
Due to the limited real-time support of the ALSEP packages, it is difficult to precisely track the anomalous events which occur. The Apollo ALSEP anomalies report will appear hereafter as a monthly summarization publication. All previous publications should be retained on file for reference.

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Apollo 17 ALSEP


Station

Filament #1 failed - 23 Sep 1973. Periodic operational checks performed.

LEAM - (AJ-11) Maximum Temperatures - Experiment ON, 192.5°F, Sun Angle 45.5°. Experiment OFF, 189.5°F, Sun Angle 118.7°.

LSGE - Heater Box heater circuit regained thermal stabilization on 20 Apr 1974.

Apollo 16 ALSEP


Station

PSE - Sensor temperature (DL-07) offscale HIGH on 4 May 1974, Sun Angle = 79.5°. Onscale 12 May 1974, (DL-07 = 139.0°F, Sun Angle = 176.3°).

Apollo 16 ALSEP (continued)

- Uncage/Arm Circuit in OT since 24 Mar 1974.

LSM - Engineering and science data valid since 17 Aug 1973.
Spurious functional changes - None since 6 Aug 1973 - 11 total.

Apollo 15 ALSEP

Station

LSM - Engineering and science data invalid since 10 Dec 1973.

SIDE/CCG:

SWS - STANDBY, data out of sync and drawing excessive power (9 watts) when commanded ON since 30 Jun 1972. Periodic operational checks performed.


Spurious functional changes - One this report period - 62 total.
62. Slow Data Rate, Octal 007, 3 May 1974

Apollo 14 ALSEP

Central - Processor Y since 5 Feb 1971.
Station

PSE - None this report period.

SIDE/CCG:

CPLLEE - Channeltron HIGH Voltage ON mode change to 3092.7 Vdc between 19 Apr and 22 Apr 1974.

ASE - Geophone #3 intermittent operation since 26 Mar 1971.
Geophone #2 amplifier failed between 3 Dec 1973 and 3 Jan 1974.
Apollo 14 ALSEP (continued)

Spurious functional changes - Five this report period - 82 total.
78. SIDE STANDBY, internal change, octal 046, 17 Apr 1974.
79. SIDE STANDBY, internal change, octal 046, 17 Apr 1974.
80. 5 Watt Heater ON, octal 056, 22 Apr 1974.
81. CPLEE Channeltron HIGH Voltage ON, octal 120, 19 Apr-22 Apr 1974.
82. SIDE STANDBY, internal change, octal 046, 26 Apr 1974.

Apollo 12 ALSEP

Central - Apparent Processor Y Failure, 3 May 1974.
Station Switched to Processor X, 3 May 1974.


- Long period Z-axis - has executed calibrations properly since 3 Mar 1974 and seismic data valid on recorders.

LSM - Engineering and science data invalid since 4 Jun 1972.

SWS - None this report period.

SIDE/CCGE - None this report period.

Spurious functional changes - One this period - 76 total.
Internal Memorandum

Date 15 June 1974

To Distribution

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 May 1974 to 15 June 1974

Due to the limited real-time support of the ALSEP packages, it is difficult to precisely track the anomalous events which occur. The Apollo ALSEP anomalies report appears as a monthly summarization publication. All previous publications should be retained on file for reference.

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Apollo 17 ALSEP

Central - None this report period.

Station

LACE - Filament #1 failed - 23 Sep 1973
Periodic operational checks performed.

LEAM - (AJ-11) Maximum Temperatures - Experiment ON 196.0°F, Sun Angle = 52.5°. Experiment OFF 188.0°F, Sun Angle = 115.5°. Experiment ON, 196.0°F, Sun Angle = 123.2°F.

LSGE - None this report period.

Apollo 16 ALSEP


Station


- Uncage/Arm Circuit in OT since 24 Mar 1974.

LSM - Engineering and science data valid since 17 Aug 1973.

Spurious functional changes - None since 6 Aug 1973 - 11 total.
Apollo 15 ALSEP

Central - Spurious functional change, 8 Jun 1974.
Station

LSM - Commanded OFF permanently on 14 Jun 1974 per NASA Hdqtrs., JSC, and Principal Investigator agreement.

SIDE/CCGE - None this report period.

SWS - Commanded OFF permanently on 14 Jun 1974 per NASA Hdqtrs., JSC, and Principal Investigator agreement.

PSE - Sensor temperature (DL-07) onscale since 9 Apr 1974.

Spurious functional changes - One this report period - 63 total.
63. 10 Watt Heater ON, Octal 024, 8 Jun 1974.

Apollo 14 ALSEP

Central - Processor Y since 5 Feb 1971.
Station

PSE - None this report period.

SIDE/CCGE - STANDBY or OFF without command on 30 May and 5 Jun 1974.

CPLEE - None this report period.


Spurious functional changes - Three this period - 85 total.
83. SIDE STANDBY, internal change, octal 046, 30 May 1974.
84. PSE LPZ Gain change, octal 064, 2 Jun 1974.

Apollo 12 ALSEP

Central - Apparent Processor Y Failure, 3 May 1974.
Station Switched to Processor X, 3 May 1974.
Apollo 12 ALSEP (continued)

PSE

- Long period Z-axis - has executed calibrations properly since 3 Mar 1974 and seismic data valid on recorders.

LSM
- Commanded OFF permanently on 14 Jun 1974 per NASA Hdqtrs., JSC, and Principal Investigator agreement.

SWS
- None this report period.

SIDE/CCGE
- None this report period.

Spurious functional changes - One this period - 77 total.
77. PSE Htr to Forced OFF, Octal 076, 18 May 1974.

Prepared by T. Breezy

TB: sg

Distribution: TDX/Standard
B. Rusky
D. Fithian
J. McNaughton
W. Tosh
Internal Memorandum

Date 15 July 1974  
Letter No. 9753-163  
Revision B  
Ann Arbor, Michigan

To Distribution

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 June 1974 to 15 July 1974

Due to the limited real-time support of the ALSEP packages, it is difficult to precisely track the anomalous events which occur. The Apollo ALSEP anomalies report appears as a monthly summarization publication. All previous publications should be retained on file for reference.

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Apollo 17 ALSEP

LEAM - (AJ-11) observed Maximum Temperatures - Experiment ON, 189.5°F, Sun Angle = 45.8°. Experiment OFF 186.5°F, Sun Angle = 119.5°. Experiment ON, 192.5°F, Sun Angle = 143.4°F.

Spurious functional change - none since deployment and initialization on 12 Dec 1972.

Apollo 16 ALSEP


Spurious functional changes - None since 6 Aug 1973 - 11 total.

Apollo 15 ALSEP


LSM - Commanded OFF permanently on 14 Jun 1974 per NASA Hdqtrs., JSC, and Principal Investigator agreement.

SWS - Commanded OFF permanently on 14 Jun 1974 per NASA Hdqtrs., JSC, and Principal Investigator agreement.

Apollo 14 ALSEP


SIDE/STANDBY or OFF without command on 13, 16, 23 and 28 Jun 1974.

Spurious functional changes - Five this period - 90 total.
86. SIDE STANDBY, Internal change, octal 046, 13 Jun 1974.
89. SIDE STANDBY, Internal change, octal 046, 23 Jun 1974.

Apollo 12 ALSEP

Central - Spurious functional changes, 3-4 Jun and 8 Jul 1974.


LSM - Commanded OFF permanently on 14 Jun 1974 per NASA Hqtrs., JSC, and Principal Investigator agreement.

SIDE/STANDBY or OFF without command on 13, 16, 23 and 28 Jun 1974.

Spurious functional changes - Three this period - 80 total.
78. 14-watt PDR ON, octal 022, 3-4 Jun 1974.
80. Transmitter OFF, octal 014, 8 Jul 1974.

TB:sg

Distribution: TDX/Standard
B. Rusky
D. Fithian
J. McNaughton
W. Tosh

Prepared by: T. Breezy
Due to the limited real-time support of the ALSEP packages, it is difficult to precisely track the anomalous events which occur. The Apollo ALSEP anomalies report appears as a monthly summarization publication. All previous publications should be retained on file for reference.

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Apollo 17 ALSEP

LEAM - (AJ-11) observed Maximum Temperatures - Experiment ON, 183.5°F, Sun Angle = 40.9°. Experiment OFF, 188.0°F, Sun Angle = 114.2°. Experiment ON, 182.0°F, Sun Angle = 150.7°F.

Spurious functional changes - none since deployment and initialization on 12 Dec 1972.

Apollo 16 ALSEP


Spurious functional changes - None since 6 Aug 1973 - 11 total.

Apollo 15 ALSEP


Spurious functional changes - One this report period - 67 total.

67. 5 watt Heater ON, octal 017, 28 Jul 1974.
Apollo 14 ALSEP


SIDE/CCGE - STANDBY or OFF without command on 28 Jul 1974.

Spurious functional changes - one this period - 91 total.

Apollo 12 ALSEP


SIDE/CCGE - Mode register change to X10 at 1408 G.m.t., 4 Aug 1974.

Spurious functional changes - None this period - 80 total.
Date 15 September 1974  
Letter No. 9753-163  
Revision D

To Distribution

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 August 1974 to 15 September 1974

The Apollo ALSEP anomalies report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported weekly in the ALSEP PERFORMANCE SUMMARY REPORT and the ALSEP STATUS REPORT and quarterly in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

Apollo 17 ALSEP

Central - Decoder A would not accept all commands on 16 and 19 station August 1974. Switched to Uplink B on 19 Aug 1974.

LEAM - (AJ-11) observed Maximum Temperatures - Experiment ON, 192.5°F, Sun Angle = 47.4°. Experiment OFF, 189.5°F, Sun Angle = 120.6°. Experiment ON, 172.8°F, Sun Angle = 156.7°.

Spurious functional changes - none since deployment and initialization on 12 Dec 1972.

Apollo 16 ALSEP


Spurious functional changes - None since 6 Aug 1973 - 11 total.

Apollo 15 ALSEP


Spurious functional changes - two this report period - 69 total.
68. PSE Feedback Filter IN, octal 101, 31 Aug 1974
69. PSE Thermal Control Auto OFF, octal 076, 13 Sep 1974
Apollo 14 ALSEP


SIDE/CCGE - STANDBY or OFF (Word 15 static) without command on 26 Aug 1974.

Spurious functional changes - three this period - 94 total.
92. SIDE STANDBY, Internal change, octal 046, 26 Aug 1974
93. PSE Level Speed HIGH, octal 075, 3 Sep 1974
94. PSE, Y motor ON, octal 071, 10 Sep 1974

Apollo 12 ALSEP

Central - Modulation loss at 0156 G.m.t., 20 Aug 1974, for six station (6) minutes.


SIDE/CCGE - No High Energy calibration or data counts, 3 and 4 Sep 1974.

Spurious functional changes - two this period - 82 total.
81. PSE Level Speed High, octal 075, 19 Aug 1974
82. LSM ON, octal 042, 6 Sep 1974

Prepared by: T. Breezy

Distribution: TDX/Standard
B. Rusky
D. Fithian
J. McNaughton
W. Tosh
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Apollo 17 ALSEP

Central - Switched to Transmitter B on 14 Oct 74. Low signal strength on Transmitter A.

LEAM - (AJ-11) observed Maximum Temperatures - Experiment ON, 188.0°F, Sun Angle = 41.5°. Experiment OFF, 192.5°F, Sun Angle = 114.2°. Experiment ON, 186.5°F, Sun Angle = 150.8°.


Spurious functional changes - none since deployment and initialization on 12 Dec 1972.

Apollo 16 ALSEP


Spurious functional changes - None since 6 Aug 1973 - 11 total.

Apollo 15 ALSEP

Central - Spurious functional change on 23 Sep 74.


Spurious functional changes - two this report period - 71 total.

70. Central Station, 5-Watt Heater ON (octal 017), 23 Sep 74
71. PSE, Calibration LP CAL ON (octal 066), 4 Oct 74
Apollo 14 ALSEP

SIDE/STANDBY or OFF (Word 15 static) without command on CCGE 28 Sep 1974.

Spurious functional changes - one this period - 93 total.
93. SIDE STANDBY, Internal change, octal 046, 28 Sep 1974

Apollo 12 ALSEP


- Long period X- and Y-axes have responded to calibration commands since 12 Sep 1974.

- Mode register change to X10, 4 Oct 74.

Spurious functional changes - one this period - 83 total.
83. PSE, Gain Change LPX, LPY (octal 063), 7 Oct 74.

Prepared by: T. Breezy

Distribution: TDX/Standard
B. Rusky
J. McNaughton
W. Tosh
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**Apollo 17 ALSEP**

**LEAM** - (AJ-11) observed Maximum Temperatures - Experiment ON, 182.0°F, Sun Angle = 34.9°. Experiment off, 196.0°F, Sun Angle = 120.4°. Experiment ON, 174.9°F, Sun Angle = 144.7°.

**LACE** - High Voltage operational check, 13 Nov 74. No improvement in Multiplier High Voltage Power Supply.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

**Apollo 16 ALSEP**

**PSE** - Sensor temperature (DL-07) offscale HIGH, 27 Oct 74, Sun Angle = 68.6°. Onscale, 5 Nov 74, (DL-07 = 140.7°F, Sun Angle = 177.7°).

Spurious functional changes - None since 6 Aug 73 - 11 total.

**Apollo 15 ALSEP**

**PSE** - Sensor temperature (DL-07) offscale HIGH, 29 Oct 74, Sun Angle = 76.3°. Onscale, 2 Nov 74, (DL-07 = 139.3°F, Sun Angle = 132.9°).

Spurious functional changes - three this report period - 74 total.

72. PSE, Leveling Direction Plus (Octal 074), 30 Oct 74.
73. PSE, Leveling Mode, Manual (Octal 103), 1-2 Nov 74.
74. SIDE, Command Register Load 008 (octal 107), 4 Nov 74.
Apollo 14 ALSEP

SIDE/ - STANDBY or OFF (Word 15 static) without command at 0036 G.m.t., 25 Oct 74.

Spurious functional changes - one this period - 94 total.
94. Central Station, 7-Watt Power Dump Resistor ON (Octal 017), 13 Oct 74.

Apollo 12 ALSEP


- Long period X- and Y-axes did not respond to calibration commands, 10 Nov 74.

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

SIDE - Mode register change to X10, 29 Oct, 30 Oct, and 2 Nov 74.

- No calibration or High Energy counts, 10 and 11 Nov 74.

Spurious functional changes - one this period - 84 total.
84. SIDE, STANDBY Power ON (Octal 053), 20 Oct 74.

Prepared by: T. Breezy

Distribution: TDX/Standard
B. Rusky
J. McNaughton
W. Tosh
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Apollo 17 ALSEP

LEAM - (AJ-11) observed Maximum Temperatures - Experiment ON, 192.5°F, Sun Angle = 40.8°. Experiment OFF, 196.0°F, Sun Angle = 105.1° - 123.8°. Experiment ON, 194.0°F, Sun Angle = 149.6°.

LACE - High Voltage operational check, 18 Nov 74. Slight improvement in Multiplier High Voltage Power Supply.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 26 Nov 74, Sun Angle = 73.4°. Onscale, 5 Dec 74, (DL-07 = 138.4°F, Sun Angle = 178.1°).

Spurious functional changes - None since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 27 Nov 74, Sun Angle = 77.5°. Onscale, 3 Dec 74, (DL-07 = 134.8°F, Sun Angle = 140.1°).

Spurious functional changes - five this report period - 79 total.

75. SIDE, Command Register Load 008 (Octal 107), 21 Nov 74.
76. HFE, Low Conductivity Mode Select (Octal 136), 26 Nov 74.
77. C/S, 5-Watt Heater, ON (Octal 017), 1 Dec 74.
78. C/S, 5-Watt Heater, ON (Octal 017), 3 Dec 74.
79. PSE, Gain Change LPX, LPY (Octal 063), 4 Dec 74.
Apollo 14 ALSEP

SIDE/CCGE - STANDBY or OFF (Word 15 static) without command at 2104 G.m.t., 17 Nov; 1837 and 2347 G.m.t., 21 Nov; 0114 and 1704 G.m.t., 22 Nov; and 1228 G.m.t., 23 Nov 74.

- Would not turn ON, 1311 to 1624 G.m.t., 29 Nov 74, during lunar eclipse.

- Required numerous commands to turn ON from 1536 G.m.t., 7 Dec, to 0703 G.m.t., 8 Dec 74 for lunar night operation.

Spurious functional changes - three this period - 97 total.
95. PSE, Gain Change Short Period Z (Octal 067), 26-27 Nov 74.
96. PSE, Calibration Short Period OFF (Octal 065), 29 Nov 74.
97. CPLEE, Step Level Voltage (Octal 115), 13 Dec 74.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07) offscale LOW (Sun Angle = 236.3°), 13 Nov 74. Onscale, 24 Nov 74, (DL-07 = 126.5°F, Sun Angle = 7.2°). Offscale HIGH, 1 Dec 74, (Sun Angle = 95.0°). Onscale 7 Dec 74 (DL-07 = 139.2°F, Sun Angle = 168.0°). Offscale LOW (Sun Angle = 229.0°).

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

- Z motor drove to Offscale LOW in AUTO mode, 24 Nov 74.

SIDE - Mode register changes to X10, 29 Nov and 30 Nov 74.

- No High Energy calibrations, 3 Dec 74, High Energy data counts good.

- Maximum electronics temperature (T2 = 76.8°C), 27 Nov 74.

SWS - Sum Cups 12, 13, and 14 were strapped on 3 Dec 74.

Spurious functional changes - two this period - 86 total.
85. SIDE, Operational Power ON (Octal 052), 27 Nov 74.
86. PSE, Leveling Power Z Motor OFF (Octal 072), 11 Dec 74.

Prepared by: T. Breezy

Distribution: TDX/Standard
B. Rusky
J. McNaughton
W. Tosh
Internal Memorandum

Date 15 January 1975

To F. A. Heinz

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 December 1974 to 15 January 1975

The Apollo ALSEP anomalies report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported weekly in the ALSEP PERFORMANCE SUMMARY REPORT and the ALSEP STATUS REPORT and quarterly in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

Apollo 17 ALSEP

LEAM - (AJ-11) observed Maximum Temperatures - Experiment ON, 183.5°F, Sun Angle = 32.9°. Experiment OFF, 200.0°F, Sun Angle = 118.2°. Experiment ON, 186.5°F, Sun Angle = 154.5°.

LACE - High Voltage operational check, 16 and 18 Dec 74 and 8, 9, 10, 13 and 15 Jan 75, following cold soaking. Improvement in Multiplier High Voltage Power Supply.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 25 Dec 74, Sun Angle = 66.3°. Onscale, 3 Jan 75, (DL-07 = 138.4°F, Sun Angle = 177.8°).

Spurious functional changes - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 26 Dec 74, Sun Angle = 66.5°. Onscale, 1 Jan 75, (DL-07 = 137.7°F, Sun Angle = 141.5°).

Spurious functional changes - three this report period - 82 total.

80. C/S, Timer Reset (Octal 150), 22 Dec 74.
81. C/S, Timer Reset (Octal 150), 23 Dec 74.
82. HFE, Subsequence No. 3 (Octal 146), 9 Jan 75.
Apollo 14 ALSEP

SIDE/CCGE

- STANDBY, will not stay in ON this report period.**

Spurious functional changes - three this period - 86 total.**
84. CPLEE, Channeltron Voltage Increase (Octal 120), 20 Dec 74.
85. PSE, Feedback Loop Filter IN (Octal 101), 25 Dec 74.
86. ASE, STANDBY Power OFF (Octal 044), 10 Jan 75.

**All SIDE changes from ON to Word 15 STATIC have been removed from Spurious functional changes (Command Verification Word) CVW listing.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07) offscale LOW (Sun Angle = 229.0°), 12 Dec 74. Onscale, 23 Dec 74, (DL-07 = 126.3°F, Sun Angle = 4.8°). Offscale HIGH, 30 Dec 74, (Sun Angle = 87.6°). Onscale, 6 Jan 75, (DL-07 = 136.7°F, Sun Angle = 172.3°). Offscale LOW (Sun Angle = 221.5°). 10 Jan 75.

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

SIDE - Mode register changes to X10, 28, 29, 30 and 31 Dec 74.
- No High Energy calibrations and High Energy data counts, 3 to 4 Jan 75.

SWS - Sum Cups 12, 13, and 14 were strapped from 30 Dec 74 to 1 Jan 75.

Spurious functional changes - two this period - 88 total.
87. PSE, Short Period Calibration ON (Octal 065), 30 Dec 74
88. C/S, PCU#2 Select (Octal 062), 1 Jan 75.

Prepared by: T. Breezy

TB: sg

Distribution: TDX/Standard
B. Rusky
J. McNaughton
W. Tosh
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Apollo 17 ALSEP

LEAM - (AJ-11) observed Maximum Temperatures - Experiment ON, 192.5°F, Sun Angle = 37.9°. Experiment OFF, 200.0°F, Sun Angle = 110.7°. Experiment ON, 176.0°F, Sun Angle = 146.9°.

LACE - High Voltage operational check, 17, 21, and 28 Jan 75 and 4, 5, 6 and 7 Feb 75, following cold soaking. No improvement in Multiplier High Voltage Power Supply since 13 Jan 75.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 24 Jan 75, Sun Angle = 71.9°. Onscale, 2 Feb 75, (DL-07 = 130.4°F, Sun Angle = 180.1°).

Spurious functional changes - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP


Spurious functional changes - two this report period - 84 total.
83. SIDE Load Command No. 4 (Octal 107), 19-20 Jan 75.
84. SWS Operational Power ON (Octal 045), 25 Jan 75.
Apollo 14 ALSEP

SIDE/ - STANDBY, would not stay ON this report period.**
CCGE

Spurious functional changes - none this period - 86 total.**

**All SIDE changes from ON to Word 15 STATIC have been removed from Spurious functional changes (Command Verification Word) CVW listing.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07) offscale LOW (Sun Angle = 221.5°), 10 Jan 75. Onscale, 22 Jan 75, (DL-07 = 126.4°F, Sun Angle = 4.6°). Offscale HIGH, 29 Jan 75, (Sun Angle = 92.6°). Onscale, 4 Feb 75, (DL-07 = 141.6°F, Sun Angle = 165.3°). Offscale LOW (Sun Angle = 238.6°), 10 Feb 75.

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

Spurious functional changes - one this period - 89 total.
89. C/S, 7-watt PDR ON (Octal 017), 5 Feb 75.

Prepared by T. Breezy

TB:sg

Distribution: TDX/Standard
B. Rusky
J. McNaughton
W. Tosh
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Apollo 17 ALSEP

CENTRAL STATION - Telemetry Parameter AB-04 experiment status reads OT (out of tolerance) when LACE in STANDBY, and LEAM in OFF, 19 Feb 75. Normal operation, 28 Feb 75.

LEAM - (AJ-11) observed Maxim Temperatures - Experiment ON, 198.0°F, Sun Angle = 42.2°. Experiment OFF, 198.0°F, Sun Angle = 114.9°. Experiment ON, 167.4°F, Sun Angle = 151.4°.

LACE - Ion pump operational check, 27 Feb 75. Ion pump is operating correctly. Command octal 132 is locked in register since 10 Mar 75.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 23 Feb 75, Sun Angle = 75.4°. Onscale, 3 Mar 75, (DL-07 = 142.3°F, Sun Angle = 175.4°).

LSM - No science data on Z-axis sensor. Temperature offscale LOW, 3 Mar 75. Flip Cals discontinued while temperature is offscale LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 24 Feb 75, Sun Angle = 74.5°. Onscale, 1 Mar 75, (DL-07 = 140.7°F, Sun Angle = 136.1°).
Apollo 15 ALSEP (continued)

SIDE - Load Command No. 11 (Octals 104, 105, and 107) High Energy Curve Plate Analyzer High Voltage ON/OFF) in command register, no change occurred, 19 Feb 75.

Spurious functional changes - one this report period - 85 total.

85. Timer Reset (Octal 150), 23 Feb 75.

Apollo 14 ALSEP

CENTRAL - LOSS OF DOWNLINK, 0008 G.M.T., 1 MAR 75. AOS RETURNED STATION 0306 G.M.T., 5 MAR 75. NO UPLINK CAPABILITY.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07) offscale LOW (Sun Angle = 238.6°), 10 Feb 75. Onscale, 20 Feb 75, (DL-07 = 126.1°F, Sun Angle = 2.3°). Offscale HIGH, 28 Feb 75, (Sun Angle = 97.0°). Onscale, 6 Mar 75, (DL-07 = 136.7°F, Sun Angle = 170.0°). Offscale LOW (Sun Angle = 218.7°), 10 Mar 75.

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

SWS - Data output of sum cup levels 1 through 14 during ac calibrate measurements (sequence 15 only) were LOW, 19 Feb 75.

Sum cup levels 12, 13, and 14 static, 28 Feb 75. Normal, 2 Mar 75.

Spurious functional changes - none this period - 89 total.

Prepared by: T. Breezy

TB:sg

Distribution: TDX/Standard
B. Rusky
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Apollo 17 ALSEP

CENTRAL STATION - Telemetry Parameter AB-04 experiment status reads OT (out of tolerance) when LACE in STANDBY, and LEAM in OFF, 19 Feb and 20 Mar 75. Normal operation, 31 Mar 75.

LEAM - (AJ-11) observed Maximum Temperatures - Experiment ON, 186.5°F, Sun Angle = 35.6°. Experiment OFF, 196.0°F, Sun Angle = 120.3°. Experiment ON, 177.5°F, Sun Angle = 156.9°.

LACE - Operational check, 17 Mar 75, no change from previous checks. Command octal 132 cleared out on 20 Mar 75.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 24 Mar 75, Sun Angle = 68.3°. Onscale, 2 Apr 75, (DL-07 = 134.1°F, Sun Angle = 178.4°).

LSM - No science data on Z-axis sensor. Temperature offscale LOW, 3 Apr 75. Flip Cals discontinued while temperature is offscale LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

Apollo 15 ALSEP (continued)

SIDE - Load Command No. 15, Reset Command Register, (Octals 104, 105, 106, and 107) in command register, no change in mode occurred, 20 Mar 75.

- Load Command No. 10, Low Energy Curved Plate Analyzer HIGH Voltage ON/OFF (Octals 105 and 107), in command register, no change in mode occurred, 20 Mar 75.

Spurious functional changes - none this report period.

Apollo 14 ALSEP

CENTRAL - LOSS OF DOWNLINK, 0008 G.M.T., 1 MAR 75. AOS RETURNED STATION 0306 G.M.T., 5 MAR 75. NO UPLINK CAPABILITY. DSS-I (10w) Heater, OFF, since 20 Feb 75.

PSE - Heater, Forced OFF, since 24 Feb 75.

SIDE - Status unknown.

CPEEE - STANDBY.

ASE - STANDBY.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07) offscale LOW (Sun Angle = 218.7°), 10 Mar 75. Onscale, 22 Mar 75, (DL-07 = 126.3°F, Sun Angle = 4.5°). Offscale HIGH, 29 Mar 75, (Sun Angle = 90.0°). Onscale, 4 Apr 75, (DL-07 = 140.0°F, Sun Angle = 163.4°). Offscale LOW (Sun Angle = 224.4°), 9 Apr 75.

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

SWS - Data output of sum cup levels 1 through 14 during ac calibrate measurements (sequence 15 only) were LOW, 12 Mar, 18 Mar, 19 Mar, 21 Mar, 22 Mar, 23 Mar, 24 Mar, 13 Apr, and 14 Apr.

Spurious functional changes - none this period - 89 total.

Prepared by: T. Breezy

TB:sg
Distribution: TDX/Standard
B. Rusky
J. McNaughton
W. Tosh
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**Apollo 17 ALSEP**

**CENTRAL** - Telemetry Parameter AB-04 experiment status reads OT (out of tolerance) when LACE in STANDBY, and LEAM in OFF.

**LEAM** - (AJ-11) observed Maximum Temperatures - Experiment ON, 191.0°F, Sun Angle = 41.1°. Experiment OFF, 192.5°F, Sun Angle = 114.3°. Experiment ON, 188.0°F, Sun Angle = 150.5°.

**LACE** - Command octal 132 in register 1 May 75. Cleared out on 3 May 75.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

**Apollo 16 ALSEP**

**PSE** - Sensor temperature (DL-07) offscale HIGH, 23 Apr 75, Sun Angle = 74.6°. Onscale, 2 May 75, (DL-07 = 132.5°F, Sun Angle = 179.2°).

**LSM** - No science data on Z-axis sensor. Temperature offscale LOW, 9 Apr 75, onscale 18 Apr 75. Temperature offscale LOW, 5 May 75, onscale 7 May 75. Flip Cals discontinued while temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.

**Apollo 15 ALSEP**

**PSE** - Sensor temperature (DL-07) offscale HIGH, 24 Apr 75, Sun Angle = 74.8°. Onscale, 28 Apr 75, (DL-07 = 142.2°F, Sun Angle = 123.1°).
Apollo 15 ALSEP (continued)

SIDE - Load Command No. 4, SIDE Master Reset, (Octal 107) in command register, no change in mode occurred, 19 Apr 75.

Spurious functional changes - none this report period.

Apollo 14 ALSEP

CENTRAL - Loss of downlink, 0008 G.m.t., 1 Mar 75. AOS returned
STATION 0306 G.m.t., 5 Mar 75. No uplink capability. DSS-1 (10w) heater, OFF, since 20 Feb 75.

PSE - Heater, Forced OFF, since 24 Feb 75.

SIDE - Status unknown.

CPL EE - Standby.

ASE - Standby.

Spurious functional changes - none since AOS returned - 86 total.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07) offscale LOW (Sun Angle = 224.4°), 9 Apr 75. Onscale, 21 Apr 75, (DL-07 = 126.3°F, Sun Angle = 4.2°). Offscale HIGH, 28 Apr 75, (Sun Angle = 96.0°). Onscale, 4 Apr 75, (DL-07 = 135.5°F, Sun Angle = 169.2°). Offscale LOW (Sun Angle = 230.4°), 9 May 75.

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

SIDE - Mode register change to X10 on 26 Apr 75.

SWS - Data output of sum cup levels 1 through 14 during ac calibrate measurements (sequence 15 only) were LOW from 13 Apr to 30 Apr 75. LOW on 12 and 14 May 75.

- Sum cup levels 12, 13, and 14 static on sequences 14 and 15 on 29 Apr 75.

Spurious functional changes - one this period - 90 total.

90. C/S, 7 watt PDR ON (Octal 017), 29 Apr 75.
Internal Memorandum

Date 16 June 1975

Letter No. 9753-163

To F. A. Heinz

Revision M

From T. Breezy

Subject: Apollo ALSEP Anomalies Report, 15 May 1975 to 15 June 1975

Page 1 of 2

The Apollo ALSEP anomalies report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported weekly in the ALSEP PERFORMANCE SUMMARY REPORT and the ALSEP STATUS REPORT and quarterly in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

Apollo 17 ALSEP

CENTRAL - Telemetry Parameter AB-04 experiment status reads OT (out of tolerance) when LACE in STANDBY, and LEAM in OFF.

LEAM - (AJ-11) observed Maximum Temperatures - Experiment ON, 179.0°F, Sun Angle = 34.7°. Experiment OFF, 191.0°F, Sun Angle = 114.5°. Experiment ON, 173.8°F, Sun Angle = 157.1°.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 23 May 75, Sun Angle = 80.5°. Onscale, 31 May 75, (DL-07 = 136.0°F, Sun Angle = 177.9°).

LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP


SIDE - Load Command No. 4, SIDE Master Reset, (Octal 107) in command register, no change in mode occurred, 19 May 75.
Apollo 15 ALSEP (Continued)

Spurious functional changes - two this report period - 87 total.
86. PSE, Y-motor ON (Octal 071), 30 May 75.
87. PSE, Uncage, Arm/Fire-UNCAGED (Octal 073), 6 Jun 75.

Apollo 14 ALSEP

CENTRAL - Loss of downlink, 0008 G.m.t., 1 Mar 75. AOS returned 0306 G.m.t., 5 Mar 75. No uplink capability. DSS-1 (10w) heater, OFF, since 20 Feb 75.

PSE - Heater, Forced OFF, since 24 Feb 75.

SIDE - Status unknown.

CPLEE - Standby.

ASE - Standby.

Spurious functional changes - none since AOS returned - 86 total.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07) offscale LOW (Sun Angle = 230.4°), 9 May 75. Onscale, 20 May 75, (DL-07 = 126.3°F, Sun Angle = 4.4°). Offscale HIGH, 28 May 75, (Sun Angle = 103.6°). Onscale, 1 Jun 75, (DL-07 = 142.7°F, Sun Angle = 151.5°). Offscale LOW (Sun Angle = 212.5°), 6 Jun 75.

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

SWS - Data output of sum cup levels 1 through 14 during ac calibrate measurements (sequence 15 only) were intermittently LOW from 12 to 29 May 75, NORMAL from 30 May to 8 Jun 75, LOW from 9 to 15 Jun 75.

- Sum cup levels 12, 13, and 14 static on sequences 14 and 15 on 28 May 75.

Spurious functional changes - none this period - 90 total.

Prepared by: [[Signature]]

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B. Rusky
J. McNaughton
B. Wallace
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**Apollo 17 ALSEP**

**CENTRAL** - Telemetry Parameter AB-04 experiment status reads OT (out of tolerance) when LACE in STANDBY, and LEAM in OFF.

**LSG** - Instrument heater box heater circuit automatic control loss, 7 Jul 75.

**LEAM** - (AJ-11) observed maximum temperatures - Experiment ON, 189.5°F, Sun Angle = 44.8°. Experiment OFF, 189.5°F, Sun Angle = 114.9°. Experiment ON, 183.5°F, Sun Angle = 151.0°.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

**Apollo 16 ALSEP**

**PSE** - Sensor temperature (DL-07) offscale HIGH, 21 Jun 75, Sun Angle = 74.7°. Onscale, 30 Jun 75, (DL-07 = 133.7°F, Sun Angle = 178.9°).

**LSM** - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.

**Apollo 15 ALSEP**

**CENTRAL** - Switched from Transmitter A to Transmitter B, 2322 G.m.t., 23 Jun 75. Transmitter A reselected 1505 G.m.t., 25 Jun 75.

**SIDE** - Load Command No. 11, High Energy Curved Plate Analyzer, High Voltage, OFF, in mode register, 17 Jun 75.
Apollo 15 ALSEP (Continued)

Spurious functional changes - three this report period - 90 total.
88. C/S, Transmitter B Select (Octal 015), 23 Jun 75.
89. SIDE, Load 4, Master Reset (Octal 107), 27 Jun 75.
90. PSE, Leveling Power, Z Motor ON, 2 Jul 75.

Apollo 14 ALSEP

CENTRAL - Loss of downlink, 0008 G.m.t., 1 Mar 75. AOS returned
STATION 0306 G.m.t., 5 Mar 75. No uplink capability. DSS-1
(10W) heater, OFF, since 20 Feb 75.
PSE - Heater, Forced OFF, since 24 Feb 75.
SIDE - Status unkown.
CPLREE - Standby.
ASE - Standby.

Spurious functional changes - none since AOS returned - 86 total.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07) offscale LOW (Sun Angle =
212.5°), 6 Jun 75. Onscale, 18 Jun 75, (DL-07 =
126.3°F, Sun Angle = 4.5°). Offscale HIGH, 26 Jun 75,
(Sun Angle = 103.7°). Onscale, 1 Jul 75, (DL-07 =
139.4°F, Sun Angle = 157.8°). Offscale LOW (Sun Angle =
218.7°), 6 Jul 75.

- Failure of AUTO and FORCED OFF modes in heater circuit
prior to 9 Nov 74.

SWS - Data output of sum cup levels 1 through 14 during ac
 calibrate measurements (sequence 15) were LOW this
report period.

- Sum cup levels 12, 13, and 14 static on sequences 14
and 15 from 26 Jun to 28 Jun 75.

Spurious functional changes - none this report period - 90 total.

Prepared by: T. Breezy

Distribution: TDX/ Standard
B. Rusky
J. McNaughton
B. Wallace
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Apollo 17 ALSEP

LSG - Instrument heater box heater circuit automatic control loss since 7 Jul 75. Intermittent A/D converter output during HIGH temperatures.

LEAM - (AJ-11) observed maximum temperatures - Experiment ON, 192.5°F, Sun Angle = 48.8°. Experiment OFF, 189.5°F, Sun Angle = 109.2° and 121.3°. Experiment ON, 170.6°F, Sun Angle = 157.8°.

LACE - Command octal 132 in register 29 Jul 75. Cleared on 30 Jul 75. Operational checks, 6, 8, and 14 Aug 75. High Voltage Failure still exists.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 21 Jul 75, Sun Angle = 81.3°. Onscale, 29 Jul 75, (DL-07 = 133.9°F, Sun Angle = 178.9°).

LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

CENTRAL STATION - Load Command No. 4, SIDE Master Reset, in command register, 16 Jul 75.

SIDE - Load Command No. 11, High Energy Curved Plate Analyzer, High Voltage, OFF, in mode register, 17 Jul 75. HECPA Hi V was ON. Load Command No. 10, Low Energy Curved
Apollo 15 ALSEP (Continued)

SIDE - Plate Analyzer, High Voltage, OFF, in command register, 17 Jul 75. LECPA Hi V was OFF.

CCGE - + 4.5 K vdc failed 18 Jul 75.

Spurious functional changes - one this report period - 91 total.

91. HFE, Low Conductivity Mode (Octal 136) 15 Jul 75.

Apollo 14 ALSEP

CENTRAL - Loss of downlink, 0008 G.m.t., 1 Mar 75. AOS returned 0306 G.m.t., 5 Mar 75. No uplink capability. DSS-1 (low) heater, OFF, since 20 Feb 75.

PSE - Heater, Forced OFF, since 24 Feb 75.

SIDE - Status unknown.

CPL EE - Standby.

ASE - Standby.

Spurious functional changes - none since AOS returned - 86 total.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07) offscale LOW (Sun Angle = 218.7°), 6 Jul 75. Onscale, 18 Jul 75, (DL-07 = 126.3°F, Sun Angle = 4.5°). Offscale HIGH, 26 Jul 75, (Sun Angle = 103.5°). Onscale, 30 Jul 75, (DL-07 = 141.4°F, Sun Angle = 152.3°). Offscale LOW (Sun Angle = 213.4°), 4 Aug 75.

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

SWS - Data output of sum cup levels 1 through 14 during ac calibrate measurements (sequence 15) were LOW this report period.

- Sum cup levels 12, 13, and 14 static on sequences 14 and 15 on 25 Jul 75.

Spurious functional changes - none this report period - 90 total.

Prepared by: T. Breezy

Distribution: TDX/Standard
B. Rusky
J. McNaughton
B. Wallace
Internal Memorandum

Date 15 September 1975  Letter No. 9753-163P

To F. A. Heinz

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 August 1975 to 15 September 1975

Page 1 of 2

The Apollo ALSEP anomalies report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported weekly in the ALSEP PERFORMANCE SUMMARY REPORT and the ALSEP STATUS REPORT and quarterly in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

Apollo 17 ALSEP

LSG - Instrument heater box heater circuit automatic control loss from 7 Jul 75 to 2 Sep 75. Intermittent A/D converter output during HIGH temperatures.

LEAM - (AJ-11) observed maximum temperatures - Experiment ON, 188.0°F, Sun Angl = 42.6°. Experiment OFF, 191.0°F, Sun Angle = 115.7°. Experiment ON, 182.0°F, Sun Angle = 152.5°.


Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 19 Aug 75, Sun Angle = 76.0°. Onscale, 28 Aug 75, (DL-07 = 133.6°F, Sun Angle = 179.3°).

LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

SWS - STANDBY power ON, 0334 G.m.t., 15 Sep 75. Commanded to OFF, 0428 G.m.t., 15 Sep 75. 4 watt change in reserve power each time.
Apollo 15 ALSEP (Continued)

CCGE - + 4.5 K vdc failed 18 Jul 75.

Spurious functional changes - three this report period - 94 total.
92. HFE, Probe No. 2 Sequence Select (Octal 143) 17-18 Aug 75.
93. C/S, 14-Watt PDR ON (Octal 022) 21-22 Aug 75.
94. SWS, STANDBY (Octal 046) 15 Sep 75.

Apollo 14 ALSEP

CENTRAL - Loss of downlink, 0008 G.m.t., 1 Mar 75. AOS returned
STATION 0306 G.m.t., 5 Mar 75. No uplink capability. DSS-1
(10w) heater, OFF, since 20 Feb 75.
PSE - Heater, Forced OFF, since 24 Feb 75.
SIDE - Status unknown.
CPLEE - Standby.
ASE - Standby.

Spurious functional changes - none since AOS returned - 86 total.

Apollo 12 ALSEP

PSE - Onscale, 16 Aug 75, (DL-07 = 126.3°F, Sun Angle =
4.3°). Offscale HIGH, 24 Aug 75, (Sun Angle = 97.7°),
Onscale, 29 Aug 75 (DL-07 = 139.8°F, Sun Angle = 159.1°).
Offscale LOW (Sun Angle = 207.5°), 2 Sep 75. Onscale,
15 Sep 75, (DL-07 = 126.3°F, Sun Angle = 4.6°).

- Failure of AUTO and FORCED OFF modes in heater circuit
prior to 9 Nov 74.

SWS - Data output of sum cup levels 1 through 14 during ac
calibrate measurements (sequence 15) were LOW this
report period.

Spurious functional changes - one this report period - 91 total.
91. PSE, Calibration, LP Cal ON (Octal 066) 10-12 Sep 75.

Prepared by T. Breezy

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B. Rusky
J. McNaughton
D. Perkins
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Apollo 17 ALSEP

LSG - Instrument heater box heater circuit automatic control loss on 19 Sep 75, 3rd occurrence. Intermittent A/D converter output during HIGH temperatures.

LEAM - (AJ-11) observed maximum temperatures - Experiment ON, 183.5°F, Sun Angle = 37.2°. Experiment OFF, 194.0°F, Sun Angle = 112.9°. Experiment ON, 173.8°F, Sun Angle = 158.3°. Experiment ON, 192.5°F, Sun Angle = 42.0°.

LACE - Numerous operational checks performed. High Voltage Failure still exists. Sweep voltage returned to stepping on 29 Sep 75.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 17 Sep 75, Sun Angle = 69.7°. Onscale, 26 Sep 75, (DL-07 = 134.2°F, Sun Angle = 179.4°).

LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 20 Sep 75, Sun Angle = 93.9°. Onscale, 22 Sep 75, (DL-07 = 141.1°F, Sun Angle = 118.3°).
Apollo 15 ALSEP (Continued)

CCGE - + 4.5 K vdc failed 18 Jul 75.

Spurious functional changes - one this report period - 95 total.
95. PSE, Gain Change, LPX, LPY (Octal 063), 23 Sep 75.

Apollo 14 ALSEP

CENTRAL - Loss of downlink, 0008 G.m.t., 1 Mar 75. AOS returned
STATION 0306 G.m.t., 5 Mar 75. No uplink capability. DSS-1
(10w) heater, OFF, since 20 Feb 75.

PSE - Heater, Forced OFF, since 24 Feb 75.

SIDE - Status unknown.

CPLEE - Standby.

ASE - Standby.

Spurious functional changes - none since AOS returned - 86 total.

Apollo 12 ALSEP

PSE - Onscale, 15 Sep 75, (DL-07 = 126.3°F, Sun Angle =
4.6°). Offscale HIGH, 23 Sep 75, (Sun Angle = 103.8°),
Onscale, 28 Sep 75 (DL-07 = 138.5°F, Sun Angle = 164.8°).
Offscale LOW (Sun Angle = 226.8°), 3 Oct 75. Onscale,
14 Oct 75, (DL-07 = 126.3°F, Sun Angle = 4.8°).

- Failure of AUTO and FORCED OFF modes in heater circuit
prior to 9 Nov 74.

SWS - Data output of sum cup levels 1 through 14 during ac
calibrate measurements (sequence 15) were intermittently
LOW this report period.

SIDE - Mode register change to X10 on 23 Jul, 22 Aug, and 22
Sep 75.

Spurious functional changes - none this report period - 91 total.

Prepared by: Ted Breezy

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**Apollo 17 ALSEP**

**LSG**
- Instrument heater box heater circuit automatic control loss on 19 Sep 75, 3rd occurrence. Intermittent A/D converter output during HIGH temperatures. No science data lost.

**LEAM**
- (AJ-11) observed maximum temperatures - Experiment ON, 192.4°F, Sun Angle = 42.0°. Experiment OFF, 198.0°F, Sun Angle = 117.9°. Experiment ON, 165.2°F, Sun Angle = 151.9°. Experiment ON, 189.5°F, Sun Angle = 37.0°.

**LACE**
- High Voltage Failure still exists. Sweep voltage returned to stepping on 29 Sep 75.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

**Apollo 16 ALSEP**

**PSE**

**LSM**
- No science data on Z-axis sensor. Flip Cals discontinued during lunar night while temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.

**Apollo 15 ALSEP**

**PSE**
Apollo 15 ALSEP (Continued)

CCGE - + 4.5K vdc failed 18 Jul 75.

Spurious functional changes - none this report period - 95 total.

Apollo 14 ALSEP

CENTRAL - Loss of downlink, 0008 G.m.t., 1 Mar 75. AOS returned
STATION - 0306 G.m.t., 5 Mar 75. No uplink capability. DSS-1
(10w) heater, OFF, since 20 Feb 75.

PSE - Heater, Forced OFF, since 24 Feb 75.

SIDE - Status unknown.

CPLEE - Standby.

ASE - Standby.

Spurious functional changes - none since AOS returned - 86 total.

Apollo 12 ALSEP

PSE - Onscale, 14 Oct 75, (DL-07 = 126.3°F, Sun Angle =
4.8°). Offscale HIGH, 22 Oct 75, (Sun Angle = 97.4°),
Onscale, 28 Oct 75 (DL-07 = 136.5°F, Sun Angle = 170.9°).
Offscale LOW (Sun Angle = 207.4°), 31 Oct 75. Onscale,
13 Nov 75, (DL-07 = 126.4°F, Sun Angle = 4.4°).

- Failure of AUTO and FORCED OFF modes in heater circuit
prior to 9 Nov 74.

SWS - Data output of sum cup levels 1 through 14 during ac
calibrate measurements (sequence 15) were intermittent-
ly LOW this report period.

SIDE - Mode register change to X10 on 20 Oct and 15 Nov 75.

Spurious functional changes - one this report period - 92 total.
92. PSE, Gain Change, SPZ (Octal 067), 27-28 Oct 75.

Prepared by Ted A. Breezy

DISTRIBUTION: TDX/Standard
B. Rusky
J. McNaughton
D. Perkins
Internal Memorandum

Date 16 December 1975  Letter No. 9753-163S

To F. A. Heinz

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 November 1975 to 15 December 1975

Page 1 of 3

The Apollo ALSEP anomalies report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported weekly in the ALSEP PERFORMANCE SUMMARY REPORT and the ALSEP STATUS REPORT and quarterly in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

Apollo 17 ALSEP


LEAM - (AJ-11) observed maximum temperatures - Experiment ON, 189.5°F, Sun Angle = 37.0°, 15 Nov 75. Experiment OFF, 200.0°F, Sun Angle = 112.6°, 17 Nov 75. Experiment ON, 188.0°F, Sun Angle = 133.4°, 19 Nov 75. Experiment ON, 198.0°F, Sun Angle = 41.0°, 11 Dec 75.

LACE - High Voltage Failure still exists. Sweep voltage returned to stepping on 29 Sep 75. STANDBY, 5 Nov 75.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP


LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.
Apollo 15 ALSEP


CCGE  - + 4.5 K vdc failed 18 Jul 75.

Spurious functional changes - two this report period - 97 total.
96. PSE, Leveling Power X-motor, ON (octal 070), 16 Nov 75.
97. PSE, Gain Change, SPZ (octal 067), 12 Dec 75.

Apollo 14 ALSEP

CENTRAL - Loss of downlink, 0008 G.m.t., 1 Mar 75. AOS returned 0306 G.m.t., 5 Mar 75. No uplink capability. DSS-1 (low) heater, OFF, since 20 Feb 75.

PSE  - Heater, Forced OFF, since 24 Feb 75.

SIDE  - Status unknown.

CPLEE  - Standby.

ASE  - Standby.

Spurious functional changes - none since AOS returned - 86 total.

Apollo 12 ALSEP

PSE  - Offscale HIGH, 21 Nov 75, (Sun Angle = 103.2°), Onscale, 26 Nov 75 (DL-07 = 142.5°F, Sun Angle = 164.0°). Offscale LOW, 1 Dec 75, (Sun Angle = 226.2°). Onscale, 13 Dec 75, (DL-07 = 126.3°F, Sun Angle = 3.9°).

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.

- A/D Converter, 3rd least significant bit not setting, 5 Dec 75. Noise in science data. No data loss.

SWS  - Data output of sum cup levels 1 through 14 during ac calibrate measurements (sequence 15) were intermittently LOW this report period.
Apollo 12 ALSEP (continued)

SIDE - Mode register change to X10 on 15 Nov 75.

Spurious functional changes - one this report period - 93 total.
93. PSE, LP Calibration ON (octal 066) 20-21 Nov 75.

Prepared by: Ted A. Breezy

DISTRIBUTION: TDX/Standard
B. Rusky
J. McNaughton
D. Perkins
Internal Memorandum

Date 16 January 1976          Letter No. 9753-163T

To F. A. Heinz

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 December 1975 to 15 January 1976

Page 1 of 3

The Apollo ALSEP Anomalies Report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported weekly in the ALSEP PERFORMANCE SUMMARY REPORT and the ALSEP STATUS REPORT and quarterly in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

Apollo 17 ALSEP

LSG - Instrument heater box heater circuit automatic control loss on 19 Sep 75, 3rd occurrence. Intermittent A/D converter output during HIGH temperatures. No science data lost. Manual ON/OFF of heater to retain science data by maintaining temperature in the 48.2 to 52.0°C range.

LEAM - (AJ-11) observed maximum temperatures - Experiment ON, 198.0°F, Sun Angle = 41.0°, 11 Dec 75. Experiment OFF, 202.0°F, Sun Angle = 113.8°, 17 Dec 75. Experiment ON, 174.9°F, Sun Angle = 148.6°, 20 Dec 75. Experiment ON, 188.0°F, Sun Angle = 33.8°, 9 Jan 76. Experiment OFF, 188.0°F, Sun Angle = 61.5°, 12 Jan 76. Experiment OFF, 202.0°F, Sun Angle = 111.7°, 16 Jan 76.

LACE - High Voltage Failure still exists. Sweep voltage returned to stepping on 29 Sep 75. STANDBY, 5 Nov 75.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP


LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.
Apollo 15 ALSEP


CCGE - + 4.5 K vdc failed 18 Jul 75.

Spurious functional changes - three this report period - 100 total.
98. LSM, Operational Power ON (octal 042), 18 Dec 75.
99. HFE, High Conductivity Mode Select (octal 140), 8 Jan 76.
100. HFE, Heater Advance (octal 152), 14 Jan 76.

Apollo 14 ALSEP

CENTRAL - Loss of downlink, 0008 G.m.t., 1 Mar 75. AOS returned 0306 G.m.t., 5 Mar 75. No uplink capability. DSS-1 (10w) heater, OFF, since 20 Feb 75.

PSE - Heater, Forced OFF, since 24 Feb 75.

SIDE - Status unknown.

CPLEE - Standby.

ASE - Standby.

Spurious functional changes - none since AOS returned - 86 total.

Apollo 12 ALSEP

PSE - Offscale HIGH, 19 Dec 75, (Sun Angle = 83.7°), Onscale, 26 Dec 75 (DL-07 = 140.7°F, Sun Angle = 168.5°). Offscale LOW, 29 Dec 75, (Sun Angle = 205.2°). Onscale, 11 Jan 76, (DL-07 = 125.7°F, Sun Angle = 1.2°).

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.
- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.

SWS - Data output of sum cup levels 1 through 14 during ac calibrate measurements (sequence 15) were intermittently LOW this report period.
Apollo 12 ALSEP (continued)

SIDE - Mode register change to X10, 17 Dec 75, Low Energy Curved Plate Analyzer, OFF; Velocity Filter, OFF; -3.5 K vdc, OFF; and Ground Plane Stepper, OFF. Mode register change to X10, 18 Dec 75.

- STANDBY, 8 Jan 76, to increase temperature of central station PSE electronics. ON, 11 Jan 76, daytime operation.

Spurious functional changes - none this report period - 93 total.

Prepared by

Ted A. Breezy

DISTRIBUTION: TDX/Standard
B. Rusky
J. McNaughton
D. Perkins
Internal Memorandum

Date 16 February 1976 Letter No. 9753-163U

To F. A. Heinz

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 January 1976 to 15 February 1976

Page 1 of 3

The Apollo ALSEP Anomalies Report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported weekly in the ALSEP PERFORMANCE SUMMARY REPORT and the ALSEP STATUS REPORT and quarterly in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

**Apollo 17 ALSEP**

**LSG** - Instrument heater box heater circuit automatic control loss on 19 Sep 75, 3rd occurrence. Intermittent A/D converter output during HIGH temperatures. No science data lost. Manual ON/OFF of heater to retain science data by maintaining temperature in the 48.2 to 52.0°C range.

**LEAM** - (AJ-11) observed maximum temperatures - Experiment OFF, 202.0°F, Sun Angle = 111.7°, 16 Jan 76. Experiment ON, 164.1°F, Sun Angle = 155.0°, 19 Jan 76. Experiment ON, 194.0°F, Sun Angle = 38.3°, 8 Feb 76. Experiment OFF, 188.0°F, Sun Angle = 75.4°, 10 Feb 76. Experiment OFF, 202.0°F, Sun Angle = 112.9°, 14 Feb 76.

**LACE** - High Voltage Failure still exists. Sweep voltage returned to stepping on 29 Sep 75. STANDBY, 5 Nov 75.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

**Apollo 16 ALSEP**

**PSE** - Sensor temperature (DL-07) Offscale HIGH, 13 Jan 76, Sun Angle = 64.7°. Onscale, 22 Jan 76, (DL-07 = 140.0°F, Sun Angle = 176.4°), Offscale HIGH, 12 Feb 76, Sun Angle = 72.7°.

**LSM** - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.
**Apollo 15 ALSEP**


CCGE - + 4.5 K vdc failed 18 Jul 75.

Spurious functional changes - two this report period - 102 total.
101. PSE, Uncage Arm/Fire (octal 073), 17 Jan 76.
102. SWS, Operational Power ON (octal 045), 31 Jan 76.

**Apollo 14 ALSEP**

CENTRAL - 2nd loss of downlink, 1929 G.m.t., 18 Jan 76.
STATION No uplink capability. DSS-1 (10w) heater, OFF, since 20 Feb 75.

PSE - Heater, Forced OFF, since 24 Feb 75.

SIDE - Status unknown.

CPLEE - Standby.

ASE - Standby.

Spurious functional changes - none since LOS - 86 total.

**Apollo 12 ALSEP**


- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.
- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.

SWS - Data output of sum cup levels 1 through 14 during ac calibrate measurements (sequence 15) were intermittently LOW this report period.

SIDE - Mode register change to X10, 12 Feb 75, Low Energy Curved Plate Analyzer, OFF; Velocity Filter, OFF; and -3.5 K vdc, OFF.
Apollo 12 ALSEP (continued)

SIDE - STANDBY, during lunar night, to increase temperature of central station PSE electronics. Cycled ON/OFF during daytime operation.

Spurious functional changes - two this report period - 95 total.
94. SIDE, Operational Power ON (octal 052), 17 Jan 76.
95. PSE, Feedback Filter OUT (octal 101), 22 Jan 76.

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B. Rusky
D. Perkins

Prepared by: Ted A. Breezy
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Apollo 17 ALSEP

LSG - Instrument heater box heater circuit automatic control loss on 19 Sep 75, 3rd occurrence. Intermittent A/D converter output during HIGH temperatures. No science data lost. Manual ON/OFF of heater to retain science data by maintaining temperature in the 48.2 to 52.0°C range.

LEAM - (AJ-11) observed maximum temperatures - Experiment OFF, 202.0°F, Sun Angle = 112.9°, 14 Feb 76. Experiment ON, 177.5°F, Sun angle = 158.9°, 18 Feb 76. Experiment ON, 200.0°F, Sun Angle = 65.9°, 9 Mar 76. Experiment OFF, 185.0°F, Sun Angle = 68.8°, 11 Mar 76. Experiment OFF, 200.0°F, Sun Angle = 117.0°, 15 Mar 76.

LACE - Operational check, 26 Feb 76. High Voltage Failure still exists. Sweep voltage locked in HIGH. STANDBY, 26 Feb 76.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP


LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.
Apollo 15 ALSEP


CCGE - + 4.5 K vdc failed 18 Jul 75.

SIDE - Internal change from Reset SIDE Frame Counter at 39 to Master Reset Full Sequence, 26-27 Feb 76.

Spurious functional changes - none this report period - 102 total.

Apollo 14 ALSEP

CENTRAL - Return of downlink and uplink, 0232 G.m.t., 19 Feb 76.

PSE - Long Period Y-axis will not level.

SIDE - OFF.

ASE - Standby.

Spurious functional changes - two this report period - 88 total.
87. CPLEE, Automatic Voltage Sequence ON (octal 114), 25 Feb 76.
88. C/S, 14-watt PDR ON (octal 022), 26-27 Feb 76.

Apollo 12 ALSEP

PSE - Offscale HIGH. 17 Feb 76, (Sun Angle = 93.9°), Onscale, 23 Feb 76, (DL-07 = 141.7°F, Sun Angle = 166.1°). Offscale LOW, 26 Feb 76, (Sun Angle = 203.2°). Onscale, 10 Mar 76, (DL-07 = 126.5°F, Sun Angle = 5.3°).

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.


SWS - STANDBY during lunar night to increase temperature of PSE electronics in central station.

SIDE - Mode register change to X10 and -3.5 K vdc OFF, 12 Mar 76.
Apollo 12 ALSEP (continued)

SIDE - STANDBY, during lunar night, to increase temperature of central station PSE electronics. Cycled ON/OFF during daytime operation.

Spurious functional changes - two this report period - 97 total.
96. C/S, Timer Output Accept (octal 032) 29 Feb 76.
97. PSE, Gain Change LPZ (octal 064) 9-10 Mar 76.

Prepared by: Ted A. Breezy

DISTRIBUTION: TDX/Standard
B. Rusky (2)
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**Apollo 17 ALSEP**

**LSG** - Instrument heater box heater circuit automatic control loss on 19 Sep 75, 3rd occurrence. Intermittent A/D converter output during HIGH temperatures. No science data lost. Manual ON/OFF of heater to retain science data by maintaining temperature in the 48.2 to 52.0°C range.

**LEAM** - (AJ-11) observed maximum temperatures - Experiment OFF, 200.0°F, Sun Angle = 117.0°, 15 Mar 76. Experiment ON, 165.2°F, Sun Angle = 152.9°, 18 Mar 76. Experiment ON, 191.0°F, Sun Angle = 40.0°, 7 Apr 76. Experiment OFF, 182.0°F, Sun Angle = 63.9°, 9 Apr 76. Experiment OFF, 196.0°F, Sun Angle = 110.1°, 13 Apr 76.

**LACE** - Operational check, 26 Feb 76. High Voltage Failure still exists. Sweep voltage locked in HIGH. STANDBY, 26 Feb 76.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

**Apollo 16 ALSEP**

**PSE** - Sensor temperature (DL-07) Offscale HIGH, 12 Mar 76, Sun Angle = 66.6°. Onscale, 21 Mar 76, (DL-07 = 140.6°F, Sun Angle = 176.0°), Offscale HIGH, 11 Apr 76, Sun Angle = 70.5°.

**LSM** - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.
Apo 11 o 15
ALSEP
CCGE - + 4.5 K vdc failed 18 Jul 75.
Spurious functional changes - none this report period - 102 total.

Apo 14 ALSEP
CENTRAL - Loss of downlink and uplink, 0146 G.m.t., 17 Mar 76.
Spurious functional changes - none this report period - 88 total.

Apo 12 ALSEP
- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.
- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.
SWS - STANDBY during lunar night to increase temperature of PSE electronics in central station.
SIDE - STANDBY, during lunar night, to increase temperature of central station PSE electronics. Cycled ON/OFF during daytime operation. Mode register change to X10 and -3.5 K vdc OFF, 20 and 22 Mar 76.
Spurious functional changes - one this report period - 98 total. 98. PSE, Calibration LP ON (octal 066), 23-24 Mar 76.
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**Apollo 17 ALSEP**

**LSG**  
Instrument heater box heater circuit automatic control loss on 19 Sep 75, 3rd occurrence. Intermittent A/D converter output during HIGH temperatures. No science data lost. Manual ON/OFF of heater to retain science data by maintaining temperature in the 48.2 to 52.0°C range.

**LEAM**  
(AJ-11) observed maximum temperatures ~ Experiment ON, 173.8°F, Sun Angle = 158.7°, 17 Apr 76. Experiment ON, 191.0°F, Sun Angle = 42.8°, 7 May 76. Experiment OFF, 179.0°F, Sun Angle = 67.8°, 9 May 76. Experiment OFF, 194.0°F, Sun Angle = 115.7°, 13 May 76. Experiment ON, 179.0°F, Sun Angle = 140.1°, 15 May 76.

**LACE**  
Operational check, 26 Feb 76. High Voltage Failure still exists. Sweep voltage locked in HIGH. STANDBY, 26 Feb 76.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

**Apollo 16 ALSEP**

**PSE**  
Sensor temperature (DL-07) onscale, 20 Apr 76, (DL-07 = 133.6°F, Sun Angle = 178.8°). Offscale HIGH, 11 May 76, Sun Angle = 75.7°.

**LSM**  
No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.
Apollo 15 ALSEP

PSE - Sensor temperature, onscale, 17 Apr 76, (DL-07 = 139.2°F, Sun Angle = 131.6°). Offscale HIGH, 13 May 76, Sun Angle = 88.2°.

SIDE - -3.5 K vdc high voltage arced OFF, T2 = 89.5°C, 12 May 76.

CCGE - + 4.5 K vdc failed 18 Jul 75.

HFE - Degraded absolute temperature measurements, Dec 75. Commanded OFF, 13 May 76, for operational test.

Spurious functional changes - none this report period - 102 total.

Apollo 14 ALSEP

CENTRAL - Loss of downlink and uplink, 0146 G.m.t., 17 Mar 76.

Spurious functional changes - 88 total.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07), offscale HIGH, 16 Apr 76, (Sun Angle = 92.3°). Onscale, 22 Apr 76, (DL-07 = 139.6°F, Sun Angle = 164.7°). Offscale LOS, 26 Apr 76, (Sun Angle = 213.6°). Onscale, 8 May 76, (DL-07 = 126.2°F, Sun Angle = 1.9°).

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.


SIDE - Commanded OFF permanently, 3 May 76, to increase temperature of PSE electronics in central station.

Spurious functional changes - none this report period - 98 total.
Internal Memorandum

Date 16 June 1976            Letter No. 9753-163Y

To F. A. Heinz

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 May 1976 to 15 June 1976

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Apollo 17 ALSEP

LSG - Instrument heater box heater circuit automatic control loss on 19 Sep 75, 3rd occurrence. Intermittent A/D converter output during HIGH temperatures. No science data lost. Manual ON/OFF of heater to retain science data by maintaining temperature in the 48.2 to 52.0°C range.

LEAM - (AJ-11) observed maximum temperatures - Experiment ON, 185.0°F, Sun Angle = 152.5°, 16 May 76. Experiment ON, 186.5°F, Sun Angle = 39.4°, 5 Jun 76. Experiment OFF, 176.0°F, Sun Angle = 64.0°, 7 Jun 76. Experiment OFF, 189.5°F, Sun Angle = 125.2°, 12 Jun 76. Experiment ON, 170.6°F, Sun Angle = 158.9°, 15 Jun 76.

LACE - Operational check, 26 Feb 76. High Voltage Failure still exists. Sweep voltage locked in HIGH. STANDBY, 26 Feb 76.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP


LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.
9753-163Y
16 June 1976

Apollo 15 ALSEP

PSE  - Sensor temperature (DL-07) onscale, 16 May 76, (DL-07 = 139.3°F, Sun Angle = 125.2°).
SIDE - Cycled ON to STANDBY during lunar day to avoid exceeding internal temperature, T2 = 85.0°C.
CCGE - + 4.5 K vdc failed 18 Jul 75.
HFE  - Degraded absolute temperature measurements, Dec 75.

Spurious functional changes - none this report period - 102 total.

Apollo 14 ALSEP

CENTRAL - Return of downlink and uplink, 20 May 76. Loss of downlink and uplink, 8 Jun 76. Return of downlink and uplink, 10 Jun 76.

Spurious functional changes - one this report period - 89 total.

Apollo 12 ALSEP

PSE  - Sensor temperature (DL-07), offscale HIGH, 16 May 76, (Sun Angle = 98.0°). Onscale, 21 May 76, (DL-07 = 141.0°F, Sun Angle = 159.0°). Offscale LOW, 26 May 76, (Sun Angle = 220.0°). Onscale, 7 Jun 76, (DL-07 = 126.2°F, Sun Angle = 2.4°). Offscale HIGH, 15 Jun 76, (Sun Angle = 104.3°).

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.


SIDE - Commanded OFF permanently, 3 May 76, to increase temperature of PSE electronics in central station.

Spurious functional changes - none this report period - 98 total.

Prepared by: [Signature]

DISTRIBUTION: TDX/Standard
B. Rusky (2)
Internal Memorandum

Date 16 July 1976

Letter No. 9753-163Z

To F. A. Heinz

From T. Breezy

Subject: Apollo ALSEP Anomalies Report, 15 June 1976 to 15 July 1976

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Apollo 17 ALSEP

LSG - Instrument heater box heater circuit automatic control loss on 19 Sep 75, 3rd occurrence. Intermittent A/D converter output during HIGH temperatures. No science data lost. Manual ON/OFF of heater to retain science data by maintaining temperature in the 48.2 to 52.0°C range.

LEAM - (AJ-11) observed maximum temperatures - Experiment ON, 170.6°F, Sun Angle = 158.9°, 15 Jun 76. Experiment ON, 200.0°F, Sun Angle = 68.1°, 7 Jul 76. Experiment ON, 212.0°F, Sun Angle = 116.9°, 11 Jul 76. Operational test through lunar day for first time, maximum temperature observed was 212°F at sun angles 107° to 117°.

LACE - Operational check, 26 Feb 76. High Voltage Failure still exists. Sweep voltage locked in HIGH. STANDBY, 26 Feb 76.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP


LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.
Apollo 15 ALSEP

PSE - Sensor temperature (DL-07) onscale, entire period, 15 Jun - 15 Jul 76.

SIDE - Cycled ON to STANDBY during lunar day to avoid exceeding internal temperature, T2 = 85.0°C.

CCGE - + 4.5 K vdc failed 18 Jul 75.

HFE - Degraded absolute temperature measurements, Dec 75.

Spurious functional changes - four this report period - 106 total.
  103. PSE, Standby Power ON (Octal 037), 17 Jun 76.
  104. LSM, Standby Power ON (Octal 043), 17 Jun 76.
  105. SWS, Standby Power ON (Octal 046), 22 Jun 76.
  106. SIDE, Operational Power ON (Octal 153), 11 Jul 76.

Apollo 14 ALSEP

CENTRAL STATION - Return of downlink and uplink, 10 Jun 76.

Spurious functional changes - one this report period - 90 total.
  90. PSE, Leveling Mode, Manual (Octal 103), 17 Jun 76.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07), offscale HIGH, 15 Jun 76, (Sun Angle = 104.3°). Onscale, 20 Jun 76, (DL-07 = 137.7°F, Sun Angle = 165.3°). Offscale HIGH, 14 May 76, (Sun Angle = 98.9°).

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.

- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.


SIDE - Commanded OFF permanently, 3 May 76, to increase temperature of PSE electronics in central station.

Spurious functional changes - eight this report period - 106 total.
  99. C/S, High Data Rate ON (Octal 003), 17 Jun 76.
  100. PSE, Leveling Mode Manual (Octal 103), 17 Jun 76.
  101. PSE, Gain Change LPX, LPY (Octal 063), 17 Jun 76.
9753-163Z
16 July 1976

Apollo 12 ALSEP (continued)

Spurious functional changes (continued)
102. PSE, Leveling Power X Motor ON (Octal 070), 17 Jun 76.
103. C/S, 7-watt PDR ON (Octal 017), 17 Jun 76.
104. DTREM ON (Octal 027), 17 Jun 76.
105. PSE, Leveling Power Y Motor ON (Octal 071), 3-4 Jul 76.
106. C/S, PCU 2 Select (Octal 062), 12-14 Jul 76.

Prepared by: Ted A. Breezy

DISTRIBUTION: TDX/Standard
B. Rusky (2)
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Apollo 17 ALSEP

- **LSPE** - ON, High Bit Rate Mode, 15 Aug 76.
- **LSG** - STANDBY, 17 Aug 76.
- **LEAM** - (AJ-11) observed maximum temperatures - Experiment STANDBY, 207.2°F, Sun Angle = 117.3°, 8 Sep 76. Science data static, 16 Jul to 2 Aug 76, and 15 Aug 76.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

- **LSM** - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

- **PSE** - Sensor temperature (DL-07) offscale HIGH, 9 Sep 76, (Sun Angle = 89.8°). Onscale, 11 Sep 76, (DL-07 = 142.1°F, Sun Angle = 114.2°).
- **SIDE** - Cycled ON to STANDBY during lunar day to avoid exceeding internal temperature, T2 = 85.0°C.
Apollo 15 ALSEP (continued)

CCGE - + 4.5 Kvdc failed 18 Jul 75.
HFE - Degraded absolute temperature measurements, Dec 75.

Spurious functional changes - two this report period - 111 total.
110. SIDE, Load Command No. 4, Master Reset (octal 107), 18 Aug 76.
111. C/S, 5-watt Heater ON (octal 017), 31 Aug-1 Sep 76.

Apollo 14 ALSEP

CENTRAL STATION - Return of downlink and uplink, 10 Jun 76.

Spurious functional changes - one this report period - 93 total.
93. PSE, Feedback Filter IN (octal 101) 8 Sep 76.

Apollo 12 ALSEP

- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 74.
- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.

SIDE - Commanded OFF permanently, 3 May 76, to increase temperature of PSE electronics in central station.

Spurious functional changes - one from 3 May 1974 and one this report period - 110 total.
109. C/S, High Data Rate ON (octal 003), 3 May 74.
110. PSE, Coarse Level Sensor IN (octal 102), 22 Aug 76.

Prepared by: Ted A. Breezy

DISTRIBUTION: TDX/Standard
B. Rusky (2)
Internal Memorandum

Date 18 October 1976 Letter No. 9753-163AC

To F. A. Heinz

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 September 1976 to 15 October 1976

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**Apollo 17 ALSEP**

- CENTRAL - Normal Bit Rate Mode on Mondays, Wednesdays, and Fridays.
- LSPE - ON, High Bit Rate Mode, 15 Aug 76.
- LSG - STANDBY.
- LEAM - STANDBY.
- LACE - STANDBY.
- HFE - ON, Ring Bridge Surveys on Wednesdays only.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

**Apollo 16 ALSEP**

- PSE - Sensor temperature (DL-07) offscale HIGH, 5 Oct 76, Sun Angle = 71.4°. Onscale, 14 Oct 76, (DL-07 = 142.8°F, Sun Angle = 175.6°).
- LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.

**Apollo 15 ALSEP**

- SIDE - Cycled ON to STANDBY during lunar day to avoid exceeding internal temperature, T2 = 85.0°C.
Apollo 15 ALSEP (continued)

CCGE - + 4.5 Kvdc failed 18 Jul 75.

HFE - Degraded absolute temperature measurements, Dec 75.

Spurious functional changes - none this report period - 111 total.

Apollo 14 ALSEP

CENTRAL - Loss of downlink and uplink, 9 Oct 76.

STATION

Spurious functional changes - one this report period - 94 total.

94. C/S, Timer Output Accept (octal 032), 7 Oct 76.

Apollo 12 ALSEP


- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 75.

- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.

- A/D Converter, 3rd least significant bit not setting, intermittently during lunar night. Noise in science data. Caused by low temperature in central station. No problem since SIDE commanded OFF.

SIDE - Commanded OFF permanently, 3 May 76, to increase temperature of PSE electronics in central station.

Spurious functional changes - two this report period - 112 total.

111. PSE, Long Period Calibration ON (octal 066), 19 Sep 76.

112. SWS, Standby Power ON (octal 046), 5 Oct 76.

Prepared by: 

Ted A. Breezy

DISTRIBUTION: TDX Standard  
B. Rusky (2)
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**Apollo 17 ALSEP**

<table>
<thead>
<tr>
<th>Component</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTRAL</td>
<td>Normal Bit Rate Mode on Mondays, Wednesdays, and Fridays only during real-time support. 61-hour timer, minimum 34 minutes offset early from predicted times.</td>
</tr>
<tr>
<td>STATION</td>
<td></td>
</tr>
<tr>
<td>LSPE</td>
<td>ON, High Bit Rate Mode, 15 Aug 76.</td>
</tr>
<tr>
<td>LSG</td>
<td>STANDBY.</td>
</tr>
<tr>
<td>LEAM</td>
<td>STANDBY.</td>
</tr>
<tr>
<td>LACE</td>
<td>STANDBY.</td>
</tr>
<tr>
<td>HFE</td>
<td>ON, Ring Bridge Surveys on Wednesdays only.</td>
</tr>
</tbody>
</table>

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

**Apollo 16 ALSEP**

<table>
<thead>
<tr>
<th>Component</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE</td>
<td>Sensor temperature (DL-07) offscale HIGH, 3 Nov 76, Sun Angle = 66.3°. Onscale, 12 Nov 76, (DL-07 = 142.8°F, Sun Angle = 175.9°).</td>
</tr>
<tr>
<td>LSM</td>
<td>No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.</td>
</tr>
</tbody>
</table>

Spurious functional changes - none since 6 Aug 73 - 11 total.

**Apollo 15 ALSEP**

<table>
<thead>
<tr>
<th>Component</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTRAL</td>
<td>With HFE, PSE, and SIDE ON, 14 Nov 76, SIDE rippled to STANDBY because of low reserve power.</td>
</tr>
<tr>
<td>STATION</td>
<td></td>
</tr>
</tbody>
</table>


Apollo 15 ALSEP (continued)

PSE - Sensor temperature (DL-07) offscale HIGH, 5 Nov 76, (Sun Angle = 75.2°). Onscale, 10 Nov 76, (DL-07 = 137.5°F, Sun Angle = 138.5°).

SIDE - Cycled ON to STANDBY during lunar day to avoid exceeding internal temperature, T2 = 85.0°C.

CCGE - + 4.5 Kvdc failed 18 Jul 75.

HFE - STANDBY, to maintain reserve power to avoid ripple off during lunar night.

- Degraded absolute temperature measurements, Dec 75.

Spurious functional changes - one from previous report period, three this report period - 115 total.

112. C/S, Data Processor X Select (octal 034), 7 Oct 76.
113. SIDE, Master Reset (octals 107 and 110), 25 Oct 76.
114. HFE, Standby Power ON (octal 056), 2 Nov 76.
115. SWS, Standby Power ON (octal 046), 5 Nov 76.

Apollo 14 ALSEP

CENTRAL STATION - Acquisition of uplink and downlink, 12 Nov 76.

Spurious functional changes - none this report period - 94 total.

Apollo 12 ALSEP


- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 75.

- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.

- A/D Converter, 3rd least significant bit not setting, intermittently during lunar night. Noise in science data. Caused by low temperature in central station. SIDE OFF and SWS STANDBY during lunar night to maintain minimum 2°F average thermal plate temperature.
Apollo 12 ALSEP (continued)

SIDE - Commanded OFF permanently, 3 May 1976, to increase temperature of PSE electronics in central station.

SWS - Commanded to STANDBY during lunar night to increase temperature of PSE electronics in central station.

Spurious functional changes - none this report period - 112 total.

Prepared by: Ted A. Breezy

DISTRIBUTION: TDX Standard
B. Rusky (2)
Internal Memorandum

Date 16 December

To F. A. Heinz

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 November 1976 to 15 December 1976

The Apollo ALSEP Anomalies Report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported weekly in the ALSEP PERFORMANCE SUMMARY REPORT and the ALSEP STATUS REPORT and quarterly in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

Apollo 17 ALSEP

CENTRAL STATION - Normal Bit Rate Mode on Mondays, Wednesdays, and Fridays only during real-time support. 61-hour timer, minimum 34 minutes offset early from predicted times.

LSPE - ON, High Bit Rate Mode, 15 Aug 76.

LSG - STANDBY.

LEAM - STANDBY, nights - OFF, days.

LACE - STANDBY.

HFE - ON, Ring Bridge Surveys on Wednesdays only.

Spurious functional changes - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 3 Dec 76, Sun Angle = 69.9°. Onscale, 12 Dec 76, (DL-07 = 130.8°F, Sun Angle = 179.9°).

LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.

Spurious functional changes - none since 6 Aug 73 - 11 total.
Apollo 15 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 4 Dec 76, (Sun Angle = 74.8°). Onscale, 10 Dec 76, (DL-07 = 137.2°F, Sun Angle = 143.2°).

SIDE - Cycled ON to STANDBY during lunar day to avoid exceeding internal temperature, T2 = 85.0°C.

CCGE - + 4.5 Kvdc failed 18 Jul 75.

HFE - STANDBY, to maintain reserve power to avoid ripple off during lunar night.

- Degraded absolute temperature measurements, Dec 75.

Spurious functional changes - two this report period - 117 total.
116. C/S Transmitter OFF (octal 014), 28 Nov 76.
117. C/S, 14-watt PDR ON (octal 022), 5 Dec 76.

Apollo 14 ALSEP

CENTRAL - Acquisition of uplink and downlink, 12 Nov 76.
STATION - 14 and 7-watt power dump resistors are ON for lunar day.

Spurious functional changes - two this report period - 96 total.
95. PSE, Feedback Filter IN (octal 101), 19-22 Nov 76.
96. PSE, Gain Change LPX, LPY (octal 063), 3-5 Dec 76.

Apollo 12 ALSEP


- Failure of AUTO and FORCED OFF modes in heater circuit prior to 9 Nov 75.

- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.

- A/D Converter, 3rd least significant bit not setting, intermittently during lunar night. Noise in science data. Caused by low temperature in central station. SIDE OFF and SWS STANDBY during lunar night to maintain minimum 2°F average thermal plate temperature.
Apollo 12 ALSEP (continued)

SIDE - Commanded OFF permanently, 3 May 1976, to increase temperature of PSE electronics in central station.

SWS - Commanded to STANDBY during lunar night to increase temperature of PSE electronics in central station.

Spurious functional changes - two this report period - 114 total.

113. PSE, Leveling Power Z Motor ON (octal 072), 3 Dec 76.

114. SIDE, Standby Power ON (octal 053), 4 Dec 76.

Prepared by: Ted A. Breezy

DISTRIBUTION: TDX Standard
B. Rusky
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Apollo 17 ALSEP

CENTRAL - Normal Bit Rate Mode on Mondays, Wednesdays, and
STATION Fridays only during real-time support.

- 61-hour timer, minimum 34 minutes offset early from previous predicted times.

LSPE - ON, High Bit Rate Mode, 15 Aug 76.

LSG - STANDBY.

LEAM - STANDBY, nights - OFF, days.

LACE - STANDBY.

HFE - ON, Ring Bridge Surveys once weekly.

Functional changes by spurious commands - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 3 Jan 77, Sun Angle = 87.0°. Onscale, 10 Jan 77, (DL-07 = 135.5°F, Sun Angle = 171.7°).

LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.

Functional changes by spurious command - none since 6 Aug 73 - 11 total.
Apollo 15 ALSEP

**PSE**
- Sensor temperature (DL-07) offscale HIGH, 2 Jan 77, (Sun Angle = 62.8°). Onscale, 9 Jan 77, (DL-07 = 134.9°F, Sun Angle = 147.7°).

**SIDE**
- Cycled ON to STANDBY during lunar day to avoid exceeding internal temperature, T2 = 85.0°C.

**CCGE**
- + 4.5 Kvdc failed 18 Jul 75.

**HFE**
- Commanded OFF permanently, 13 Jan 77, to increase reserve power lunar nights.

Functional changes by spurious command - two this report period - 119 total.
- 118. LSM, Operational Power ON (octal 042), 2-3 Jan 77.
- 119. PSE, Thermal Control Mode Auto OFF (octal 076), 7 Jan 77.

Apollo 14 ALSEP

**CENTRAL**
- Acquisition of uplink and downlink, 12 Nov 76.

- 14 and 7 watt power dump resistors are ON for lunar day, OFF for lunar night.

**PSE**
- Sensor temperature (DL-07) offscale HIGH, 8 Jan 77, (Sun Angle = 114.7°). Onscale 10 Jan 77, (DL-07 = 137.2°F, Sun Angle = 139.3°).

**CPLEE**
- + 3500 vdc range, no spurious command, 29-30 Dec 76. Internal switch.

- Full sequence, + 3500 to - 3500 vdc range, no spurious command, 30-31 Dec 76. Internal switch.

Functional changes by spurious command - none this report period - 96 total.

Apollo 12 ALSEP

**PSE**
Apollo 12 ALSEP (continued)

- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.


SIDE

- Commanded OFF permanently, 3 May 76, to increase temperature of PSE electronics in central station.

SWS

- Commanded to OFF permanently, 15 Jan 77, to increase temperature of PSE electronics in central station.

Functional changes by spurious command - none this report period - 114 total.

Prepared by: 

Ted A. Breezy

DISTRIBUTION: TDX Standard
B. Rusky
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Apollo 17 ALSEP

CENTRAL - Normal Bit Rate Mode on Mondays, Wednesdays, and STATION Fridays only during real time support.
- 61-hour timer, minimum 34 minutes offset early from previous predicted times.

LSPE - ON, High Bit Rate Mode, 15 Aug 76.

LSG - STANDBY.

LEAM - STANDBY, nights - OFF, days.

LACE - STANDBY.

HFE - ON, Ring Bridge Surveys once weekly.

Functional changes by spurious commands - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP


LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.

Functional changes by spurious command - none since 6 Aug 73 - 11 total.
Apollo 15 ALSEP

PSE  - Sensor temperature (DL-07) offscale HIGH, 1 Feb 77, (Sun Angle = 67.8°). Onscale, 7 Feb 77, (DL-07 = 137.0°F, Sun Angle = 143.5°).

SIDE  - Cycled ON to STANDBY during lunar day to avoid exceeding internal temperature T2 = 85.0°C.

CCGE  - +4.5 Kvdc failed 18 Jul 75.

HFE  - Commanded OFF permanently, 13 Jan 77, to increase reserve power lunar nights.

Functional changes by spurious command - 3 from previous period, 5 this report period - 127 total.
120. PSE, Uncage Arm/Fire (octal 073), 22-25 Oct 76.
121. C/S, PCU 2 Select (octal 062), 27 Dec 76.
122. PSE, Uncage Arm/Fire (octal 073), 31 Dec 76 - 1 Jan 77.
123. C/S, PCU 2 Select (octal 062), 24 Jan 77.
124. C/S, PCU 2 Select (octal 062), 28-29 Jan 77.
125. PSE, Calibration Short Period OFF (octal 065), 6 Feb 77.
126. C/S, Timer Reset (octal 150), 6-7 Feb 77.
127. PSE, Calibration Short Period OFF (octal 065), 12-13 Feb 77.

Apollo 14 ALSEP

CENTRAL STATION  - Acquisition of uplink and downlink, 12 Nov 76.

- 14 and 7 watt power dump resistors are ON for lunar day, OFF for lunar night.

PSE  - Sensor temperature (DL-07) remained onscale this period.

Functional changes by spurious command - 2 from previous period, 3 this report period - 101 total.
97. CPLEE, Step Voltage Level (octal 115), 29-30 Dec 76.
98. CPLEE, Automatic Voltage Sequence ON (octal 114), 31 Dec 76.
99. CPLEE, Operational Heater ON (octal 111), 29 Jan 77.
100. ASE, Standby Power OFF (octal 044), 4 Feb 77.
101. C/S, PCU 2 Select (octal 062), 5-6 Feb 77.
Apollo 12 ALSEP


- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.


SIDE - Commanded OFF permanently, 3 May 76, to increase temperature of PSE electronics in central station.

SWS - Commanded to OFF during lunar night to increase temperature of PSE electronics in central station. STANDBY during lunar day to cool central station.

Functional changes by spurious command - 2 from previous periods, 2 this report period - 118 total.

115. PSE, Leveling Direction (octal 074), 26 Nov 76.
116. PSE, Feedback Filter Out (octal 101), 29 Dec 76.
117. PSE, Gain Change Long Period Z (octal 064), 22 Jan 77.
118. PSE, Gain Change Long Period XY (octal 063), 4 Feb 77.

Prepared by Ted A. Breezy

DISTRIBUTION: TDX Standard
B. Rusky
Internal Memorandum

Date 16 March 1977 Letter No. 9753-163AH

To F. A. Heinz

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 February 1977 to 15 March 1977

The Apollo ALSEP Anomalies Report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported in the ALSEP PERFORMANCE SUMMARY REPORT, the ALSEP STATUS REPORT and in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

Apollo 17 ALSEP

CENTRAL - Normal Bit Rate Mode on Mondays, Wednesdays, and Fridays only during real time support.

- 61-hour timer, minimum 34 minutes offset early from previous predicted times.

LSPE - ON, High Bit Rate Mode, 15 Aug 76.

LSG - Beam at top stop, attempts to remove have been unsuccessful.

LEAM - STANDBY, nights - OFF, days.

HFE - Probe #2 230 cm level readings, (DTH22, DTL22, and T22) invalid from 18 Feb 77 to 4 Mar 77.

Functional changes by spurious commands - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 3 Mar 77, Sun Angle = 87.0°. Onscale, 10 Mar 77, (DL-07 = 134.1°F, Sun Angle = 172.2°). Heater to Forced OFF, days - Auto ON, nights.

LSM - No science data on Z-axis sensor. Flip Cals discontinued during lunar night while Z-axis sensor head temperature is LOW.

Functional changes by spurious command - none since 6 Aug 73 - 11 total.
Apollo 15 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 3 Mar 77, (Sun Angle = 74.9°). Onscale, 8 Mar 77, (DL-07 = 142.3°F, Sun Angle = 132.9°).

SIDE - Commanded OFF permanently, 12 Mar 77, to increase reserve power lunar nights.

CCGE - Commanded OFF permanently, 13 Jan 77, to increase reserve power lunar nights.

HFE - Commanded OFF permanently, 13 Jan 77, to increase reserve power lunar nights.

Functional changes by spurious command - one this report period - 128 total.
128. Gain Change LPZ (octal 064), 4-5 Mar 77.

Apollo 14 ALSEP

CENTRAL - 14 and 7 watt power dump resistors are ON for STATION lunar day, OFF for lunar night.

Functional changes by spurious command - one this report period - 102 total.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07) offscale LOW, 18 Feb 77, (Sun Angle = 247.5°). Onscale, 28 Feb 77, (DL-07 = 126.3°F, Sun Angle = 4.1°). Offscale HIGH, 7 Mar 77, (Sun Angle = 95.2°). Onscale 13 Mar 77, (DL-07 = 140.3°F, Sun Angle = 168.0°).

- SPZ Gain at -20 db, cleared noise in LP axes, 22 Nov 75.


SIDE - Commanded OFF permanently, 3 May 76, to increase temperature of PSE electronics in central station.

SWS - Commanded to OFF during lunar night to increase temperature of PSE electronics in central station. STANDBY during lunar day to cool central station.
Apollo 12 ALSEP (continued)

Functional changes by spurious command - none this report period - 118 total.

Prepared by Ted A. Breezy

DISTRIBUTION: TDX Standard
B. Rusky
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**Apollo 17 ALSEP**

- **CENTRAL** - Normal Bit Rate Mode on Mondays, Wednesdays, and Fridays only during real time support
- 61-hour timer, minimum 40 minutes offset early from original predicted times.

- **LSPE** - ON, High Bit Rate Mode, 15 Aug 76.

- **LSG** - Instrument Housing heater box heater circuit failed in Full OFF, no temperature control, 13 Apr 77.

  Functional changes by spurious commands - none since deployment and initialization on 12 Dec 72.

**Apollo 16 ALSEP**


- **LSM** - No science data on Y-axis sensor, 8 Apr 77. No science data on Z-axis sensor, Mar 75.

  Functional changes by spurious command - none since 6 Aug 73 - 11 total.

**Apollo 15 ALSEP**

- **PSE** - Sensor temperature (DL-07) offscale HIGH, 2 Apr 77, (Sun Angle = 78.5°). Onscale, 6 Apr 77, (DL-07 = 141.9°F, Sun Angle = 126.9°).
Apollo 15 ALSEP (continued)

Functional changes by spurious command - three this report period - 131 total.
129. PSE, Uncage/OT (octal 073), 24-25 Mar 77.
130. PSE, Gain Change, SPZ (octal 067), 9-10 Apr 77.
131. C/S, Timer Output Inhibit (octal 033), 14 Apr 77.

Apollo 14 ALSEP

CENTRAL - 14 and 7 watt power dump resistors are ON for STATION lunar day, OFF for lunar night.

Functional changes by spurious command - three this report period - 105 total.
103. ASE, Standby Power OFF (octal 044), 17 Mar 77.
104. CPLEE, Automatic Voltage Sequence, (octal 114), 26-27 Mar 77.
105. PSE, Standby Power ON (octal 037), 2 Apr 77.

Apollo 12 ALSEP


- SPZ Gain at -20 db.

Functional changes by spurious command - one this report period - 119 total.
119. SIDE, Standby Power ON (octal 053), 20 Mar 77.

Prepared by

Ted A. Breezy

DISTRIBUTION: TDX Standard
B. Rusky
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**Apollo 17 ALSEP**

- **CENTRAL** - Normal Bit Rate Mode, 25 Apr 1977.
- **STATION** - 61-hour timer, minimum 40 minutes offset early from original predicted times.
- **LSPE** - STANDBY, 25 Apr 1977
- **LSG** - Instrument Housing heater box heater circuit failed in Full OFF, no temperature control, 13 Apr 77. Bit 8 intermittent data, analog to digital converter.

Functional changes by spurious commands - none since deployment and initialization on 12 Dec 72.

**Apollo 16 ALSEP**

- **PSE** - Sensor Temperature (DL-07) offscale HIGH, 2 May 77, Sun Angle = 95.4°. Onscale, 9 May 77, (DL-07 = 126.2°F, Sun Angle = 175.1°). Heater to Forced OFF, days - Auto ON, nights.
- **LSM** - Science data on Y-axis sensor, 28 Apr to 7 May 77. Y-axis data static, 8 May 77. No science data on Z-axis sensor, Mar 75.

Functional changes by spurious command - none since 6 Aug 73 - 11 total.

**Apollo 15 ALSEP**

- **PSE** - Sensor temperature (DL-07) offscale HIGH, 2 May 77, (Sun Angle = 83.7°). Onscale, 6 May 77, (DL-07 = 138.3°F, Sun Angle = 132.4°).
Apollo 15 ALSEP (continued)

Functional changes by spurious command - two this report period - 133 total.
132. C/S, High Bit Rate ON (octal 003), 30 Apr 77.
133. PSE, Gain Change LPX, LPY (octal 063), 10 May 77.

Apollo 14 ALSEP

CENTRAL - 14 and 7 watt power dump resistors are ON for STATION lunar day, OFF for lunar night.

Functional changes by spurious command - two this report period - 107 total.
106. CPLEE, Operational Power ON (octal 052), 6 May 77.
107. CPLEE, Operational Heater OFF (octal 112), 10 May 77.

Apollo 12 ALSEP

PSE - Sensor temperature (DL-07) offscale LOW, 18 Apr 77, (Sun Angle = 246.0°). Onscale, 28 Apr 77, (DL-07 = 126.4°F, Sun Angle = 3.9°). Offscale HIGH, 5 May 77, (Sun Angle = 93.1°). Onscale 11 May 77, (DL-07 = 139.2°F, Sun Angle = 166.9°).

- SPZ Gain at -20 db.

Functional changes by spurious command - none this report period - 119 total.

Prepared by Ted A. Breezy

DISTRIBUTION: TDX Standard
B. Rusky
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Apollo 17 ALSEP

CENTRAL - Normal Bit Rate Mode, 25 Apr 1977.
STATION
- 61-hour timer, minimum 1 hour 4 minutes 53 seconds offset early since initialization 12 Dec 72.
LSPE - STANDBY, 25 Apr 1977
LSG - Instrument housing heater box heater circuit control failed, cycle heater OFF/ON only available.

Functional changes by spurious commands - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

LSM - Science data on Y-axis sensor, 27 May to 5 Jun 77. Y-axis data static, 6 Jun 77. Z-axis data static, Mar 75.

Functional changes by spurious command - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 1 Jun 77, (Sun Angle = 90.8°). Onscale, 3 Jun 77, (DL-07 = 142.5°F, Sun Angle = 114.9°).
Apollo 15 ALSEP (continued)

Functional changes by spurious command - 3 this report period - 136 total.
134. PSE, Gain Change LPX, LPY (octal 063), 18 May 77.
135. C/S, Timer Output Inhibit (octal 033), 8 Jun 77.
136. PSE, Calibration LP ON (octal 066), 10 Jun 77.

Apollo 14 ALSEP

CENTRAL - 14 and 7 watt power dump resistors are ON for lunar day, OFF for lunar night.

Functional changes by spurious command - one this report period - 108 total.
108. ASE, Standby Power OFF (octal 044), 6 Jun 77.

Apollo 12 ALSEP


- SPZ Gain at -20 db.

Functional changes by spurious command - none this report period - 119 total.

Prepared by

Ted A. Breezy

DISTRIBUTION: TDX Standard B. Rusky
Internal Memorandum

Date 18 July 1977

Letter No. 9753-163AL

To F. A. Heinz

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 June 1977 to 15 July 1977

The Apollo ALSEP Anomalies Report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported in the ALSEP PERFORMANCE SUMMARY REPORT, the ALSEP STATUS REPORT and in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

Apollo 17 ALSEP

CENTRAL STATION - 61-hour timer, minimum 1 hour 4 minutes 53 seconds offset early since initialization 12 Dec 72.

LEAM - One of five 20-bit buffers is operating. Leam data static at nights, intermittent during day.

LSG - Instrument housing heater box heater circuit control failed, cycle heater OFF/ON only available.

HFE - Probe #2; DTH 22 and T 22 reference currents and voltages anomalous.

Functional changes by spurious commands - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP


Functional changes by spurious command - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

PSE - Sensor temperature (DL-07) offscale HIGH, 2 Jul 77, (Sun Angle = 108.4°). Onscale, 3 Jul 77, (DL-07 = 140.4°F, Sun Angle = 120.6°).
9753-163AL
18 July 1977

Apollo 15 ALSEP

Functional changes by spurious command - none this report period - 136 total.

Apollo 14 ALSEP

CENTRAL - 14 and 7 watt power dump resistors are ON for lunar day, OFF for lunar night.

PSE - Arm/Fire circuit Out of Tolerance, 11 Jul 77. Unable to command to Uncaged.

Functional changes by spurious command - four this report period - 112 total.

109. CPLEE, Step Voltage Level (octal 115) 15-17 Jun 77.
110. DTREM, OFF (octal 031), 20-22 Jun 77.
111. DTREM, OFF (octal 031), 5 Jul 77.
112. PSE, Uncage Arm/Fire, OT (octal 073), 11 Jul 77.

Apollo 12 ALSEP


- SPZ Gain at -20 db.

Functional changes by spurious command - one this report period - 120 total.

120. PSE, Calibration SP ON Octal 065), 7 Jul 77.

Prepared by Ted A. Breezy

DISTRIBUTION: TDX Standard
B. Rusky
Internal Memorandum

Date: 16 August 1977

To: F. A. Heinz

From: T. Breezy

Subject: Apollo ALSEP Anomalies Report, 15 July 1977 to 15 August 1977

The Apollo ALSEP Anomalies Report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported in the ALSEP PERFORMANCE SUMMARY REPORT, the ALSEP STATUS REPORT and in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

Apollo 17 ALSEP

CENTRAL - 61-hour timer, minimum 1 hour 4 minutes 53 seconds offset early since initialization 12 Dec 72.

LEAM - One of five 20-bit buffers is operating. Leam data static at nights, intermittent during day.

LSG - Instrument housing heater box heater circuit control failed.

HFE - Probe #2; DTH 22 and T 22 reference currents and voltages anomalous.

Functional changes by spurious commands - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP


Functional changes by spurious command - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

CENTRAL - 18-hour timer, 82 minutes late from 24 May 77 reset predictions.
Apollo 15 ALSEP (continued)

PSE - Sensor temperature (DL-07) offscale HIGH, 30 Jul 77, (Sun Angle = 92.0°). Onscale, 2 Aug 77, (DL-07 = 137.6°F, Sun Angle = 127.8°).

Functional changes by spurious command - one this report period - 137 total.
137. C/S, Slow Data Rate (octal 007), 8 Aug 77

Apollo 14 ALSEP

Loss of Signal (LOS), 2030 G.m.t., 30 Jul 77. Acquisition of Signal (AOS) 1246 G.m.t., 4 Aug 77.

CENTRAL STATION - 14 and 7 watt power dump resistors are ON for lunar day, OFF for lunar night.

PSE - Arm/Fire circuit Out of Tolerance, 11 Jul 77. Unable to command to Uncaged.
- Long Period Z-axis, static.

Functional changes by spurious command - one this report period - 113 total.
113. PSE, ARM/FIRE to OT (octal 073), 11 Aug 77.

Apollo 12 ALSEP

CENTRAL STATION - DSS-1 (10 watt) heater OFF day and night.
- PSE A/D converter 3rd least significant bit not setting at low temperatures.

- SPZ Gain at -20 db.

Functional changes by spurious command - one this report period - 120 total.

Prepared by Ted A. Breezy

DISTRIBUTION: TDX Standard
B. Rusky
K. Hsi
Internal Memorandum

Date 16 September 1977    Letter No. 9753-163AN

To B. Rusky

From T. Breezy

Subject Apollo ALSEP Anomalies Report, 15 August 1977 to 15 September 1977

Page 1 of 3

The Apollo ALSEP Anomalies Report appears as a monthly summarization publication. All previous publications should be retained on file for reference. The anomalies also are reported in the ALSEP PERFORMANCE SUMMARY REPORT, the ALSEP STATUS REPORT and in the LUNAR SURFACE EQUIPMENT STATUS REPORT. Information of previous anomalous events are available upon request.

Apollo 17 ALSEP

CENTRAL STATION - Transmitter B, 9 Dec 74.

- Command Decoder A, Aug 74.

- 61-hour timer, minimum 1 hour 4 minutes 53 seconds offset early since initialization 12 Dec 72.

LEAM - One of five 20-bit buffers is operating. Leave data static at nights, intermittent during day.

LSG - Instrument housing heater box heater circuit control failed.

LACE - High Voltage Failure Oct 73.

HFE - Probe #2; DTH 22 and T 22 reference currents and voltages anomalous.

Functional changes by spurious commands - none since deployment and initialization on 12 Dec 72.

Apollo 16 ALSEP

CENTRAL STATION - Transmitter A, 26 Mar 73.

- Processor Y, 12 Jan 77.

PSE - Sensor Temperature (DL-07) offscale HIGH, 28 Aug 77, Sun Angle = 97.0°. Onscale, 3 Sep 77, (DL-07 = 140.4°F, Sun Angle = 170.2°). Heater to Forced OFF, days - Auto ON, nights.
Apollo 16 ALSEP (continued)

LSM - Science data on y-axis sensor, 24 Aug to 1 Sep 77. Y-axis data static, 2 Sep 77. Z-axis data static, Mar 75.

Functional changes by spurious command - none since 6 Aug 73 - 11 total.

Apollo 15 ALSEP

CENTRAL STATION - Transmitter A, 20 Aug 76.
- Processor X, 19 Oct 76.
- 18-hour timer, 82 minutes late from 24 May 77 reset predictions.

PSE - Sensor temperature (DL-07) offscale HIGH, 28 Aug 77, (Sun Angle = 85.3°). Onscale, 1 Sep 77, (DL-07 = 136.7°F, Sun Angle = 134.0°).

Functional changes by spurious command - none this report period - 137 total.

Apollo 14 ALSEP

Loss of Signal (LOS), 2030 G.m.t., 30 Jul 77. Acquisition of Signal (AOS) 1246 G.m.t., 4 Aug 77.

CENTRAL STATION - Transmitter A, 12 Nov 76.

PSE - Long Period Z-axis, static.

Functional changes by spurious command - one this report period - 114 total.
- 114. PSE, Calibration SP ON (octal 065) 27-28 Aug 77.

Apollo 12 ALSEP

CENTRAL STATION - Transmitter A, 8 July 74.
- PSE A/D converter 3rd least significant bit not setting at low temperatures.

Apollo 12 ALSEP (continued)

PSE  - SPZ Gain at -20 db.

Functional changes by spurious command - none this report period - 120 total.

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