

Apollo 12 Real Time Simulation

Flight hand notes



**from a Real Time Simulation performed by Iván Turrado on his YouTube
channel
from 27th may 2024 to june 6th 2024**

FD1

Insertion
+25566
+00004
+01029

16 44
103,8
101,9
-59 59

ECS, EPS checkout (GET 000:30:00)
H2 Qty: 99%
O2 Qty: 99%

FC1: 25A	MNA: 28,7V
FC2: 35A	MNB: 29V
FC3: 19A	SPS Oxid, Fuel @ 000:37:45: 99,9%, no unbal

P52 06 93
+00150
+00069
+00105

Attitude Reference Comparison Check:

IMU	DSKY	ASCP
	+17995	179,9
	+01321	13,2
	+00077	0,7

GDC	DSKY	ASCP
	+18003	180,2
	+00176	001,9
	+00087	0,6

Launch debriefing audio (001:16:00 GET):

[Lnk](#)

Post TLI:

TLI GET: 002:53:13

16 62	16 83
+35399	+99334
+05201	-18159
+02009	+44416

Flight day 1 debriefing 1 audio (before schedule shift, 011:40:00 GET):

[Lnk](#)

At GET 14:52:20 the physical DSKY API on that device was restarted. Swap memory partition was added on the next FD and no further freezes were noticed on the remained of the mission.

Flight day 1 debriefing 2 audio (before sleep, 017:18:00 GET):

[Link](#)

FD2

Consumables update:

GET 28:55:30

RCS:

A: 91% B: 93% C: 91% D: 93% Total: 92%

H2: 90% O2: 91%

Crew status report:

Sleep: 8h; Good (*"I slept pretty well, I guess that I needed the sleep and I feel perfect, I feel fine"*)

MCC-2 PAD in picture on respective PAD folder.

MCC-2 resids:

Pre trim: +00003, -00003, +00002; EMS -4,2

Post trim: -00000, -00003, +00003; EMS -4,4

98,1% SPS Oxid

98,1% SPS Fuel

No unbal

Onboard readouts:

GET 041:00:30

Batt C: 36,5V

Pyro Batt A: 37V

Pyro Batt B: 37V

RCS:

A: 90% B: 91% C: 89,5% D: 91%

Flight day 2 debriefing audio, before sleep (041:59:00 GET):

[Link](#)

FD3

Consumables update:

GET 53:05:00

RCS:

A: 90% B: 91% C: 89% D: 91% Total: 90%

H2: 82% O2: 84%

Fuel SPS: 98,1%

Oxid SPS: 98,1%

Unbal: 0%

Crew status report:

Sleep: 9h; Average sleep - good (*"Let's see, I slept around 9 hours and it was a pretty average sleep. On FD1 to FD2 I slept pretty good. Well, today it was also pretty good."*)

At 54:33:15 DSKY was controlled remotely from MCC. This was done as a test of the physical DSKY's API and NASSP's telemetry client.

Flight day 3 debriefing audio, before sleep (066:12:00 GET):

[Link](#)

Onboard readouts:

GET 066:35:00

Batt C: 36V

Pyro Batt A: 37V

Pyro Batt B: 37V

RCS:

A: 90% B: 91% C: 90% D: 91%

FD4

Because MCC-4 was scrubbed, power NAP between 77:41:00 and 77:55:00 GET.

Consumables update:

GET 77:58:30

RCS:

A: 90% B: 91% C: 89% D: 91% Total: 90%

H2: 74% O2: 76%

Fuel SPS: 98,1%

Oxid SPS: 98,1%

Unbal: 0%

Crew status report:

Sleep: 8h; Medium - good (*"I got interrupted because of the phone call I was dealing before when I woke up, they called me around 12 AM or 11 AM or 10 AM or something like that, so I got interrupted, then there was a little bit of noise around so that deteriorated my mood a little bit but after that it was good. I got a little bit stressed also, during the second part of my sleep period because of the phone call but all good"*)

82:36:00

RCS A 90% B: 90% C: 89% D 90%

Fuel SPS: 98,1%

Oxid SPS: 98,1%

Unbal: 0%

LOI-1 PAD in picture on respective PAD folder.

LOI-1 resids:

-00006, -00001, -00000; EMS -6,3

16 44 = 169,5 60,0 -59 59

38,9% SPS Oxid

38,9% SPS Fuel

No unbal

86:32:00

Fuel SPS: 38,9%

Oxid SPS: 38,9%

Unbal: 0%

LOI-2 PAD in picture on respective PAD folder.

LOI-2 resids:

-00003, -00001, -00002; EMS -5,7 (Not trimmed)

16 44 = 60,6 59,9 -59 59

36,6% SPS Oxid

36,6% SPS Fuel

No unbal

Flight day 4 debriefing audio, before sleep (091:15:40 GET):

[Link](#)

Onboard readouts:

GET 091:27:50

Batt C: 36V

Pyro Batt A: 37V

Pyro Batt B: 37V

RCS:

A: 88% B: 89% C: 88% D: 89% Tot: 88%

FD5

Consumables update:

GET 101:31:05

RCS:

A: 86% B: 87% C: 86% D: 87% Total: 86%

H2: 65% O2: 68%

Fuel SPS: 36,6%

Oxid SPS: 36,6%

Unbal: 0%

Crew status report:

Sleep: 6,9h; Medium - interrupted (*"Didn't sleep very well with that electricity surge because I was interrupted and then was a bit in a bad mood... didn't sleep very well today"*)

GET 105:29:30 ED Batts 37,5 (Go)

Landing LAT, LON, ALT (P68)

-00302 -02342 +00000

Landing GET 112:31:54

EVA Time:

CDR: 3 hours 41 minutes 44 seconds

LMP: 3 hours 2 minutes 21 seconds

LOPC-1 Resids:

-00006 +00004 -00001

EMS -11,7

FD6

Consumables update:

GET 131:34:10

RCS:

A: 62% B: 74% C: 64% D: 74% Total: 68%

H2: 54% O2: 59%

Fuel SPS: 33,3%

Oxid SPS: 33,3%

Unbal: 0%

Crew status report:

Sleep: 5,5h; Normal - stressed (*"My sleep was normal, 5 hours and a half. Now I feel less, but when I went to sleep I was stressed, very very stressed."*)

EVA Time:

CDR: 3 hours 38 minutes

LMP: 3 hours 30 minutes

EVA-2 debriefing audio (138:21:30 GET):

[Link](#)

Onboard readouts:

GET 149:00:16

H2%: 46

O2%: 54

A: 51% B: 69% C: 51% D: 69% Total: 61%

Flight day 6 debriefing audio, before sleep (150:05:00 GET):

[Link](#)

FD7

Consumables update:

GET 158:06:15

RCS:

A: 51% B: 68% C: 51% D: 68% Total: 61%

H2: 45% O2: 51%

Fuel SPS: 33,3%

Oxid SPS: 33,3%

Unbal: 0%

Crew status report:

Sleep: 6,5h; Good

LOPC-2 Resids:

-00004 +00003 +00001

EMS -11,7

30,5% SPS Oxid

30,5% SPS Fuel

No unbal

171:34:25

A: 50% B: 65% C: 48% D: 65% Total: 57%

TEI Resids:

-00007 +00011 +00000

EMS -16,1

8,4% SPS Oxid

8,4% SPS Fuel

No unbal

Flight day 7 debriefing audio, before sleep (173:43:00 GET):

[Link](#)

FD8

Consumables update:

GET 184:20:00

RCS:

A: 49% B: 60% C: 47% D: 60% Total: 54%

H2: 36% O2: 44%

Fuel SPS: 8,4%

Oxid SPS: 8,4%

Unbal: 0%

Crew status report:

Sleep: 9,25h; Very Good (*"Sleep was very good, very very very good, and I feel very good."*)

Onboard readouts:

GET 197:33:20

H2%: 32

O2%: 39

A: 47% B: 60% C: 47% D: 60% Total: 53%

SPS Fuel, Oxid: 8,4% Unbal: 0

Flight day 8 debriefing audio, before sleep (197:33:20 GET):

[Link](#)

FD9

Consumables update:

GET 209:05:00

RCS:

A: 47% B: 59% C: 47% D: 59% Total: 53%

H2: 27% O2: 36%

Fuel SPS: 8,4%

Oxid SPS: 8,4%

Unbal: 0%

Crew status report:

Sleep: 8,25h; Normal (*"8 hours and 15 minutes of sleep and it was pretty normal. I woke up two or three times, but returned to sleep without difficulty. However, I woke up a little bit earlier than I wanted and couldn't get back into sleep like 20 minutes before the scheduled wake up"*)

GET 221:01:00 MCC-6 Scrubbed

224:22:30 System test:

5C = 3,9

5D = 3,2

6A = 3,2

6B = 3,8

6C = +5

6D = 4,6

Onboard readouts:

GET 224:36:00

H2%: 22

O2%: 32

RCS: A: 45% B: 59% C: 45% D: 59% Total: 52%

SPS Fuel, Oxid: 8,4% Unbal: 0

Flight day 9 debriefing audio, before sleep (224:36:00 GET):

[Link](#)

FD10

Consumables update:

GET 234:59:00

RCS:

A: 45% B: 59% C: 45% D: 59% Total: 52%

H2: 18% O2: 27%

Fuel SPS: 8,4%

Oxid SPS: 8,4%

Unbal: 0%

Crew status report:

Sleep: 7,5h; Normal-Medium (*"For some reason at the end of the sleep period I didn't feel completely rested, but well, I am okay"*)

238:23:20 System test:

5C = 4,2

5D = 3,7

6A = 3,8

6B = 4,2

6C = 5

6D = 4,7

240:12:00

RCS:

A: 45% B: 59% C: 45% D: 57% Total: 51%

H2: 16% O2: 27%

Fuel SPS: 8,4%

Oxid SPS: 8,4%

Unbal: 0%

FC1 A = 25; FC2 A = 35; FC3 A = 16

Entry ATT:

R 0 P 152 Y 0

Horizon check: P 268