April as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 27 March 1975, to 1300 G.m.t., 4 April 1975

Central station

Sunset at the Apollo 14 site (52nd lunation) will occur on 5 April. Transmitter A signal strength was reported between -136.0 and -141.5 dbm from the 30-foot antenna tracking stations. Since 5 March 1975 when the downlink signal returned, numerous commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.

Passive seismic experiment

The instrument is ON. (DL-07), the internal temperature, was reading 116.1°F on 3 April. The PSE heater has been in Forced OFF since 24 February 1975. Because of the present offscale condition of the instrument's sensor axes it is doubtful that seismic events can be observed. *During this report period the Y-axis returned onscale and went from offscale HIGH to offscale LOW. The table depicts the performance of the PSE from 26 March to 1 April 1975.*

DATE	*G.M.T.*	*X*	*Y*	*Z*	*DL-07 (°F)*	*SUN ANGLE*
26 MAR	*1346*	*L*	*H*	*H*	*L*	*59.7°*
27 MAR	*1403*	*L*	*12.79*	*H*	*L*	*72.0°*
28 MAR	*1358*	*L*	*2.28*	*H*	*115.53*	*84.1°*
29 MAR	*1411*	*L*	*-9.62*	*H*	*122.56*	*96.4°*
30 MAR	*1414*	*L*	*-22.70*	*H*	*127.28*	*108.6°*
31 MAR	*1355*	*L*	*L*	*H*	*129.82*	*120.6°*

Active seismic experiment

The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).

Suprathermal ion detector/cold cathode gauge experiment

The instrument status is unknown.

Charged particle lunar environmental experiment

The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 27 March 1975, to 1300 G.m.t., 4 April 1975

Central station	Sunset of the 67th lunation will occur on 5 April. A signal strength of -140.0 ± 1.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter IN. The instrument's assembly temperature is offscale HIGH and is expected to return onscale on 5 April. No significant seismic events were noted during the real-time support this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE in ON and in the full automatic stepping sequence (0-127 frames) with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 3 April 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1961	1518	1342	1077
Total Commands to Date	22487	15567	27809	15738
Sun Angle	151.7°	157.7°	178.8°	190.7°
Input Power	60.1w	63.7w	66.9w	67.2w
Heater and Power Dumps	All OFF	All OFF	All OFF	DSS-1 ON (10w)
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	72.5°F	74.1°F	48.1°F	13.1°F
PSE Sensor Temp (DL-07)	Offscale HIGH	116.1°F	125.0°F	126.1°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-2.1°C
SWS Module 300 Temp (DW-13)	51.8°C	N/A	OFF	N/A
SIDE Temp (DI-05)	25.4°C	STBY	40.7°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	249.2°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	77.2°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	290.1°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	842
Total Commands to Date	22023
Sun Angle	205.9°
Input Power	72.7w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	20.4°F
LACE Temp (AM-41)	1.4°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	285.3°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	21.4°F

ALSEP SUPPORT SCHEDULE/EVENTS

MAR 23/082	24/083	25/084	26/085	27/086	28/086	29/087
0900-1100 ALSEP 12 SIDE OFF	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS	2100-2400 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0000-0100 ALSEP 15 SIDE SPRT 0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES

MAR 30/089	31/090	APR 1/091	2/092	3/093	4/094	5/095
0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2100-2200	0700-0900 ALSEP 17 ALSEP 12 CYCLE SIDE 1600-1700	0100-0200 1000-1200 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR ON FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 12 SIDE ON ALSEP 14 CPLEE ON FLIP CAL HFE RBS	1900-2245 ALSEP 14 C/S HTR ON ALSEP 12 C/S HTR ON PSE Z MTR ON

APR 6	7/097	8/098	9/099	10/100	11/101	12/102
0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT

ALSEP PERFORMANCE SUMMARY REPORT

11 April 1975
G.m.t.: 1300

Apollo 17 ALSEP

Midnight of the scientific station's 29th lunation occurred on 8 April at the Taurus Littrow site. Downlink signal strength was reported at -137.5 ± 1.5 dbm from transmitter A by the tracking stations with the 30-foot antennas. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods. Telemetry parameter AB-04, which indicates the status of the Lunar Atmospheric Composition and the Lunar Ejecta and Meteorite Experiments is displaying a valid indication with the LACE and LEAM ON.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 9 April lunar surface temperature, as measured by the HFE thermocouples was 108 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment, as of 9 April, is operating and configured for data collection as follows: seismic high gain, *integrator normal, bias in,* post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *Also on 9 April an operational check to reconfirm the natural frequency response of 1.6 cycles/second of the beam was performed.* The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. The next 4-day passive listening period is planned for 13 to 18 April 1975.

The Lunar Atmospheric Composition Experiment is currently ON but is not processing scientific data. The instrument is configured to discriminator level, LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 4 April 1975, to 1300 G.m.t., 11 April 1975

Central station	Midnight at the Descartes Site occurred on 10 April for the 37th lunar night. The DSS-1 heater (10 watts) is ON for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -135.7 ± 1.7 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the limited real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. 982 flip calibration sequences have been executed and verified by the experiment's engineering data. The static Z axis science data and offscale low temperature anomaly continued this week. No flip calibrations of the instrument will be performed until the Z-axis temperature returns onscale during the lunar day.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 4 April 1975, to 1300 G.m.t., 11 April 1975

Central station	Midnight of the station's 46th lunation occurred today at the Hadley Rille Site. Transmitter A downlink signal strength is reported between -134.0 and -139.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. No significant seismic events were observed during the limited real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames). Initiation of SIDE cycling this lunar day was 24 March and not 26 March as previously reported in 27 March 1975 Summary Report.
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 89.2°K on 9 April, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 4 April 1975, to 1300 G.m.t., 11 April 1975

Central station

Midnight at the Apollo 14 site (52nd lunation) will occur on 12 April. Transmitter A signal strength was reported between -139.0 and -144.0 dbm from the 30-foot antenna tracking stations. Since 5 March 1975 when the downlink signal returned, numerous commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.

Passive seismic experiment

The instrument is ON. The internal temperature (DL-07), has been reading offscale LOW since 4 April. The PSE heater has been Forced OFF since 24 February 1975. Even with this present offscale condition of the instrument's sensor axes it is possible that seismic events could be observed. *A low level oscillation was observed on the short period sensor axis during support on 9 April, and prior to that the data had appeared normal throughout this reporting period.*

DATE	*G.M.T.*	*X*	*Y*	*Z*	*DL-07 (°F)*	*SUN ANGLE*
4 APR	*1410*	*L*	*L*	*H*	*L*	*169.5°*
5 APR	*2327*	*L*	*-12.29*	*H*	*L*	*186.4°*
6 APR	*1405*	*L*	*0.89*	*H*	*L*	*193.8°*
7 APR	*1401*	*L*	*18.99*	*H*	*L*	*206.0°*
9 APR	*1415*	*L*	*H*	*H*	*L*	*230.6°*

Active seismic experiment

The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).

Suprathermal ion detector/cold cathode gauge experiment

The instrument status is unknown.

Charged particle lunar environmental experiment

The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 4 April 1975, to 1300 G.m.t., 11 April 1975

Central station	Midnight of the 67th lunation will occur on 13 April at the ALSEP site in the Ocean of Storms. The DSS-1 heater (10 watts) is ON for lunar night operations. A signal strength between -137.0 and -143.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). *On 9 April per the P.I.'s request the instrument was reconfigured to the feedback loop filter OUT.* The instrument's assembly temperature (DL-07) was offscale LOW at a sun angle of 224.4° on 9 April. The Z-axis drive motor is ON to maximize heating in the instrument during lunar night. No significant seismic events were noted during the real-time support periods.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 9 April 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1967	1524	1348	1083
Total Commands to Date	23586	15581	27893	15785
Sun Angle	225.5°	231.4°	252.7°	264.4°
Input Power	59.4w *(59.8w)*	63.4w *(63.8w)*	65.2w *(65.9w)*	67.1w *(67.1w)*
Heater and Power Dumps	All ON	All OFF	All OFF	All ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	9.1°F	9.9°F	7.4°F	33.4°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.5°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-15.2°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.2°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	110.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-69.1°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.6°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	848
Total Commands to Date	22188
Sun Angle	279.7°
Input Power	72.7w *(72.7w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	17.3°F
LACE Temp (AM-41)	-2.3°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.7°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	18.8°F

Value in parenthesis indicates RTG output during last lunation at a similar sun angle.

MAR 23/082	24/083	25/084	26/085	27/086	28/086	29/087
0900-1100 ALSEP 12 SIDE OFF	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS	2100-2400 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0000-0100 ALSEP 15 SIDE SPRT 0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES

MAR 30/089	31/090	APR 1/091	2/092	3/093	4/094	5/095
0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2100-2200	0700-0900 ALSEP 17 ALSEP 12 CYCLE SIDE 1600-1700	0100-0200 1000-1200 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR ON FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 12 SIDE ON ALSEP 14 CPLEE ON FLIP CAL HFE RBS	1900-2245 ALSEP 14 C/S HTR ON ALSEP 12 C/S HTR ON PSE Z MTR ON

APR 6	7/097	8/098	9/099	10/100	11/101	12/102
0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT

APR 13/103	14/104	15/105	16/106	17/107	18/108	19/109
0900-1100 ALSEP 17 LSPE ON HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	0900-1100 ALSEP 16 C/S HTR OFF ALSEP 17 HBR ON	0900-1200 ALSEP 15 TIMER RST ALSEP 16 TIMER RST ALSEP 17 HBR OFF LSPE STDBY FLIP CAL HFE RBS	0900-1100 ALSEP 14 ALSEP 17 LACE STDBY LEAM OFF
APR 20/110	**21/111**	**22/112**	**23/113**	**24/114**	**25/115**	**26/116**
2000-2400 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF	0900-1100 FLIP CAL HFE RBS	0900-1100 ALSEP 12 SIDE OFF ALSEP 14 CPLEE STDBY	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS	0900-1300 ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR OFF ALSEP 15 SIDE SPRT	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LSPE ON HBR ON
APR 27/117	**28/118**	**29/119**	**30/120**	**MAY 1/121**	**2/122**	**3/123**
0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON HBR ON	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 HBR ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 17 LACE ON HBR ON	0900-1100 ALSEP 17 HBR ON ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2000-2100 ALSEP 17 HBR OFF LSPE STDBY	0600-0700 1500-1600	0000-0100 ALSEP 16 C/S HTR ON ALSEP 14 PSE HTR ON 0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 SIDE ON ALSEP 14 CPLEE ON

ALSEP PERFORMANCE SUMMARY REPORT

18 April 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses may not be recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*11 Apr 75*	*0422/0439*	*17^m*	*GWM/BUR*	*Priority Support*
12	*16 Apr 75*	*1446/1455*	*09^m*	*MIL*	*Scheduling*

Apollo 17

Sunrise of the scientific station's 30th lunation occurred on 16 April at the Taurus Littrow site. Downlink signal strength is reported at -137.5 ± 2.5 dbm from transmitter A by the 30-foot antenna tracking stations. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 17 April the lunar surface temperature, as measured by the HFE thermocouples, was 222 ± 8°K. At a depth of 230 cm, the subsurface temperatures was 256.5°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator normal mode, bias in, post amplifier gain at increment 15, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently ON. *A passive listening period of the LSPE was begun at 1415 G.m.t., 13 April, to continue a study of meteoroid impacts and thermal moonquakes. Significant events were noted during the real-time support periods on 13 and 16 April when the LSP high bit rate was monitored in-house. This listening period is being conducted during lunar night and day (Sun Angles 331.0° to 024.0°) and will be terminated on 18 April. This will complete the listening periods as planned for one entire lunation beginning in July 1973. However, two additional periods are planned, one from 26-30 April prior to sunset terminator and the other from 12-16 May prior to sunrise terminator.*

The Lunar Atmospheric Composition Experiment is ON, but is not processing scientific data.

The Lunar Ejecta and Meteorites Experiment is ON.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 11 April 1975, to 1300 G.m.t., 18 April 1975

Central station	Sunrise at the Descartes Site occurred on 17 April for the 38th lunar day. The DSS-1 heater (10 watts) was commanded OFF for lunar day operations on 17 April. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -135.5 ± 2.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the limited real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. *Science data from the Z-axis has been intermittent since 3 March 1975. Flip calibrations have not been accomplished because of the low temperatures of the Z-axis sensor head during this report period.*
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 11 April 1975, to 1300 G.m.t., 18 April 1975

Central station	Sunrise of the station's 47th lunation occurred at the Hadley Rille Site earlier today, 18 April. Transmitter A downlink signal strength is reported at -136.0 ± 2.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station's data subsystem timer outputs. No significant seismic events were observed during the limited real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 83.8°K on 17 April, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 11 April 1975, to 1300 G.m.t., 18 April 1975

Central station	Midnight at the Apollo 14 site occurred on 12 April for the 52nd lunation. Transmitter A signal strength was reported between -135.0 and -142.5 dbm from the 30-foot antenna tracking stations. Since 5 March 1975 when the downlink signal returned, numerous commands have been transmitted to the central station without success. *The DSS-1 heater (10 watts) has been OFF since 20 February 1975. The minimum average thermal plate temperature experienced during this lunar night was 9.76°F.*
Passive seismic experiment	The instrument is ON. All parameters were offscale during this report period. The instrument's heater remains in the Forced OFF configuration as previously reported. The present offscale condition of the instrument's sensor axes does not cancel the possibility that seismic events will be observed. *An increase in noise amplitude has been noted on the long period X and Z-axes while the Y-axes amplitude remains relatively normal.*
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environment experiment	The CPLEE is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 11 April 1975, to 1300 G.m.t., 18 April 1975

Central station	Midnight of the 67th lunation occurred on 13 April. The DSS-1 heater (10 watts) is ON for lunar night operations. A signal strength between -138.0 and -141.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) remains offscale LOW. The Z-axis drive motor is ON to maximize heating in the instrument during lunar night. No significant seismic events were noted during the real-time support periods.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode. *From 13 April to 17 April it was noted that the data output of the sum cups levels 1 through 14 during the instrument's ac calibrate measurements (sequence 15) were LOW. This anomaly was previously noted on 19 June 1972, 19 February, and 12 March 1975.*
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 17 April 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1975	1532	1356	1091
Total Commands to Date	23594	15587	27928	15815
Sun Angle	322.7°	328.7°	349.8°	1.7°
Input Power	59.2w	62.9w	64.7w	66.6w
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	All OFF
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	7.2°F	9.8°F	6.2°F	32.4°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.5°F	125.8°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-16.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	6.6°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	106.5°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-71.1°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.4°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	856
Total Commands to Date	22449
Sun Angle	16.9°
Input Power	71.4w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	All ON
Avg Thermal Plate Temp	55.1°F
LACE Temp (AM-41)	90.6°F
LEAM Temp (AJ-11)	142.0°F
HFE Temp Ref 1 (DH-13)	294.3°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	70.0°F

MAR 23/082	24/083	25/084	26/085	27/086	28/086	29/087
0900-1100 ALSEP 12 SIDE OFF	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS	2100-2400 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0000-0100 ALSEP 15 SIDE SPRT 0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES
MAR 30/089	**31/090**	**APR 1/091**	**2/092**	**3/093**	**4/094**	**5/095**
0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2100-2200	0700-0900 ALSEP 17 ALSEP 12 CYCLE SIDE 1600-1700	0100-0200 1000-1200 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR ON FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 12 SIDE ON ALSEP 14 CPLEE ON FLIP CAL HFE RBS	1900-2245 ALSEP 14 C/S HTR ON ALSEP 12 C/S HTR ON PSE Z MTR ON
APR 6	**7/097**	**8/098**	**9/099**	**10/100**	**11/101**	**12/102**
0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT

APR 13/103	14/104	15/105	16/106	17/107	18/108	19/109
0900-1100 ALSEP 17 LSPE ON HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	0900-1100 ALSEP 16 C/S HTR OFF ALSEP 17 HBR ON	0900-1200 ALSEP 15 TIMER RST ALSEP 16 TIMER RST ALSEP 17 HBR OFF LSPE STDBY FLIP CAL HFE RBS	0900-1100 ALSEP 14 ALSEP 17 LACE STDBY LEAM OFF

APR 20/110	21/111	22/112	23/113	24/114	25/115	26/116
2000-2400 ALSEP 12 C/S HTR OFF PSE Z MTR OFF ALSEP 14 C/S HTR OFF	1100-1300 FLIP CAL HFE RBS	1000-1200 ALSEP 12 SIDE OFF ALSEP 14 CPLEE STDBY	0930-1130 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS	0930-1330 ALSEP 12 CYCLE SIDE ALSEP 14 PSE HTR OFF ALSEP 15 SIDE SPRT	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LSPE ON HBR ON

APR 27/117	28/118	29/119	30/120	MAY 1/121	2/122	3/123
0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON HBR ON	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 HBR ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 17 LACE ON HBR ON	0900-1100 ALSEP 17 HBR ON ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2000-2100 ALSEP 17 HBR OFF LSPE STDBY	0600-0700 1500-1600	0000-0100 ALSEP 16 C/S HTR ON ALSEP 14 PSE HTR ON 0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 SIDE ON ALSEP 14 CPLEE ON

ALSEP PERFORMANCE SUMMARY REPORT

25 April 1975
G.m.t.: 1300

Apollo 17

Noon of the scientific station's 30th lunation occurred on 23 April at the Taurus Littrow site. Downlink signal strength, as reported by the 30-foot antenna tracking stations, is between -138.5 and -143.0 dbm from transmitter A. Automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulse is inhibited by routine transmission of command octal 174 (Delay uplink switchover) during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being accomplished on a periodic basis. On 24 April the lunar surface temperature, as measured by the HFE thermocouples, was 379 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias in, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *On 17 April during the Seismic Gain Low check the experiment slave heater was inadvertently turned OFF permitting the instrument internal temperature (DG-04) to drift offscale LOW. At 1435 G.m.t., 18 April the heater was commanded ON and the temperature returned onscale on 19 April. At approximately 0800 G.m.t., 20 April, the temperature had stabilized at 49.2°C as reported by the Hawaii Tracking Station. At 0203 G.m.t., 21 April, during real-time support a significant seismic event was detected by the experiment in conjunction with the Apollo 12, 14, and 16 PSEs. The event was noted to have lasted approximately 45 minutes.* The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. *The 4-day passive listening period that started on 13 April was concluded at 1412 G.m.t., 18 April (sun angles 327.6° - 28.7°). This period completed one entire lunation in the high bit rate mode. Additional 4-day listening periods are scheduled for 26-30 April and 12-16 May 1975.*

The Lunar Atmospheric Composition Experiment is in STANDBY.

The Lunar Ejecta and Meteorites Experiment is currently OFF.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 18 April 1975, to 1300 G.m.t., 25 April 1975

On 21 April the Apollo 16 ALSEP completed three years of Lunar operation.

Central station	Noon of the 38th lunation occurred on 24 April 1975. The DSS-1 heater (10 watts) is OFF for lunar day operation. The 18-hour timer output pulses continue to be inhibited. The 30-foot antenna tracking stations report a signal strength between -131.5 and -139.0 dbm from transmitter B.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). The instrument's sensor temperature (DL-07) indicated offscale HIGH on 23 April, at a sun angle of 74.6°. *A significant seismic event was observed during the real-time support period on 21 April. Activity was noted on all axes starting at 0203 G.m.t. and lasting approximately 45 minutes. The Apollo 12 and 14 PSEs, and the Apollo 17 LSG also detected this activity.*
Lunar surface magnetometer experiment	The LSM is currently ON and recording data as the moon passes through the earth's geomagnetic tail. 988 flip calibration sequences have been executed and verified by the experiment's engineering data since activation. The Z axis continued to indicate invalid science data throughout this reporting period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 18 April 1975, to 1300 G.m.t., 25 April 1975

Central station	Noon of the station's 47th lunation will occur later today. Transmitter A downlink signal strength was reported at -135.2 ± 3.2 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18 hour timer output pulse functions. The instrument's sensor temperature (DL-07) went offscale high on 24 April at a sun angle of 74.8°. No significant seismic events were noted during the periodic real-time support periods. *It should be noted that this ALSEP was not monitored in mission control on 21 April during the seismic event period previously mentioned on the other PSEs.*
Suprathermal ion detector/cold cathode gauge experiment	The instrument is currently in STANDBY. Cyclic commanding of the experiment was initiated for the remainder of this lunar day on 23 April (Apollo 15 ALSEP, SMEAR 47). *During real-time support on 19 April it was noted the instrument received an octal 107 (Load 4, SIDE Master Reset) between the support periods of 18 and 19 April. As a command verification word (CVW) had not been reported in the ALSEP 15 downlink it is assumed that this functional change was generated internally in the instrument. Octals 104, 105, and 106 were sent to the instrument and the command register was cleared at 1401 G.m.t., 19 April, with octal 110 (execution command).*
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 365.7°K on 24 April, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 18 April 1975, to 1300 G.m.t., 25 April 1975

Central station	Sunrise at the Apollo 14 site (53rd lunation) occurred on 20 April. Transmitter A signal strength was reported at -137.0 ± 2.5 dbm from the 30-foot antenna tracking stations. Since 5 March 1975 when the downlink signal returned, numerous commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.
Passive seismic experiment	The instrument is ON. *At 0203 G.m.t., 21 April a significant seismic event occurred and was detected by the X & Y axes long period sensors. This event was also detected by the ALSEP 12 and 16 PSEs, and the ALSEP 17 LSG experiment. Throughout this reporting period the Y axis has appeared normal and the X axis has intermittently shown a normal response. On 24 April, during real-time support the short period Z axis appears to show a normal response.* All parameters are indicating offscale as previously reported last week. The PSE heater has been in Forced OFF since 24 February 1975.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 18 April 1975, to 1300 G.m.t., 25 April 1975

Central station	Sunrise of the 68th lunar day occurred on 20 April. The DSS-1 heater (10 watts) is OFF for lunar day operations. A signal strength of -138.7 ± 2.2 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z motor was commanded OFF on 21 April to minimize heating in the instrument. *A significant seismic event was observed on 21 April during the real-time support period on all the long period axes.*
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode. *From 13 April to 24 April it has been observed that the data output of the sum cups levels 1 through 14 during the instrument's ac calibrate measurements (sequence 15) were LOW. On 21 April 1975 the ac calibrate measurements were intermittent and appeared normal during the end of one support period. This anomaly has previously occurred as noted in last week's Summary Report.*
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1830 G.m.t., 24 April 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1982	1539	1363	1098
Total Commands to Date	23671	15603	28046	15911
Sun Angle	49.8°	55.8°	76.9°	88.8°
Input Power	59.7w	63.3w	65.0w	66.6w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF&SIDE STBY	ASE OFF
Avg Thermal Plate Temp	89.9°F	106.8°F	110.4°F	103.1°F
PSE Sensor Temp (DL-07)	127.3°F	Offscale LOW	Offscale HIGH	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	45.8°C
SWS Module 300 Temp (DW-13)	60.0°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	STBY	N/A
CCGE Temp (DI-04)	OFF	STBY	STBY	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	61.6°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	327.0°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	863
Total Commands to Date	22926
Sun Angle	104.0°
Input Power	70.3w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSPE/LACE STBY & LEAM OFF
Avg Thermal Plate Temp	94.8°F
LACE Temp (AM-41)	149.7°F
LEAM Temp (AJ-11)	188.0°F
HFE Temp Ref 1 (DH-13)	327.2°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	95.4°F

APR 13/103	14/104	15/105	16/106	17/107	18/108	19/109
0900-1100 ALSEP 17 LSPE ON HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	0900-1100 ALSEP 16 C/S HTR OFF ALSEP 17 HBR ON	0900-1200 ALSEP 15 TIMER RST ALSEP 16 TIMER RST ALSEP 17 HBR OFF LSPE STDBY FLIP CAL HFE RBS	0900-1100 ALSEP 14 ALSEP 17 LACE STDBY LEAM OFF

APR 20/110	21/111	22/112	23/113	24/114	25/115	26/116
2000-2400 ALSEP 12 C/S HTR OFF PSE Z MTR OFF	1100-1300 FLIP CAL HFE RBS	1000-1200 ALSEP 12 SIDE OFF	0930-1130 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS	0930-1330 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LSPE ON HBR ON

APR 27/117	28/118	29/119	30/120	MAY 1/121	2/122	3/123
0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON HBR ON	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 HBR ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 17 LACE ON HBR ON	0900-1100 ALSEP 17 HBR ON ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2000-2100 ALSEP 17 HBR OFF LSPE STDBY	0600-0700 1500-1600	0000-0100 ALSEP 16 C/S HTR ON 0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 SIDE ON

ALSEP PERFORMANCE SUMMARY REPORT

2 May 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following period. It must be noted that this data loss is non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
14	*27 Apr 75*	*0845/0919*	*34^m*	*QUI*	*Station Problem*

Apollo 17 ALSEP

Sunset of the 30th lunation occurred on 1 May at the Taurus Littrow site. Downlink signal strength is reported at -139.0 ± 3.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods. Telemetry parameter AB-04, which reports the status of the Lunar Atmospheric Composition and the Lunar Ejecta and Meteorite Experiments, is valid with the LACE and LEAM ON.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 1 May the lunar surface temperature, as measured by the HFE thermocouples, was 125 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.5°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator normal mode, bias in, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. A special passive listening period of the LSPE was begun at 1515 G.m.t., 26 April, and terminated at 0053 G.m.t., 1 May, to continue a study of meteoroid impacts and thermal moonquakes. Significant events were noted during each real-time support period when the LSP high bit rate was monitored in-house. This listening period was conducted during sunset terminator (Sun Angles 126.6° to180.3°). Another special period is planned from 12-16 May prior to the sunrise terminator.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. The instrument is configured to discriminator level, LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON. The command register again contained octal 132 on 1 May. No attempts were made by mission control to clear the command.

ALSEP PERFORMANCE SUMMARY REPORT (continued)

2 May 1975
G.m.t.: 1300

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 25 April 1975, to 1300 G.m.t., 2 May 1975

Central station	Sunset at the Descartes Site occurred on 2 May for the 38th lunation, The DSS-1 heater (10 watts) will be commanded ON, later 2 May, for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -136.0 ± 3.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter OUT). The instrument assembly temperature (DL-07) continues to be offscale HIGH during this report period. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 984 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 25 April 1975, to 1300 G.m.t., 2 May 1975

Central station	Sunset of the 47th lunation will occur at the Hadley Rille Site on 3 May. Transmitter A downlink signal strength is reported at -135.5 ± 3.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames) (Apollo 15 ALSEP, SMEAR 47).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 302.8°K on 1 May as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 25 April 1975, to 1300 G.m.t., 2 May 1975

Central station

Sunset at the Apollo 14 site (53rd lunation) will occur on 4 May. Transmitter A signal strength was reported at -138.5 ± 2.5 dbm from the 30-foot antenna tracking stations. Since 5 March 1975 when the downlink signal returned, numerous commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.

Passive seismic experiment

The instrument is ON. (DL-07), the internal temperature, was reading 124.6°F on 1 May. The PSE heater has been in Forced OFF since 24 February 1975. *During this report period the Y-axis returned onscale and went from offscale HIGH to offscale LOW. The short period Z-axis appeared to be responding normally during this report period. The table depicts the performance of the PSE from 24 April to 1 May 1975.*

DATE	*G.M.T.*	*X*	*Y*	*Z*	*DL-07 (°F)*	*SUN ANGLE*
24 APR	*1436*	*L*	*H*	*H*	*L*	*53.8°*
25 APR	*1438*	*L*	*12.59*	*H*	*L*	*65.9°*
26 APR	*1400*	*L*	*-0.25*	*H*	*107.95*	*77.8°*
27 APR	*1401*	*L*	*-9.17*	*H*	*115.67*	*90.0°*
28 APR	*1349*	*L*	*-22.50*	*H*	*121.36*	*102.1°*
29 APR	*1405*	*L*	*L*	*0.00*	*125.00*	*114.4°*
30 APR	*1339*	*L*	*L*	*0.00*	*126.00*	*126.4°*
1 MAY	*1101*	*L*	*L*	*0.09*	*124.63*	*137.3°*

No significant seismic events were noted during real-time this report period.

Active seismic experiment

The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).

Suprathermal ion detector/cold cathode gauge experiments

The instrument status is unknown.

Charged particle lunar environmental experiment

The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 25 April 1975, to 1300 G.m.t., 2 May 1975

Central station	Sunset of the 68th lunation will occur on 5 May. A signal strength of -139.5 ± 2.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations. *At 1117 G.m.t., 29 April, the Hawaii Tracking Station reported a CVW (octal 017, 7-watt PDR ON) in the Apollo 12 ALSEP downlink. The PDR was commanded OFF (octal 021) at 1142 G.m.t. by Mode I, through Hawaii at the direction of mission control. During real-time support, later 29 April, it was confirmed the 7-watt PDR was OFF.*
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT. The instrument's assembly temperature is offscale HIGH and is expected to return onscale on 4 May. No significant seismic events were noted during the real-time support this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. *From 13 April to 30 April the data output of the sum cups levels 1 through 14 during the instrument ac calibrate measurements (sequence 15) were LOW. The measurements returned to normal during real-time support on 30 April. This anomaly was previously noted on 19 June 1972, 19 February, and 12 March 1975.*
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day. *During real-time support on 26 April the SIDE experienced an unexpected mode change to command register X10 at a temperature of 53.68°C. The mode change was cleared by commanding the instrument to OFF to cool down prior to turn ON during the next support period.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1100 G.m.t., 1 May 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1989	1546	1370	1105
Total Commands to Date	23718	15621	28162	15998
Sun Angle	131.3°	137.2°	158.3°	170.2°
Input Power	59.7w	63.3w	65.5w	66.3w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	83.0°F	93.4°F	84.5°F	57.1°F
PSE Sensor Temp (DL-07)	Offscale HIGH	124.6°F	125.8°F	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	36.3°C
SWS Module 300 Temp (DW-13)	60.0°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	68.8°C	N/A
CCGE Temp (DI-04)	OFF	STBY	316.2°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	75.7°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	303.0°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	870
Total Commands to Date	23131
Sun Angle	185.4°
Input Power	72.6w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	29.1°F
LACE Temp (AM-41)	18.2°F
LEAM Temp (AJ-11)	-7.7°F
HFE Temp Ref 1 (DH-13)	284.8°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	30.4°F

APR 13/103	14/104	15/105	16/106	17/107	18/108	19/109
0900-1100 ALSEP 17 LSPE ON HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	0900-1100 ALSEP 16 C/S HTR OFF ALSEP 17 HBR ON	0900-1200 ALSEP 15 TIMER RST ALSEP 16 TIMER RST ALSEP 17 HBR OFF LSPE STDBY FLIP CAL HFE RBS	0900-1100 ALSEP 14 ALSEP 17 LACE STDBY LEAM OFF

APR 20/110	21/111	22/112	23/113	24/114	25/115	26/116
2000-2400 ALSEP 12 C/S HTR OFF PSE Z MTR OFF	1100-1300 FLIP CAL HFE RBS	1000-1200 ALSEP 12 SIDE OFF	0930-1130 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS	0930-1330 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LSPE ON HBR ON

APR 27/117	28/118	29/119	30/120	MAY 1/121	2/122	3/123
0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON HBR ON	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 HBR ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 17 LACE ON HBR ON	0900-1100 ALSEP 17 HBR ON ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2000-2100 ALSEP 17 HBR OFF LSPE STDBY	0600-0700 1500-1600	0000-0100 ALSEP 16 C/S HTR ON 0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 SIDE ON

MAY 4/124	5/125	6/126	7/127	8/128	9/129	10/130
0900-1100 ALSEP 14	0500-0900 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS 1600-1700	0900-1100	0700-0900 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS ALSEP 17 5A174 Mode I 2145 G.m.t.	NO SUPPORT
MAY 11/131	**12/132**	**13/133**	**14/134**	**15/135**	**16/136**	**17/137**
NO SUPPORT	0900-1100 ALSEP 17 LSPE ON HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 16 ALSEP 17 HBR OFF LSPE STDBY FLIP CAL HFE RBS	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST
MAY 18/138	**19/139**	**20/140**	**21/141**	**22/142**	**23/143**	**24/144**
0900-1100 LACE STDBY LEAM OFF	0900-1100 ALSEP 14 ALSEP 12 FLIP CAL HFE RBS	0800-1200 ALSEP 12 C/S HTR OFF PSE Z MTR OFF 2000-2100	0900-1100 FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS 2100-2400 ALSEP 15 SIDE SPRT	0000-0100 ALSEP 15 SIDE SPRT 2200-2400 LUNAR ECLIPSE

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ALSEP PERFORMANCE SUMMARY REPORT

9 May 1975
G.m.t.: 1300

Remote site coverage for recording of ALSEP downlink data was not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
14	*02 May 75*	*1022/1027*	*05^m*	*QUI*	*Station Problem*
16	*02 May 75*	*2001/2012*	*11^m*	*ORR*	*Station Problem*
12	*02 May 75*	*2012/2024*	*12^m*	*ORR*	*Station Problem*
12	*02 May 75*	*2150/2255*	*$01^h 05^m$*	*ORR*	*Station Problem*

Apollo 17 ALSEP

Midnight of the scientific station's 30th lunation occurred on 8 May at the Taurus Littrow site. Downlink signal strength was reported at -136.2 ± 2.7 dbm from transmitter A by the tracking stations with the 30-foot antennas. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 7 May lunar surface temperature, as measured by the HFE thermocouples was 109 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.5°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator normal mode, bias in, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is in STANDBY. The next 4-day high bit rate passive listening period is planned for sun angles 321° to 10° from 12 to 16 May 1975.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. The instrument is configured to discriminator level, LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON. The octal 132 that was contained in the command register on 1 May, was cleared out on 3 May, by sending command execute octal 134 after the total loading of the command register (octals 123, 124, 125, 127, 132, and 133). Since 3 May 1975 the command register has maintained its normal configuration.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 2 May 1975, to 1300 G.m.t., 9 May 1975

Central station	Midnight at the Descartes Site will occur later today for the 38th lunar night. The DSS-1 heater (10 watts) is ON for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -136.0 ± 3.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). The instrument assembly temperature (DL-07 = 132.5°F) returned onscale, 2 May, at a sun angle of 179.2°. No significant seismic events were noted during the limited real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. 998 flip calibration sequences have been executed and verified by the experiment engineering data. The static Z-axis science data and low temperature anomaly continued this week. *Flip calibrations of the instrument were discontinued on 5 May 1975 due to the low temperature of the Z-axis sensor and will be resumed when the temperature returns to a near normal value. The sensor temperature appears to have stabilized at approximately -30°C during this period.*
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 2 May 1975, to 1300 G.m.t., 9 May 1975

Central station	Midnight of the 47th lunation will occur on 10 May at the Hadley Rille Site. Transmitter A downlink signal strength is reported between -133.0 and -139.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were observed during the limited real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 90.6°K on 7 May, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 2 May 1975, to 1300 G.m.t., 9 May 1975

Central station

Midnight at the Apollo 14 site (53rd lunation) will occur on 12 May. Transmitter A signal strength was reported between -138.0 and -143.0 dbm from the 30-foot antenna tracking stations. Since 5 March 1975 when the downlink signal returned, numerous commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.

Passive seismic experiment

The instrument is ON. The internal temperature (DL-07), has been reading offscale LOW since 4 May. The PSE heater has been in Forced OFF since 24 February 1975. *During this report period the X and Y axes sensors appeared to exhibit normal responses. Since 6 May 1975 the short period Z axis sensor appears to display an invalid response. The following table depicts the performance of the PSE from 2 May to 7 May 1975.*

DATE	*G.M.T.*	*X*	*Y*	*Z*	*DL-07 (°F)*	*SUN ANGLE*
2 May	*1402*	*L*	*L*	*H*	*117.48*	*151.0°*
3 May	*1355*	*L*	*L*	*-0.01*	*107.23*	*163.1°*
4 May	*1355*	*L*	*L*	*-0.01*	*L*	*175.3°*
5 May	*1009*	*L*	*-22.50*	*-0.01*	*L*	*185.6°*
6 May	*1412*	*L*	*0.35*	*-0.008*	*L*	*199.9°*
7 May	*1229*	*L*	*16.66*	*-0.008*	*L*	*211.3°*
7 May	*1348*	*L*	*18.34*	*-0.008*	*L*	*211.9°*

No significant seismic events were noted during real-time this report period.

Active seismic experiment

The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).

Suprathermal ion detector/cold cathode gauge experiments

The instrument status is unknown.

Charged particle lunar environmental experiment

The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 2 May 1975, to 1300 G.m.t., 9 May 1975

Central station	Midnight of the 68th lunation will occur on 12 May at the ALSEP site in the Ocean of Storms. The DSS-1 heater (10 watts) is ON for lunar night operations. A signal strength between -138.0 and -144.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07 = 135.1°F) returned onscale at a sun angle of 169.2° on 4 May. The Z-axis drive motor is ON to maximize heating in the instrument during lunar night. No significant seismic events were noted during the real-time support periods.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode. Data output of the sum cup levels 1 through 14 during the instrument ac calibrate measurements (sequence 15) were normal this reporting period.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1400 G.m.t., 7 May 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1973	1530	1344	1089
Total Commands to Date	23805	15625	28291	16105
Sun Angle	206.1°	212.0°	233.2°	245.0°
Input Power	59.3w *(60.6w)*	62.3w *(63.4w)*	65.1w *(65.5w)*	66.6w *(67.1w)*
Heater and Power Dumps	All ON	All OFF	All OFF	All ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	9.1°F	10.1°F	7.1°F	33.4°F
PSE Sensor Temp (DL-07)	126.3°F	Offscale LOW	124.6°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-8.9°C
SWS Module 300 Temp (DW-13)	-14.8°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.2°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	112.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-63.0°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.7°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	854
Total Commands to Date	23364
Sun Angle	260.2°
Input Power	72.2w *(72.7w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	17.3°F
LACE Temp (AM-41)	-0.5°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	284.9°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	18.8°F

Value in parenthesis indicates RTG output during last lunation at a similar sun angle.

APR 13/103	14/104	15/105	16/106	17/107	18/108	19/109
0900-1100 ALSEP 17 LSPE ON HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	0900-1100 ALSEP 16 C/S HTR OFF ALSEP 17 HBR ON	0900-1200 ALSEP 15 TIMER RST ALSEP 16 TIMER RST ALSEP 17 HBR OFF LSPE STDBY FLIP CAL HFE RBS	0900-1100 ALSEP 14 ALSEP 17 LACE STDBY LEAM OFF

APR 20/110	21/111	22/112	23/113	24/114	25/115	26/116
2000-2400 ALSEP 12 C/S HTR OFF PSE Z MTR OFF	1100-1300 FLIP CAL HFE RBS	1000-1200 ALSEP 12 SIDE OFF	0930-1130 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS	0930-1330 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LSPE ON HBR ON

APR 27/117	28/118	29/119	30/120	MAY 1/121	2/122	3/123
0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON HBR ON	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 HBR ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 17 LACE ON HBR ON	0900-1100 ALSEP 17 HBR ON ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2000-2100 ALSEP 17 HBR OFF LSPE STDBY	0600-0700 1500-1600	0000-0100 ALSEP 16 C/S HTR ON 0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 15 ALSEP 12 SIDE ON

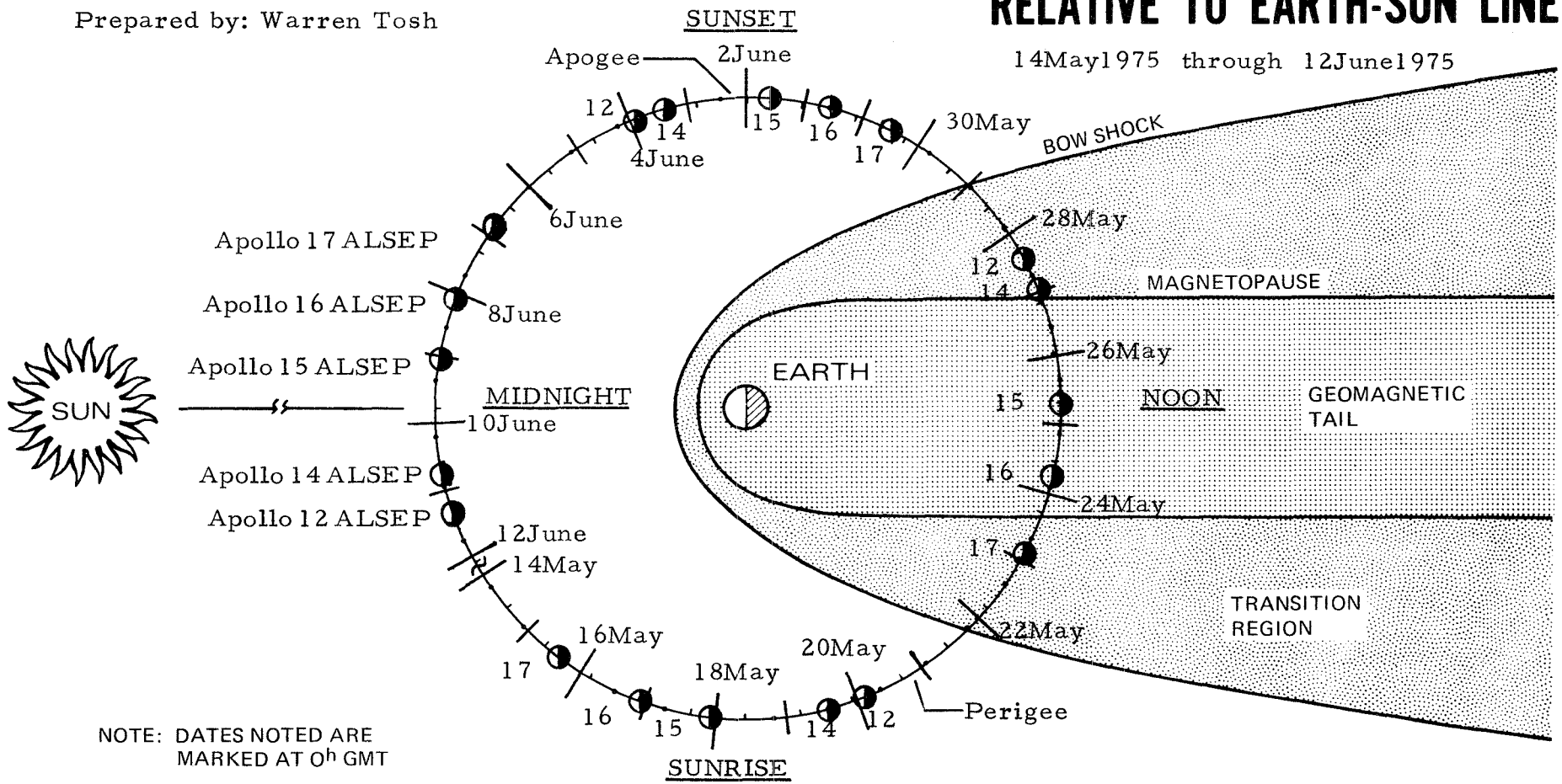
MAY 4/124	5/125	6/126	7/127	8/128	9/129	10/130
0900-1100 ALSEP 14	0500-0900 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS 1600-1700	0900-1100	0700-0900 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS ALSEP 17 5A174 Mode I 2145 G.m.t.	NO SUPPORT
MAY 11/131	**12/132**	**13/133**	**14/134**	**15/135**	**16/136**	**17/137**
NO SUPPORT	0900-1100 ALSEP 17 LSPE ON HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 16 ALSEP 17 HBR OFF LSPE STDBY FLIP CAL HFE RBS	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST
MAY 18/138	**19/139**	**20/140**	**21/141**	**22/142**	**23/143**	**24/144**
0900-1100 LACE STDBY LEAM OFF	0900-1100 ALSEP 14 ALSEP 12 FLIP CAL HFE RBS	0800-1200 ALSEP 12 C/S HTR OFF PSE Z MTR OFF 2000-2100	0900-1100 FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS 2100-2400 ALSEP 15 SIDE SPRT	0000-0100 ALSEP 15 SIDE SPRT 2200-2400 LUNAR ECLIPSE

Bendix Aerospace Systems Division

Prepared by: Warren Tosh

MOON POSITIONS RELATIVE TO EARTH-SUN LINE

14May1975 through 12June1975



NOTE: DATES NOTED ARE MARKED AT 0^h GMT

APOLLO	DAY/HOUR(GMT)				
(ALSEP)	Midnight	Sunrise	Lunation/Noon	Sunset	Midnight
17	8May/0910	15May/1741	(31)23May/0238	30May/1149	6June/2031
16	9May/1504	16May/2335	(39)24May/0839	31May/1747	8June/0222
15	10May/1419	17May/2253	(48)25May/0801	1June/1705	9June/0136
14	12May/0744	19May/1624	(54)27May/0136	3June/1033	10June/1859
12	12May/1920	20May/0417	(69)27May/1316	3June/2119	11June/0635

ALSEP PERFORMANCE SUMMARY REPORT

16 May 1975
G.m.t.: 1300

A total eclipse of the moon will occur on 25 May 1975. The eclipse will begin with the entry of the moon into the penumbra at 0259 G.m.t. and will end as the moon exits the penumbra at 0838 G.m.t. The duration will be 5 hours and 39 minutes and the magnitude will be 1.431. All ALSEPs will experience total darkness during the eclipse.

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses may not be recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
12	*7-8 May 75*	*2344/0041*	57^m	*ULA*	*Station Problem*
ALL	*8 May 75*	*0131/0247*	1^h16^m	*ULA/BUR*	*Priority Support*
12	*10 May 75*	*0340/0343*	03^m	*GWM*	*Station Problem*
12	*10 May 75*	*0807/0809*	02^m	*MAD*	*Station Problem*
ALL	*14 May 75*	*0748/0810*	22^m	*GWM/MAD*	*Priority Support*

Apollo 17

Sunrise of the scientific station's 31st lunation occurred on 15 May at the Taurus Littrow site. Downlink signal strength is reported at -137.5 ± 2.5 dbm from transmitter A by the 30-foot antenna tracking stations. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 14 May the lunar surface temperature, as measured by the HFE thermocouples, was 106 ± 8°K. At a depth of 230 cm, the subsurface temperatures was 256.5°K at probe #1 and 256.9 °K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator normal mode, bias in, *post amplifier gain at increment 1*, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently ON. *A passive listening period of the LSPE was begun at 1530 G.m.t., 12 May, to continue a study of meteoroid impacts and thermal moonquakes. Small events were noted during the real-time support period on 12 May, when the LSP high bit rate was monitored in-house. This listening period is being conducted during lunar night and day (Sun Angles 321.0° to 10.0°) and will be terminated later today, 16 May. This will complete the two additional listening periods which were planned, one prior to sunset terminator and the other prior to sunrise terminator. A special listening period is scheduled during the lunar eclipse on 24-25 May 1975.*

ALSEP PERFORMANCE SUMMARY REPORT (CONTINUED)

16 May 1975
G.m.t.: 1300

The Lunar Atmospheric Composition Experiment is ON, but is not processing scientific data.

The Lunar Ejecta and Meteorites Experiment is ON.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 9 May 1975, to 1300 G.m.t., 16 May 1975

Central station	Sunrise at the Descartes Site will occur later today 16 May, for the 39th lunar day. The DSS-1 heater (10 watts) will be commanded OFF for lunar day operations on 17 May. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported between -133.5 and -138.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. Flip calibrations have not been accomplished this lunar night because of the low temperatures of the Z-axis sensor head.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 9 May 1975, to 1300 G.m.t., 16 May 1975

Central station	Midnight of the station's 47th lunation occurred at the Hadley Rille Site on 10 May. Transmitter A downlink signal strength is reported at -135.5 ± 2.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were observed during the real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames).
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 84.6°K on 14 May, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 9 May 1975, to 1300 G.m.t., 16 May 1975

Central station

Midnight at the Apollo 14 site occurred on 12 May for the 53rd lunation. Transmitter A signal strength was reported at -139.0 ± 2.0 dbm from the 30-foot antenna tracking stations. Since 5 March 1975, when the downlink signal returned, numerous commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. The minimum average thermal plate temperature experienced during this lunar night was 9.4°F.

Passive seismic experiment

The instrument is ON. The internal temperature (DL-07) has been reading offscale LOW since 4 May. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y axis sensor appeared to exhibit normal responses. Since 6 May 1975 the short period Z axis sensor appears to display an invalid response. The following table depicts the performance of the PSE from 7 May to 14 May 1975.

DATE	G.M.T.	X	Y	Z	DL-07 (°F)	SUN ANGLE
7 May	1229	L	16.66	-0.008	L	211.3°
7 May	1348	L	18.34	-0.008	L	211.9°
9 May	1611	L	H	-0.008	L	237.6°
12 May	1447	L	H	-0.008	L	273.6°
14 May	1529	L	H	-0.000	L	298.4°

No significant seismic events were noted during real-time this report period.

Active seismic experiment

The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).

Suprathermal ion detector/cold cathode gauge experiment

The instrument status is unknown.

Charged particle lunar environment experiment

The CPLEE is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 9 May 1975, to 1300 G.m.t., 16 May 1975

Central station	Midnight of the 68th lunation occurred on 12 May. The DSS-1 heater (10 watts) is ON for lunar night operations. A signal strength of -138.5 $\pm$ 2.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) has been offscale LOW since 9 May. The Z-axis drive motor is ON to maximize heating in the instrument during lunar night. No significant seismic events were noted during the real-time support periods.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode. *On 12 May and 14 May it was noted that the data output of the sum cups levels 1 through 14 during the instrument ac calibrate measurements (sequence 15) were LOW. This anomaly has been previously reported.*
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 14 May 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2002	1559	1383	1118
Total Commands to Date	23819	15625	28360	16119
Sun Angle	292.2°	298.2°	319.3°	331.2°
Input Power	58.6w	62.7w	64.7w	66.6w
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	DSS-1 (10w) ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	6.5°F	9.4°F	6.2°F	32.2°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.2°F	125.8°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-8.9°C
SWS Module 300 Temp (DW-13)	-16.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	6.6°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	106.5°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-71.1°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.4°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	883
Total Commands to Date	23545
Sun Angle	346.4°
Input Power	71.8w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	All ON
Avg Thermal Plate Temp	15.6°F
LACE Temp (AM-41)	-2.3°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.0°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	20.1°F

MAY 4/124	5/125	6/126	7/127	8/128	9/129	10/130
0900-1100 ALSEP 14	0500-0900 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS 1600-1700	0900-1100	0700-0900 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS ALSEP 17 5A174 Mode I 2145 G.m.t.	NO SUPPORT
MAY 11/131	**12/132**	**13/133**	**14/134**	**15/135**	**16/136**	**17/137**
NO SUPPORT	0900-1100 ALSEP 17 LSPE ON HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 16 ALSEP 17 HBR OFF LSPE STDBY FLIP CAL HFE RBS	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST
MAY 18/138	**19/139**	**20/140**	**21/141**	**22/142**	**23/143**	**24/144**
0900-1100 LACE STDBY LEAM OFF	0900-1100 ALSEP 14 ALSEP 12 FLIP CAL HFE RBS	0800-1200 ALSEP 12 C/S HTR OFF PSE Z MTR OFF 2000-2100	0900-1100 FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS 2100-2400 ALSEP 15 SIDE SPRT	0000-0100 ALSEP 15 SIDE SPRT 2200-2400 LUNAR ECLIPSE

ALSEP PERFORMANCE SUMMARY REPORT

23 May 1975
G.m.t.: 1300

A total eclipse of the moon will occur on 25 May 1975. The eclipse will begin with the entry of the moon into the penumbra at 0259 G.m.t. and will end as the moon exits the penumbra at 0838 G.m.t. All ALSEPs will experience total darkness during the eclipse. Real time support is scheduled for mission control to monitor the event during this time period.

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses may not be recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*21 May 75*	*1003/1005*	*02^m*	*HAW*	*Station Problem*
ALL	*21 May 75*	*2345/2355*	*10^m*	*MIL*	*Station Problem*

Apollo 17

Noon of the 31st lunation occurred today at the Taurus Littrow site. Downlink signal strength as reported from the 30-foot antenna tracking stations was between -139.0 and -142.5 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment continues operating in the gradient mode with all sensors being sampled in full sequence and periodic ring bridge surveys being accomplished. On 22 May, the lunar surface temperature, as measured by the HFE's thermocouples, was 370 ± 8°K. Subsurface temperature at 230 cm depth was 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator normal mode, bias in, *post amplifier gain at increment 1 since 9 May*, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Surface Profiling Experiment is in STANDBY. A special passive listening period of the LSPE was begun at 1530 G.m.t., 12 May, and terminated at 1343 G.m.t., 16 May, to continue a study of meteoroid impacts and thermal moonquakes. No significant events were noted during each real-time support period when the LSP high bit rate was monitored in-house. This listening period was conducted during sunrise terminator (Sun Angles 322.2° to 10.3°). The next passive listening period is scheduled for 25 May during the lunar eclipse.

The Lunar Atmospheric Composition Experiment is currently in STANDBY. The instrument was commanded to STANDBY at 1408 G.m.t., 17 May, for the lunar day.

The Lunar Ejecta and Meteorites Experiment is presently OFF. The instrument was commanded OFF at 1431 G.m.t., 18 May 1975, when the mirror temperature (AJ-11) was 180.5°F.

ALSEP PERFORMANCE SUMMARY REPORT (continued)

23 May 1975
G.m.t.: 1300

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch, TN3, telephone 333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 16 May 1975, to 1300 G.m.t., 23 May 1975

Central station	Noon of the 39th lunation will occur on 24 May 1975. The DSS-1 heater (10 watts) is OFF for lunar day operation. The 18-hour timer output pulses continue to be inhibited. The 30-foot antenna tracking stations report a signal strength between -134.0 and -138.0 dbm from transmitter B.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the periodic real time support periods.
Lunar surface magnetometer experiment	The LSM is currently ON and recording data as the moon passes through the earth's geomagnetic tail. 1002 flip calibration sequences have been executed and verified by the experiment engineering data since activation. The Z axis continued to indicate invalid science data throughout this reporting period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 16 May 1975, to 1300 G.m.t., 23 May 1975

Central station	Sunrise at this ALSEP station occurred on 17 May (48th lunation). Transmitter A downlink signal strength was reported at -135.0 ± 2.5 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18 hour timer output pulse functions. No significant seismic events were noted during the periodic real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is currently in STANDBY. Cyclic commanding of the experiment was initiated for the remainder of this lunar day on 22 May (Apollo 15 ALSEP, SMEAR 47). *During real-time support on 19 May, it was noted the instrument received an octal 107 (Load 4, SIDE Master Reset) between the support periods of 18 and 19 May. As a command verification word (CVW) had not been reported in the ALSEP 15 downlink it is assumed that this functional change was generated internally in the instrument. Octals 104, 105, and 106 were sent to the instrument and the command register was cleared at 1358 G.m.t., 19 May, with octal 110 (execution command).*
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 354.0°K on 22 May as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 16 May 1975, to 1300 G.m.t., 23 May 1975

Central station	Sunrise at the Apollo 14 site (54th lunation) occurred on 19 May. Transmitter A signal strength was reported at -137.0 ± 1.5 dbm from the 30-foot antenna tracking stations. Since 5 March 1975, when the downlink signal returned, numerous commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.
Passive seismic experiment	The instrument is ON. The long period X and Y axes sensors and the instrument internal temperature (DL-07) are indicating offscale as previously reported last week, however this does not preclude the possibility of observing seismic events. The PSE heater has been in Forced OFF since 24 February 1975. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 16 May 1975, to 1300 G.m.t., 23 May 1975

Central station	Sunrise of the 69th lunar day occurred on 20 May. The DSS-1 heater (10 watts) is OFF for lunar day operations. A signal strength between -135.0 and -140.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z motor was commanded OFF on 20 May to minimize heating in the instrument. No significant seismic events were observed during real time support this report period.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode. From 12 May to 19 May it has been observed that the data output of the sum cups levels 1 through 14 during the instrument ac calibrate measurements (sequence 15) were LOW. From 20 through 22 May 1975 the ac calibrate measurements were intermittent and appeared normal during the end of each support period. This anomaly has previously occurred as noted in last week's Summary Report.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 22 May 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2011	1567	1372	1107
Total Commands to Date	23887	15626	28475	16258
Sun Angle	30.4°	36.4°	57.5°	69.4°
Input Power	59.4w	63.3w	64.6w	65.8w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF& SIDE STBY	ASE OFF
Avg Thermal Plate Temp	78.9°F	88.5°F	100.9°F	98.8°F
PSE Sensor Temp (DL-07)	126.4°F	Offscale LOW	133.6°F	141.7°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	41.4°C
SWS Module 300 Temp (DW-13)	48.0°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	STBY	N/A
CCGE Temp (DI-04)	OFF	STBY	STBY	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	36.3°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	319.1°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	869
Total Commands to Date	23722
Sun Angle	84.6°
Input Power	70.3w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSPE/LACE STBY & LEAM OFF
Avg Thermal Plate Temp	91.9°F
LACE Temp (AM-41)	147.2°F
LEAM Temp (AJ-11)	169.5°F
HFE Temp Ref 1 (DH-13)	326.5°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	92.2°F

TIMES - CDT

ALSEP SUPPORT SCHEDULE/EVENTS

PSE CALS DAILY

MAY 4/124	5/125	6/126	7/127	8/128	9/129	10/130
0900-1100 ALSEP 14	0500-0900 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS 1600-1700	0900-1100	0700-0900 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS ALSEP 17 5A174 Mode I 2145 G.m.t.	NO SUPPORT
MAY 11/131	**12/132**	**13/133**	**14/134**	**15/135**	**16/136**	**17/137**
NO SUPPORT	0900-1100 ALSEP 17 LSPE ON HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 16 ALSEP 17 HBR OFF LSPE STDBY FLIP CAL HFE RBS	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST
MAY 18/138	**19/139**	**20/140**	**21/141**	**22/142**	**23/143**	**24/144**
0900-1100 LACE STDBY LEAM OFF	0900-1100 ALSEP 14 ALSEP 12 FLIP CAL HFE RBS	0800-1200 ALSEP 12 C/S HTR OFF PSE Z MTR OFF 2000-2100	0900-1100 FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS 2100-2400 ALSEP 15 SIDE SPRT	0000-0100 ALSEP 15 SIDE SPRT 2200-2400 LUNAR ECLIPSE

TIMES - CDT

ALSEP SUPPORT SCHEDULE/EVENTS

PSE CALS DAILY

MAY 25/145	26/146	27/147	28/148	29/149	30/150	31/151
0000-0300 LUNAR ECLIPSE 1900-2100 ALSEP 12 & 15 CYCLE SIDES HFE RBS	NO SUPPORT	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE 2300-2400	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2300-2400	0900-1100 ALSEP 16 C/S HTR ON 1700-1800
JUN 1/152	**2/153**	**3/154**	**4/155**	**5/156**	**6/157**	**7/158**
0900-1100 ALSEP 15 ALSEP 12 SIDE ON	1300-1500 FLIP CAL HFE RBS	1800-2400 ALSEP 14 ALSEP 12 C/S HTR ON PSE Z MTR ON	0900-1100 FLIP CAL HFE RBS	0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT
JUN 8/159	**9/160**	**10/161**	**11/162**	**12/163**	**13/164**	**14/165**
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT ALSEP 17

ALSEP PERFORMANCE SUMMARY REPORT

G.m.t.: 1300
30 May 1975

A total eclipse of the moon occurred on 25 May 1975. The eclipse began with the entry of the moon into the penumbra at 0259 G.m.t. and ended with the exit from the penumbra at 0838 G.m.t. All ALSEPs experienced total darkness during the eclipse. Totality began as the eastern edge of the moon slipped into the umbra at approximately 0505 G.m.t. and ended as the western edge emerged from the umbra at 0644 G.m.t. Real time support was scheduled to monitor the event during this time period.

Recordings of ALSEP downlink data are not available for the following period. It must be noted that this data loss is non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*22 May*	*2347/2359*	12^m	*MAD*	*Station Problem*
ALL	*24 May*	*1150/1203*	13^m	*GDS/HAW*	*Scheduling*
15	*25 May*	*2030/2043*	13^m	*ACN*	*Station Problem*
15	*26 May*	*1300/1305*	05^m	*GWM*	*Station Problem*

Apollo 17 ALSEP

Sunset of the 31st lunation occurred on 30 May at the Taurus Littrow site. Downlink signal strength is reported at -138.5 ± 3.5 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 29 May the lunar surface temperature, as measured by the HFE thermocouples, was 291 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator normal mode, bias in, post amplifier gain at increment 1, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is currently in STANDBY. *A special passive listening period of the LSPE was begun at 0245 G.m.t., 25 May, and terminated at 0819 G.m.t., 25 May, during the lunar eclipse. Significant events were noted while the LSP high bit rate was monitored in-house.*

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. The instrument is configured to discriminator level, LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON.

ALSEP PERFORMANCE SUMMARY REPORT (continued)

G.m.t.: 1300
30 May 1975

The Lunar Ejecta and Meteorites Experiment was commanded ON, 27 May, and configured to measure impact flux rates on the lunar surface. *The LEAM was ON for a period of four (4) hours and 32 minutes during the lunar eclipse.*

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 23 May 1975, to 1300 G.m.t., 30 May 1975

Central station	Noon at the Descartes Site occurred on 24 May for the 39th lunation. The DSS-1 heater (10 watts) is OFF for lunar day operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -136.5 $\pm$ 2.5 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter OUT). The instrument assembly temperature (DL-07) was offscale HIGH on 23 May at a sun angle of 80.5° and has remained so during this report period. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1008 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 23 May 1975, to 1300 G.m.t., 30 May 1975

Central station	Noon of the 48th lunation occurred at the Hadley Rille Site on 25 May. Transmitter A downlink signal strength is reported at -134.5 ± 2.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames). The experiment was cycled from STANDBY-ON-STANDBY to avoid exceeding an internal temperature of 85°C from 22 May to 28 May (Apollo 15 ALSEP, SMEAR 47). *The experiment was ON throughout the lunar eclipse on 25 May.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 331.2°K on 29 May as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 23 May 1975, to 1300 G.m.t., 30 May 1975

Central station	Noon at the Apollo 14 site (54th lunation) occurred on 27 May. Transmitter A signal strength was reported at -139.5 ± 3.5 dbm from the 30-foot antenna tracking stations. No commands have been transmitted to the central station this report period. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.
Passive seismic experiment	The instrument is ON. (DL-07), the internal temperature, was reading 121.8°F on 29 May. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis appeared to be responding normally. The Y-axis moved from offscale HIGH to offscale LOW between the sun angles of 55.5° and 109.8° during this report period. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 23 May 1975, to 1300 G.m.t., 30 May 1975

Central station	Noon of the 69th lunation occurred on 27 May. A signal strength of -140.5 ± 2.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 (10 watts) heater is OFF for lunar day operations.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT. The instrument assembly temperature (DL-07) was offscale HIGH on 28 May at a sun angle of 103.6°. It is expected to return onscale on 4 June. The Z-motor has been OFF since 20 May to minimize heat in the instrument. No significant seismic events were noted during the real-time support this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. From 12 May to 29 May the instrument ac calibrate measurements (sequence 15) were intermittently LOW. This anomaly has been previously reported.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day. *The experiment was ON during the lunar eclipse.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 29 May 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2017	1574	1398	1133
Total Commands to Date	23947	15626	28584	16336
Sun Angle	115.3°	121.2°	142.3°	154.2°
Input Power	59.4w	63.3w	64.6w	66.3w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	92.3°F	104.1°F	99.4°F	76.5°F
PSE Sensor Temp (DL-07)	Offscale HIGH	121.8°F	129.3°F	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	39.3°C
SWS Module 300 Temp (DW-13)	59.7°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	80.5°C	N/A
CCGE Temp (DI-04)	OFF	STBY	339.4°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	77.2°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	315.8°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	898
Total Commands to Date	24021
Sun Angle	169.4°
Input Power	71.1w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	60.3°F
LACE Temp (AM-41)	105.1°F
LEAM Temp (AJ-11)	146.4°F
HFE Temp Ref 1 (DH-13)	296.0°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	62.2°F

MAY 4/124	5/125	6/126	7/127	8/128	9/129	10/130
0900-1100 ALSEP 14	0500-0900 ALSEP 12 C/S HTR ON PSE Z MTR ON FLIP CAL HFE RBS 1600-1700	0900-1100	0700-0900 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS ALSEP 17 5A174 Mode I 2145 G.m.t.	NO SUPPORT
MAY 11/131	**12/132**	**13/133**	**14/134**	**15/135**	**16/136**	**17/137**
NO SUPPORT	0900-1100 ALSEP 17 LSPE ON HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 17 HBR ON FLIP CAL HFE RBS	NO SUPPORT ALSEP 17 HBR ON	0900-1100 ALSEP 16 ALSEP 17 HBR OFF LSPE STDBY FLIP CAL HFE RBS	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST
MAY 18/138	**19/139**	**20/140**	**21/141**	**22/142**	**23/143**	**24/144**
0900-1100 LACE STDBY LEAM OFF	0900-1100 ALSEP 14 ALSEP 12 FLIP CAL HFE RBS	0800-1200 ALSEP 12 C/S HTR OFF PSE Z MTR OFF 2000-2100	0900-1100 FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY FLIP CAL HFE RBS 2100-2400 ALSEP 15 SIDE SPRT	0000-0100 ALSEP 15 SIDE SPRT 2200-2400 LUNAR ECLIPSE

MAY 25/145	26/146	27/147	28/148	29/149	30/150	31/151
0000-0300 LUNAR ECLIPSE 1900-2100 ALSEP 12 & 15 CYCLE SIDES HFE RBS	NO SUPPORT	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON	1000-1200 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE 2300-2400	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2300-2400	0900-1100 ALSEP 16 C/S HTR ON 1700-1800

JUN 1/152	2/153	3/154	4/155	5/156	6/157	7/158
0900-1100 ALSEP 15 ALSEP 12 SIDE ON	1300-1500 FLIP CAL HFE RBS	1800-2400 ALSEP 14 ALSEP 12 C/S HTR ON PSE Z MTR ON	0900-1100 FLIP CAL HFE RBS	0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT

JUN 8/159	9/160	10/161	11/162	12/163	13/164	14/165
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	0900-1300 ALSEP 17 LSG	0900-1100 FLIP CAL HFE RBS	0900-1300 ALSEP 17 LSG	0900-1100 FLIP CAL HFE RBS	NO SUPPORT ALSEP 17

ALSEP PERFORMANCE SUMMARY REPORT

6 June 1975
G.m.t.: 1300

Apollo 17 ALSEP

Midnight of the 31st lunation will occur later today, 6 June, at the Taurus Littrow site. Downlink signal strength is reported at -136.0 ± 2.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. On 5 June the lunar surface temperature, as measured by the HFE thermocouples, was 109 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.5°K at probe #1 and 256.8°K at probe #2. *Ring bridge surveys were not achieved this report period because of lack of support time due to other operations.*

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator normal mode, bias in, *post amplifier gain at increment 7 on 4 June,* the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 30 May 1975, to 1300 G.m.t., 6 June 1975

Central station	Sunset at the Descartes Site occurred on 31 May for the 39th lunation. The DSS-1 heater (10 watts) was commanded ON, 31 May, for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -136.5 $\pm$ 2.5 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter OUT). The instrument assembly temperature (DL-07) returned onscale (DL-07 = 136.0°F, sun angle = 177.9°) on 31 May. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. Flip calibration sequences have been discontinued for the remainder of this lunar night due to the low temperatures of the Z-axis sensor head. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 30 May 1975, to 1300 G.m.t., 6 June 1975

Central station	Sunset of the 48th lunation occurred at the Hadley Rille Site on 1 June. Transmitter A downlink signal strength is reported at -136.5 ± 2.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. *At 1238 G.m.t., 30 May, the PSE responded to a spurious command (octal 071, Y-motor ON) as observed by the Goldstone tracking station. The Y-motor was commanded to the OFF condition by mission control at 1329 G.m.t., 30 May, during real-time support.* No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames) (Apollo 15 ALSEP, SMEAR 47).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 90.9°K on 5 June as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. *Ring bridge surveys were not obtained this period due to lack of support time due to other operations.*
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 30 May 1975, to 1300 G.m.t., 6 June 1975

Central station	Sunset at the Apollo 14 site (54th lunation) occurred on 3 June. Transmitter A signal strength was reported at -141.0 ± 3.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. Commands have not been successful since the return of downlink on 5 March 75.
Passive seismic experiment	The instrument is ON. The PSE heater has been in Forced OFF since 24 February 1975. (DL-07), the internal temperature, was reading offscale LOW on 5 June. The long-period Y-axis was onscale, 4 June, and appeared to be responding normally during this report period. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 30 May 1975, to 1300 G.m.t., 6 June 1975

Central station	Sunset of the 69th lunation occurred on 3 June. A signal strength of -141.0 $\pm$ 2.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 (10w) Heater was commanded ON for lunar night operation on 3 June.
Passive seismic experiment	The instrument is configured with thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT. The instrument assembly temperature was offscale HIGH from 28 May to 31 May. The internal temperature (DL-07) was reading 142.7°F at a sun angle of 151.5° on 1 June 1975. The Z-motor was commanded ON, 3 June, to maximize heating in the instrument during lunar night operation. No significant seismic events were noted during real-time this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with Channeltron high voltages ON for this lunar night.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 5 June 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2024	1581	1405	1140
Total Commands to Date	24045	15626	28676	16462
Sun Angle	200.8°	206.7°	227.7°	239.7°
Input Power	58.6w *(59.7w)*	62.9w *(62.9w)*	64.6w *(65.1w)*	66.6w *(66.6w)*
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	DSS-1 (10w) ON
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	9.1°F	10.1°F	6.8°F	33.2°F
PSE Sensor Temp (DL-07)	126.3°F	Offscale LOW	124.6°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°F
SWS Module 300 Temp (DW-13)	-13.9°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.2°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	114.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-59.3°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.7°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	905
Total Commands to Date	24859
Sun Angle	254.9°
Input Power	71.8w *(72.7w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	16.2°F
LACE Temp (AM-41)	-0.5°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	285.7°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	17.5°F

Value in parentheses indicates RTG output during last lunation at a similar sun angle.

MAY 25/145	26/146	27/147	28/148	29/149	30/150	31/151
0000-0300 LUNAR ECLIPSE 1900-2100 ALSEP 12 & 15 CYCLE SIDES HFE RBS	NO SUPPORT	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON	1000-1200 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE 2300-2400	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2300-2400	0900-1000 ALSEP 16 C/S HTR ON 1700-1800
JUN 1/152	**2/153**	**3/154**	**4/155**	**5/156**	**6/157**	**7/158**
0900-1100 ALSEP 15 ALSEP 12 SIDE ON	1300-1500 FLIP CAL HFE RBS	1800-2400 ALSEP 14 ALSEP 12 C/S HTR ON PSE Z MTR ON	0900-1100 FLIP CAL HFE RBS	0900-1100	0900-1100 FLIP CAL HFE RBS	NO SUPPORT
JUN 8/159	**9/160**	**10/161**	**11/162**	**12/163**	**13/164**	**14/165**
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	0900-1300 ALSEP 17 LSG	0900-1100 FLIP CAL HFE RBS	0900-1300 ALSEP 17 LSG	0900-1100 FLIP CAL HFE RBS	NO SUPPORT ALSEP 17

ALSEP PERFORMANCE SUMMARY REPORT

13 June 1975
G.m.t.: 1300

Remote site coverage for recording of ALSEP downlink data was not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*05 Jun 75*	*2211/2245*	*35^m*	*GWM/ULA*	*Higher Priority*
12	*10 Jun 75*	*1135/1141*	*06^m*	*ACN*	*Station Problem*

Apollo 17 ALSEP

Sunrise of the scientific station's 32nd lunation will occur on 14 June at the Taurus Littrow site. Downlink signal strength was reported between -135.0 and -142.5 dbm from transmitter A by the tracking stations with the 30-foot antennas. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 12 June lunar surface temperature, as measured by the HFE thermocouples was 106 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator normal mode, bias in, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 717-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 6 June 1975, to 1300 G.m.t., 13 June 1975

Central station	Midnight at the Descartes Site occurred on 8 June for the 39th lunar night. The DSS-1 heater (10 watts) is ON for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -135.5 ± 2.5 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the limited real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. The static Z-axis science data and low temperature anomaly continued this week. Flip calibrations of the instrument were discontinued on 30 May 1975 due to the low temperature of the Z-axis sensor and will be resumed when the temperature returns to a near normal value. The sensor temperature appears to have stabilized at approximately -30°C during this period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 6 June 1975, to 1300 G.m.t., 13 June 1975

Central station	Midnight of the 48th lunation occurred on 9 June at the Hadley Rille Site. Transmitter A downlink signal strength is reported at -135.0 ± 2.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. *At 0538 G.m.t., 6 June 1975, the instrument experienced a spurious command (octal 073) to the uncage/arm fire circuitry. As the 18-hour timer is presently operating uninhibited no adverse effects were encountered by this spurious command and a corrective command was not transmitted.* No significant seismic events were observed during the limited real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 85.3°K on 12 June, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 6 June 1975, to 1300 G.m.t., 13 June 1975

Central station	Midnight at the Apollo 14 site (54th lunation) occurred on 10 June. Transmitter A signal strength was reported at -139.0 ± 2.5 dbm from the 30-foot antenna tracking stations. Since 5 March 1975 when the downlink signal returned, numerous commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has been reading offscale LOW since 2 June. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis sensor appeared to exhibit normal responses. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 6 June 1975, to 1300 G.m.t., 13 June 1975

Central station	Midnight of the 69th lunation occurred on 11 June at the ALSEP site in the Ocean of Storms. The DSS-1 heater (10 watts) is ON for lunar night operations. A signal strength between -136.5 and -141.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) has been offscale LOW since 6 June. The Z-axis drive motor is ON to maximize heating in the instrument during lunar night. No significant seismic events were noted during the real-time support periods.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode. Data output of the sum cup levels 1 through 14 during the instrument ac calibrate measurements (sequence 15) have been LOW since 9 June.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 12 June 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2031	1588	1413	1147
Total Commands to Date	24059	15626	28731	16483
Sun Angle	286.5°	292.5°	313.6°	325.5°
Input Power	58.6w *(58.6w)*	63.6w *(62.7w)*	63.8w *(64.6w)*	66.6w *(66.6w)*
Heater and Power Dumps	All ON	All OFF	All OFF	All ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	6.5°F	9.4°F	4.6°F	32.2°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.6°F	125.8°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-15.6°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.2°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	106.5°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-70.7°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.4°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	913
Total Commands to Date	25562
Sun Angle	340.7°
Input Power	71.8w *(72.2w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	14.7°F
LACE Temp (AM-41)	-2.3°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.3°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	15.9°F

Value in parenthesis indicates RTG output during last lunation at a similar sun angle.

TIMES - CDT

ALSEP SUPPORT SCHEDULE/EVENTS

PSE CALS DAILY

MAY 25/145	26/146	27/147	28/148	29/149	30/150	31/151
0000-0300 LUNAR ECLIPSE 1900-2100 ALSEP 12 & 15 CYCLE SIDES HFE RBS	NO SUPPORT	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON	1000-1200 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE 2300-2400	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2300-2400	0900-1000 ALSEP 16 C/S HTR ON 1700-1800
JUN 1/152	**2/153**	**3/154**	**4/155**	**5/156**	**6/157**	**7/158**
0900-1100 ALSEP 15 ALSEP 12 SIDE ON	1300-1500 FLIP CAL HFE RBS	1800-2400 ALSEP 14 ALSEP 12 C/S HTR ON PSE Z MTR ON	0000-0100 0900-1100 FLIP CAL HFE RBS	0900-1100	0900-1200 FLIP CAL HFE RBS	NO SUPPORT
JUN 8/159	**9/160**	**10/161**	**11/162**	**12/163**	**13/164**	**14/165**
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	0800-1345 ALSEP 17 LSG	0830-0930 FLIP CAL HFE RBS	0900-1130 ALSEP 17 LSG	0900-1100 FLIP CAL HFE RBS	NO SUPPORT ALSEP 17

JUN 15/166	16/167	17/168	18/169	19/170	20/171	21/172
1800-2000 ALSEP 16 C/S HTR ON	1300-1500 ALSEP 15 TIMER RST ALSEP 16 TIMER RST ALSEP 17 LACE STDBY FLIP CAL HFE RBS	1500-1700 ALSEP 14 ALSEP 17 LEAM OFF	1900-2300 ALSEP 12 C/S HTR OFF PSE Z MTR OFF FLIP CAL HFE RBS	0900-1100	0900-1100 ALSEP 12 SIDE OFF FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY
JUN 22/173	**23/174**	**24/175**	**25/176**	**26/177**	**27/178**	**28/179**
0900-1300 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE 2200-2300
JUN 29	**30/181**	**JUL 1/182**	**2/183**	**3/184**	**4/185**	**5/186**
1100-1300 ALSEP 12 CYCLE SIDE ALSEP 16 C/S HTR ON 2200-2300	0600-0800 ALSEP 16 ALSEP 15 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 12 SIDE ON	0900-1100 ALSEP 14 FLIP CAL HFE RBS	0500-0900 ALSEP 12 C/S HTR ON PSE Z MTR ON 2000-2100	0900-1100 FLIP CAL HFE RBS	0900-1100

ALSEP PERFORMANCE SUMMARY REPORT

20 June 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses may not be recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
15	*16 Jun 75*	*1341/1415*	*34^m*	*MAD*	*Station Problem*

Apollo 17

Sunrise of the scientific station's 32nd lunation occurred on 14 June at the Taurus Littrow site. Downlink signal strength is reported at -139.0 ± 3.0 dbm from transmitter A by the 30-foot antenna tracking stations. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 19 June the lunar surface temperature, as measured by the HFE thermocouples, was 344 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, *integrator short mode, bias out, post amplifier gain at increment 7,* the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center *since 16 June.* The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY.

The Lunar Ejecta and Meteorites Experiment was commanded OFF on 17 June for lunar day operation.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 13 June 1975, to 1300 G.m.t., 20 June 1975

Central station	Sunrise at the Descartes Site occurred on 15 June for the 40th lunar day. The DSS-1 heater (10 watts) was commanded OFF for lunar day operations on 15 June. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported between -133.5 and -138.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter OUT). No significant seismic events were noted during the real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. Flip calibrations have been resumed this lunar day as the temperature of the Z-axis sensor head has increased after lunar sunrise. 1014 flip calibrations have been executed by the experiment. The science data continues to be static from the Z-axis sensor.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 13 June 1975, to 1300 G.m.t., 20 June 1975

Central station	Sunrise of the station's 49th lunation occurred at the Hadley Rille Site on 16 June. Transmitter A downlink signal strength is reported at -135.5 ± 3.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were observed during the real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames). *Between the period of end support on 16 June and start support on 17 June, the instrument had executed a mode register change (SIDE Load 11, High Energy Curved Plate Analyzer High Voltage OFF). The mode register was re-initialized by commanding the experiment to STANDBY and back to ON at 1957 G.m.t., 17 June. Command Octals 104, 105, 107, and 110 were assumed to have been generated internally in the instrument as no command verification words (CVWs) were reported in the ALSEP 15 downlink.*
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 333.0 °K on 19 June, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 13 June 1975, to 1300 G.m.t., 20 June 1975

Central station	Sunrise at the Apollo 14 site occurred on 18 June for the 55th lunation. Transmitter A signal strength was reported between -135.5 and -140.0 dbm from the 30-foot antenna tracking stations. Since 5 March 1975, when the downlink signal returned, numerous commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. The minimum average thermal plate temperature experienced during this lunar night was 9.1°F.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has been reading offscale LOW since 2 June. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y axis sensor has been offscale HIGH but has appeared to exhibit normal responses. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environment experiment	The CPLEE is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 13 June 1975, to 1300 G.m.t., 20 June 1975

Central station	Sunrise of the 70th lunation occurred on 18 June. The DSS-1 heater (10 watts) is OFF for lunar day operation. Signal strengths between -134.0 and -140.5 dbm from transmitter B were reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) had been offscale LOW since 6 June and returned onscale just after sunrise 18 June (sun angle = 4.5°). The Z-axis drive motor was commanded OFF on 18 June to minimize heating in the instrument during lunar day. No significant seismic events were noted during the real-time support periods.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode. The data output of the sum cups levels 1 through 14 during the instrument ac calibrate measurements (sequence 15) had been intermittently LOW until 18 June this report period.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 19 June 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2038	1595	1419	1154
Total Commands to Date	24115	15626	28852	16574
Sun Angle	12.1°	18.0°	39.2°	51.0°
Input Power	58.6w	62.5w	64.1w	65.8w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	50.8°F	62.0°F	88.0°F	90.5°F
PSE Sensor Temp (DL-07)	125.8°F	Offscale LOW	126.0°F	127.8°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	36.4°C
SWS Module 300 Temp (DW-13)	27.7°C	N/A	OFF	N/A
SIDE Temp (DI-05)	27.4°C	STBY	71.0°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	347.4°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-3.1°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	306.6°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	919
Total Commands to Date	25725
Sun Angle	66.3°
Input Power	69.9w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE/LSPE STBY & LEAM OFF
Avg Thermal Plate Temp	86.2°F
LACE Temp (AM-41)	138.1°F
LEAM Temp (AJ-11)	174.9°F
HFE Temp Ref 1 (DH-13)	322.9°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	86.3°F

ALSEP SUPPORT SCHEDULE/EVENTS

MAY 25/145	26/146	27/147	28/148	29/149	30/150	31/151
0000-0300 LUNAR ECLIPSE 1900-2100 ALSEP 12 & 15 CYCLE SIDES HFE RBS	NO SUPPORT	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON	1000-1200 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE 2300-2400	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS 2300-2400	0900-1000 ALSEP 16 C/S HTR ON 1700-1800
JUN 1/152	**2/153**	**3/154**	**4/155**	**5/156**	**6/157**	**7/158**
0900-1100 ALSEP 15 ALSEP 12 SIDE ON	1300-1500 FLIP CAL HFE RBS	1800-2400 ALSEP 14 ALSEP 12 C/S HTR ON PSE Z MTR ON	0000-0100 0900-1100 FLIP CAL HFE RBS	0900-1100	0900-1200 FLIP CAL HFE RBS	NO SUPPORT
JUN 8/159	**9/160**	**10/161**	**11/162**	**12/163**	**13/164**	**14/165**
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	0800-1345 ALSEP 17 LSG	0830-0930 FLIP CAL HFE RBS	0900-1130 ALSEP 17 LSG	0900-1100 FLIP CAL HFE RBS	NO SUPPORT ALSEP 17

JUN 15/166	16/167	17/168	18/169	19/170	20/171	21/172
1800-2000 ALSEP 16 C/S HTR ON	1300-1500 ALSEP 15 TIMER RST ALSEP 16 TIMER RST ALSEP 17 LACE STDBY FLIP CAL HFE RBS	1500-1700 ALSEP 14 ALSEP 17 LEAM OFF	1900-2300 ALSEP 12 C/S HTR OFF PSE Z MTR OFF FLIP CAL HFE RBS	0900-1100	0900-1100 ALSEP 12 SIDE OFF FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY
JUN 22/173	**23/174**	**24/175**	**25/176**	**26/177**	**27/178**	**28/179**
0900-1300 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE 2200-2300
JUN 29	**30/181**	**JUL 1/182**	**2/183**	**3/184**	**4/185**	**5/186**
1100-1300 ALSEP 12 CYCLE SIDE ALSEP 16 C/S HTR ON 2200-2300	0600-0800 ALSEP 16 ALSEP 15 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 12 SIDE ON	0900-1100 ALSEP 14 FLIP CAL HFE RBS	0500-0900 ALSEP 12 C/S HTR ON PSE Z MTR ON 2000-2100	0900-1100 FLIP CAL HFE RBS	0900-1100

ALSEP PERFORMANCE SUMMARY REPORT

27 June 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
14	*25 Jun 75*	*1456/1502*	06^m	*ORR/GWM*	*Schedule Problem*
ALL	*25 Jun 75*	*2102/2223*	1^h21^m	*BUR*	*Higher Priority*

Apollo 17 ALSEP

Sunset of the 32nd lunation will occur on 28 June at the Taurus Littrow site. Downlink signal strength is reported at -138.5 ± 2.5 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 26 June the lunar surface temperature, as measured by the HFE thermocouples, was 280 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.8°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON). *Post amplifier gain was changed to increment 5 on 25 June because of saturation at increment 7. Post amplifier gain was returned to increment 7 on 26 June without saturating.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. The instrument is configured to discriminator level, LOW; filament, OFF; high voltage power supply, OFF; and backup heater, ON.

The Lunar Ejecta and Meteorites Experiment was commanded ON, 25 June, and is configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 20 June 1975, to 1300 G.m.t., 27 June 1975

Central station	Noon at the Descartes Site occurred on 22 June for the 40th lunation. The DSS-1 heater (10 watts) is OFF for lunar day operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported between -134.5 and -139.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter OUT). The instrument assembly temperature (DL-07) was offscale HIGH on 21 June at a sun angle of 74.7° and has remained so during this report period. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1020 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 20 June 1975, to 1300 G.m.t., 27 June 1975

Central station	Noon of the 49th lunation occurred at the Hadley Rille Site on 23 June. Transmitter A downlink signal strength is reported at -136.0 ± 3.0 dbm by the tracking stations with 30-foot antennas. *At 2323 G.m.t., 23 June, the Ascension tracking station noted a six (6) second drop in the downlink and 1/2 db increase in signal strength indicating a transmitter switch. At the end of real-time support on 24 June it was verified that the central station transmitters had switched from "A" to "B" due to a possible CVW. At 1505 G.m.t., 25 June, the transmitters were ground commanded (octal 012) back to the initial configuration of transmitter "A" on-line with a decrease of 3 dbm in signal strength from -139.0 to -142.0 dbm.*
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames). The experiment was cycled from STANDBY-ON-STANDBY to avoid exceeding an internal temperature of 85°C from 21 June to 26 June (Apollo 15 ALSEP, SMEAR 47).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 351.8°K on 26 June, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.3°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 20 June 1975, to 1300 G.m.t., 27 June 1975

Central station	Noon at the Apollo 14 site (55th lunation) occurred on 25 June. Transmitter Signal strength was reported between -137.5 and -143.0 dbm from the 30-foot antenna tracking stations. *Four commands were transmitted to the central station this report period and none were effective (space craft rejects).*
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) returned onscale and was reading 113.0 °F on 25 June. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis appeared to be responding normally. The Y-axis moved from offscale HIGH to offscale LOW between the sun angles of 54.6° and 103.7° during this report period. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 20 June 1975, to 1300 G.m.t., 27 June 1975

Central station	Noon of the 70th lunation occurred on 26 June. A signal strength between -138.0 and -143.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 (10 watts) heater is OFF for lunar day operations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) was offscale HIGH on 26 June at a sun angle of 97.7°. It is expected to return onscale on 1 July. The Z-motor has been OFF since 18 June to minimize heat in the instrument. No significant seismic events were noted during the real-time support this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. The instrument ac calibrate measurements (sequence 15) were intermittently LOW this report period.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF has been in effect for this lunar day since 20 June.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 26 June 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2045	1602	1426	1161
Total Commands to Date	24200	15630	28964	16652
Sun Angle	97.5°	103.4°	124.5°	136.4°
Input Power	58.9w	63.3w	64.1w	65.8w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	91.3°F	109.2°F	108.3°F	89.9°F
PSE Sensor Temp (DL-07)	Offscale HIGH	118.6°F	138.7°F	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	38.3°C
SWS Module 300 Temp (DW-13)	63.5°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	65.6°C	N/A
CCGE Temp (DI-04)	OFF	STBY	347.4°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	77.2°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	323.6°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	926
Total Commands to Date	26033
Sun Angle	151.6°
Input Power	69.9w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	59.3°F
LACE Temp (AM-41)	116.7°F
LEAM Temp (AJ-11)	183.5°F
HFE Temp Ref 1 (DH-13)	304.7°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	59.6°F

JUN 15/166	16/167	17/168	18/169	19/170	20/171	21/172
1800-2000 ALSEP 16 C/S HTR ON	1300-1500 ALSEP 15 TIMER RST ALSEP 16 TIMER RST ALSEP 17 LACE STDBY FLIP CAL HFE RBS	1500-1700 ALSEP 14 ALSEP 17 LEAM OFF	1900-2300 ALSEP 12 C/S HTR OFF PSE Z MTR OFF FLIP CAL HFE RBS	0900-1100	0900-1100 ALSEP 12 SIDE OFF FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY

JUN 22/173	23/174	24/175	25/176	26/177	27/178	28/179
0900-1300 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES	1015-1215 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE 2200-2300

JUN 29	30/181	JUL 1/182	2/183	3/184	4/185	5/186
1100-1300 ALSEP 12 CYCLE SIDE ALSEP 16 C/S HTR ON 2200-2300	0600-0800 ALSEP 16 ALSEP 15 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 12 SIDE ON	0900-1100 ALSEP 14 FLIP CAL HFE RBS	0500-0900 ALSEP 12 C/S HTR ON PSE Z MTR ON 2000-2100	0900-1100 FLIP CAL HFE RBS	0900-1100

ALSEP PERFORMANCE SUMMARY REPORT

3 July 1975
G.m.t.: 0900

Remote site coverage for recording of ALSEP downlink data was not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*02 Jun 75*	*0837/0846*	*09^m*	*TAN/AGO*	*Schedule Problem*
ALL	*02 Jun 75*	*1000/1002*	*02^m*	*AGO*	*Station Problem*

On 28 June 1975 all Passive Seismometers (Apollo 16, 15, and 12 ALSEPs) were configured with the feedback loop filter commanded IN. This operation will be conducted for an indefinite period at the Principal Investigator's request.

Apollo 17 ALSEP

Midnight of the 32nd lunation will occur on 6 July at the Taurus Littrow site. Downlink signal strength is reported at -136.2 ± 1.7 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. On 2 July, the lunar surface temperature, as measured by the HFE thermocouples, was 112 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator normal mode, bias in, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The experiment sensor temperature remains stabilized at 49.2°C (slave heater ON).

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 27 June 1975, to 0900 G.m.t., 3 July 1975

Central station	Sunset at the Descartes Site occurred on 30 June for the 40th lunation. The DSS-1 heater (10 watts) was commanded ON, 29 June, for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -136.0 $\pm$ 1.5 dbm by the 30-foot antenna tracking stations.
Passive seismic	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; *and feedback loop filter IN*). The instrument assembly temperature (DL-07) returned onscale (DL-07 = 133.7°F, sun angle = 178.9°) on 30 June. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. Flip calibration sequences have been discontinued for the remainder of this lunar night due to the low temperatures of the Z-axis sensor head. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 27 June 1975, to 0900 G.m.t., 3 July 1975

Central station	Sunset of the station's 49th lunation occurred on 1 July. Transmitter A downlink signal strength was reported at -136.0 ± 1.5 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). *At 1707 G.m.t., 2 July, the PSE responded to a spurious command octal 072 (Z-axis Leveling Motor ON) as reported by the Vanguard Tracking Ship. The spurious command was verified and the Z-motor turned OFF (octal 072) by mission control through the Guam Tracking Station at 1838 G.m.t., 2 July.* The uncage-arm fire circuitry has been cycling per the normal 18 hour timer output pulse functions. No significant seismic events were noted during the periodic real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is currently in ON. *At 2002 G.m.t., 27 June, the SIDE responded to a spurious command octal 107 (Load 4, SIDE Master Reset) as reported by the Guam Tracking Station. Octals 104, 105, and 106 were sent to the instrument and the command register was cleared at 1418 G.m.t., 28 June, with octal 110 (execution command) by mission control.*
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 96.5°K on 2 July, indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 27 June 1975, to 0900 G.m.t., 3 July 1975

Central station	Sunset at the Apollo 14 site (55th lunation) occurred on 2 July. Transmitter A signal strength was reported at -142.5 ± 1.5 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. Commands have not been successful since the return of downlink on 5 March 1975.
Passive seismic experiment	The instrument is ON. The PSE heater has been in Forced OFF since 24 February 1975. The internal temperature (DL-07) was reading offscale LOW on 1 July, at a sun angle of 164°. The long-period Y-axis was offscale LOW on 26 June and appeared to be responding normally during this report period. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 27 June 1975, to 0900 G.m.t., 3 July 1975

Central station	Sunset of the 70th lunation occurred today. A signal strength of -141.0 ± 1.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 (10w) Heater will be commanded ON for lunar night operation later today.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature was offscale HIGH from 27 June to 1 July. The internal temperature (DL-07) was reading 139.4°F at a sun angle of 157.8° on 1 July, 1975. No significant seismic events were noted during real-time this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. *The experiment was operated in the extended range mode, due to observation of high particle counts, from 1719 G.m.t., 29 June to 1342 G.m.t., 1 July.*
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with Channeltron high voltages ON for the lunar night.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 2 July 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2051	1608	1432	1167
Total Commands to Date	26258	15630	29115	16774
Sun Angle	171.2°	177.2°	198.3°	210.2°
Input Power	58.9w	63.3w	63.8w	67.1w
Heater and Power Dumps	All OFF	All OFF	All OFF	DSS-1 (10w) ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	54.1°F	49.5°F	7.1°F	33.6°F
PSE Sensor Temp (DL-07)	132.2°F	Offscale LOW	124.8°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-8.9°C
SWS Module 300 Temp (DW-13)	32.4°C	N/A	OFF	N/A
SIDE Temp (DI-05)	39.9°C	STBY	6.6°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	121.0°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	60.3°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.9°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	932
Total Commands to Date	26251
Sun Angle	225.4°
Input Power	71.4w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	15.9°F
LACE Temp (AM-41)	-0.5°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.2°K
LSG Temp (DG-04)	49.2°C
LSP Temp (AP-01)	17.5°F

ALSEP PERFORMANCE SUMMARY REPORT

11 July 1975
G.m.t.: 1300

Apollo 17 ALSEP

Sunrise of the scientific station's 33rd lunation will occur on 13 July at the Taurus Littrow site. Downlink signal strength was reported between -136.0 and -143.0 dbm from transmitter A by the tracking stations with the 30-foot antennas. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being acheived on a periodic basis. On 9 July, the lunar surface temperature, as measured by the HFE termocouples, was 107 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter instrument heater box heater circuit was detected to be full ON (loss of regulation) at 0320 G.m.t., 7 July. This condition causes the sensor temperature to increase above a stabilized 49.194°C and eventually drift offscale HIGH (temperature transducer range is 48.2 to 52.0°C). The instrument circuitry will not automatically control the experiment temperature beyond the transducer range. At 1500 G.m.t., 7 July, the LSG slave heater was commanded OFF and at approximately 1800 G.m.t., 7 July, the temperature had decreased to 52.0°C. With the temperature back within its operating range the slave heater was commanded ON, but the temperature again increased to offscale HIGH at 0311 G.m.t., 8 July, and has remained so since. Useful scientific data cannot be obtained unless the temperature can be regulated in the above range. This unregulated temperature condition occurred previously on 15 March 1974 with automatic control returning on 20 April 1974.

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 717-333-3481.

Apollo 16 ALSEP

Operational status from 0900 G.m.t., 3 July 1975, to 1300 G.m.t., 11 July 1975

Central station	Midnight at the Descartes Site occurred on 7 July for the 40th lunar night. The DSS-1 heater (10 watts) is ON for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -135.0 $\pm$ 2.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter, IN). No significant seismic events were noted during the limited real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. The static Z-axis science data and low temperature anomaly continued this week. Flip calibrations of the instrument were discontinued on 27 June 1975 due to the low temperature of the Z-axis sensor and will be resumed when the temperature returns to a near normal value.
Active seismic	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 0900 G.m.t., 3 July 1975, to 1300 G.m.t., 11 July 1975

Central station	Midnight of the 49th lunation occurred on 8 July at the Hadley Rille Site. Transmitter A downlink signal strength was reported between -134.0 and -136.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were observed during the limited real-time support periods.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames).
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 86.5°K on 9 July, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 0900 G.m.t., 3 July 1975, to 1300 G.m.t., 11 July 1975

Central station	Midnight at the Apollo 14 site (55th lunation) occurred on 10 July. Transmitter A signal strength was reported between -136.5 and -141.0 dbm from the 30-foot antenna tracking stations. Since 5 March 1975, when the downlink signal returned, numerous commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has been reading offscale LOW since 1 July. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis sensor appeared to exhibit normal responses. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 0900 G.m.t., 3 July 1975, to 1300 G.m.t., 11 July 1975

Central station	Midnight of the 70th lunation occurred on 10 July at the ALSEP site in the Ocean of Storms. The DSS-1 heater (10 watts) is ON for lunar night operations. A signal strength between -135.0 and -141.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) has been offscale LOW since 7 July at a sun angle of 231.2°. The Z-axis drive motor is ON to maximize heating in the instrument during lunar night. No significant seismic events were noted during the real-time support periods.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode. Data output of the sum cup levels 1 through 14 during the instrument ac calibrate measurements (sequence 15) have been reading LOW during this report period.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 9 July 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2058	1615	1439	1174
Total Commands to Date	26358	15630	29186	16820
Sun Angle	256.9°	262.9°	284.0°	295.9°
Input Power	57.8w *(58.6w)*	62.1w *(62.5w)*	63.3w *(64.3w)*	66.6w *(66.6w)*
Heater and Power Dumps	ALL ON	ALL OFF	ALL OFF	ALL ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	5.9°F	9.4°F	4.6°F	32.2°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.4°F	125.8°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-8.9°C
SWS Module 300 Temp (DW-13)	-15.6°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	6.6°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	108.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-70.7°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	939
Total Commands to Date	26441
Sun Angle	311.1°
Input Power	71.4w *(71.8w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	ALL OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	7.5°F
LACE Temp (AM-41)	-2.3°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	287.0°K
LSG Temp (DG-04)	Offscale HIGH
LSP Temp (AP-01)	7.8°F

Value in parentheses indicates RTG output during the last lunation at a similar sun angle.

JUN 15/166	16/167	17/168	18/169	19/170	20/171	21/1.
1800-2000 ALSEP 16 C/S HTR ON	1300-1500 ALSEP 15 TIMER RST ALSEP 16 TIMER RST ALSEP 17 LACE STDBY FLIP CAL HFE RBS	1500-1700 ALSEP 14 ALSEP 17 LEAM OFF	1900-2300 ALSEP 12 C/S HTR OFF PSE Z MTR OFF FLIP CAL HFE RBS	0900-1100	0900-1100 ALSEP 12 SIDE OFF FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY
JUN 22/173	**23/174**	**24/175**	**25/176**	**26/177**	**27/178**	**28/179**
0900-1300 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE SPRT	0900-1100 ALSEP 12 & 15 CYCLE SIDES FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES	1015-1215 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON	0900-1100 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE 2200-2300
JUN 29	**30/181**	**JUL 1/182**	**2/183**	**3/184**	**4/185**	**5/186**
1100-1300 ALSEP 12 CYCLE SIDE ALSEP 16 C/S HTR ON 2200-2300	0600-0800 ALSEP 16 ALSEP 15 ALSEP 12 CYCLE SIDE FLIP CAL HFE RBS	0900-1100 ALSEP 12 SIDE ON	0900-1100 ALSEP 14 FLIP CAL HFE RBS	0500-0900 ALSEP 12 C/S HTR ON PSE Z MTR ON 2000-2100	0900-1100 FLIP CAL HFE RBS	0900-1100

ALSEP PERFORMANCE SUMMARY REPORT

18 July 1975
G.m.t.: 1000

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses may not be recoverable.

ALSEP	*DATE*	*G.M.T.*	*LOSS*	*SITE*	*REMARKS*
12	*09 Jul 75*	*1600/1627*	*27^m*	*BDA*	*Station Problem*
12,14,16	*13 Jul 75*	*1455/1504*	*09^m*	*BUR*	*Station Problem*

Apollo 17

Sunrise of the scientific station's 33rd lunation occurred on 13 July at the Taurus Littrow site. Downlink signal strength is reported between -137.0 and -142.0 dbm from transmitter A by the 30-foot antenna tracking stations. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 17 July the lunar surface temperature, as measured by the HFE thermocouples, was 302 $\pm$ 8°K. At a depth of 230 cm, the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The lunar Surface Gravimeter Experiment continues to maintain loss of regulation in the instrument heater box. At 1947 G.m.t., 11 July, the LSG was commanded to STANDBY (Mode I through the Hawaii tracking station) to reduce the internal temperature (DG-04) from the offscale HIGH condition. At 1343 G.m.t., 14 July, during real-time support, the experiment was commanded back ON when the sensor temperature drifted offscale LOW. The experiment sensor temperature remains offscale LOW (slave heater ON). The instrument is presently operating and configured for data collection as follows: seismic low gain, integrator short mode, bias out, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center since 16 June. *Present operating procedures are per Apollo 17 ALSEP, SMEAR 72.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY.

The Lunar Ejecta and Meteorites Experiment was commanded OFF on 17 July for lunar day operation.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 11 July 1975, to 1000 G.m.t., 18 July 1975

Central station	Sunrise at the Descartes Site occurred on 14 July for the 41st lunar day. The DSS-1 heater (10 watts) was commanded OFF for lunar day operations on 15 July. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated on 6 May 1972. The signal strength from transmitter B is reported between -133.0 and -138.5 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter, IN). No significant seismic events were noted during the real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. Flip calibrations have been resumed this lunar day as the temperature of the Z-axis sensor head has increased after lunar sunrise. 1024 flip calibrations have been executed by the experiment. The science data continues to be static from the Z-axis sensor.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 11 July 1975, to 1000 G.m.t., 18 July 1975

Central station	Sunrise of the station's 50th lunation occurred at the Hadley Rille Site on 15 July. Transmitter A downlink signal strength is reported between -133.0 and -136.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/armfire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were observed during the real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames). *During support on 16 July it was noted that the instrument contained an octal 107 (Load 4, SIDE Master Reset) in the command register. The experiment was cleared by commanding the instrument to STANDBY and back to ON at 1553 G.m.t., 16 July. At the start of support on 17 July, the SIDE was observed to have experienced several functional changes from the previous days support without any command verification words being noted in the downlink. The SIDE mode register contained a Load 11 (High Energy Curved Plate Analyzer High Voltage OFF) and the command register contained a Load 10 (Low Energy Curved Plate Analyzer High Voltage OFF). The -3.5K vdc was OFF. The SIDE was commanded to STANDBY at 1447 G.m.t. (T2 = 45.7°C, sun angle = 21.3°) and at 1517 G.m.t. it was commanded back to operate SELECT with a normal indication of the instrument being observed (T2 = 44.8°C). These spurious changes are assumed to have been generated internally and have been observed previously at similar sun angles.*
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. *An unexpected functional change of the HFE occurred at 0923 G.m.t., 15 July, when the Guam tracking station noted a command verification word of octal 136 (Low Conductivity Mode) in the downlink signal. The HFE was returned to the normal gradient mode 1 by ground command at 1427 G.m.t., 16 July.* The lunar surface temperature was 301.4°K on 17 July, as indicated by the cable thermocouples. The subsurface temperature was 253.5°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 250.2°K at its

Apollo 15 ALSEP (continued)

Operational status from 1300 G.m.t., 11 July 1975, to 1000 G.m.t., 18 July 1975

Heat flow experiment	lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 11 July 1975, to 1000 G.m.t., 18 July 1975

Central station	Sunrise at the Apollo 14 site occurred on 17 July for the 56th lunation. Transmitter A signal strength was reported between -136.0 and -139.5 dbm from the 30-foot antenna tracking stations. Since 5 March 1975, commands have been transmitted to the central station without success. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. The minimum average thermal plate temperature experienced during the past lunar night was 8.8°F.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has been reading offscale LOW since 1 July. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis sensor has been offscale HIGH, but has appeared to exhibit normal responses. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environment experiment	The CPLEE is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 11 July 1975, to 1000 G.m.t., 18 July 1975

Central station	Sunrise of the station's 71st lunation occurred today, 18 July. The DSS-1 heater (10 watts) will be turned OFF later today for lunar day operation. Signal strengths between -133.0 and -140.5 dbm, from transmitter B, were reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) has been offscale LOW since 7 July and is expected to return onscale today. The Z-axis drive motor will be commanded OFF later today to minimize heating in the instrument during the lunar day. No significant seismic events were noted during the real-time support periods.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode. The data output of the sum cups, levels 1 through 14, during the instrument ac calibrate measurements (sequence 15) have been reading LOW during this report period.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with the Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 18 July 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2066	1623	1447	1182
Total Commands to Date	26370	15630	29315	16891
Sun Angle	354.8°	0.8°	21.9°	33.8°
Input Power	57.4w	62.3w	63.7w	65.8w
Heater and Power Dumps	DSS-1(10w) ON	All OFF	All OFF	All OFF
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	4.2°F	8.8°F	65.5°F	76.5°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	126.0°F	126.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	37.3°C
SWS Module 300 Temp (DW-13)	-16.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	45.7°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	331.5°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-71.1°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	298.1°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	947
Total Commands to Date	26572
Sun Angle	49.0°
Input Power	69.4w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE/LSPE STBY & LEAM OFF
Avg Thermal Plate Temp	69.2°F
LACE Temp (AM-41)	124.0°F
LEAM Temp (AJ-11)	192.5°F
HFE Temp Ref 1 (DH-13)	315.8°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	69.1°F

ALSEP PERFORMANCE SUMMARY REPORT

25 July 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*18 Jul 75*	*0444/0457*	*13^m*	*HAW/GWM*	*Higher Priority*
ALL	*18 Jul 75*	*2344/2400*	*16^m*	*BDA/GDS*	*Higher Priority*
ALL	*19 Jul 75*	*0424/0499*	*25^m*	*HAW/ORR*	*Higher Priority*
ALL	*21 Jul 75*	*0513/0518*	*05^m*	*ACN/GDS*	*Higher Priority*
ALL	*23 Jul 75*	*2258/2339*	*41^m*	*BUR/AGO*	*Higher Priority*

Apollo 17 ALSEP

Noon of the 33rd lunation occurred on 21 July at the Taurus Littrow site. Downlink signal strength is reported between -134.5 and -143.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 24 July the lunar surface temperature, as measured by the HFE thermocouples, was 319 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: *seismic low gain*, integrator shorted mode, bias out, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The anomalous automatic regulation of temperature control of the instrument housing continued during this report period. The LSG heater was commanded OFF at 1342 G.m.t., 19 July, when the sensor temperature (DG-04) was offscale HIGH. At the beginning of real-time support at 1344 G.m.t., 20 July, the temperature was offscale LOW and has remained so (slave heater ON). The instrument had been configured in seismic high gain from 1341 G.m.t., 20 July, to 1420 G.m.t., 24 July, because the post amplifier gain became saturated. The LSG heater will be commanded ON prior to sunset at the Apollo 17 ALSEP site.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY.

The Lunar Ejecta and Meteorites Experiment is OFF.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 18 July 1975, to 1300 G.m.t., 25 July 1975

Central station	Noon at the Descartes Site occurred on 22 July for the 41st lunation. The DSS-1 heater (10 watts) is OFF for lunar day operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported at -137.0 ± 2.5 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter IN). The instrument assembly temperature (DL-07) was offscale HIGH on 21 July at a sun angle of 81.3° and is predicted to be onscale on 29 July. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1030 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 18 July, to 1300 G.m.t., 25 July 1975

Central station	Noon of the 50th lunation occurred at the Hadley Rille Site on 23 July. Transmitter A downlink signal strength is reported at -136.0 ± 4.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is in STANDBY. The experiment is presently being cycled from STANDBY-ON-STANDBY during real-time support periods to avoid exceeding an internal temperature of 85°C (Apollo 15 ALSEP, SMEAR 47). *A special operation of the SIDE was conducted from 21 July to 24 July at the request of the Principal Investigator.* *At the beginning of real-time support on 18 July it was noted that the Cold Cathode Gauge Experiment High Voltage (+ 4.5 K vdc) was OFF. The instrument was commanded to STANDBY and back to ON. This re-initialization did not turn the CCGE High Voltage ON. A load 13 was executed twice without success in an attempt to turn the + 4.5 K vdc ON. The CCGE first experienced problems in February 1973 when noisy science data was observed during lunar night and the automatic zero and calibration functions did not appear to be operating properly. Nighttime data since February 1973 has been sporadic until the current anomaly.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 362.5°K on 24 July as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.3°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 18 July 1975, to 1300 G.m.t., 25 July 1975

Central station	Noon at the Apollo 14 site (56th lunation) occurred on 24 July. Transmitter A signal strength was reported at -140.0 ± 4.0 dbm from the 30-foot antenna tracking stations. *Four commands were transmitted to the central station this report period and none were effective (space craft rejects).*
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) returned onscale and was reading 109.2°F on 24 July. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis appeared to be responding normally. The Y-axis had returned onscale at a sun angle of 54.2°. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 18 July 1975, to 1300 G.m.t., 25 July 1975

Central station	Noon of the 71st lunation occurred today, 25 July. A signal strength of -140.5 ± 2.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 (10 watts) heater is OFF for lunar day operations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z-motor has been OFF since 18 July to minimize heat in the instrument. No significant seismic events were noted during the real-time support this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. The instrument ac calibrate measurements (sequence 15) were normal this report period.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF has been in effect for this lunar day since 20 July. *During real-time support on 23 July the SIDE experienced an unexpected mode change to command register X10 at a temperature of 53.68°C. The mode change was cleared by commanding the instrument to OFF to cool down prior to turn ON during the next support period.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1400 G.m.t., 24 July 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2073	1630	1454	1189
Total Commands to Date	26489	15634	29436	17024
Sun Angle	78.9°	85.0°	106.0°	118.0°
Input Power	58.6w	63.3w	63.7w	65.4w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF/SIDE STBY	ASE OFF
Avg Thermal Plate Temp	89.6°F	110.0°F	110.8°F	98.1°F
PSE Sensor Temp (DL-07)	135.2°F	109.2°F	140.5°F	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	41.4°C
SWS Module 300 Temp (DW-13)	63.7°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	STBY	N/A
CCGE Temp (DI-04)	OFF	STBY	STBY	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	74.2°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	327.7°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	954
Total Commands to Date	26792
Sun Angle	133.5°
Input Power	69.4w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP/LACE STBY, LEAM OFF
Avg Thermal Plate Temp	82.5°F
LACE Temp (AM-41)	134.2°F
LEAM Temp (AJ-11)	182.0°F
HFE Temp Ref 1 (DH-13)	315.9°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	82.9°F

ALSEP PERFORMANCE SUMMARY REPORT

1 August 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
A14	*24 Jun 75*	*0652/1200*	5^h08^m	*GDS*	*Station Problem*
ALL	*02 Jul 75*	*0336/0837*	5^h10^m	*TAN*	*Data Shipment Problem*

Apollo 17 ALSEP

Sunset of the 33rd lunation occurred on 28 July at the Taurus Littrow site. Downlink signal strength is reported between -134.0 and -138.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 31 July the lunar surface temperature, as measured by the HFE thermocouples, was 117.0 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: *seismic low gain,* integrator shorted mode, bias out, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The anomalous automatic regulation of temperature control of the instrument housing continued during this report period. The LSG heater was commanded ON at 1519 G.m.t., 26 July, when the sensor temperature (DG-04) was offscale LOW. At the beginning of real-time support 0448 G.m.t., 29 July, the DG-04 temperature was 51.0°C and went offscale HIGH at 1406 G.m.t., this same day, remaining offscale HIGH until 31 July. On 29 July, the instrument was reconfigured to seismic LOW gain with slave heater ON. At 1450 G.m.t., 30 July, the heater was commanded OFF for cool down of the instrument when intermittent operation of the Analog/Digital converter was observed. The LSG heater was commanded ON at 1400 G.m.t. 31 July, since DG-04 temperature was offscale LOW.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. The instrument is configured to discriminator level, LOW; filament, OFF: high voltage power supply, OFF; and backup heater, ON. *The octal 132 that was contained in the command register on 28 July, was cleared out on 29 July, by sending command execute octal 134 after the total loading of the command register (octals 123, 124, 125, 127, 132, and 133). Since 29 July 1975 the command register has maintained its normal configuration.*

ALSEP PERFORMANCE SUMMARY REPORT (continued)

1 August 1975
G.m.t.: 1300

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 25 July 1975, to 1300 G.m.t., 1 August 1975

Central station	Sunset at the Descartes Site occurred on 29 July for the 41st lunation. The DSS-1 heater (10 watts) is ON for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported between -134.0 and -138.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter IN). The instrument assembly temperature returned onscale (DL-07 = 133.9°F) on 29 July at a sun angle of 178.9°. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1034 flip calibration sequences have been executed and verified by the experiment engineering data. Flip calibrations of the instrument were discontinued on 28 July 1975 due to the low temperature of the Z-axis sensor and will be resumed when the temperature returns to a near normal value. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 25 July 1975, to 1300 G.m.t., 1 August 1975

Central station	Sunset of the 50th lunation occurred at the Hadley Rille Site on 30 July. Transmitter A downlink signal strength is reported between -135.0 and -138.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames) (Apollo 15 ALSEP, SMEAR 47). The Cold Cathode Gauge Experiment High Voltage OFF Anomaly (+ 4.5 K vdc) continued during this report period.
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 98.4°K on 31 July as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 25 July 1975, to 1300 G.m.t., 1 August 1975

Central station	Sunset at the Apollo 14 site (56th lunation) occurred today. Transmitter A signal strength was reported between -141.0 and -143.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. Commands during this report period have not been successful.
Passive seismic experiment	The instrument is ON. The PSE heater has been in Forced OFF since 24 February 1975. (DL-07), the internal temperature, was reading offscale LOW on 31 July. The long-period Y-axis was onscale, 25 July, and appeared to be responding normally during this report period. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 25 July 1975, to 1300 G.m.t., 1 August 1975

Central station	Sunset of the 71st lunation will occur later today. A signal strength between -139.5 and -143.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 (10w) Heater will be commanded ON for lunar night operation later today.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature was offscale HIGH from 26 July to 30 July. The internal temperature (DL-07) returned onscale and was reading 141.4°F at a sun angle of 152.3° on 30 July 1975. No significant seismic events were noted during real-time this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. *The experiment was operated in the extended range mode, due to observation of high particle counts, from 1423 G.m.t., 25 July to 0045 G.m.t., 28 July.*
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with Channeltron high voltages ON for lunar nighttime operations.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 31 July 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2080	1637	1461	1196
Total Commands to Date	26537	15636	29605	17167
Sun Angle	165.7°	171.6°	192.7°	204.6°
Input Power	58.6w	63.7w	63.7w	66.6w
Heater and Power Dumps	All OFF	All OFF	All OFF	All ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	63.2°F	59.4°F	8.8°F	33.6°F
PSE Sensor Temp (DL-07)	135.8°F	Offscale LOW	124.8°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-8.9°C
SWS Module 300 Temp (DW-13)	39.3°C	N/A	OFF	N/A
SIDE Temp (DI-05)	47.4°C	STBY	8.4°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	123.5°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	71.2°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	284.3°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	961
Total Commands to Date	26930
Sun Angle	219.8°
Input Power	71.4w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	26.2°F
LACE Temp (AM-41)	-0.5°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.5°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	27.8°F

JUL 6/187	7/188	8/189	9/190	10/191	11/192	12/193
NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	0900-1100 FLIP CAL HFE RBS	NO SUPPORT	1000-1200 FLIP CAL HFE RBS	NO SUPPORT
JUL 13/194	**14/195**	**15/196**	**16/197**	**17/198**	**18/199**	**19/200**
NO SUPPORT ALSEP 17	0900-1100 ALSEP 16 FLIP CAL HFE RBS	1100-1330 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST	0900-1100 ALSEP 17 LACE STDBY FLIP CAL HFE RBS	1000-1200 ALSEP 14 ALSEP 12 ALSEP 17 LEAM OFF	0600-1000 ALSEP 12 C/S HTR PSE Z MTR OFF FLIP CAL HFE RBS 1800-1900	0900-1100
JUL 20/201	**21/202**	**22/203**	**23/204**	**24/205**	**25/206**	**26/207**
0900-1100 ALSEP 12 SIDE OFF	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY, MODE I 1354 FLIP CAL HFE RBS 2000-2400 ALSEP 15 SIDE SPRT	0900-1100 ALSEP 12 CYCLE SIDE SPECIAL MODE I & ALSEP 15 SIDE STDBY, MODE I, 0530	0900-1100 ALSEP 12 CYCLE SIDE MODE II OPERATION ALSEP 15 SIDE ON, MODE I 1600 FLIP CAL HFE RBS	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 15 SIDE	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON FLIP CAL HFE RBS	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON

ALSEP PERFORMANCE SUMMARY REPORT

8 August 1975
G.m.t.: 1300

The Apollo 15 ALSEP completed four (4) years of uninterrupted operations on 30 July 1975.

Remote site coverage for recording of ALSEP downlink data was not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*15 Jul 75*	*0836/0840*	*04^m*	*HAW/ORR*	*Schedule Problem*
A15	*06 Aug 75*	*1204/1221*	*17^m*	*ACN*	*Station Problem*

Apollo 17 ALSEP

Midnight of the 33rd lunation occurred on 4 August at the Taurus Littrow site. Downlink signal strength was reported at -138.0 ± 3.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are achieved on a periodic basis. On 6 August the lunar surface temperature, as measured by the HFE thermocouples, was 108 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic low gain, integrator shorted mode, bias out, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The automatic temperature regulation anomaly continues and the instrument housing temperature (DG-04) was offscale HIGH on 6 August with the heater ON. The LSG was operated in seismic high gain from 1420 G.m.t., 2 August, to 1400 G.m.t., 4 August. A reading (AG-05 = 15.46 torr) of the pressure transducer was accomplished at 1528 G.m.t., 6 August.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. *An operational check was performed on 6 August. Results were the same as those previously reported with the continuing indication of a high voltage failure. The LACE will be cold soaked for six (6) hours prior to another operational check at approximately 1500 G.m.t., 8 August.*

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 1 August 1975, to 1300 G.m.t., 8 August 1975

Central station	Midnight at the Descartes Site occurred on 6 August for the 41st lunation. The DSS-1 heater (10 watts) is ON for lunar night operation. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength, from transmitter B, was reported between -133.5 and -138.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter, IN). No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON. Flip calibration sequences have been discontinued for the remainder of this lunar night due to the low temperatures of the Z-axis sensor head. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 1 August 1975, to 1300 G.m.t., 8 August 1975

Central station	Midnight of the station's 50th lunation occurred on 6 August. Transmitter A downlink signal strength was reported at -135.0 ± 2.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18 hour timer output pulse functions. No significant seismic events were noted during the periodic real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The SIDE is currently ON and operating in the full automatic stepping sequence (0-127 frames) with the Channeltron high voltages ON. The CCGE high voltage (+ 4.5 K vdc) remains OFF this report period.
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 87.4°K on 6 August, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 1 August 1975, to 1300 G.m.t., 8 August 1975

Central station	Sunset of the 56th lunation at the Apollo 14 site occurred on 1 August. Transmitter A signal strength was reported between -137.5 and -142.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. Commands have not been successful since the return of downlink on 5 March 1975.
Passive seismic experiment	The instrument is ON. The PSE heater has been in Forced OFF since 24 February 1975. The internal temperature (DL-07) has been reading offscale LOW this report period. The long-period Y-axis was onscale from 2 to 6 August and appeared to be responding normally during this report period. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 1 August 1975, to 1200 G.m.t., 8 August 1975

Central station	Sunset of the 71st lunation occurred on 1 August. A signal strength between -139.0 and -142.5 dbm, from transmitter B, was reported by the 30-foot antenna tracking stations. The DSS-1 (10w) Heater was commanded ON for lunar night operation on 1 August at 2049 G.m.t.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z-axis levelling motor was commanded ON at 2048 G.m.t., 1 August, to maximize internal heating in the instrument for lunar night operation. The internal temperature (DL-07) was reading offscale LOW at a sun angle of 213.4° on 4 August. No significant seismic events were noted during real-time this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence (0-127 frames) with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 6 August 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2086	1643	1467	1202
Total Commands to Date	26623	15636	29682	17209
Sun Angle	238.6°	244.5°	265.7°	277.5°
Input Power	57.4w *(58.2w)*	62.1w *(62.5w)*	63.2w *(63.3w)*	66.2w *(66.6w)*
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	DSS-1 (10w) ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	5.4°F	9.4°F	4.3°F	33.2°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.6°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-136.8°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.8°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	110.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-70.3°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	967
Total Commands to Date	27057
Sun Angle	292.8°
Input Power	71.0w *(71.4w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	5.2°F
LACE Temp (AM-41)	-2.3°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.8°K
LSG Temp (DG-04)	Offscale HIGH
LSP Temp (AP-01)	6.2°F

Values in parentheses indicate RTG outputs during the last lunation at a similar sun angle.

ALSEP PERFORMANCE SUMMARY REPORT

15 August 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following period. It must be noted that this data loss may not be recoverable.

ALSEP	*DATE*	*G.M.T.*	*LOSS*	*SITE*	*REMARKS*
14	*11 Aug 75*	*1750/1825*	*35^m*	*MAD*	*Higher Priority Mission*

Apollo 17

Sunrise of the scientific station's 34th lunation occurred on 12 August at the Taurus Littrow site. Downlink signal strength is reported between -137.0 and -144.5 dbm from transmitter A by the 30-foot antenna tracking stations. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continued during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 14 August the lunar surface temperature, as measured by the HFE thermocouples, was 190 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic *HIGH* gain, integrator shorted mode, bias out, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The automatic temperature regulation anomaly continues and the instrument housing temperature (DG-04) was offscale HIGH on 11 August, with the heater ON. At 1527 G.m.t., 11 August, the LSG was commanded to STANDBY to reduce the internal temperature (DG-04) prior to sunrise. At 1403 G.m.t., 13 August, during real-time support, the experiment was commanded back ON when the sensor temperature had drifted offscale LOW and seismic high gain was selected. A reading (post amplifier gain at increment 2, AG-04 = 14.41 torr) of the pressure transducer was accomplished at 1518 G.m.t., 11 August. The LSG was operated in seismic low gain from 1400 G.m.t., 4 August, to 1411 G.m.t., 13 August. At 1407 G.m.t., 14 August, the post amplifier gain was commanded to Step 7.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY. *On 8 August, 1975, after a six (6) hour cold soak (Experiment power OFF) an operational check was performed without any change from previous observations of the instrument's high voltage failure. The cold soak has been unsuccessful in restoring the High Voltage so a high temperature check was performed*

ALSEP PERFORMANCE SUMMARY REPORT (continued)

15 August 1975
G.m.t.: 1300

on 14 August 1975. At 1421 G.m.t. an operational check was performed at a 30° sun angle with the temperature (AM-41) at 112.3°F. The high temperature operation was unsuccessful in restoring the high voltage.

The Lunar Ejecta and Meteorites Experiment will be commanded OFF later today for lunar day operation.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 8 August 1975, to 1300 G.m.t., 15 August 1975

Central station	Sunrise at the Descartes Site occurred on 13 August for the 42nd lunar day. The DSS-1 heater (10 watts) was commanded OFF for lunar day operations on 13 August when the average thermal plate temperature was 42.3°F. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated on 6 May 1972. The signal strength from transmitter B is reported between -132.0 and -138.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter, IN). *From 1349 G.m.t., 6 August, until 1424 G.m.t., 8 August, the feedback loop filter was inadvertently left OUT.* No significant seismic events were noted during the real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. Flip calibrations will be resumed later this lunar day when the temperature of the Z-axis sensor head increases to a near normal value. The science data continues to be static from the Z-axis sensor.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 8 August 1975, to 1300 G.m.t., 15 August 1975

Central station	Sunrise of the station's 51st lunation occurred at the Hadley Rille Site on 14 August. Transmitter A downlink signal strength is reported between -134.0 and -137.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were observed during the real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames). The CCGE high voltage (+ 4.5 K vdc) remains OFF this report period.
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 83.1°K on 14 August, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are being obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 8 August 1975, to 1300 G.m.t., 15 August 1975

Central station	Sunrise at the Apollo 14 site will occur on 16 August for the 57th lunation. Transmitter A signal strength was reported between -135.0 and -143.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. The minimum average thermal plate temperature experienced during the lunar night this report period was 9.1°F.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has been reading offscale LOW since 31 July. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis sensor has been offscale HIGH, but has appeared to exhibit normal responses. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environment experiment	The CPLEE is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 8 August 1975, to 1300 G.m.t., 15 August 1975

Central station	Sunrise of the station's 72nd lunation will occur on 16 August. The DSS-1 heater (10 watts) is ON for lunar night. Signal strengths between -135.5 and -141.0 dbm, from transmitter B, were reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) has been offscale LOW since 4 August. The Z-axis drive motor is ON to maximize heating in the instrument during the lunar night. No significant seismic events were observed during this report period.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with the Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 14 August 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2094	1671	1475	1210
Total Commands to Date	26631	15636	29743	17254
Sun Angle	336.9°	342.9°	4.1°	15.9°
Input Power	57.0w	61.7w	62.9w	65.8w
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	All OFF
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	3.0°F	9.1°F	2.6°F	53.3°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.1°F	126.3°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	28.7°C
SWS Module 300 Temp (DW-13)	-16.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.8°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	106.5°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-71.4°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	955
Total Commands to Date	27226
Sun Angle	31.2°
Input Power	69.0w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE & LSPE STBY
Avg Thermal Plate Temp	61.3°F
LACE Temp (AM-41)	113.6°F
LEAM Temp (AJ-11)	170.6°F
HFE Temp Ref 1 (DH-13)	302.1°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	61.4°F

ALSEP PERFORMANCE SUMMARY REPORT

22 August 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following period. It must be noted that this data loss is non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*16 Aug 75*	*0755/0800*	*05^m*	*HAW/ORR*	*Higher Priority*

Apollo 17 ALSEP

Noon of the 34th lunation occurred on 19 August at the Taurus Littrow site. Downlink signal strength is reported between -135.0 and -141.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 21 August the lunar surface temperature, as measured by the HFE thermocouples, was 366 $\pm$ 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: *seismic HIGH gain*, integrator shorted mode, bias out, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The anomalous automatic regulation of temperature control of the instrument housing continued during this report period. The LSG heater was commanded OFF at 2235 G.m.t., 16 August, when the sensor temperature (DG-04) was offscale HIGH. At the beginning of real-time support at 1406 G.m.t., 18 August, the temperature was offscale LOW and has remained there to date. The instrument has been configured in seismic high gain since real time support on 18 August. The post amplifier gain was configured to increment 2 at 0129 G.m.t., 17 August until 1410 G.m.t., 18 August, when the gain was configured to increment 7.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY. *On 19 August, a high temperature operational check was performed without any change from previous observations of the instrument's high voltage failure. The operational check was performed at approximately a 90° sun angle with the temperature (AM-41) at 148.9°F. The high temperature operation was unsuccessful in restoring the high voltage.*

The Lunar Ejecta and Meteorites Experiment is OFF for lunar day.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 15 August 1975, to 1300 G.m.t., 22 August 1975

Central station	Noon at the Descartes Site occurred on 20 August for the 42nd lunation. The DSS-1 heater (10 watts) is OFF for lunar day operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported between -135.5 and -138.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter IN). The instrument assembly temperature (DL-07) was offscale HIGH on 19 August at a sun angle of 76.0° and is predicted to return onscale 27 August. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1040 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 15 August, to 1300 G.m.t., 22 August 1975

Central station	Noon of the 51st lunation occurred at the Hadley Rille Site on 21 August. Transmitter A downlink signal strength is reported between -133.0 and -139.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is in STANDBY. The experiment is presently being cycled from ON to STANDBY during real-time support periods to avoid exceeding an internal temperature of 85°C (Apollo 15 ALSEP, SMEAR 47). *A special operation of the SIDE was conducted from 18 August to 23 August at the request of the Principal Investigator.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 365.9°K on 21 August as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.3°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 15 August 1975, to 1300 G.m.t., 22 August 1975

Central station	Noon at the Apollo 14 site (57th lunation) will occur on 23 August. Transmitter A signal strength was reported between -138.5 and -144.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has remained offscale low during this report period. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis appeared to be responding normally. On 20 August the Y-axis returned onscale with a reading of 22.06 u rad. at a sun angle of 54.7°. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12

Operational status from 1300 G.m.t., 15 August 1975, to 1300 G.m.t., 22 August 1975

Central station	Noon of the 72nd lunation will occur on 23 August. A signal strength between -138.5 and -142.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 (10 watts) heater is OFF for lunar day operations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z-motor has been OFF since 16 August to minimize heat in the instrument. *From 1344 G.m.t., 18 August, until 1403 G.m.t., 19 August, the feedback loop filter was inadvertently left OUT.* No significant seismic events were noted during the real-time support of this instrument.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. The instrument ac calibrate measurements (sequence 15) were intermittently LOW during this report period.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF in order to prevent mode changes is in effect to keep the temperature below 55°C.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 21 August 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2101	1678	1482	1217
Total Commands to Date	26721	15636	29862	17361
Sun Angle	62.4°	68.3°	89.4°	101.3°
Input Power	58.2w	62.9w	63.2w	65.8w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE & LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF & SIDE STBY	ASE OFF
Avg Thermal Plate Temp	89.0°F	107.6°F	110.4°F	101.9°F
PSE Sensor Temp (DL-07)	128.9°F	Offscale LOW	140.7°F	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	44.7°C
SWS Module 300 Temp (DW-13)	63.5°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	STBY	N/A
CCGE Temp (DI-04)	OFF	STBY	STBY	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	69.8°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	327.9°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	962
Total Commands to Date	27377
Sun Angle	116.5°
Input Power	69.0w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE & LSPE STBY & LEAM OFF
Avg Thermal Plate Temp	89.3°F
LACE Temp (AM-41)	145.5°F
LEAM Temp (AJ-11)	191.0°F
HFE Temp Ref 1 (DH-13)	323.5°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	90.2°F

JUL 27/208	28/209	29/210	30/211	31/212	AUG 01/213	02/214
0900-1100 ALSEP 12 CYCLE SIDE 2000-2100	0500-0600 ALSEP 17 1400-1600 ALSEP 12 CYCLE SIDE HFE RBS FLIP CAL	0000-0100 0900-1100 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 15 ALSEP 12 SIDE ON HFE RBS FLIP CAL	0900-1100	1600-2000 ALSEP 14 ALSEP 12 C/S HTR ON PSE Z MTR ON HFE RBS FLIP CAL	0900-1100

AUG 03/215	04/216	05/217	06/218	07/219	08/220	09/221
0900-1100	0900-1100 HFE RBS FLIP CAL	NO SUPPORT	0900-1100 HFE RBS FLIP CAL	NO SUPPORT	0900-1100 HFE RBS FLIP CAL	NO SUPPORT

AUG 10/222	11/223	12/224	13/225	14/226	15/227	16/228
NO SUPPORT	0900-1100 ALSEP 17 HFE RBS FLIP CAL	NO SUPPORT	0900-1100 ALSEP 16 C/S HTR ON TIMER RST HFE RBS FLIP CAL	0900-1100 ALSEP 15 TIMER RST ALSEP 17 LACE STDBY	0900-1100 ALSEP 14 ALSEP 17 LEAM OFF HFE RBS FLIP CAL	1700-2100 ALSEP 12 C/S HTR OFF PSE Z MTR OFF

ALSEP PERFORMANCE SUMMARY REPORT

28 August 1975
G.m.t.: 1700

Apollo 17 ALSEP

Sunset of the 34th lunation occurred on 26 August at the Taurus Littrow site. Downlink signal strength is reported between -135.0 and -139.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 28 August the lunar surface temperature, as measured by the HFE thermocouples, was 120 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follws: seismic high gain, integrator shorted mode, bias out, *post amplifier gain at increment 2,* the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The anomalous automatic regulation of temperature control of the instrument housing continued during this report period. The LSG heater was commanded ON at 1410 G.m.t., 25 August, when the sensor temperature (DG-04) was offscale LOW. The sensor temperature remained in the offscale LOW condition throughout this reporting period. The post amplifier gain was configured from increment 7 to increment 2 on 23 August.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is OFF. *The instrument was commanded OFF at 0931 G.m.t., 28 August, for a cold soak prior to an operational check to be conducted at 1800 G.m.t., 28 August. The octal 132 that was contained in the command register on 24 August was cleared out on 26 August by sending command execute octal 134 after loading the command register (octals 123, 124, 125, 127, 132, and 133). Since 26 August the command register has maintained its normal configuration of all zeros.*

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 25 August 1975, to 1700 G.m.t., 28 August 1975

Central station	Sunset at the Descartes Site occurred today for the 42nd lunation. The DSS-1 heater (10 watts) is ON for lunar night operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported between -136.0 and -139.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter IN). The instrument assembly temperature returned onscale (DL-07 = 133.6°F) on 28 August at a sun angle of 179.3°. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1046 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 22 August 1975, to 1700 G.m.t., 28 August 1975

Central station	Sunset of the 51st lunation will occur at the Hadley Rille Site on 29 August. Transmitter A downlink signal strength is reported between -136.0 and -139.0 dbm by the tracking stations with 30-foot antennas. *On 25 August, a spurious change (14 watt Power Dump Resistor ON, octal 022) was noted without a command verification word in the downlink signal being observed. At 1434 G.m.t., 25 August, the 14 watt PDR was commanded OFF (octal 023) and an increase in reserve power was observed.*
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result ot the central station data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames) (Apollo 15 ALSEP, SMEAR 47). The Cold Cathode Gauge Experiment High Voltage OFF anomaly (+ 4.5 K vdc) continued during this report period.
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors are being sampled in full sequence. The lunar surface temperature was 279.4°K on 28 August as indicated by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 250.3°K at its lowermost point.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 22 August 1975, to 1700 G.m.t., 28 August 1975

Central station

Sunset at the Apollo 14 site (57th lunation) will occur on 30 August. Transmitter A signal strength was reported between -140.0 and -144.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.

Passive seismic experiment

The instrument is ON. DL-07, internal temperature, was reading 117.0°F on 28 August. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the Y-axis returned onscale and went from offscale HIGH to offscale LOW. The table depicts the performance of the PSE from 20 August to 28 August 1975:

DATE	G.M.T.	X	Y	Z	DL-07 (°F)	SUN ANGLE
20 Aug	1313	L	22.06	H	L	54.7°
21 Aug	1403	L	5.50	H	L	67.3°
22 Aug	1420	L	-8.87	H	L	79.6°
23 Aug	1356	L	-16.61	H	114.15	91.6°
24 Aug	1415	L	L	H	119.23	104.0°
25 Aug	1348	L	L	H	122.56	115.9°
26 Aug	1310	L	L	H	123.19	127.8°
27 Aug	1755	L	L	H	119.37	142.4°

Active seismic experiment

The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).

Suprathermal ion detector/cold cathode gauge experiments

The instrument status is unknown.

Charged particle lunar environmental experiment

The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 22 August 1975, to 1700 G.m.t., 28 August 1975

Central station	Sunset of the 72nd lunation will occur on 31 August. A signal strength between -140.0 and -143.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) went offscale HIGH on 24 August. The temperature is expected to return onscale today. No significant seismic events were noted during real-time this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day. *During real-time support on 22 August the SIDE experienced an unexpected mode change to X10 at a temperature of 57.47°C. The mode change was cleared by commanding the instrument to OFF to cool down prior to turn ON during the next support period.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 0300 G.m.t., 28 August 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2108	1665	1489	1224
Total Commands to Date	26789	15636	29984	17498
Sun Angle	141.1°	147.0°	168.2°	180.0°
Input Power	58.2w	62.9w	63.7w	66.7w
Heater and Power Dumps	ALL OFF	ALL OFF	ALL OFF	DSS-1 (10w) ON
Experiment Status	SIDE & LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	84.2°F	85.7°F	69.5°F	35.1°F
PSE Sensor Temp (DL-07)	Offscale HIGH	117.0°F	125.5°F	133.6°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	22.8°F
SWS Module 300 Temp (DW-13)	57.5°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	55.6°C	N/A
CCGE Temp (DI-04)	OFF	STBY	301.6°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	75.7°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	298.9°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	989
Total Commands to Date	27610
Sun Angle	195.3°
Input Power	70.9w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LSPE STBY
Avg Thermal Plate Temp	14.4°F
LACE Temp (AM-41)	3.2°F
LEAM Temp (AJ-11)	-14.0°F
HFE Temp Ref 1 (DH-13)	286.1°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	15.9°F

ALSEP PERFORMANCE SUMMARY REPORT

5 September 1975
G.m.t.: 1300

Long-period seismic events occurred at approximately 0940 G.m.t., 31 August, and 1319 G.m.t., 3 September. The events were recorded on all Passive Seismic Experiments and also believed to have been experienced by the Lunar Surface Gravimeter. The duration was approximately one (1) hour for both events and were observed during real-time support.

Remote site coverage for recording of ALSEP downlink data was not available during the following period. It must be noted that this data loss is non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*29 Aug 75*	*0058/0100*	*02^m*	*MAD/ACN*	*Schedule Problem*

Apollo 17 ALSEP

Midnight of the 34th lunation occurred on 3 September at the Taurus Littrow site. Downlink signal strength was reported at -139.0 ± 3.5 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are achieved on a periodic basis. On 3 September the lunar surface temperature, as measured by the HFE thermocouples, was 108 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic low gain, integrator shorted mode, bias out, post amplifier gain at increment 2, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The instrument housing heater circuit is again under control of the automatic temperature regulator. The temperature was 48.71°C on 2 September and had increased to 51.5°C on 3 September at 1356 G.m.t. The sensor temperature has held steady at 51.5°C through 0955 G.m.t., 4 September.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. *The LACE was cold soaked for approximately 18 hours prior to an operational check which was begun at 1758 G.m.t., 28 August. The high voltage indicated no improvement over previous checks. An additional anomaly was observed when the sweep voltage was at full scale after the high voltage was commanded ON. Operational checks performed on 29, 30, and 31 August and 2 September showed no improvement and the sweep voltage at full scale when the high voltage was commanded ON. An operational check is planned for 13 September after instrument warm-up during lunar day.*

ALSEP PERFORMANCE SUMMARY REPORT (continued)

5 September 1975
G.m.t.: 1300

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1700 G.m.t., 28 August 1975, to 1300 G.m.t., 5 September 1975

Central station	Midnight at the Descartes Site occurred on 4 September for the 42nd lunation. The DSS-1 heater (10 watts) is ON for lunar night operation. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength, from transmitter B, was reported at -135.0 ± 2.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter, IN). *Significant seismic events were noted on 31 August and 3 September.*
Lunar surface magnetometer experiment	The LSM is ON. Flip calibration sequences have been discontinued for the remainder of this lunar night due to the low temperatures of the Z-axis sensor head. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1700 G.m.t., 28 August 1975, to 1300 G.m.t., 5 September 1975

Central station	Midnight of the station's 51st lunation occurred on 5 September. Transmitter A downlink signal strength was reported between -133.0 and -137.5 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18-hour timer output pulse functions. *Significant seismic events were noted on 31 August and 3 September.*
Suprathermal ion detector/cold cathode gauge experiment	The SIDE is currently ON and operating in the full automatic stepping sequence (0-127 frames) with the Channeltron high voltages ON. The CCGE high voltage (+ 4.5 K vdc) remains OFF.
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 88.7°K on 3 September, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1700 G.m.t., 28 August 1975, to 1300 G.m.t., 5 September 1975

Central station	Sunset of the 57th lunation at the Apollo 14 site occurred on 30 August. Transmitter A signal strength was reported at -138.0 ± 2.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. Commands have not been successful since the return of downlink on 5 March 1975.
Passive seismic experiment	The instrument is ON. The PSE heater has been in Forced OFF since 24 February 1975. The internal temperature (DL-07) has been reading offscale LOW this report period. The long-period Y-axis was onscale from 31 August to 3 September and appeared to be responding normally during this report period. *A significant seismic event was noted on 31 August although both the long period X and Y-axes indicated offscale LOW. Another event was observed on 3 September with the long period X-axis offscale LOW and the long-period Y-axis reading 22.11 u rad, near off-scale HIGH. The short period Z-axis also recorded the event. This PSE is the only one operating with feedback loop filter OUT.*
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1700 G.m.t., 28 August 1975, to 1500 G.m.t., 5 September 1975

Central station	Sunset of the 72nd lunation occurred on 31 August. A signal strength at -138.5 ± 4.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 (10w) Heater was commanded ON for lunar night operation on 31 August.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z-axis levelling motor was commanded ON at 0835 G.m.t., 31 August, to maximize internal heating in the instrument for lunar night operation. The internal temperature (DL-07) was reading offscale LOW at a sun angle of 207.5° on 2 September. *Significant seismic events were noted during real-time on 31 August and 3 September.*
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence (0-127 frames) with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 3 September 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2114	1671	1495	1230
Total Commands to Date	26887	15640	30072	17589
Sun Angle	220.5°	226.4°	247.6°	259.4°
Input Power	57.0w *(57.4w)*	61.7w *(62.1w)*	62.5w *(63.7w)*	66.2w *(66.6w)*
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	DSS-1 (10w) ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	4.4°F	9.1°F	2.6°F	32.2°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.5°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-136.8°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.8°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	110.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-69.1°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	995
Total Commands to Date	27997
Sun Angle	274.7°
Input Power	70.6w *(70.9w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSP STBY
Avg Thermal Plate Temp	10.4°F
LACE Temp (AM-41)	-0.5°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.7°K
LSG Temp (DG-04)	51.5°C
LSP Temp (AP-01)	11.1°F

Values in parentheses indicate RTG outputs during the last lunation at a similar sun angle.

ALSEP PERFORMANCE SUMMARY REPORT

12 September 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses may not be recoverable.

ALSEP	*DATE*	*G.M.T.*	*LOSS*	*SITE*	*REMARKS*
12,14,15	*09 Sep 75*	*1400/1450*	*50^m*	*VAN/AGO*	*Viking Launch*
16.17	*09 Sep 75*	*1443/1447*	*04^m*	*AGO*	*Station Problem*
ALL	*09 Sep 75*	*175848/180800*	*$09^m 12^s$*	*QUI*	*Station Problem*

Apollo 17

Sunrise of the scientific station's 35th lunation occurred on 10 September at the Taurus Littrow site. Downlink signal strength was reported at -141.0 ± 3.0 dbm from transmitter A by the 30-foot antenna tracking stations. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continued during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 10 September the lunar surface temperature, as measured by the HFE thermocouples, was 108 ± 8°K. At a depth of 230 cm, the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic HIGH gain, integrator shorted mode, bias out, *post amplifier gain at increment 7,* the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The automatic temperature regulator continues to function properly. The sensor temperature (DG-04) has been holding between 51.53 and 51.54°C this report period. The beam was repositioned near center and the post amplifier gain set at increment 7 on 8 September. The instrument is operated in seismic gain LOW briefly during real-time support periods.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 5 September 1975, to 1300 G.m.t., 12 September 1975

Central station	Sunrise at the Descartes Site occurred on 11 September for the 43rd lunar day. The DSS-1 heater (10 watts) will be commanded OFF for lunar day operations later today, 12 September. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated on 6 May 1972. The signal strength from transmitter B was reported at -136.0 ± 3.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gains, 0 db; and feedback loop filter, IN). No significant seismic events were noted during the real-time support of this instrument.
Lunar surface magnetometer experiment	The LSM is ON. Flip calibrations will be resumed later this lunar day when the temperature of the Z-axis sensor head increases to a near normal value. The science data continues to be static from the Z-axis sensor.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 5 September 1975, to 1300 G.m.t., 12 September 1975

Central station	Sunrise of the station's 52nd lunation occurs later today, 12 September, at the Hadley Rille Site. Transmitter A downlink signal strength is reported between -133.5 and -137.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage/arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were observed during the real-time support periods.
Suprathermal ion detector/cold cathode gauge experiment	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames). The CCGE high voltage (+ 4.5 K vdc) remains OFF this report period.
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 83.6°K on 10 September, as indicated by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are being obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 5 September 1975, to 1300 G.m.t., 12 September 1975

Central station	Midnight at the Apollo 14 site occurred on 7 September for the 57th lunation. Transmitter A signal strength was reported at -138.0 ± 3.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. The minimum average thermal plate temperature experienced during the lunar night this report period was 9.1°F.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has been reading offscale LOW since 29 August. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis sensor has been offscale HIGH, but has appeared to exhibit normal responses. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environment experiment	The CPLEE is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 5 September 1975, to 1300 G.m.t., 12 September 1975

Central station	Midnight of the station's 72nd lunation occurred on 7 September. The DSS-1 heater (10 watts) is ON for lunar night. Signal strengths of -139.5 $\pm$ 3.0 dbm, from transmitter B, were reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) has been offscale LOW since 2 September. The Z-axis drive motor is ON to maximize heating in the instrument during the lunar night. No significant seismic events were observed during this report period.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with the Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 10 September 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2121	1678	1502	1237
Total Commands to Date	26893	15640	30141	17605
Sun Angle	306.1°	312.1°	333.2°	345.1°
Input Power	56.7w	61.7w	62.5w	66.2w
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	DSS-1 (10w) ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	2.1°F	9.1°F	1.4°F	31.1°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.4°F	125.8°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-16.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.8°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	106.5°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-71.4°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1002
Total Commands to Date	28138
Sun Angle	0.3°
Input Power	70.2w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LSPE STBY
Avg Thermal Plate Temp	9.1°F
LACE Temp (AM-41)	-0.5°F
LEAM Temp (AJ-11)	-20.8°F
HFE Temp Ref 1 (DH-13)	286.8°K
LSG Temp (DG-04)	51.5°C
LSP Temp (AP-01)	9.4°F

AUG 17/229	18/230	19/231	20/232	21/233	22/234	23/235
0900-1100	0900-1100 ALSEP 12 SIDE OFF ALSEP 15 0900-SIDE OFF 1100-SIDE ON HFE RBS FLIP CAL	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 0200-SIDE STBY, MODE I 0900-1100 SIDE CHECK	0750-0920 ALSEP 15 SIDE SPRT 1720-SIDE ON, MODE I ALSEP 12 CYCLE SIDE HFE RBS FLIP CAL	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 0330-SIDE STBY, MODE I 0900-1100 SIDE ON CHK,STBY 1100-SIDE OFF 1800-SIDE ON, MODE I	0900-1100 ALSEP 12 CYCLE SIDE HFE RBS FLIP CAL ALSEP 15 0900-CHK 2 CYCLES SIDE STBY 0400-SIDE STBY MODE I 2000-SIDE ON, MODE I	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 17 LEAM ON ALSEP 15 1230-SIDE STBY, MODE I

AUG 24/236	25/237	26/238	27/239	28/240	29/241	30/242
0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON	0900-1100 ALSEP 12 CYCLE SIDE HFE RBS FLIP CAL	0800-1100 ALSEP 17 ALSEP 12 CYCLE SIDE 1900-2000	0400-0500 1300-1500 ALSEP 12 CYCLE SIDE HFE RBS 2100-2200 ALSEP 16 C/S HTR ON	1300-1500 ALSEP 15 ALSEP 12 SIDE ON	0900-1100 HFE RBS	0900-1100 ALSEP 14

AUG 31/243	SEP 01/244	02/245	03/246	04/247	05/248	06/249
0400-0800 ALSEP 12 C/S HTR ON PSE Z MTR ON 2030-2130	1400-1600 HFE RBS	0900-1100	0900-1100 HFE RBS	NO SUPPORT	0900-1100 HFE RBS	NO SUPPORT

ALSEP PERFORMANCE SUMMARY REPORT

19 September 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*17 Sep 75*	*0126/0150*	*24^m*	*GDS/MAD*	*Station Problem*
ALL	*18 Sep 75*	*0748/0806*	*18^m*	*GWM/GDS*	*Higher Priority*

Apollo 17 ALSEP

Noon of the 35th lunation occurred on 17 September at the Taurus Littrow site. Downlink signal strength was reported at -137.5 ± 3.5 dbm from transmitter A. Transmission of command octal 174 (delay uplink switch-over), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 18 September the lunar surface temperature, as measured by the HFE thermocouples, was 376 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic HIGH gain, integrator shorted mode, bias out, post amplifier gain at increment 7, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The sensor temperature (DG-04) has been stable at 51.54°C this report period.

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY. *On 12 September an operational check was performed. No change was noted in previous observations of the instrument's high voltage failure. The operation was unsuccessful in restoring the high voltage.*

The Lunar Ejecta and Meteorites Experiment is OFF for lunar day.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 12 September 1975, to 1300 G.m.t., 19 September 1975

Central station	Noon at the Descartes Site occurred on 19 September for the 43rd lunation. The DSS-1 heater (10 watts) is OFF for lunar day operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B was reported at -138.5 ± 5.5 dbm by the 30-foot antenna tracking stations.
Passive seismic	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db: and feedback loop filter IN). The instrument assembly temperature (DL-07) was offscale HIGH on 17 September at a sun angle of 69.7° and is predicted to return onscale 26 September. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1050 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis continues to be static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 12 September, to 1300 G.m.t., 19 September 1975

Central station	Sunrise of the 52nd lunation occurred at the Hadley Rille Site on 12 September. Transmitter A downlink signal strength is reported between -132.5 and -139.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is in STANDBY. The experiment is presently being cycled from ON to STANDBY during real-time support periods to avoid exceeding an internal temperature of 85°C (Apollo 15 ALSEP, SMEAR 47). *A special operation of the SIDE is being conducted from 18 September to 23 September at the request of the Principal Investigator.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 364.0°K on 18 September as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.3°K at its lowermost point. Ring bridge surveys are obtained periodically. *An unexpected functional change (Octal 143, Probe No. 2 Sequence Select) of the HFE occurred between the real-time support periods of 17 and 18 August 1975. A command verification word (CVW) was not detected in the downlink telemetry. The HFE was commanded to Full Sequence Select (Octal 141) by mission control at 1424 G.m.t., 18 August 1975.*
Solar wind spectrometer experiment	Commanded OFF 14 June 1974. *At 0334 G.m.t., 15 September 1975, the Hawaii Tracking Station detected a CVW (Octal 046, STANDBY, Power ON) in the downlink. Later playback indicated the command had been executed as a four (4) watt decrease in reserve power was observed. Hawaii had also detected a change in octal reading of parameter AB-05 (experiment standby status). The SWS was commanded to OFF at 0428 G.m.t., 15 September by Mode I through the Hawaii station. The 4-watt decrease in reserve power is attributed to the standby heater turning on. No power has been applied to the SWS since 25 January 1975.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 18 September 1975, to 1300 G.m.t., 19 September 1975

Central station	Sunrise at the Apollo 14 site (58th lunation) occurred on 14 September. Transmitter A signal strength was reported between -137.5 and -144.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has remained offscale low during this report period. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis appeared to be responding normally. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 12 September 1975, to 1300 G.m.t., 19 September 1975

Central station	Sunrise of the 73rd lunation occurred on 15 September. A signal strength between -136.5 and -144.0 dbm from transmitter B was reported by the 30-foot antenna track-stations. The DSS-1 (10 watts) heater is OFF for lunar day operations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z-motor has been OFF since 15 September to minimize heat in the instrument. No significant seismic events were noted during the real-time support of this instrument.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. The instrument ac calibrate measurements (sequence 15) were intermittently LOW during this report period.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF in order to prevent mode changes is in effect to keep the temperature below 55°C.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1900 G.m.t., 18 September 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2129	1686	1510	1245
Total Commands to Date	27013	15644	30291	17720
Sun Angle	45.7°	51.6°	72.8°	84.6°
Input Power	57.8w	62.4w	62.8w	65.4w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	86.1°F	100.9°F	108.2°F	103.5°F
PSE Sensor Temp (DL-07)	127.3°F	Offscale LOW	139.6°F	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	45.8°C
SWS Module 300 Temp (DW-13)	60.9°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	63.5°C	N/A
CCGE Temp (DI-04)	OFF	STBY	364.0°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	55.4°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	325.9°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1010
Total Commands to Date	28327
Sun Angle	99.9°
Input Power	68.6w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE/LSPE STBY & LEAM OFF
Avg Thermal Plate Temp	90.1°F
LACE Temp (AM-41)	151.5°F
LEAM Temp (AJ-11)	188.0°F
HFE Temp Ref 1 (DH-13)	327.1°K
LSG Temp (DG-04)	51.5°C
LSP Temp (AP-01)	90.9°F

ALSEP PERFORMANCE SUMMARY REPORT

25 September 1975
G.m.t.: 1300

Apollo 17 ALSEP

Sunset of the 35th lunation occurred today at the Taurus Littrow site. Downlink signal strength is reported between -134.5 and -140.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switch-over), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 25 September the lunar surface temperature, as measured by the HFE thermocouples, was 130 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic *high* gain, integrator shorted mode, bias out, *post amplifier gain at increment 2,* the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The anomalous automatic regulation of temperature control of the instrument reoccurred 19 September. Subsequent attempts to regain temperature control during this reporting period have been unsuccessful. From 1347 G.m.t., 24 September to 1132 G.m.t., 25 September the instrument was operated in seismic LOW gain.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data. *The LACE was ON for two operational checks on 23 and 24 September and no change was observed in the high voltage and sweep lock anomaly.*

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 19 September 1975, to 1300 G.m.t., 25 September 1975

Central station	Sunset at the Descartes Site will occur 26 September for the 43rd lunation. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported between -133.5 and -140.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter IN). The instrument assembly temperature (DL-07) is offscale HIGH but is expected to return onscale tomorrow. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1056 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 19 September 1975, to 1300 G.m.t., 25 September 1975

Central station	Noon of the 52nd lunation occurred at the Hadley Rille Site on 20 September. Transmitter A downlink signal strength is reported between -133.0 and -139.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. The instrument assembly temperature (DL-07) was offscale HIGH on 20 September at a sun angle of 93.9° and returned onscale 22 September (DL-07 = 141.1°F), at a sun angle of 118.3°. *At 1201 G.m.t., 23 September, the PSE responded to a spurious command (octal 063, long period XY-axis sensor gain change to -10 db) as observed by the Guam Tracking Station. At 2129 G.m.t., 23 September, the long period XY-axis sensor gain was commanded back to the 0 db gain (3 octal 063s) by Mode I commands from Guam.* No seismic events were observed during this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames) (Apollo 15 ALSEP, SMEAR 47). *A special operational test of the SIDE was conducted between 18 September and 23 September at the request of the Principal Investigator.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors are being sampled in full sequence. The lunar surface temperature was 284.6°K on 25 September as indicated by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.3°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 19 September 1975, to 1300 G.m.t., 25 September 1975

Central station

Noon at the Apollo 14 site (58th lunation) occurred on 21 September. Transmitter A signal strength was reported between -139.0 and -144.0 dbm from the 30-foot antenna tracking stations.

Passive seismic experiment

The instrument is ON. DL-07, internal temperature, was reading 124.06°F on 25 September. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the Y-axis returned onscale and went from offscale HIGH to offscale LOW. No seismic events were noted during real-time this reporting period. The table depicts the performance of the PSE from 18 September to 25 September 1975:

DATE	G.M.T.	X	Y	Z	DL-07 (°F)	SUN ANGLE
18 Sep	1840	L	22.31	H	L	51.5°
19 Sep	2035	L	3.47	H	L	64.6°
20 Sep	1306	L	-6.20	H	L	73.0°
22 Sep	0124	L	-20.37	H	115.30	91.4°
22 Sep	1256	L	L	H	118.37	97.3°
23 Sep	1350	L	L	H	122.82	109.9°
24 Sep	1423	L	L	H	125.00	122.4°
25 Sep	1119	L	L	H	124.06	133.0°

Active seismic experiment

The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).

Suprathermal ion detector/cold cathode gauge experiments

The instrument status is unknown.

Charged particle lunar environmental experiment

The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 19 September 1975, to 1300 G.m.t., 25 September 1975

Central station	Noon of the 73rd lunation occurred on 22 September. A signal strength between -139.5 and -143.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) went offscale HIGH on 23 September. The temperature is expected to return onscale 28 September. No significant seismic events were noted during real-time this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day. *During real-time support on 22 September the SIDE experienced an unexpected mode change to X10 at a temperature of 55.55°C. The mode change was cleared by commanding the instrument to OFF for cool down prior to turn ON during the next support period.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1200 G.m.t., 25 September 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2136	1693	1517	1252
Total Commands to Date	27070	15644	30399	17845
Sun Angle	127.4°	133.3°	154.5°	166.3°
Input Power	57.4w	62.4w	62.8w	65.4w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	92.0°F	96.9°F	88.3°F	64.2°F
PSE Sensor Temp (DL-07)	Offscale HIGH	124.1°F	125.9°F	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	38.3°C
SWS Module 300 Temp (DW-13)	61.7°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	73.3°C	N/A
CCGE Temp (DI-04)	OFF	STBY	323.8°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	83.7°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	307.7°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1017
Total Commands to Date	28627
Sun Angle	181.5°
Input Power	70.8w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LSPE STBY
Avg Thermal Plate Temp	64.1°F
LACE Temp (AM-41)	-35.9°F
LEAM Temp (AJ-11)	16.3°F
HFE Temp Ref 1 (DH-13)	285.1°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	66.6°F

ALSEP PERFORMANCE SUMMARY REPORT

3 October 1975
G.m.t.: 1300

Remote site coverage for recordings of ALSEP downlink data are not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
14, 15	*23 Jul 75*	*0647/0841*	*01^h54^m*	*GDS*	*Site Problem*
14	*25 Jul 75*	*0423/1330*	*09^h07^m*	*GDS*	*Site Problem*

Apollo 17 ALSEP

Midnight of the 35th lunation occurred on 2 October at the Taurus Littrow site. Downlink signal strength was reported at -139.0 ± 4.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge sruveys are achieved on a periodic basis. On 1 October the lunar surface temperature, as measured by the HFE thermocouples, was 110 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic low gain, integrator shorted mode, bias out, *post amplifier gain at increment 2,* the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *Attempts to regain control of the temperature regulator have been unsuccessful this report period. The instrument was inadvertently operated with post amplifier gain at increment 3 from 1541 G.m.t., 26 September to 1523 G.m.t., 1 October.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY. Operational checks performed on 29 and 30 September indicated an improvement in the high voltage and sweep voltage. The instrument was operated after the bake out heater had been ON prior to these two checks. The sweep voltage was stepping instead of being at full scale. Another check is scheduled for later today, 3 October.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 25 September 1975, to 1300 G.m.t., 3 October 1975

Central station	Midnight at the Descartes Site occurred on 3 October for the 43rd lunation. The DSS-1 heater (10 watts) is ON for lunar night operation. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength, from transmitter B, was reported between -134.5 and -138.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter, IN). No significant seismic events were noted this report period.
Lunar surface magnetometer experiment	The LSM is ON. Flip calibration sequences have been discontinued for the remainder of this lunar night due to the low temperatures of the Z-axis sensor head. Science data from the Z-axis remains static.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 25 September 1975, to 1300 G.m.t., 3 October 1975

Central station	Sunset of the station's 52nd lunation occurred on 27 September. Transmitter A downlink signal strength was reported between -133.5 and -138.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18-hour timer output pulse functions. No significant seismic events were noted this report period.
Suprathermal ion detector/cold cathode gauge experiment	The SIDE is currently ON and operating in the full automatic stepping sequence (0-127 frames) with the Channeltron high voltages ON. The CCGE high voltage (+ 4.5 K vdc) remains OFF.
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 90.5°K on 1 October, as indicated by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 25 September 1975, to 1300 G.m.t., 3 October 1975

Central station	Sunset of the 58th lunation at the Apollo 14 site occurred on 29 September. Transmitter A signal strength was reported at -139.0 ± 2.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.
Passive seismic experiment	The instrument is ON. The PSE heater has been in Forced OFF since 24 February 1975. The internal temperature (DL-07) has been reading offscale LOW this report period. The long-period Y-axis was onscale and appeared to be responding normally during this report period. No significant seismic events were noted this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 25 September 1975, to 1300 G.m.t., 3 October 1975

Central station	Sunset of the 73rd lunation occurred on 29 September. A signal strength at -140.0 $\pm$ 2.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 (10w) Heater is ON for lunar night operation.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z-axis levelling motor is ON to maximize internal heating in the instrument for lunar night operation. No significant seismic events were noted this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence (0-127 frames) with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 1 October 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2142	1699	1523	1258
Total Commands to Date	27175	15644	30537	17994
Sun Angle	202.1°	208.0°	229.2°	241.0°
Input Power	57.0w *(57.4w)*	61.8w *(62.1w)*	62.0w *(62.9w)*	66.2w *(66.2w)*
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	DSS-1 (10w) ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	5.0°F	9.4°F	2.6°F	32.2°F
PSE Sensor Temp (DL-07)	126.3°F	Offscale LOW	124.6°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-14.4°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.8°C	STBY	7.8°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	112.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-61.5°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.7°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1023
Total Commands to Date	28969
Sun Angle	256.3°
Input Power	70.2w *(70.6w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LACE/LSP STBY
Avg Thermal Plate Temp	5.2°F
LACE Temp (AM-41)	Offscale LOW
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.0°K
LSG Temp (DG-04)	51.2°C
LSP Temp (AP-01)	6.2°F

Values in parentheses indicate RTG outputs during the last lunation at a similar sun angle.

SEP 07/250	08/251	09/252	10/253	11/254	12/255	13/256
NO SUPPORT	0900-1100 HFE RBS	NO SUPPORT	0900-1100 ALSEP 17 HFE RBS	NO SUPPORT ALSEP 16	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST HFE RBS FLIP CAL	0900-1100 LACE STDBY LEAM OFF
SEP 14/257	**15/258**	**16/259**	**17/260**	**18/261**	**19/262**	**20/263**
0900-1100 ALSEP 14 ALSEP 12	0500-0900 ALSEP 12 C/S HTR OFF PSE Z MTR OFF HFE RBS FLIP CAL 1600-1700	0900-1100 ALSEP 12 SIDE OFF	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 2100 - SIDE STDBY, MODE I HFE RBS FLIP CAL	1330-1530 ALSEP 15 SIDE SPRT 2330 - SIDE OFF, MODE I ALSEP 12 CYCLE SIDE	1530-1730 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON HFE RBS FLIP CAL	0800-1000 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY
SEP 21/264	**22/265**	**23/266**	**24/267**	**25/268**	**26/269**	**27/270**
2030-2230 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON	0800-1000 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE STDBY ALSEP 17 LEAM ON HFE RBS FLIP CAL	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON	0900-1100 ALSEP 12 CYCLE SIDE HFE RBS FLIP CAL 2100-2200	0600-0700 ALSEP 17 1600-1700	0100-0200 0900-1100 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE HFE RBS FLIP CAL	0900-1100 ALSEP 15 ALSEP 12 SIDE ON

ALSEP PERFORMANCE SUMMARY REPORT

10 October 1975
G.m.t.: 1300

Remote site coverage for recordings of ALSEP downlink data are not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*02 Oct 75*	*0117/0119*	02^m	*ORR*	*Site Problem*
ALL	*06 Oct 75*	*0845/1027*	01^h42^m	*GWM/BUR*	*Higher Priority*
ALL	*08 Oct 75*	*1045/1113*	28^m	*ACN*	*Higher Priority*

Apollo 17 ALSEP

Sunrise of the 36th lunation occurred today at the Taurus Littrow site. Downlink signal strength was reported between -137.0 and -143.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are achieved on a periodic basis. On 8 October the lunar surface temperature, as measured by the HFE thermocouples, was 106 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment was commanded to STANDBY on 8 October and will be turned ON during real time support on 10 October, after sunrise. This configuration was made to reduce the instrument's housing temperature (DG-04) and attempt to regain thermal control of the experiment.

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY. Another operational check was performed on 3 October 1975 and the same indications were noted as had previously been observed on 29 and 30 September 1975. After approximately 20 minutes of operation the experiment was commanded to STANDBY on 3 October, at the Principal Investigator's request, for further analysis of the data gained by these checks.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 3 October 1975, to 1300 G.m.t., 10 October 1975

Central station	Sunrise at the Descartes Site will occur on 11 October for the 44th lunation. The DSS-1 heater (10 watts) is ON for lunar night operation. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength, from transmitter B, was reported between -132.5 and -137.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter, IN). No significant seismic events were noted this report period.
Lunar surface magnetometer experiment	The LSM is ON. Flip calibration sequences have been discontinued for the lunar night due to the low temperatures of the Z-axis sensor head. Science data from the Z-axis remains static.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 3 October 1975, to 1300 G.m.t., 10 October 1975

Central station	Midnight of the station's 52nd lunation occurred on 4 October. Transmitter A downlink signal strength was reported between -132.0 and -139.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18-hour timer output pulse functions. No significant seismic events were noted this report period.
Suprathermal ion detector/cold cathode gauge experiment	The SIDE is currently ON and operating in the full automatic stepping sequence (0-127 frames) with the Channeltron high voltages ON. The CCGE high voltage (+ 4.5 K vdc) remains OFF.
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 84.5°K on 8 October, as indicated by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 3 October 1975, to 1300 G.m.t., 10 October 1975

Central station	Midnight at the Apollo 14 site occurred on 6 October for the 58th lunation. Transmitter A signal strength was reported between -135.5 and 140.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. The minimum average thermal plate temperature experienced during the lunar night this report period was 9.1°F.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has been reading offscale LOW this reporting period. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis sensor has been offscale HIGH, but has appeared to exhibit normal responses. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environment experiment	The CPLEE is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 3 October 1975, to 1300 G.m.t., 10 October 1975

Central station	Midnight of the station's 73rd lunation occurred on 7 October. The DSS-1 heater (10 watts) is ON for lunar night. Transmitter B signal strength was reported between -136.5 and -141.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) has been offscale LOW since 3 October. The Z-axis drive motor is ON to maximize heating in the instrument during the lunar night. No significant seismic events were observed during this report period.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with the Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 8 October 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2149	1706	1600	1265
Total Commands to Date	27191	15648	30603	18016
Sun Angle	287.6°	293.6°	314.7°	326.6°
Input Power	56.3w	61.3w	61.6w	65.4w
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	DSS-1 (10w) ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	1.3°F	9.1°F	1.4°F	31.1°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.2°F	125.8°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-15.6°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.8°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	106.5°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-71.4°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1030
Total Commands to Date	29115
Sun Angle	341.8°
Input Power	69.7w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	All OFF
Experiment Status	LSG/LACE/LSP STBY
Avg Thermal Plate Temp	6.3°F
LACE Temp (AM-41)	-16.1°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.7°K
LSG Temp (DG-04)	Offscale HIGH
LSP Temp (AP-01)	7.8°F

ALSEP PERFORMANCE SUMMARY REPORT

17 October 1975
G.m.t.: 1300

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
A17	*09 Oct 75*	*1227/1235*	*08^m*	*BUR*	*Station Problem*
ALL	*13 Oct 75*	*0405/0430*	*25^m*	*GWM/ORR*	*Higher Priority*

Apollo 17 ALSEP

Noon of the 36th lunation occurred today, 17 October, at the Taurus Littrow site. Downlink signal strength was reported between -136.0 and -140.5 dbm from transmitter A. Transmission of command octal 174 (delay uplink switch-over), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 16 October the lunar surface temperature, as measured by the HFE thermocouples, was 366 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic HIGH gain, integrator shorted mode, bias out, post amplifier gain at increment 2, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The sensor temperature (DG-04) was offscale HIGH on 16 October and the LSG heater was commanded OFF. The thermal regulation anomaly continues.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY.

The Lunar Ejecta and Meteorites Experiment is OFF for lunar day.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 10 October 1975, to 1300 G.m.t., 17 October 1975

Central station	Sunrise at the Descartes Site occurred on 11 October for the 44th lunation. The DSS-1 heater (10 watts) is OFF for lunar day operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B was reported at -135.5 $\pm$ 2.5 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter IN). No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1060 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis continues to be static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 10 October, to 1300 G.m.t., 17 October 1975

Central station	Sunrise of the 53rd lunation occurred at the Hadley Rille Site on 12 October. Transmitter A downlink signal strength is reported between -133.5 and -140.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON. *A special operation of the SIDE will be conducted from 17 October to 21 October at the request of the Principal Investigator.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 351.4°K on 16 October as indicated by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.3°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 10 October 1975, to 1300 G.m.t., 17 October 1975

Central station	Sunrise at the Apollo 14 site (59th lunation) occurred on 14 October. Transmitter A signal strength was reported at -140.5 ± 3.5 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has remained offscale low during this report period. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis appeared to be responding normally. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 10 October 1975, to 1300 G.m.t., 17 October 1975

Central station	Sunrise of the 74th lunation occurred on 14 October. A signal strength of -140.0 $\pm$ 2.0 dbm, from transmitter B, was reported by the 30-foot antenna tracking stations. The DSS-1 (10 watts) heater is OFF for lunar day operations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z-motor is OFF to minimize heat in the instrument. No significant seismic events were noted during the real-time support of this instrument.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. The instrument ac calibrate measurements (sequence 15) were intermittently LOW during this report period.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument, in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF in order to prevent mode changes, is in effect to keep the temperature below 55°C.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 16 October 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2157	1714	1538	1273
Total Commands to Date	27249	15648	30738	18150
Sun Angle	25.1°	31.1°	52.2°	64.1°
Input Power	57.0w	62.0w	62.4w	64.9w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	73.3°F	82.6°F	98.9°F	99.5°F
PSE Sensor Temp (DL-07)	126.3°F	Offscale LOW	132.6°F	139.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	41.4°C
SWS Module 300 Temp (DW-13)	45.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	81.7°C	N/A
CCGE Temp (DI-04)	OFF	STBY	364.0°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	22.9°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	317.7°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1038
Total Commands to Date	29282
Sun Angle	79.3°
Input Power	68.2w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE/LSPE STBY & LEAM OFF
Avg Thermal Plate Temp	87.2°F
LACE Temp (AM-41)	150.6°F
LEAM Temp (AJ-11)	173.8°F
HFE Temp Ref 1 (DH-13)	327.9°K
LSG Temp (DG-04)	Offscale HIGH
LSP Temp (AP-01)	87.0°F

ALSEP PERFORMANCE SUMMARY REPORT

24 October 1975
G.m.t.: 1300

Apollo 17 ALSEP

Sunset of the 36th lunation occurs today at the Taurus Littrow site. Downlink signal strength is reported between -134.0 and -139.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switch-over), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 23 October the lunar surface temperature, as measured by the HFE thermocouples, was 306 $\pm$ 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 2, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The LSG heater was commanded ON, 23 October, after having been OFF since 16 October. This manual commanding of the heater OFF/ON is to insure that the instrument will not go into an out of limits condition thereby losing the seismic data. The thermal regulation anomaly continues.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 17 October 1975, to 1300 G.m.t., 24 October 1975

Central station	Noon at the Descartes Site occurred on 18 October for the 44th lunation. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B is reported between -135.0 and -138.5 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter IN). The instrument assembly temperature (DL-07) is offscale HIGH but is expected to return onscale tomorrow. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1066 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 17 October 1975, to 1300 G.m.t., 24 October 1975

Central station	Noon of the 53rd lunation occurred at the Hadley Rille Site on 19 October. Transmitter A downlink signal strength is reported between -133.0 and -138.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. The instrument assembly temperature (DL-07) was offscale HIGH on 18 October at a sun angle of 78.2° and returned onscale 22 October (DL-07 = 142.1°F), at a sun angle of 125.2°. No seismic events were observed during this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames) (Apollo 15 ALSEP, SMEAR 47). *A special operational test of the SIDE was conducted between 17 October and 20 October at the request of the Principal Investigator.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors are being sampled in full sequence. The lunar surface temperature was 340.6 °K on 23 October as indicated by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.3°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 17 October 1975, to 1300 G.m.t., 24 October 1975

Central station

Noon at the Apollo 14 site (59th lunation) occurred on 21 October. Transmitter A signal strength was reported between -137.0 and -143.0 dbm from the 30-foot antenna tracking stations.

Passive seismic experiment

The instrument is ON. DL-07, internal temperature, was reading 125.73°F on 23 October. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the Y-axis returned onscale and went from offscale HIGH to offscale LOW. No seismic events were noted during real-time this reporting period. The table depicts the performance of the PSE from 18 October to 23 October 1975:

DATE	G.M.T.	X	Y	Z	DL-07 (°F)	SUN ANGLE
18 Oct	1848	L	12.09	H	L	57.3°
19 Oct	1909	L	-3.57	H	L	69.6°
20 Oct	1224	L	-12.74	H	108.08	78.4°
21 Oct	1354	L	-22.31	H	116.89	91.3°
22 Oct	1421	L	L	H	122.49	103.7°
23 Oct	1335	L	L	H	125.73	115.5°

Active seismic experiment

The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).

Suprathermal ion detector/cold cathode gauge experiments

The instrument status is unknown.

Charged particle lunar environmental experiment

The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 17 October 1975, to 1300 G.m.t., 24 October 1975

Central station	Noon of the 74th lunation occurred on 21 October. A signal strength between -139.5 and -143.0 dbm from transmitter B was reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network contruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) went offscale HIGH on 22 October. The temperature is expected to return onscale 27 October. No significant seismic events were noted during real-time this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. *On 23 October, it was noted that the data output of the sum cups Levels 1 through 14 during the instrument's calibrate measurements (Sequence 14 and 15) were giving an invalid indication. This anomaly has previously been observed.*
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day. *During real-time support on 20 October the SIDE experienced a spurious mode change to X10 at a temperature of 56.51°C. The mode change was cleared by commanding the instrument to OFF for cool down prior to turn ON during the next support period.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 23 October 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2164	1721	1545	1280
Total Commands to Date	27324	15648	30844	18256
Sun Angle	110.2°	116.2°	137.3°	149.2°
Input Power	57.0w	62.0w	62.4w	64.8w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	95.4°F	108.7°F	103.9°F	83.1°F
PSE Sensor Temp (DL-07)	Offscale HIGH	125.7°F	136.2°F	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	41.4°C
SWS Module 300 Temp (DW-13)	65.2°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	85.5°C	N/A
CCGE Temp (DI-04)	OFF	STBY	347.4°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	82.0°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	320.6°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1045
Total Commands to Date	29475
Sun Angle	164.4°
Input Power	69.0w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LSPE STBY
Avg Thermal Plate Temp	69.3°F
LACE Temp (AM-41)	115.4°F
LEAM Temp (AJ-11)	164.1°F
HFE Temp Ref 1 (DH-13)	299.9°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	71.4°F

SEP 28/271	29/272	30/273	OCT 01/274	02/275	03/276	04/277
0900-1100	1600-2000 ALSEP 14 ALSEP 12 C/S HTR ON PSE Z MTR ON HFE RBS	0900-1100	0900-1100 HFE RBS	NO SUPPORT	0900-1100 HFE RBS	NO SUPPORT

OCT 05/278	06/279	07/280	08/281	09/282	10/283	11/284
NO SUPPORT	1400-1600 HFE RBS	NO SUPPORT	0900-1100 HFE RBS	NO SUPPORT ALSEP 17	0900-1100 HFE RBS	0900-1100 ALSEP 16 C/S HTR OFF TIMER RST

OCT 12/285	13/286	14/287	15/288	16/289	17/290	18/291
0900-1100 ALSEP 15 TIMER RST ALSEP 17 LACE STDBY	0900-1100 ALSEP 14 ALSEP 17 LEAM OFF HFE RBS FLIP CAL	1800-2200 ALSEP 12 C/S HTR OFF PSE Z MTR OFF	0900-1100 HFE RBS FLIP CAL	0900-1100 ALSEP 12 SIDE OFF	1530 ALSEP 15 SIDE OFF, MODE I 2000-2200 ALSEP 12 CYCLE SIDE 2100 ALSEP 15 SIDE ON HFE RBS FLIP CAL	0500 ALSEP 15 SIDE STDBY, MODE I 1400-1600 ALSEP 12 & 15 CYCLE SIDES

ALSEP PERFORMANCE SUMMARY REPORT

31 October 1975
G.m.t.: 1300

Remote site coverage for recordings of ALSEP downlink data are not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
12	*14 Aug 75*	*0748/0911*	1^h23^m	*HAW*	*Site Problem*
14	*19 Aug 75*	*0912/1203*	2^h51^m	*ORR*	*Site Problem*
14	*20 Aug 75*	*1707/1846*	1^h39^m	*ORR*	*Site Problem*
12	*22 Aug 75*	*0650/1027*	3^h37^m	*HAW*	*Site Problem*
12,14	*22 Aug 75*	*1017/1240*	2^h23^m	*ORR*	*Site Problem*
16	*28 Aug 75*	*1954/2236*	2^h42^m	*ORR*	*Site Problem*

Apollo 17 ALSEP

Midnight of the 36th lunation will occur on 1 November at the Taurus Littrow site. Downlink signal strength was reported at -139.0 ± 4.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are achieved on a periodic basis. On 30 October the lunar surface temperature, as measured by the HFE thermocouples was 110 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 2, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The LSG heater is currently ON. During the past reporting period the heater was commanded OFF/ON several times to manually maintain the instrument within the operating temperature limits to avoid the loss of seismic data. The thermal regulation anomaly continues.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is ON but is not processing scientific data.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 24 October 1975, to 1300 G.m.t., 31 October 1975

Central station	Sunset at the Descartes Site occurred on 26 October for the 44th lunation. The DSS-1 heater (10 watts) is ON for lunar night operation. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength, from transmitter B, was reported between -134.0 and -142.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter, IN). The instrument assembly temperature returned onscale 26 October (DL-07 = 134.6°F), at a sun angle of 179.4°. No significant seismic events were noted this report period.
Lunar surface magnetometer experiment	The LSM is ON. Flip calibration sequences have been discontinued for the remainder of this lunar night due to the low temperatures of the Z-axis sensor head. Science data from the Z-axis remains static.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 24 October 1975, to 1300 G.m.t., 31 October 1975

Central station	Sunset of the station's 53rd lunation occurred on 27 October. Transmitter A downlink signal strength was reported between -133.5 and -137.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18-hour timer output pulse functions. No significant seismic events were noted this report period.
Suprathermal ion detector/cold cathode gauge experiment	The SIDE is currently ON and operating in the full automatic stepping sequence (0-127 frames) with the Channeltron high voltages ON. The CCGE high voltage (+ 4.5 K vdc) remains OFF.
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 91.4°K on 30 October, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 24 October 1975, to 1300 G.m.t., 31 October 1975

Central station	Sunset of the 59th lunation at the Apollo 14 site occurred on 28 October. Transmitter A signal strength was reported at -137.5 ± 3.5 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) went offscale LOW on 27 October, at a sun angle of 164.8°. The PSE heater has been in Forced OFF since 24 February 1975. *The long period Y-axis sensor has been offscale LOW from 22 October until 30 October when it came back onscale (-9.96 micro-radians) at a sun angle of 203°.* No significant seismic events were noted during the support periods.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 24 October 1975, to 1300 G.m.t., 31 October 1975

Central station	Sunset of the 74th lunation occurred on 29 October. A signal strength of -139.5 ± 2.5 dbm from transmitter B was reported by the 30-foot antenna tracking stations. The DSS-1 (10w) Heater is ON for lunar night operation.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z-axis levelling motor is ON to maximize internal heating in the instrument for lunar night operation. *At the beginning of support on 28 October, it was observed that the short period Z-axis sensor gain indicated -10 db. No command verification word (octal 067) was noted in the downlink signal. This spurious functional change occurred between support periods of 27-28 October and was cleared during real-time support 28 October, by commanding the experiment to the 0 db range (3 octal 067's).* The instrument assembly temperature returned onscale 28 October (DL-07 = 136.5°F), at a sun angle of 170.9°. No significant seismic events were noted this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence (0-127 frames) with Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1800 G.m.t., 30 October 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2171	1728	1552	1287
Total Commands to Date	27460	15648	30984	18428
Sun Angle	197.5°	203.4°	224.6°	236.4°
Input Power	56.7w	61.3w	61.2w	65.4w
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	DSS-1 (10w) ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	4.4°F	9.4°F	1.1°F	32.2°F
PSE Sensor Temp (DL-07)	126.5°F	Offscale LOW	124.6°F	125.9°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-13.0°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.8°C	STBY	7.8°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	112.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-55.5°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.7°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1052
Total Commands to Date	29685
Sun Angle	251.6°
Input Power	70.2w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LSPE STBY
Avg Thermal Plate Temp	20.7°F
LACE Temp (AM-41)	-0.5°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.4°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	22.7°F

ALSEP PERFORMANCE SUMMARY REPORT

7 November 1975
G.m.t.: 1300

Remote site coverage for recordings of ALSEP downlink data are not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	*DATE*	*G.m.t.*	*LOSS*	*SITE*	*REMARKS*
ALL	*31 Oct 75*	*0045/0119*	*34^m*	*GWM/BUR*	*Higher Priority*
ALL	*02 Nov 75*	*0922/0946*	*24^m*	*ACN/AGO*	*Higher Priority*
14,17	*03 Nov 75*	*1909/1924*	*15^m*	*HAW*	*Station Problem*
ALL	*04 Nov 75*	*1040/1055*	*15^m*	*ACN/VAN*	*Scheduling*
ALL	*04 Nov 75*	*1905/1918*	*13^m*	*BDA/GDS*	*Scheduling*
ALL	*05 Nov 75*	*0529/0542*	*13^m*	*GWM/VAN*	*Higher Priority*

Apollo 17 ALSEP

Sunrise of the 37th lunation will occur tomorrow at the Taurus Littrow site. Downlink signal strength was reported between -135.0 and -145.5 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are achieved on a periodic basis. On 5 November the lunar surface temperature, as measured by the HFE thermocouples, was 106 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.7°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 2, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The LSG heater is currently ON. During the past reporting period the heater was commanded OFF/ON to manually maintain the instrument within the operating temperature limits to avoid the loss of seismic data.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY pending further analysis by the Principal Investigator.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 31 October 1975, to 1300 G.m.t., 7 November 1975

Central station	Midnight at the Descartes Site occurred on 2 November for the 44th lunation. The DSS-1 heater (10 watts) is ON for lunar night operation. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength, from transmitter B, was reported between -132.0 and -138.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter, IN). No significant seismic events were noted this report period.
Lunar surface magnetometer experiment	The LSM is ON. Flip calibration sequences have been discontinued for the remainder of this lunar night due to the low temperatures of the Z-axis sensor head. Science data from the Z-axis remains static.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 31 October 1975, to 1300 G.m.t., 7 November 1975

Central station	Midnight of the station's 53rd lunation occurred on 3 November. Transmitter A downlink signal strength was reported between -133.0 and -139.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18-hour timer output pulse functions. No significant seismic events were noted this report period.
Suprathermal ion detector/cold cathode gauge experiment	The SIDE is currently ON and operating in the full automatic stepping sequence (0-127 frames) with the Channeltron high voltages ON. The CCGE high voltage (+ 4.5 K vdc) remains OFF.
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 85.5°K on 5 November, as indicated by the cable thermocouples. The subsurface temperature was 253.6°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 31 October 1975, to 1300 G.m.t., 7 November 1975

Central station	Midnight at the Apollo 14 site occurred on 5 November for the 59th lunation. Transmitter A signal strength was reported between -134.0 and -141.5 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. The minimum average thermal plate temperature experienced during the lunar night this report period was 9.4°F.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has been reading offscale LOW this reporting period. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis sensor drifted offscale HIGH, but has appeared to exhibit normal responses. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environment experiment	The CPLEE is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 31 October 1975, to 1300 G.m.t., 7 November 1975

Central station	Midnight of the station's 74th lunation occurred on 5 November. The DSS-1 heater (10 watts) is ON for lunar night. Transmitter B signal strength was reported between -135.0 and -141.5 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) has been offscale LOW since 31 October. The Z-axis drive motor is ON to maximize heating in the instrument during the lunar night. No significant seismic events were observed during this report period.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with the Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1700 G.m.t., 5 November 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2177	1734	1558	1293
Total Commands to Date	27490	15648	31063	18446
Sun Angle	269.7°	275.6°	296.8°	308.6°
Input Power	55.9w *(56.3w)*	61.3w *(61.3w)*	60.7w *(62.5w)*	65.7w *(66.2w)*
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	DSS-1 (10w) ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	0.9°F	9.4°F	1.2°F	31.1°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.4°F	125.8°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-15.6°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.8°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	108.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-77.4°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1058
Total Commands to Date	29785
Sun Angle	323.9°
Input Power	69.4w *(69.7w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE/LSPE STBY
Avg Thermal Plate Temp	11.6°F
LACE Temp (AM-41)	-2.3°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	286.5°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	12.7°F

Values in parentheses indicate RTG outputs during the last lunation at a similar sun angle.

ALSEP PERFORMANCE SUMMARY REPORT

14 November 1975
G.m.t.: 1300

November 19 will mark the completion of six full years of continued operation by the Apollo 12 ALSEP science station on the lunar surface. The lunar scientific station will have exceeded by five years its original one year design life expectation. The Radioisotope Thermoelectric Generator has experienced an anticipated gradual degradation of 18.1 watts (3.01 watts per year). The signal strength from the transmitter has remained essentially constant since activation. The Passive Seismic, Solar Wind Spectrometer, and Suprathermal Ion Detector Experiments are operating and returning valid science data to the Earth. The Lunar Surface Magnetometer Experiment had been permanently deactivated on 14 June 1974. For the past year over 5600 commands have been transmitted to and executed by the central station and experiments for a six year total of 27550. The Apollo 12 ALSEP began its 75th lunation on the lunar surface with sunrise on 13 November 1975.

Recordings of ALSEP downlink data are not available for the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	DATE	G.m.t.	LOSS	SITE	REMARKS
14	04 Nov 75	1918/1931	13^m	GDS	Station Problem
16	05 Nov 75	1252/1257	05^m	MAD	Station Problem
ALL	06 Nov 75	1020/1034	14^m	ORR/ACN	Higher Priority
ALL	07 Nov 75	1109/1121	12^m	GWM/ACN	Higher Priority
ALL	08 Nov 75	1655/1705	10^m	AGO/ACN	Higher Priority
ALL	11 Nov 75	1200/1300	1^h00^m	GWM/GWM	Higher Priority

Apollo 17 ALSEP

Sunrise of the 37th lunation occurred on 8 November at the Taurus Littrow site. Downlink signal strength was reported at -137.5 ± 3.5 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 13 November the lunar surface temperature, as measured by the HFE thermocouples, was 339 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.7°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic HIGH gain, integrator shorted mode, bias out, post amplifier gain at increment 2, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The thermal regulation anomaly continues.*

The Lunar Seismic Profiling Experiment is in STANDBY.

ALSEP PERFORMANCE SUMMARY REPORT (continued)

14 November 1975
G.m.t.: 1300

The Lunar Atmospheric Composition Experiment is in STANDBY.

The Lunar Ejecta and Meteorites Experiment was commanded OFF on 11 November for the lunar day.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 7 November 1975, to 1300 G.m.t., 14 November 1975

Central station	Sunrise at the Descartes Site occurred on 9 November for the 45th lunation. The DSS-1 heater (10 watts) is OFF for lunar day operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B was reported between -133.0 and -139.5 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter IN). No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1072 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis continues to be static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 7 November 1975, to 1300 G.m.t., 14 November 1975

Central station	Sunrise of the 54th lunation occurred at the Hadley Rille Site on 10 November. Transmitter A downlink signal strength is reported between -134.0 and -139.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON. *A special operation of the SIDE will be conducted from 17 November to 20 November at the request of the Principal Investigator.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 326.3°K on 13 November as indicated by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 7 November 1975, to 1300 G.m.t., 14 November 1975

Central station	Sunrise at the Apollo 14 site (60th lunation) occurred on 12 November. Transmitter A signal strength was reported at -140.5 ± 3.5 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has remained offscale low during this report period. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis appeared to be responding normally. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 7 November 1975, to 1300 G.m.t., 14 November 1975

Central station	Sunrise of the 75th lunation occurred on 13 November. A signal strength of -139.0 ± 3.0 dbm, from transmitter B, was reported by the 30-foot antenna tracking stations. The DSS-1 (10 watts) heater is OFF for lunar day operations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z-motor is OFF to minimize heat in the instrument. No significant seismic events were noted during the real-time support of this instrument.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. The instrument ac calibrate measurements (sequence 15) were intermittently LOW during this report period.
Suprathermal ion detector experiment	The SIDE is currently ON. Cyclic commanding of the instrument, in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF in order to prevent mode changes, is in effect to keep the temperature below 55°C.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1400 G.m.t., 13 November 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2185	1742	1566	1301
Total Commands to Date	27526	15648	31186	18510
Sun Angle	5.5°	11.6°	32.7°	44.6°
Input Power	56.3w	61.7w	61.5w	64.9w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	37.2°F	48.6°F	82.7°F	88.3°F
PSE Sensor Temp (DL-07)	126.4°F	Offscale LOW	126.0°F	127.3°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	38.3°C
SWS Module 300 Temp (DW-13)	5.4°C	N/A	OFF	N/A
SIDE Temp (DI-05)	14.4°C	STBY	66.7°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	347.4°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-22.7°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	303.4°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1066
Total Commands to Date	29908
Sun Angle	59.8°
Input Power	67.8w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE/LSPE STBY & LEAM OFF
Avg Thermal Plate Temp	84.2°F
LACE Temp (AM-41)	140.5°F
LEAM Temp (AJ-11)	183.5°F
HFE Temp Ref 1 (DH-13)	323.6°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	84.3°F

TIMES - CDT thru Oct 25 - CST Oct 26 & ON ALSEP SUPPORT SCHEDULE/EVENTS PSE CALS DAILY

OCT 19/292	20/293	21/294	22/295	23/296	24/297	25/298
1400-1600 ALSEP 12 CYCLE SIDE 1430 ALSEP 15 SIDE ON	0030 ALSEP 15 SIDE STBY,MODE I 0700-0900 ALSEP 12 CYCLE SIDE 0700 ALSEP 15 SIDE ON 1700 ALSEP 15 SIDE STBY,MODE I	0900-1100 ALSEP 12 & 15 CYCLE SIDES ALSEP 17 LEAM ON	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON HFE RBS FLIP CAL	0900-1100 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 17 ALSEP 12 CYCLE SIDE HFE RBS FLIP CAL 1900-2000	0500-0600 1400-1600 ALSEP 12 CYCLE SIDE 2200-2300 ALSEP 16 C/S HTR ON
OCT 26/299	27/300	28/301	29/302	30/303	31/304	NOV 01/305
0900-1100 ALSEP 15 ALSEP 12 CYCLE SIDE	0900-1100 ALSEP 12 SIDE ON HFE RBS	0900-1100 ALSEP 14	0400-0600 ALSEP 12 C/S HTR ON PSE Z MTR ON HFE RBS 1400-1500	1200-1400	0900-1100 HFE RBS	NO SUPPORT
NOV 02/306	03/307	04/308	05/309	06/310	07/311	08/312
NO SUPPORT	0900-1100 HFE RBS	NO SUPPORT	0900-1100 HFE RBS	NO SUPPORT	0900-1100 HFE RBS	NO SUPPORT ALSEP 17

Bendix Aerospace Systems Division

Prepared by: Ted A. Breezy - January 1976

ALSEP SUNRISE/SUNSET PREDICTIONS FOR 1976

Note: Apollo 12 ALSEP based on empirical data
Apollo 14 - 17 are "normalized"
Time is shown as GMT (EST)
* Indicates previous day

ALSEP Longitude	Apollo 17 30.75°E	Apollo 16 15.51°E	Apollo 15 3.65°E	Apollo 14 17.47°W	Apollo 12 23.39°W
Lunation	39	47	56	62	77
Sunrise	Jan 6/2053 (1553)	Jan 8/0255 (2155)*	Jan 9/0219 (2119)*	Jan 10/2003 (1503)	Jan 11/0813 (0313)
Noon	Jan 14/0638 (0138)	Jan 15/1245 (0745)	Jan 16/1215 (0715)	Jan 18/0604 (0104)	Jan 18/1750 (1250)
Sunset	Jan 21/1643 (1143)	Jan 22/2249 (1749)	Jan 23/2213 (1713)	Jan 25/1556 (1056)	Jan 26/0230 (2130)*
Midnight	Jan 29/0214 (2114)*	Jan 30/0813 (0313)	Jan 31/0735 (0235)	Feb 2/0111 (2011)*	Feb 2/1254 (0754)
Lunation	40	48	57	63	78
Sunrise	Feb 5/1128 (0628)	Feb 6/1729 (1229)	Feb 7/1653 (1153)	Feb 9/1035 (0535)	Feb 9/2247 (1747)
Noon	Feb 12/2107 (1607)	Feb 14/0314 (2214)*	Feb 15/0242 (2142)*	Feb 16/2031 (1531)	Feb 17/0816 (0316)
Sunset	Feb 20/0705 (0205)	Feb 21/1309 (0809)	Feb 22/1234 (0734)	Feb 24/0613 (0113)	Feb 24/1648 (1148)
Midnight	Feb 27/1618 (1118)	Feb 28/2225 (1725)	Feb 29/2144 (1644)	Mar 2/1519 (1019)	Mar 3/0300 (2200)*
Lunation	41	49	58	64	79
Sunrise	Mar 6/0130 (2030)*	Mar 7/0729 (0529)	Mar 8/0652 (0152)	Mar 10/0031 (1931)*	Mar 10/1239 (0739)
Noon	Mar 13/1058 (0558)	Mar 14/1714 (1214)	Mar 15/1629 (1129)	Mar 17/1014 (0514)	Mar 17/2159 (1659)
Sunset	Mar 20/2042 (1542)	Mar 22/0244 (2144)*	Mar 23/0206 (2106)*	Mar 24/1944 (1444)	Mar 25/0622 (0122)
Midnight	Mar 28/0552 (0052)	Mar 29/1147 (0647)	Mar 30/1104 (0604)	Apr 1/0436 (2336)*	Apr 1/1616 (1116)
Lunation	42	50	59	65	80
Sunrise	Apr 4/1439 (0939)	Apr 5/2036 (1536)	Apr 6/1956 (1456)	Apr 8/1333 (0833)	Apr 9/0132 (2032)*
Noon	Apr 11/2353 (1853)	Apr 13/0556 (0056)	Apr 14/0519 (0019)	Apr 15/2302 (1802)	Apr 16/1046 (0546)
Sunset	Apr 19/0923 (0423)	Apr 20/1521 (1021)	Apr 21/1442 (0942)	Apr 23/0815 (0315)	Apr 23/1857 (1357)
Midnight	Apr 26/1817 (1317)	Apr 28/0010 (1921)*	Apr 28/2326 (1826)	Apr 30/1654 (1154)	May 1/0434 (2334)*
Lunation	43	51	60	66	81
Sunrise	May 4/0253 (2153)*	May 5/0847 (0347)	May 6/0804 (0304)	May 8/0138 (2038)*	May 8/1332 (0832)
Noon	May 11/1153 (0653)	May 12/1753 (1253)	May 13/1714 (1214)	May 15/1055 (0555)	May 15/2237 (1737)
Sunset	May 18/2108 (1608)	May 20/0306 (2206)*	May 21/0225 (2125)*	May 22/1956 (1456)	May 23/0642 (0142)
Midnight	May 26/0543 (0043)	May 27/1144 (0644)	May 28/1059 (0559)	May 30/0424 (2324)*	May 30/1601 (1101)
Lunation	44	52	61	67	82
Sunrise	Jun 2/1417 (0917)	Jun 3/2010 (1510)	Jun 4/1926 (1426)	Jun 6/1259 (0759)	Jun 7/0047 (1947)*
Noon	Jun 9/2308 (1808)	Jun 11/0508 (0008)	Jun 12/0430 (2330)*	Jun 13/2207 (1707)	Jun 14/0949 (0449)
Sunset	Jun 17/0818 (0318)	Jun 18/1413 (0913)	Jun 19/1331 (0831)	Jun 21/0701 (0201)	Jun 21/1752 (1252)
Midnight	Jun 24/1656 (1156)	Jun 25/2247 (1747)	Jun 26/2159 (1659)	Jun 28/1524 (1024)	Jun 29/0302 (2202)*
Lunation	45	53	62	68	83
Sunrise	Jul 2/0116 (2016)*	Jul 3/0708 (0208)	Jul 4/0625 (0125)	Jul 5/2356 (1856)	Jul 6/1140 (0640)
Noon	Jul 9/1006 (0506)	Jul 10/1604 (1104)	Jul 11/1525 (1025)	Jul 13/0902 (0402)	Jul 13/2044 (1544)
Sunset	Jul 16/1912 (1412)	Jul 18/0108 (2008)*	Jul 19/0026 (1926)*	Jul 20/1757 (1257)	Jul 21/0449 (2349)*
Midnight	Jul 24/0352 (2252)*	Jul 25/0942 (0442)	Jul 26/0856 (0356)	Jul 28/0220 (2120)*	Jul 28/1359 (0859)
Lunation	46	54	63	69	84
Sunrise	Jul 31/1213 (0713)	Aug 1/1806 (1306)	Aug 2/1724 (1224)	Aug 4/1056 (0556)	Aug 4/2221 (1721)
Noon	Aug 7/2107 (1607)	Aug 8/0307 (2207)*	Aug 10/0229 (2129)*	Aug 11/2006 (1506)	Aug 12/0748 (0248)
Sunset	Aug 15/0619 (0119)	Aug 16/1216 (0716)	Aug 17/1135 (0635)	Aug 19/0506 (0006)	Aug 19/1558 (1058)
Midnight	Aug 22/1504 (1004)	Aug 23/2055 (1555)	Aug 24/2011 (1511)	Aug 26/1338 (0838)	Aug 27/0117 (2017)*
Lunation	47	55	64	70	85
Sunrise	Aug 29/2335 (1835)	Aug 31/0529 (0029)	Sep 1/0448 (2348)*	Sep 2/2223 (1723)	Sep 3/1006 (0506)
Noon	Sep 6/0838 (0338)	Sep 7/1438 (0938)	Sep 8/1401 (0901)	Sep 10/0742 (0242)	Sep 10/1924 (1424)
Sunset	Sep 13/1759 (1259)	Sep 14/2358 (1858)	Sep 15/2318 (1818)	Sep 17/1653 (1153)	Sep 18/0342 (2242)*
Midnight	Sep 21/0255 (2155)*	Sep 22/0849 (0349)	Sep 23/0806 (0306)	Sep 25/0136 (2036)*	Sep 25/1316 (0816)
Lunation	48	56	65	71	86
Sunrise	Sep 28/1137 (0637)	Sep 29/1736 (1236)	Sep 30/1655 (1155)	Oct 2/1034 (0534)	Oct 2/2221 (1721)
Noon	Oct 5/2054 (1554)	Oct 7/0258 (2158)*	Oct 8/0222 (2122)*	Oct 9/2005 (1505)	Oct 10/0748 (0248)
Sunset	Oct 13/0629 (0129)	Oct 14/1231 (0731)	Oct 15/1153 (0653)	Oct 17/0531 (0031)	Oct 17/1616 (1116)
Midnight	Oct 20/1540 (1040)	Oct 21/2136 (1636)	Oct 22/2054 (1554)	Oct 24/1428 (0928)	Oct 25/0208 (2108)*
Lunation	49	57	66	72	87
Sunrise	Oct 28/0036 (1936)*	Oct 29/0636 (0136)	Oct 30/0558 (0058)	Oct 31/2338 (1838)	Nov 1/1132 (0632)
Noon	Nov 4/1006 (0506)	Nov 5/1612 (1112)	Nov 6/1537 (1037)	Nov 8/0924 (0424)	Nov 8/2108 (1608)
Sunset	Nov 11/1955 (1455)	Nov 13/0159 (2059)*	Nov 14/0123 (2023)*	Nov 15/1904 (1404)	Nov 16/0544 (0044)
Midnight	Nov 19/0520 (0020)	Nov 20/1118 (0618)	Nov 21/1037 (0537)	Nov 23/0413 (2313)*	Nov 23/1555 (1055)
Lunation	50	58	67	73	88
Sunrise	Nov 26/1429 (0929)	Nov 27/2030 (1530)	Nov 28/1953 (1453)	Nov 30/1336 (0836)	Dec 1/0142 (2042)*
Noon	Dec 4/0010 (1910)*	Dec 5/0617 (0117)	Dec 6/0543 (0043)	Dec 7/2332 (1832)	Dec 8/1118 (0618)
Sunset	Dec 11/1008 (0508)	Dec 12/1614 (1114)	Dec 13/1540 (1040)	Dec 15/0923 (0423)	Dec 15/1959 (1459)
Midnight	Dec 18/1942 (1442)	Dec 20/0142 (2042)*	Dec 21/0102 (2002)*	Dec 22/1840 (1340)	Dec 23/0621 (0121)
Lunation	51	59	68	74	89
Sunrise	Dec 26/0458 (2358)*	Dec 27/1100 (0600)	Dec 28/1025 (0525)	Dec 30/0410 (2310)*	Dec 30/1619 (1119)
Noon	Jan 2/1443 (0943)	Jan 3/2052 (1552)	Jan 4/2020 (1520)	Jan 6/1410 (0910)	Jan 7/0155 (2055)*
Sunset	Jan 10/0048 (1948)*	Jan 11/0654 (0154)	Jan 12/0619 (0119)	Jan 14/0002 (1902)*	Jan 14/1041 (0541)
Midnight	Jan 17/1023 (0523)	Jan 18/1622 (1122)	Jan 19/1542 (1042)	Jan 21/0920 (0420)	Jan 21/2101 (1601)

ALSEP PERFORMANCE SUMMARY REPORT

21 November 1975
G.m.t.: 1300

A Status Report will not be published on 28 November because of observance of the Thanksgiving Holidays. The next report will be published on 5 December and will cover the two week period from 21 November to 5 December 1975.

The Apollo 12 ALSEP completed six (6) full years of continual operation on 19 November. The lunar science station has exceeded by five (5) years the original one (1) year design life criteria. The Passive Seismic, Solar Wind Spectrometer and Suprathermal Ion Detector Experiments are operating and returning valid science data to the Earth.

A total solar eclipse was experienced by all five (5) lunar science stations on 18 and 19 November. This is the third total eclipse that affected all of the ALSEPs.

Remote site coverage for recordings of ALSEP downlink data are not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	DATE	G.m.t.	LOSS	SITE	REMARKS
ALL	13 Nov 75	1339/1418	39^m	GWM	Higher Priority
ALL	13 Nov 75	1519/1526	07^m	GWM/ACN	Station Problem
ALL	18 Nov 75	1025/1046	21^m	GWM/GDS	Higher Priority
ALL	19 Nov 75	2104/2148	44^m	VAN/MAD	Higher Priority
ALL	19 Nov 75	2350/2400	10^m	MAD	Higher Priority
ALL	20 Nov 75	0000/0038	38^m	MAD	Higher Priority

Apollo 17 ALSEP

Noon of the 37th lunation occurred on 16 November at the Taurus Littrow site. Downlink signal strength is reported between -134.0 and -139.5 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 20 November the lunar surface temperature, as measured by the HFE thermocouples, was 335 $\pm$ 8°K. At a depth of 230 cm the subsurface temperatures were 256.7°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 2, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position,

21 November 1975
G.m.t.: 1300

and the sensor beam near center. *The thermal regulation anomaly continues. Manual commanding of the heater OFF/ON is to insure that the instrument will not go into an out of limits condition which could cause loss of the seismic data.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY.

The Lunar Ejecta and Meteorites Experiment was commanded ON at 0715 G.m.t., 20 November, and configured to measure impact flux rates on the lunar surface. *LEAM was ON during the eclipse from 2046 G.m.t., 18 November to 0041 G.m.t., 19 November.*

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 14 November 1975, to 1300 G.m.t., 21 November 1975

Central station	Noon at the Descartes Site occurred on 17 November for the 45th lunation. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength, from transmitter B, is reported at -136.0 $\pm$ 2.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter IN). The instrument assembly temperature (DL-07) is offscale HIGH but is expected to return onscale 24 November. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1080 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 14 November 1975, to 1300 G.m.t., 21 November 1975

Central station	Noon of the 54th lunation occurred at the Hadley Rille Site on 18 November. Transmitter A downlink signal strength is reported at -135.0 ± 2.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. The instrument assembly temperature (DL-07) was off-scale HIGH on 16 November at a sun angle of 70.1° and is expected to return onscale 21 November. *A spurious functional change, leveling power X motor ON (octal 070), occurred at 1708 G.m.t., 16 November, during real-time support. A CVW was not seen in the downlink. At the time technical difficulties were being encountered and the X motor was commanded OFF later at 1807 G.m.t., 16 November. Subsequent monitoring of the PSE data indicated that all engineering and science data shortly returned to normal.* No significant seismic events were observed during this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is ON and operating with the Channeltron high voltages commanded ON and in full automatic stepping sequence (0-127 frames) (Apollo 15 ALSEP, SMEAR 47). *A special operational test of the SIDE is being conducted from 16 to 21 November at the request of the Principal Investigator.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors are being sampled in full sequence. The lunar surface temperature was 363.1°K on 20 November as measured by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.3°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 14 November 1975, to 1300 G.m.t., 21 November 1975

Central station	Noon at the Apollo 14 site (60th lunation) occurred on 20 November. Transmitter A signal strength was reported at -139.5 $\pm$ 2.5 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is ON. DL-07, internal temperature, was reading 115.0°F on 20 November. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the Y-axis returned onscale and went from offscale HIGH to offscale LOW. No seismic events were noted during real-time this reporting period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 14 November 1975, to 1300 G.m.t., 21 November 1975

Central station	Noon of the 75th lunation occurred on 20 November. A signal strength at -137.5 ± 3.5 dbm, from transmitter B, is reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). No significant seismic events were noted during real-time this report period.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day. *During real-time support on 15 November the SIDE experienced a spurious mode change to X10 at a temperature of 62.45°C. The mode change was cleared by commanding the instrument to OFF for cool down prior to turn ON during the next support period. The instrument was ON during the eclipse from 1940 G.m.t., 18 November to 0006 G.m.t., 19 November and experienced no mode changes during this operation.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 0800 G.m.t., 20 November 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2192	1749	1573	1308
Total Commands to Date	27631	15648	31346	18639
Sun Angle	87.6°	93.6°	114.7°	126.5°
Input Power	57.0w	62.2w	61.9w	64.9w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	94.2°F	118.0°F	114.5°F	98.5°F
PSE Sensor Temp (DL-07)	139.1°F	115.0°F	Offscale HIGH	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	42.4°C
SWS Module 300 Temp (DW-13)	67.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	69.9°C	N/A
CCGE Temp (DI-04)	OFF	STBY	364.0°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	75.7°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	329.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1073
Total Commands to Date	30078
Sun Angle	141.7°
Input Power	68.2w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE/LSPE STBY
Avg Thermal Plate Temp	78.8°F
LACE Temp (AM-41)	133.5°F
LEAM Temp (AJ-11)	185.0°F
HFE Temp Ref 1 (DH-13)	314.9°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	79.5°F

ALSEP PERFORMANCE SUMMARY REPORT

5 December 1975
G.m.t.: 1300

This report covers the period from 21 November to 5 December 1975.

Remote site coverage for recordings of ALSEP downlink data are not available during the following periods. It must be noted that these data losses are non-recoverable.

ALSEP	DATE	G.m.t.	LOSS	SITE	REMARKS
ALL	23 Nov 75	2021/2028	07^m	GWM/ORR	Higher Priority
12	25 Nov 75	0254/0905	6^h11^m	ACN	Station Problem
ALL	26 Nov 75	0722/0730	08^m	ACN/MAD	Higher Priority
ALL	28 Nov 75	1010/1029	19^m	ACN/AGO	Higher Priority
ALL	29 Nov 75	0335/0353	18^m	VAN	Station Problem
ALL	01 Dec 75	1212/1230	18^m	ACN/BDA	Higher Priority
ALL	03 Dec 75	0653/0719	26^m	VAN	Station Problem
ALL	03 Dec 75	0850/0911	21^m	VAN	Station Problem
ALL	03 Dec 75	2113/2137	24^m	HAW/GWM	Higher Priority
ALL	03 Dec 75	2245/2321	36^m	GWM	Higher Priority
15	07 Oct 75	0502/0906	4^h04^m	VAN	Station Problem

Apollo 17 ALSEP

Sunrise of the 38th lunation will occur on 8 December at the Taurus Littrow site. Downlink signal strength was reported between -134.0 and -143.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switch-over), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are achieved on a periodic basis. On 3 December the lunar surface temperature, as measured by the HFE thermocouples was 107 $\pm$ 8°K. At a depth of 230 cm the subsurface temperatures were 256.7°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 2, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The LSG heater is currently ON. During the past reporting period the heater was commanded OFF/ON to manually maintain the instrument within the operating temperature limits to attempt to avoid the loss of seismic data. Two occurrences of seismic data losses were noted during this period between 0000 G.m.t., 23 November through 1800 G.m.t., 24 November and 1000 G.m.t., 29 November through 0300 G.m.t., 1 December.*

ALSEP PERFORMANCE SUMMARY REPORT (continued)

5 December 1975
G.m.t.: 1300

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY.

The Lunar Ejecta and Meteorites Experiment is ON and configured to measure impact flux rates on the lunar surface.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 21 November 1975, to 1300 G.m.t., 5 December 1975

Central station	Midnight at the Descartes Site occurred on 2 December for the 45th lunation. The DSS-1 heater (10 watts) is ON for lunar night operation. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength, from transmitter B, was reported between -132.0 and -138.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter, IN). No significant seismic events were noted this report period.
Lunar surface magnetometer experiment	The LSM is ON. Flip calibration sequences have been discontinued for the remainder of this lunar night due to the low temperatures of the Z-axis sensor head. Science data from the Z-axis remains static.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 21 November 1975, to 1300 G.m.t., 5 December 1975

Central station	Midnight of the station's 54th lunation occurred on 3 December. Transmitter A downlink signal strength was reported between -133.0 and -140.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry has been cycling per the normal 18-hour timer output pulse functions. No significant seismic events were noted this report period.
Suprathermal ion detector/cold cathode gauge experiment	The SIDE is currently ON and operating in the full automatic stepping sequence (0-127 frames) with the Channeltron high voltages ON. The CCGE high voltage (+ 4.5 K vdc) remains OFF.
Heat flow experiment	The instrument is presently operating in the gradient mode with all sensors being sampled in full sequence. The lunar surface temperature was 86.8°K on 3 December, as indicated by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.1°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 21 November 1975, to 1300 G.m.t., 5 December 1975

Central station	Midnight at the Apollo 14 site occurred on 4 December for the 60th lunation. Transmitter A signal strength was reported between -135.0 and -141.0 dbm from the 30-foot antenna tracking stations. The DSS-1 heater (10 watts) has been OFF since 20 February 1975. The minimum average thermal plate temperature experienced during the lunar night this report period was 9.1°F.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has been reading offscale LOW this reporting period. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period Y-axis sensor drifted offscale HIGH, but has appeared to exhibit normal responses. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiment	The instrument status is unknown.
Charged particle lunar environment experiment	The CPLEE is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 21 November 1975, to 1300 G.m.t., 5 December 1975

Central station	Midnight of the station's 75th lunation will occur today, 5 December. The DSS-1 heater (10 watts) is ON for lunar night. Transmitter B signal strength was reported between -133.0 and -144.0 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The instrument assembly temperature (DL-07) has been offscale LOW since 1 December. The Z-axis drive motor is ON to maximize heating in the instrument during the lunar night. *The Passive Seismic Experiment experienced a functional change to Long Period Calibration ON (octal 066) between the support periods of 20 and 21 November. The instrument was commanded to Long Period Calibration OFF (octal 066) at 1558 G.m.t., 22 November. Science data was not affected during this period of operation. No CVW was reported in the ALSEP 12 downlink for this functional change. On 23 November the PSE Short Period Z Gain was commanded to -20 db. This setting eliminated the noise, due to crosstalk interference, appearing on the Long Period X, Y, and Z-axes science data. The experiment will be operated in this configuration pending further analysis by the Principal Investigator.* No significant seismic events were observed during this report period.
Solar wind spectrometer experiment	The instrument is ON and operating in the normal gain mode recording solar wind plasma data. The data output of the sum cups levels 1 through 14 during the Solar Wind Spectrometer Experiment ac calibrate measurements (sequence 15 only) continued to be intermittently LOW this report period.
Suprathermal ion detector experiment	The SIDE is ON and in the full automatic stepping sequence with the Channeltron high voltages ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1700 G.m.t., 3 December 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	2205	1762	1586	1306
Total Commands to Date	27762	15648	31591	18817
Sun Angle	250.3°	256.3°	277.4°	289.3°
Input Power	55.6w *(55.9w)*	61.0w *(61.3w)*	59.9w *(60.7w)*	65.7w *(66.2w)*
Heater and Power Dumps	DSS-1 (10w) ON	All OFF	All OFF	DSS-1 (10w) ON
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	-0.6°F	9.4°F	-2.8°F	31.1°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	124.6°F	125.8°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	-10.2°C
SWS Module 300 Temp (DW-13)	-15.6°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	7.2°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	110.3°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-71.4°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	283.5°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1071
Total Commands to Date	30379
Sun Angle	304.5°
Input Power	69.7w *(69.7w)*
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE/LSPE STBY
Avg Thermal Plate Temp	13.2°F
LACE Temp (AM-41)	-16.1°F
LEAM Temp (AJ-11)	-17.4°F
HFE Temp Ref 1 (DH-13)	285.7°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	14.3°F

Values in parentheses indicate RTG outputs during the last lunation at a similar sun angle.

NOV 09/313	10/314	11/315	12/316	13/317	14/318	15/319
NO SUPPORT ALSEP 16	0900-1100 ALSEP 15 TIMER RST ALSEP 16 C/S HTR OFF TIMER RST HFE RBS FLIP CAL	1100-1300 ALSEP 17 LEAM OFF LACE STDBY	0900-1100 ALSEP 14 ALSEP 12 HFE RBS FLIP CAL	0600-1000 ALSEP 12 C/S HTR OFF PSE Z MTR OFF 1700-1800	0930-1130 HFE RBS FLIP CAL	0900- 1000 ALSEP 12 SIDE OFF ALSEP 15 SIDE STDBY
NOV 16/320	**17/321**	**18/322**	**19/323**	**20/324**	**21/325**	**22/326**
1035-1230 ALSEP 12 & 15 CYCLE SIDES	0000-0100 0030 ALSEP 15 SIDE ON 1030 ALSEP 15 SIDE OFF,MODE I 1600-1800 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON HFE-RBS-FLIP CAL	0200 ALSEP 15 SIDE STDBY, MODE I 1300-1400 ECLIPSE ALSEP 15 SIDE ON 1800-1900 ECLIPSE ALSEP 15 SIDE STDBY	0900-1100 ALSEP 12 & 15 CYCLE SIDES HFE RBS FLIP CAL 1000 ALSEP 15 SIDE ON 1900 ALSEP 15 SIDE OFF,MODE I	0100-0200 ALSEP 15 SIDE ON LEAM ON 1000 ALSEP 15 SIDE STDBY, MODE I	0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LACE ON HFE RBS FLIP CAL	0900-1100 ALSEP 12 CYCLE SIDE
NOV 23/327	**24/328**	**25/329**	**26/330**	**27/331**	**28/332**	**29/333**
0600-0800 ALSEP 17 ALSEP 12 CYCLE SIDE 1500-1600	0200-0300 1000-1200 ALSEP 16 C/S HTR ON ALSEP 12 CYCLE SIDE HFE RBS FLIP CAL	0900-1100 ALSEP 15 ALSEP 12 SIDE ON	0900-1100 HFE RBS	1730-2130 ALSEP 14 ALSEP 12 C/S HTR ON PSE Z MTR ON	0900-1100	0900-1100

ALSEP PERFORMANCE SUMMARY REPORT

12 December 1975
G.m.t.: 1300

Apollo 17 ALSEP

Sunrise of the 38th lunation occurred on 8 December at the Taurus Littrow site. Downlink signal strength was reported at -137.5 ± 3.5 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 11 December the lunar surface temperature, as measured by the HFE thermocouples, was 285 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.7°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic HIGH gain, integrator shorted mode, bias out, post amplifier gain at increment 2, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. *The LSG heater was commanded OFF on 10 December to keep the sensor temperature (DG-04) below the high temperature range and to avoid seismic data losses.*

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY.

The Lunar Ejecta and Meteorites Experiment was commanded OFF on 11 December for lunar day operation.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 5 December 1975, to 1300 G.m.t., 12 December 1975

Central station	Sunrise at the Descartes Site occurred on 9 December for the 46th lunation. The DSS-1 heater (10 watts) is OFF for lunar day operations. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength from transmitter B was reported at -136.0 ± 2.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain, 0 db; and feedback loop filter IN). No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is On and recording data. 1084 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis continues to be static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 5 December 1975, to 1300 G.m.t., 12 December 1975

Central station	Sunrise of the 55th lunation occurred at the Hadley Rille Site on 10 December. Transmitter A downlink signal strength is reported at -136.0 ± 2.0 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. No significant seismic events were noted during real-time support this report period.
Suprathermal ion detector/cold cathode gauge experiments	The SIDE is ON. The CCGE high voltage is OFF.
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors being sampled in full sequence. The lunar surface temperature was 285.6°K on 11 December as indicated by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 5 December 1975, to 1300 G.m.t., 12 December 1975

Central station	Sunrise of the 61st lunation occurred on 12 December. Transmitter A signal strength was reported between -137.0 and -142.5 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is ON. The internal temperature (DL-07) has remained offscale LOW during this report period. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the long period X & Y-axes appeared to be responding normally. No significant seismic events were noted during real-time this report period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 5 December 1975, to 1300 G.m.t., 12 December 1975

Central station	Sunrise of the 76th lunation will occur later today, 12 December. A signal strength of -136.0 to -140.5 dbm, from transmitter B, was reported by the 30-foot antenna tracking stations. The DSS-1 (10 watts) heater will be commanded OFF for lunar day operations today, 12 December.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The Z-motor will be commanded OFF to minimize heat in the instrument. *During this reporting period it has been noted that noise spikes are appearing on the data recorded by the Helicorders. This noise is attributed to the third (3rd) least significant bit not setting properly in the analog to digital (A/D) converter. Scientific data is totally recoverable with this condition.* No significant seismic events were noted during the real-time support of this instrument.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data. The instrument ac calibrate measurements (sequence 15) were intermittently LOW during this report period.
Suprathermal ion detector experiment	The SIDE is currently ON.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1500 G.m.t., 11 December 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1213	1770	1594	1329
Total Commands to Date	27709	15648	31690	18884
Sun Angle	347.3°	353.2°	14.3°	26.2°
Input Power	55.2w	61.0w	60.3w	64.9w
Heater and Power Dumps	All ON	All OFF	All OFF	All OFF
Experiment Status	LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF	ASE OFF
Avg Thermal Plate Temp	-2.0°F	8.5°F	46.2°F	69.3°F
PSE Sensor Temp (DL-07)	Offscale LOW	Offscale LOW	125.8°F	126.7°F
LSM Internal Temp (DM-05)	OFF	N/A	OFF	37.3°C
SWS Module 300 Temp (DW-13)	-16.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	4.3°C	STBY	29.5°C	N/A
CCGE Temp (DI-04)	HIGH	STBY	323.8°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	-71.4°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	299.7°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1094
Total Commands to Date	30501
Sun Angle	41.4°
Input Power	67.8w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE/LSPE STBY & LEAM OFF
Avg Thermal Plate Temp	66.4°F
LACE Temp (AM-41)	122.0°F
LEAM Temp (AJ-11)	198.0°F
HFE Temp Ref 1 (DH-13)	315.2°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	65.7°F

DATA LOSSES FOR WEEK ENDING 12 DECEMBER 1975

Remote site coverage for recordings of ALSEP downlink data are not available during the following periods. It must be noted that these losses are non-recoverable.

ALSEP	DATE	G.m.t.	LOSS	SITE	REMARKS
ALL	06 Dec 75	0006/0100	54^m	GWM/ORR	Higher Priority
A14,A15	06 Dec 75	2232/2335	01^h03^m	GDS	Higher Priority
ALL	08 Dec 75	0020/0025	05^m	HAW/ORR	Higher Priority
ALL	08 Dec 75	0233/0238	05^m	ORR	Station Problem
ALL	08 Dec 75	0745/0756	11^m	ORR/VAN	Higher Priority
ALL	08 Dec 75	1224/1308	44^m	VAN	Station Problem
A17	08 Dec 75	1330/1351	21^m	VAN	Station Problem
ALL	08 Dec 75	1602/1626	24^m	ACN/MAD	Higher Priority
A17	10 Dec 75	0201/0211	10^m	QUI	Higher Priority
ALL	10 Dec 75	1840/1904	24^m	ACN/MIL	Higher Priority
A14,A17	10 Dec 75	2043/2223	01^h40^m	MIL/ACN	Higher Priority

ALSEP PERFORMANCE SUMMARY REPORT

19 December 1975
G.m.t.: 1300

A Status Report will not be published on 26 December 1975 and 2 January 1976 because of observance of the Holidays. The next report will be published on 9 January 1976 and will cover the period from 19 December 1975 to 9 January 1976.

The Apollo 17 ALSEP completed three (3) full years of continual operation on 12 December. The lunar science station has exceeded by one (1) year the original two (2) year design life criteria.

Apollo 17 ALSEP

Noon of the 38th lunation occurred on 15 December at the Taurus Littrow site. Downlink signal strength is reported between -133.5 and -141.0 dbm from transmitter A. Transmission of command octal 174 (delay uplink switchover), to inhibit automatic selection of the redundant command signal processing chain by the internally generated 61-hour pulses, continues during real-time support periods.

The Heat Flow Experiment is presently operating in the gradient mode and all sensors are being sampled in full sequence. Ring bridge surveys are being achieved on a periodic basis. On 18 December the lunar surface temperature, as measured by the HFE thermocouples was 368 ± 8°K. At a depth of 230 cm the subsurface temperatures were 256.6°K at probe #1 and 256.9°K at probe #2.

The Lunar Surface Gravimeter Experiment is operating and configured for data collection as follows: seismic high gain, integrator shorted mode, bias out, post amplifier gain at increment 2, the coarse and fine screws driven to the extreme lower position, the tilt servo motors in an intermediate position, and the sensor beam near center. The LSG heater is OFF to keep the sensor temperature (DG-04) within the temperature range to avoid seismic data loss. The thermal regulation anomaly continues.

The Lunar Seismic Profiling Experiment is in STANDBY.

The Lunar Atmospheric Composition Experiment is in STANDBY.

The Lunar Ejecta and Meteorites Experiment is OFF for the lunar day.

It is requested that any organization having comments, questions, or suggestions concerning this report contact F. Heinz, Science Requirements Branch TN3, telephone 713-333-3481.

Apollo 16 ALSEP

Operational status from 1300 G.m.t., 12 December 1975, to 1300 G.m.t., 19 December 1975

Central station	Noon at the Descartes Site occurred on 16 December for the 46th lunation. The 18-hour timer output pulses continue to be inhibited per the agreed operational plan initiated 6 May 1972. The signal strength, from transmitter B, is reported at -135.5 ± 2.0 dbm by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (thermal control, AUTO ON; component gain 0 db; and feedback loop filter IN). The instrument assembly temperature (DL-07) is offscale HIGH but is expected to return onscale 24 December. No significant seismic events were noted during real-time support this report period.
Lunar surface magnetometer experiment	The LSM is ON and recording data. 1090 flip calibration sequences have been executed and verified by the experiment engineering data. Science data from the Z-axis has been static this report period.
Active seismic experiment	The Active Seismic Experiment is currently OFF (Apollo 16 ALSEP, SMEAR 27).

Apollo 15 ALSEP

Operational status from 1300 G.m.t., 12 December 1975, to 1300 G.m.t., 19 December 1975

Central station	Noon of the 55th lunation occurred at the Hadley Rille Site on 17 December. Transmitter A downlink signal strength is reported at -135.5 ± 1.5 dbm by the tracking stations with 30-foot antennas.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). The uncage-arm fire circuitry is cycling normally as a result of the central station data subsystem timer outputs. The instrument assembly temperature (DL-07) was off-scale HIGH on 16 December at a sun angle of 70.8° and is expected to return onscale 21 December. *A spurious functional change, the short period Z-axis sensor gain setting to -10 db, (octal 067), occurred at 1549 G.m.t., 12 December, as observed by the Vanguard tracking ship. The PSE was returned to its 0 db gain setting by sending 3 (octal 067) commands from the Madrid Tracking Station at 1636 G.m.t., 12 December.* No significant seismic events were observed during this report period.
Suprathermal ion detector/cold cathode gauge experiments	The instrument is in STANDBY. *A special operational test of the SIDE was conducted from 15 to 19 December at the request of the Principal Investigator.*
Heat flow experiment	The instrument is presently operating in the gradient mode and all sensors are being sampled in full sequence. The lunar surface temperature was 368.6°K on 18 December as measured by the cable thermocouples. The subsurface temperature was 253.7°K at the bottom of the lowest section of probe #1. Probe #2 indicated a temperature of 251.2°K at its lowermost point. Ring bridge surveys are obtained periodically.
Solar wind spectrometer experiment	Commanded OFF 14 June 1974.
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974. *At 1408 G.m.t., 18 December 1975 the Hawaii Tracking Station observed a command verification word in the downlink signal (octal 042) Experiment Power ON. At 1553 G.m.t., 18 December, Mission Control commanded the experiment back to OFF.*

Apollo 14 ALSEP

Operational status from 1300 G.m.t., 12 December 1975, to 1300 G.m.t., 19 December 1975

Central station	Noon at the Apollo 14 site (61st lunation) occurred today 19 December. Transmitter A signal strength was reported at -137.2 ± 3.2 dbm from the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is ON. DL-07, internal temperature, was reading 109.2°F on 18 December. The PSE heater has been in Forced OFF since 24 February 1975. During this report period the Y-axis returned onscale and went from offscale HIGH to offscale LOW. No seismic events were noted during real-time this reporting period.
Active seismic experiment	The experiment is currently in STANDBY (Apollo 14 ALSEP, SMEAR 86).
Suprathermal ion detector/cold cathode gauge experiments	The instrument status is unknown.
Charged particle lunar environmental experiment	The experiment is in STANDBY.

Apollo 12 ALSEP

Operational status from 1300 G.m.t., 12 December 1975, to 1300 G.m.t., 19 December 1975

Central station	Noon of the 76th lunation will occur on 20 December. A signal strength at -139.0 ± 2.0 dbm, from transmitter B, is reported by the 30-foot antenna tracking stations.
Passive seismic experiment	The instrument is configured for seismic network congruity (Ref. Apollo 16 ALSEP). *During this reporting period the noise spikes previously reported on the data recorded by the Helicorders is no longer observed. Scientific data was totally recoverable with this condition.* No significant seismic events were noted during the real-time support of this instrument.
Solar wind spectrometer experiment	The instrument is currently in the normal gain mode and is recording solar wind plasma data.
Suprathermal ion detector experiment	The SIDE is currently OFF. Cyclic commanding of the instrument in the full automatic stepping sequence with Channeltron high voltages ON to experiment power OFF is in effect for this lunar day. *During real-time support on 17 December the SIDE experienced spurious mode changes to X10 at a temperature of 55.55°C. The instrument also displayed the following conditions: Ground plane stepper OFF, -3.5 K volt High Voltage OFF, Velocity Filter OFF, Low Energy Curve Plate Analyzer OFF, and the Mode Register contained a 007 Load. During real-time support on 18 December, the SIDE experienced a spurious mode change to X10 at a temperature of 55.55°C. The mode changes were cleared by commanding the instrument to OFF for cool down prior to turn ON during each of the support periods.*
Lunar surface magnetometer experiment	Commanded OFF 14 June 1974.

Status as of 1600 G.m.t., 18 December 1975, was as follows:

TM POINT	APOLLO 12 ALSEP	APOLLO 14 ALSEP	APOLLO 15 ALSEP	APOLLO 16 ALSEP
Total Days of Operation	1220	1777	1601	1336
Total Commands to Date	27884	15648	31857	19037
Sun Angle	84.3°	90.3°	111.4°	123.3°
Input Power	56.3w	62.2w	61.1w	64.9w
Heater and Power Dumps	All OFF	All OFF	All OFF	All OFF
Experiment Status	SIDE/LSM OFF	SIDE/ASE/CPLEE STBY	LSM/SWS OFF/SIDE ON	ASE OFF
Avg Thermal Plate Temp	96.2°F	118.8°F	115.9°F	104.0°F
PSE Sensor Temp (DL-07)	137.4°F	109.2°F	Offscale HIGH	Offscale HIGH
LSM Internal Temp (DM-05)	OFF	N/A	OFF	47.0°C
SWS Module 300 Temp (DW-13)	67.1°C	N/A	OFF	N/A
SIDE Temp (DI-05)	OFF	STBY	72.17°C	N/A
CCGE Temp (DI-04)	OFF	STBY	364.0°K	N/A
CPLEE Elect Temp (AC-06)	N/A	STBY	N/A	N/A
ASE GLA Temp (AS-03)	N/A	78.8°C	N/A	OFF
HFE Temp Ref 1 (DH-13)	N/A	N/A	331.4°K	OFF

TM POINT	APOLLO 17 ALSEP
Total Days of Operation	1101
Total Commands to Date	30657
Sun Angle	138.5°
Input Power	67.8w
APM Status (AB-13)	ON
Power Dump Status (AB-14)	OFF
Experiment Status	LACE/LSPE STBY & LEAM OFF
Avg Thermal Plate Temp	88.0°F
LACE Temp (AM-41)	148.0°F
LEAM Temp (AJ-11)	200.0°F
HFE Temp Ref 1 (DH-13)	323.7°K
LSG Temp (DG-04)	Offscale LOW
LSP Temp (AP-01)	88.9°F

DATA LOSSES FOR WEEK ENDING 19 DECEMBER 1975

Remote site coverage for recordings of ALSEP downlink data are not available during the following periods. It must be noted that these losses are non-recoverable.

ALSEP	DATE	G.m.t.	LOSS	SITE	REMARKS
A17	12 Dec 75	0014/0042	28^m	MAD/AGO	Higher Priority
A14,15,16	12 Dec 75	0016/0042	26^m	MAD/AGO	Higher Priority
A12	12 Dec 75	0017/0042	25^m	MAD/AGO	Higher Priority
ALL	12 Dec 75	0800/0845	45^m	ORR/HAW	Higher Priority
A16	12 Dec 75	2122/2202	40^m	VAN/GDS	Higher Priority
A14,17	12 Dec 75	2122/2209	47^m	VAN/GDS	Higher Priority
A14,17	13 Dec 75	0621/0703	42^m	ORR/HAW	Higher Priority
ALL	13 Dec 75	1432/1434	02^m	GWM	Station Problem
ALL	14 Dec 75	0345/0354	09^m	QUI	Higher Priority
A15	16 Dec 75	1457/1459	02^m	VAN	Station Problem

NOV 30/334	DEC 01/335	02/336	03/337	04/338	05/339	06/340
NO SUPPORT	0900-1100 HFE RBS	NO SUPPORT	0900-1100 HFE RBS	NO SUPPORT	0900-1100 HFE RBS	NO SUPPORT
DEC 07/341	**08/342**	**09/343**	**10/344**	**11/345**	**12/346**	**13/347**
NO SUPPORT	1100-1300 ALSEP 17 HFE RBS	0900-1100 ALSEP 16 C/S HTR ON TIMER RST	0900-1100 ALSEP 15 TIMER RST HFE RBS FLIP CAL	0900-1100 ALSEP 14 ALSEP 17 LEAM OFF	1900-2300 ALSEP 12 C/S HTR OFF PSE Z MTR OFF HFE RBS FLIP CAL	0800-1000
DEC 14/348	**15/349**	**16/350**	**17/351**	**18/352**	**19/353**	**20/354**
0800-1000 ALSEP 12 SIDE OFF	0500 ALSEP 15 SIDE STDBY, MODE I 1000-1200 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON HFE-RBS-FLIP CAL 1900 ALSEP 15 SIDE STDBY,MODE I	0130-0230 ALSEP 15 SIDE ON 0830 ALSEP 15 SIDE STDBY, MODE I	0900-1100 ALSEP 12 & 15 CYCLE SIDES HFE RBS FLIP CAL 2100-2200 ALSEP 15 SIDE ON	0430 ALSEP 15 SIDE OFF,MODE I 0900-1100 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON 1600 ALSEP 15 SIDE STDBY, MODE I	0900-1100 ALSEP 12 & 15 CYCLE SIDES HFE RBS FLIP CAL	0600-0800 ALSEP 12 CYCLE SIDE ALSEP 15 SIDE ON ALSEP 17 LEAM ON