Apollo 15: Lunar Rover

INST 154

Apollo at 50

Cancellations

- January 1970
 - Apollo 20 was cancelled to provide a Saturn V for Skylab
 - Apollo 18 and Apollo 19 were delayed until after Skylab to provide a backup
- April 1970
 - Apollo 14 was assigned to repeat the aborted Apollo 13 mission to Fra Mauro
- September 1970
 - Apollo 18 and 19 were cancelled for financial reasons
 - Apollo 15's planned H mission was converted to a J mission
 - Apollo 16 and Apollo 17 would also fly J missions, as originally planned





EVA-First Plan

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	POST- T.D.	EAT	EVA PREP	EVA-	1 (6 HOURS)		POST-EVA EAT DEBRIEF		REST	(8 HOURS)		EAT	EVA PREP	
ł						· · · ·								i -
ō		2	2. 4	6	8	. 10	12	14	16	18	20	2	2 2	4

		EVA-2	(7 HOURS)		POST-EV EAT DEBRIEF		RI	EST (8 HOURS)		EAT	EVA PREP	EVA-3 (7 HOURS)	}
2	([*]	26	1 28	30	32	34	36	38	40	42	44	46	7 48

ł	EVA-3 (7 HOURS)		POST-EVA EQUIP JETT EAT		REST (8	HOURS)		EAT L/O PREP	RNDZ	DECONTAM LM JETT PREP	PC PREP	P C - 2
48	50	52	54	56	58	60	62	64	66	68	70	72

Sleep-First Plan

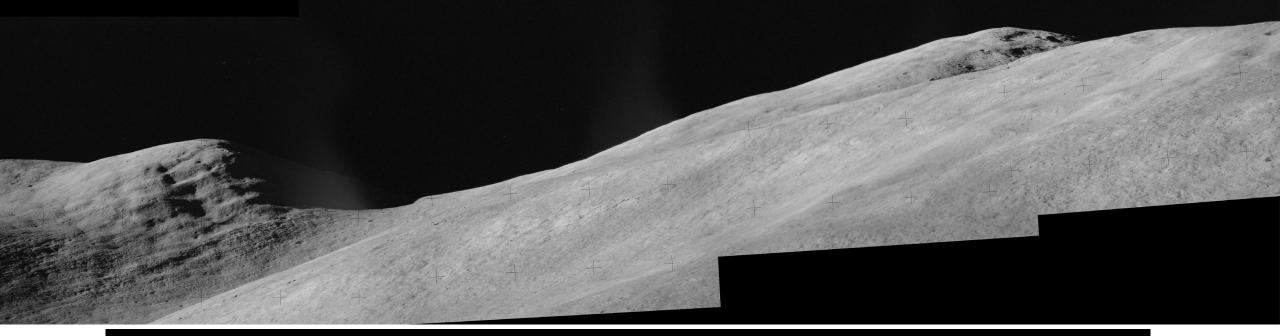
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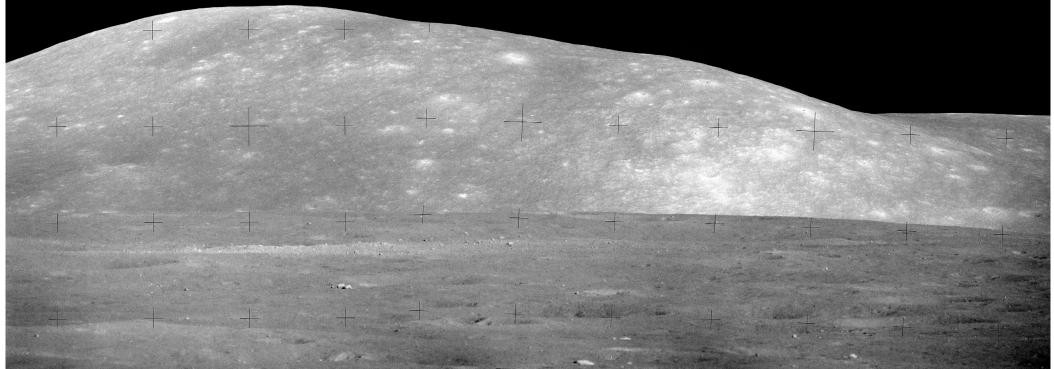
TOUCHDOWN

POST T.D.	2 - R E IVA I	ST- EAT	6	8 I REST (7 HOURS)	10 I	12 EAT	14 EVA PREP	1 <u>6</u> I EVA	18 1 -1 (6 HOURS)	20 1 PC	22 J ST-EVA EAT BRIEF	
	26	28	30	32	34	36	38	· 40	42	44	46	
	REST (7	I	-	EAT EVA PREP		.	7 HOURS)		POST-EVA EAT DEBRIEF	REST (8	HOURS)	









APOLLO 15 SUMMARY TIMELINE

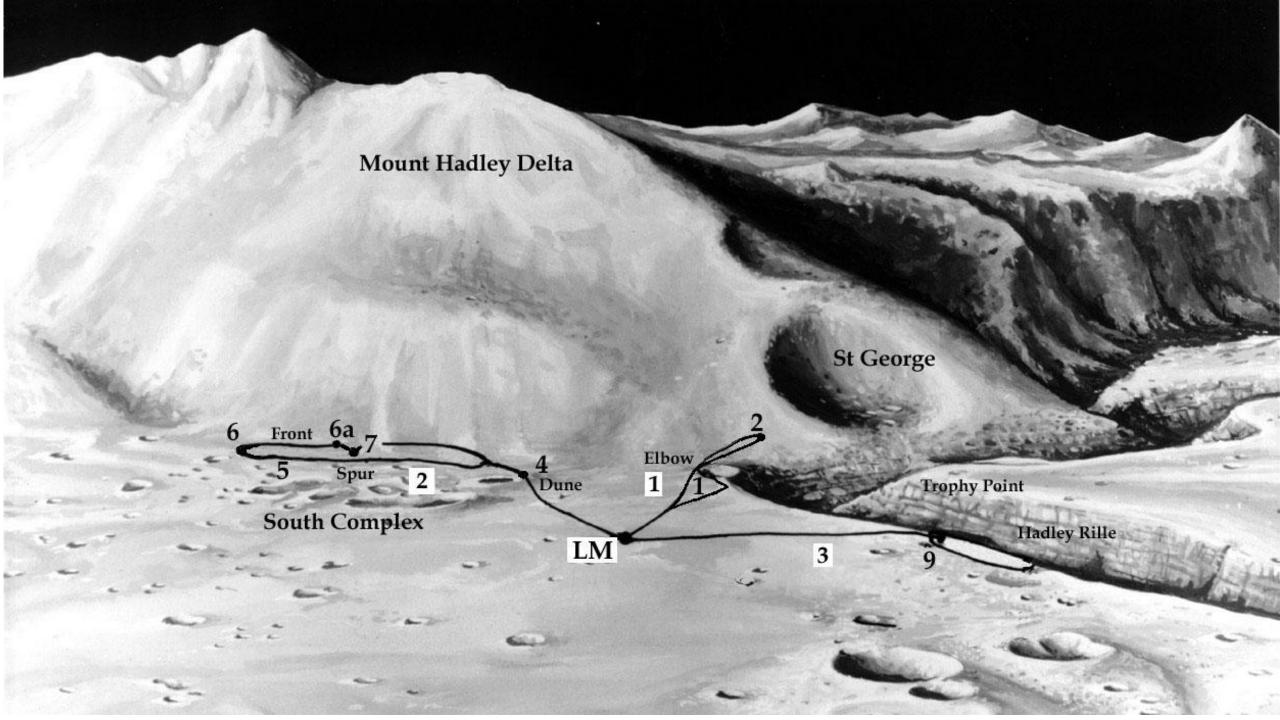
TIME SCALE	ò	1,0	20	30
TV COVERAGE				
SEQ. CAM. COVER.				<u> </u>
	●STAND ON ASCENT ENGINE COVER	DESCRIBE INITIAL IMPRESSIONS OF FRONT, RILLE, NORTH COMPLEX,	DESCRIBE SURFACE CONDITION IN IMMEDIATE VICINITY OF LM	
	COBSERVE AND DESCRIBE LM SITE	MARE SURFACE, BOULDER FIELDS	(CRATER DISTRIBUTION, BOULDER POPULATION, FRAGMENTATION AND ANY NOTICEABLE DPS EXHAUST	
COMMANDER ACTIVITY	●70 MM VERTICAL STEREO PAN	• 500 MM LENS CAMERA PHOTO OF FRONT, RILLE, NORTH COMPLEX,	EFFECTS ON SURFACE	
	● GENERAL SURFACE DESCRIPTION	BOULDER FIELDS AND OTHER FEATURES	• TERMINATE SEVA	
	●ASSIST CDR WITH CAMERA	ASSIST CDR WITH 500 MM LENS CAMERA	CASSIST CDR AS REQUIRED	
LM	●DESCRIBE SURFACE FEATURES THROUGH LM WINDOW		• TERMINATE SEVA	
PILOT				
ACTIVITY				
TIME SCALE 0	l 0	10	20	30
· · · · ·	<u> </u>	<u> </u>	<u> </u>	<u> </u>

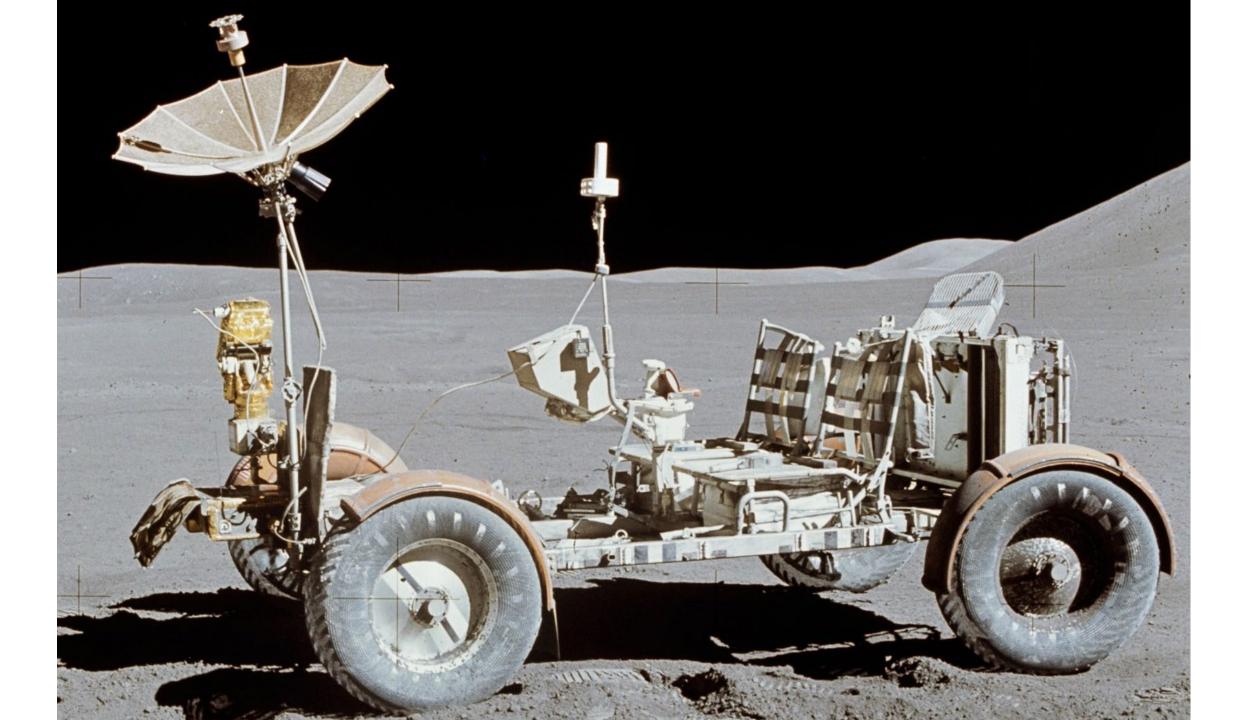
Sleep-First Plan

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TOUCHDOWN

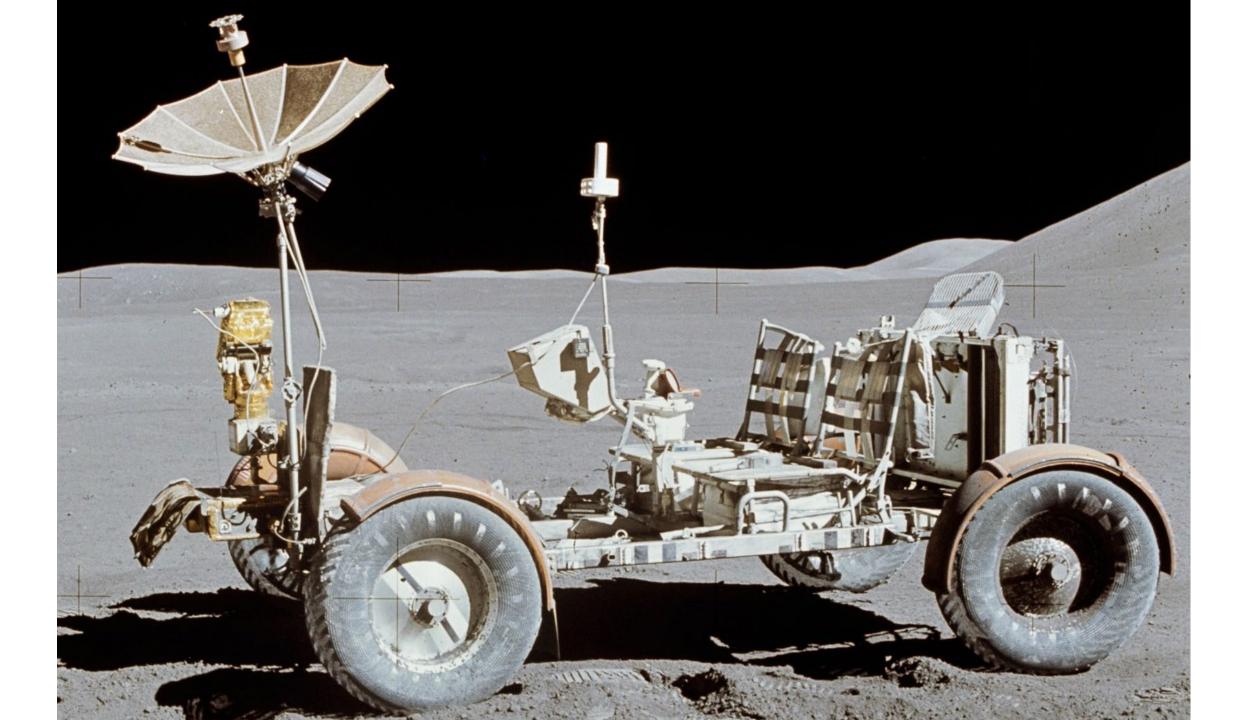
POST T.D.	2 - R E IVA I	ST- EAT	6	8 I REST (7 HOURS)	10 I	12 EAT	14 EVA PREP	1 <u>6</u> I EVA	18 1 -1 (6 HOURS)	20 1 PC	22 J ST-EVA EAT BRIEF	
	26	28	30	32	34	36	38	· 40	42	44	46	
	REST (7	I	-	EAT EVA PREP		.	7 HOURS)		POST-EVA EAT DEBRIEF	REST (8	HOURS)	

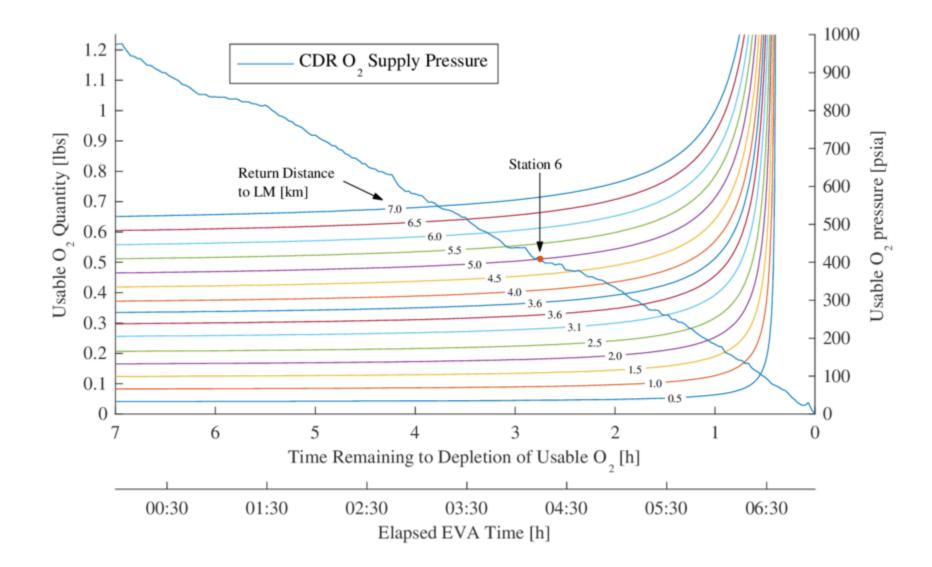




Animation



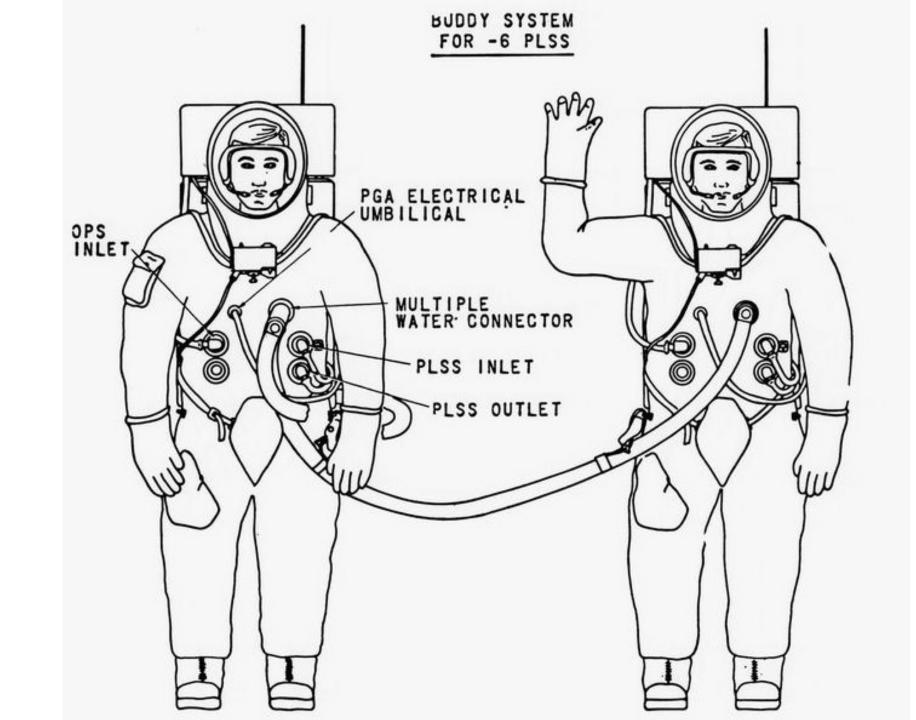




8 X \diamond ∇ Station 2 7 × $\nabla \diamond$ 6 Distance from LM [km] \bigtriangledown ╳ Station 3 5 X O V 4 Station 4 3 XØ ∇ 2 **X** T Station 5 0 1:00 2:00 3:00 6:00 7:00 0:00 4:00 5:00

× Oxygen Margin ♦ Battery Charge Margin ▼ Feedwater Margin

Elapsed EVA Time [h]

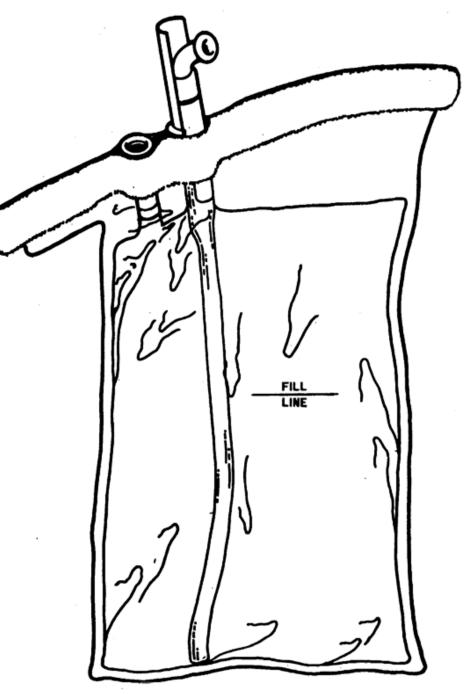


8 X \diamond ∇ Station 2 7 × $\nabla \diamond$ 6 Distance from LM [km] \bigtriangledown ╳ Station 3 5 X O V 4 Station 4 3 XØ ∇ 2 **X** T Station 5 0 1:00 2:00 3:00 6:00 7:00 0:00 4:00 5:00

× Oxygen Margin ♦ Battery Charge Margin ▼ Feedwater Margin

Elapsed EVA Time [h]





HEGULAS

drink

valve

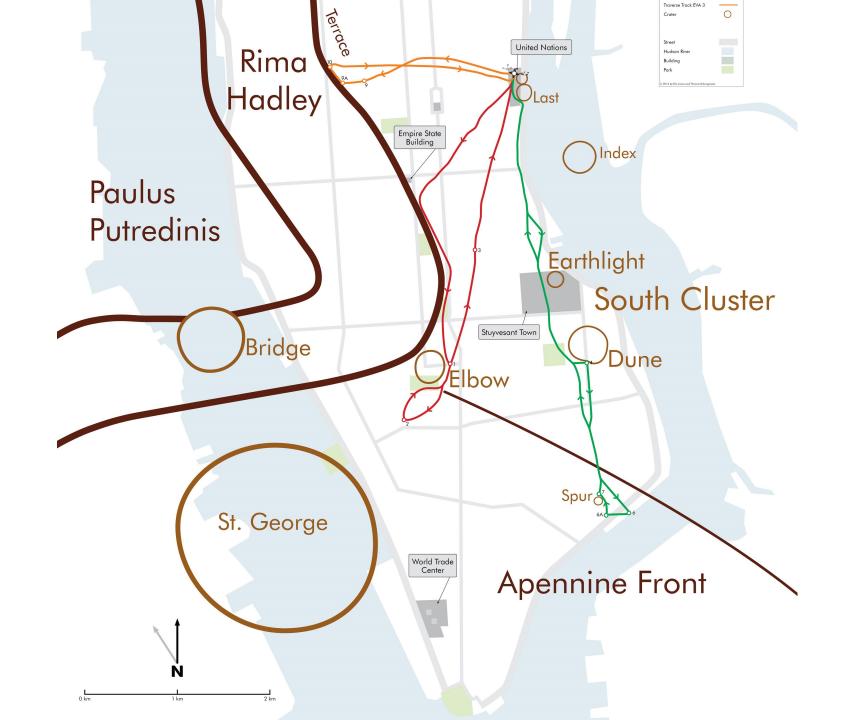
Figure 2-26.- Insuit drinking device.

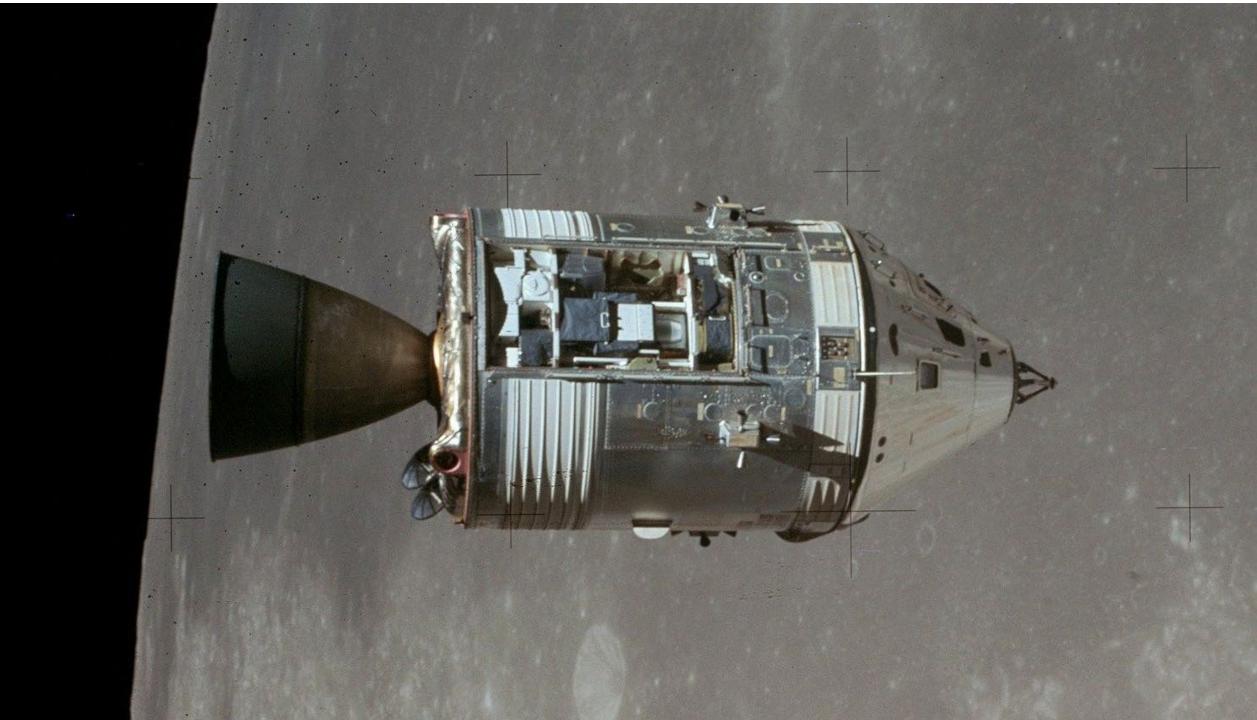


Descent Stage

LRV











Discussion Groups

- Worden and El Baz video
 - A discussion of the science performed in Lunar Orbit
- Chaikin Chapter 11 ("To the Mountains of the Moon")
 - The astronaut's view of Apollo 15
- Harland Chapter 5 ("The Wonder of the Unknown at Hadley-Apennine")
 - A detailed look at the Apollo 15 moonwalks
- Apollo Lunar Surface Journal
 - Annotated transcripts from the lunar portion of the mission

Tweeting Apollo 12: Sleep Periods (so far)

- Nov 14: wake 6:05 AM (launch 11:22 AM)
- Nov 15: sleep 4:47 AM, wake 3:15 PM
- Nov 16: sleep 6:28 AM, wake 4:18 PM
- Nov 17: sleep 8:39 AM, wake 5:20 PM (LOI 10:47 PM)
- Nov 18: sleep 7:48 AM, wake 4:16 PM
- Nov 19: (land 1:55 AM), (moonwalk), sleep 1:59 PM
- Nov 20:
- Nov 21:
- Nov 22:
- Nov 23:
- Nov 24:

Apollo 17 Readings

- Chaikin Chapter 13 ("The Last Men on the Moon")
 - The astronaut's view of Apollo 17
- Heikin Chapter 8("Boulder Rolling the Last Apollo EVA")
 - A book made form annotated transcripts from the lunar surface period
- The Last Mission to the Moon website
 - A multimedia reconstruction of the Apollo 17 mission
- A Voyage to the Moon and its Major Discoveries video
 - A seminar for a scientific audience at the Lunar and Planetary Institute