

# Apollo 13: Abort

INST 154

Apollo at 50

[Apollo 13 Flight Director Audio](#)

# Early Apollo Crew Planning

## Apollo 7 (C)

CDR: Schirra

CMP: Eisele

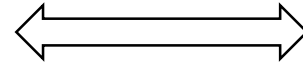
LMP: Cunningham

## Apollo 8 (D)

CDR: McDivitt

CMP: Scott

LMP: Schweickart



## Apollo 9 (E)

CDR: Borman

CMP: Collins

LMP: Anders

## Apollo 10 (F)

CDR: Stafford

CMP: Young

LMP: Cernan

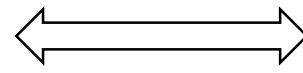
## Apollo 11 (G)

CDR: Conrad

CMP: Gordon

LMP: Williams

↑  
Bean



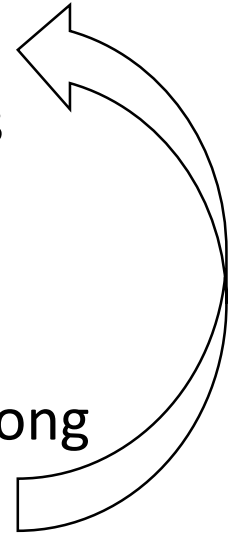
## Apollo 12 (H)

CDR: Armstrong

↪ CMP: Lovell

↪ LMP: Aldrin

↑  
Haise



# The Apollo 13 and 14 Crews

## Apollo 7

CDR: Schirra  
CMP: Eisele  
LMP: Cunningham

## Apollo 10 Backup

CDR: **Cooper**  
CMP: Eisele  
LMP: **Mitchell**  
(Schirra says no)

## Apollo 13

CDR: **Shepard**  
CMP: **Roosa**  
LMP: Mitchell  
(McDivitt says no)

## **Apollo 14**

CDR: Shepard  
CMP: Roosa  
LMP: Mitchell

## Apollo 9

CDR: Borman  
CMP: Collins  
LMP: Anders

## **Apollo 8**

CDR: Borman  
CMP: **Lovell**  
LMP: Anders

## Apollo 11 Backup

CDR: Lovell  
CMP: Anders  
LMP: **Haise**  
(Borman says no)

## Apollo 14

CDR: Lovell  
CMP: **Mattingly**  
LMP: Haise

## **Apollo 13**

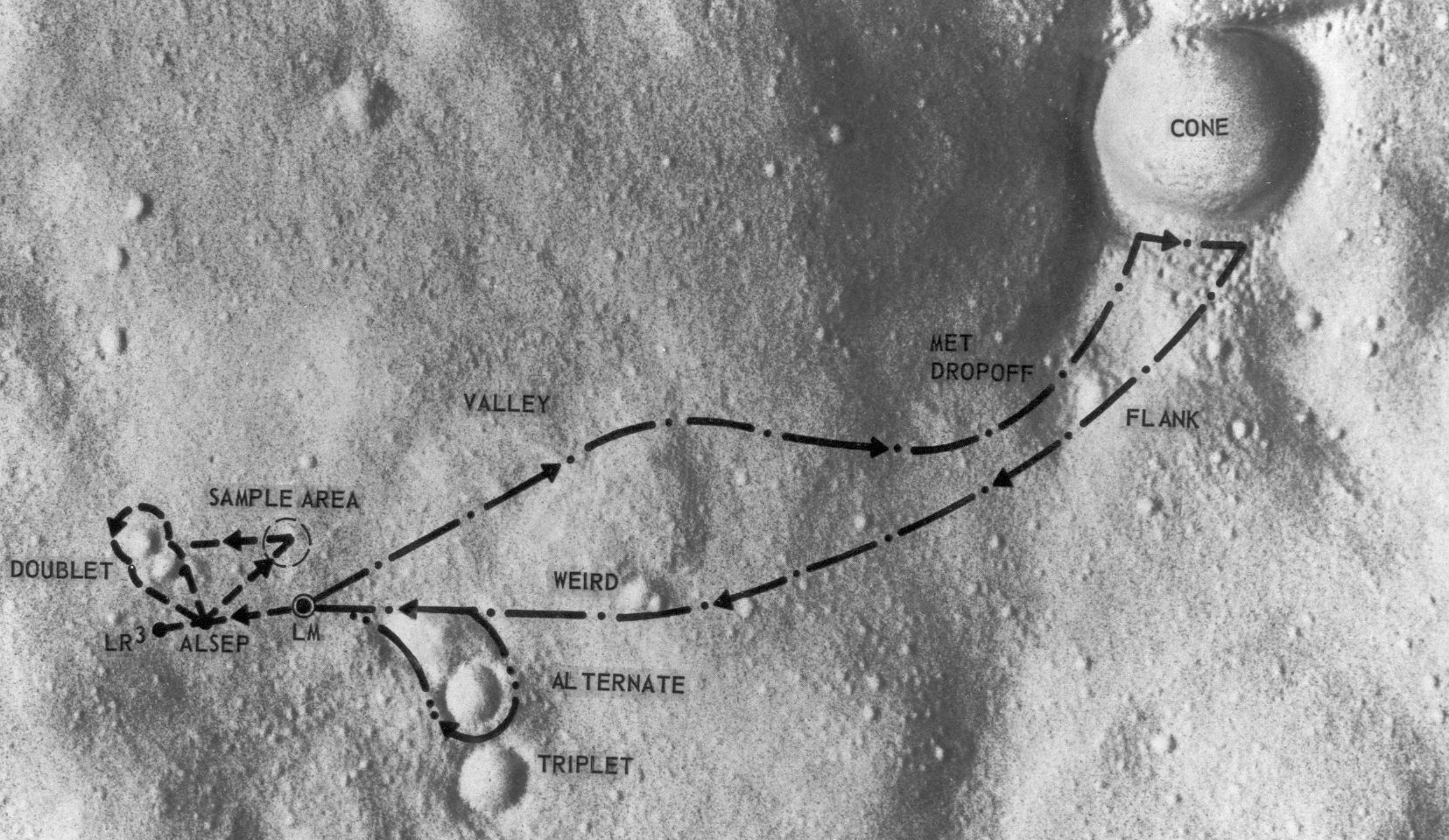
CDR: Lovell  
CMP: Mattingly  
LMP: Haise

## Apollo 13

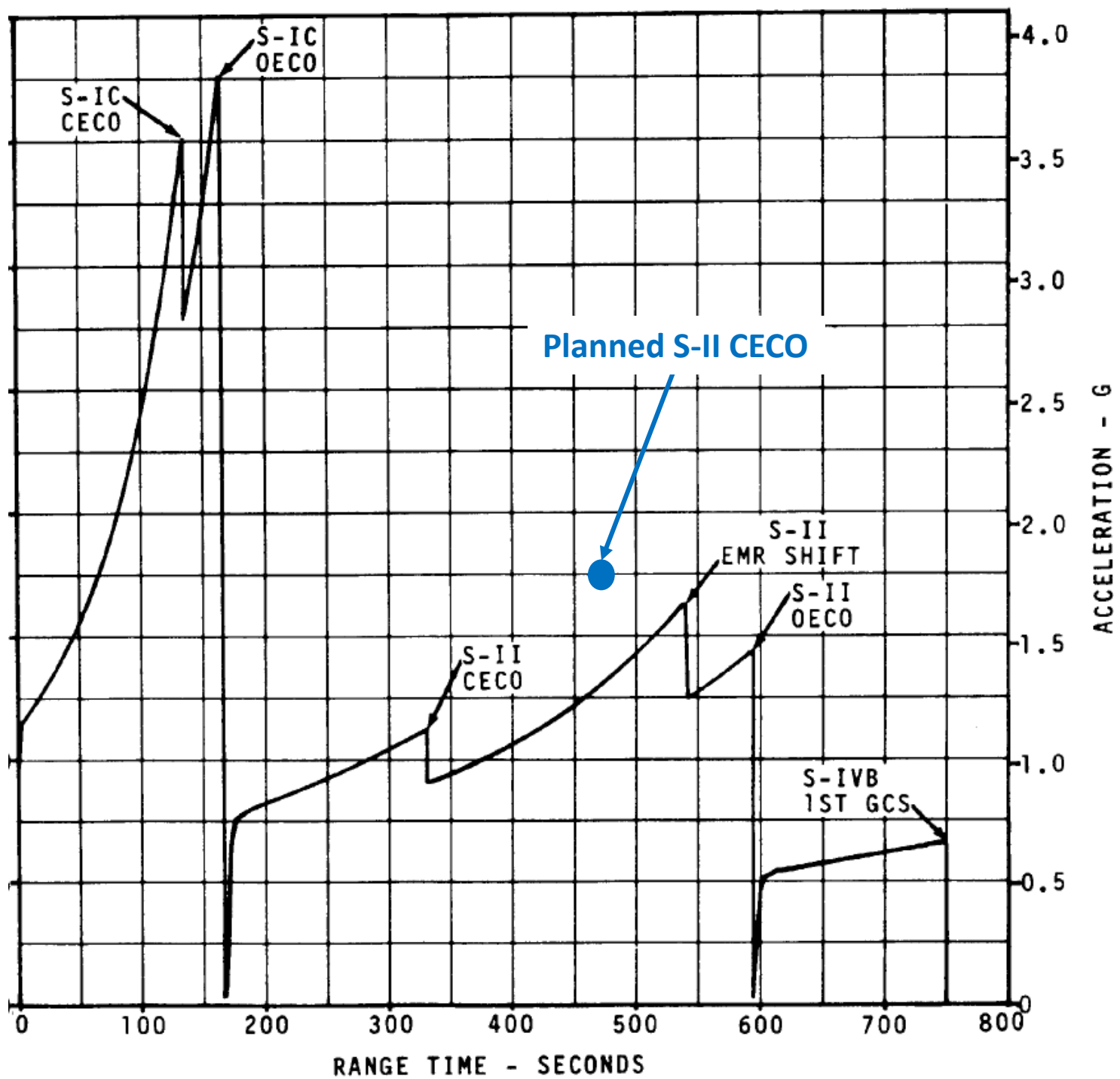
CDR: Lovell  
CMP: **Swigert**  
LMP: Haise





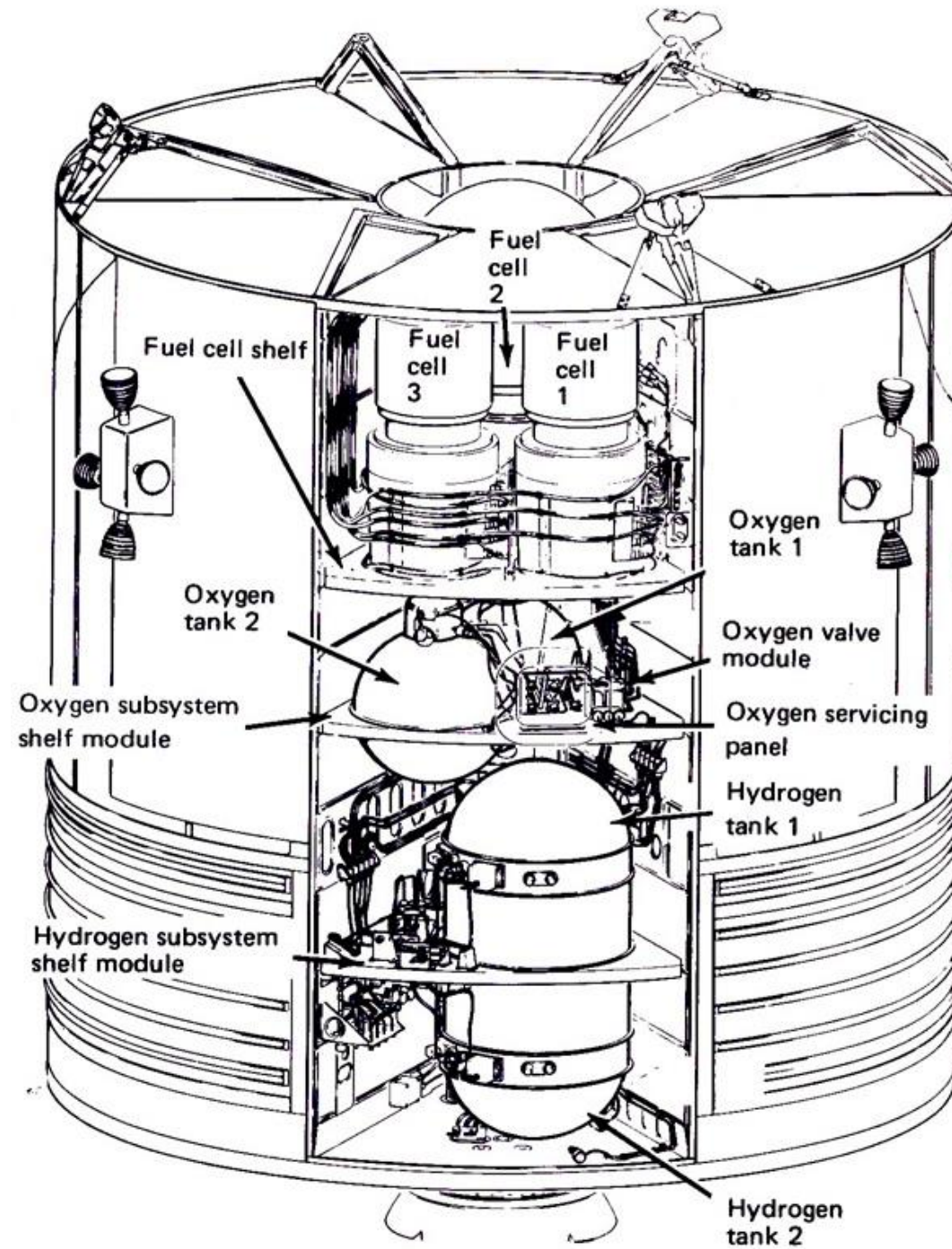


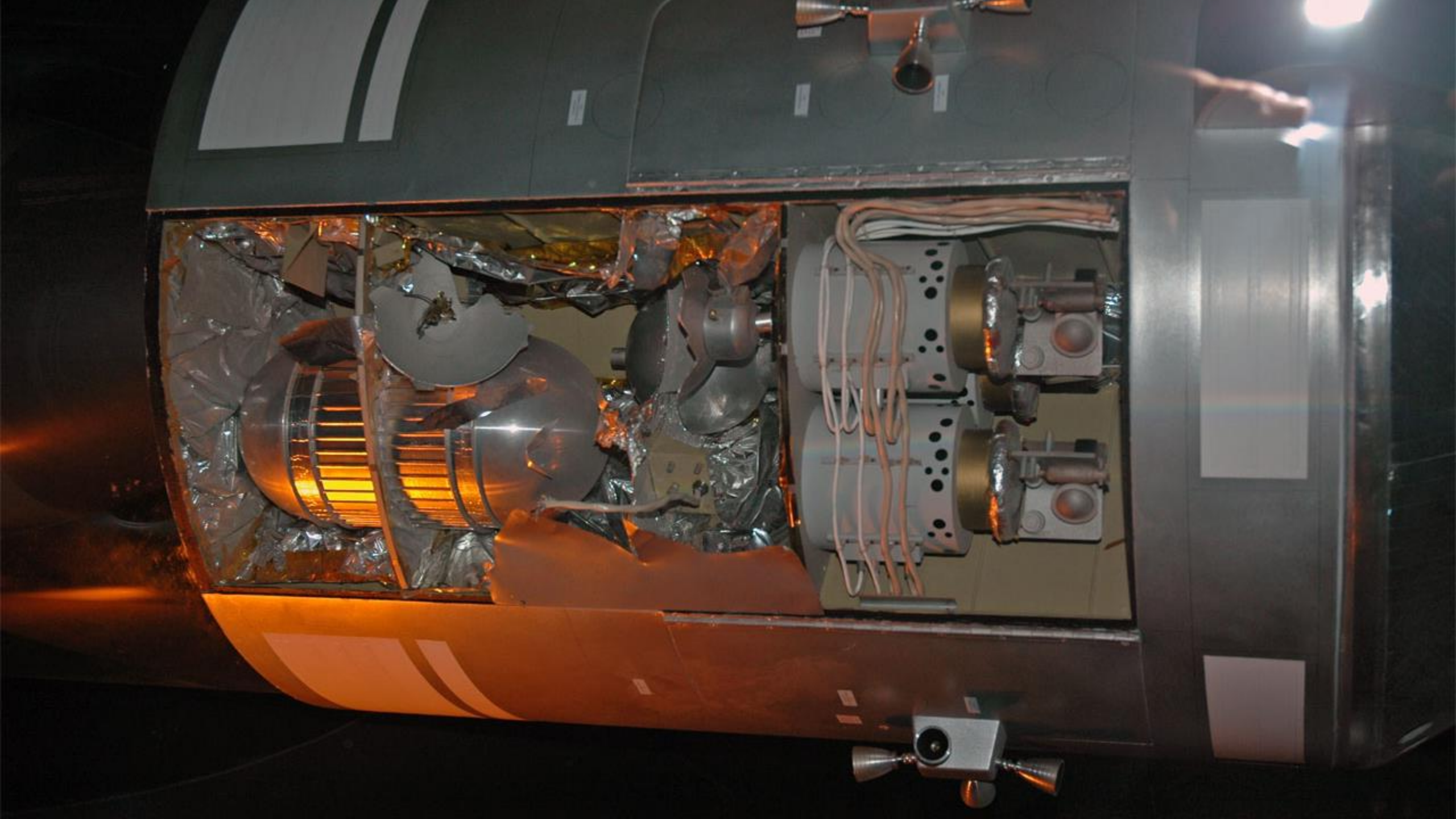


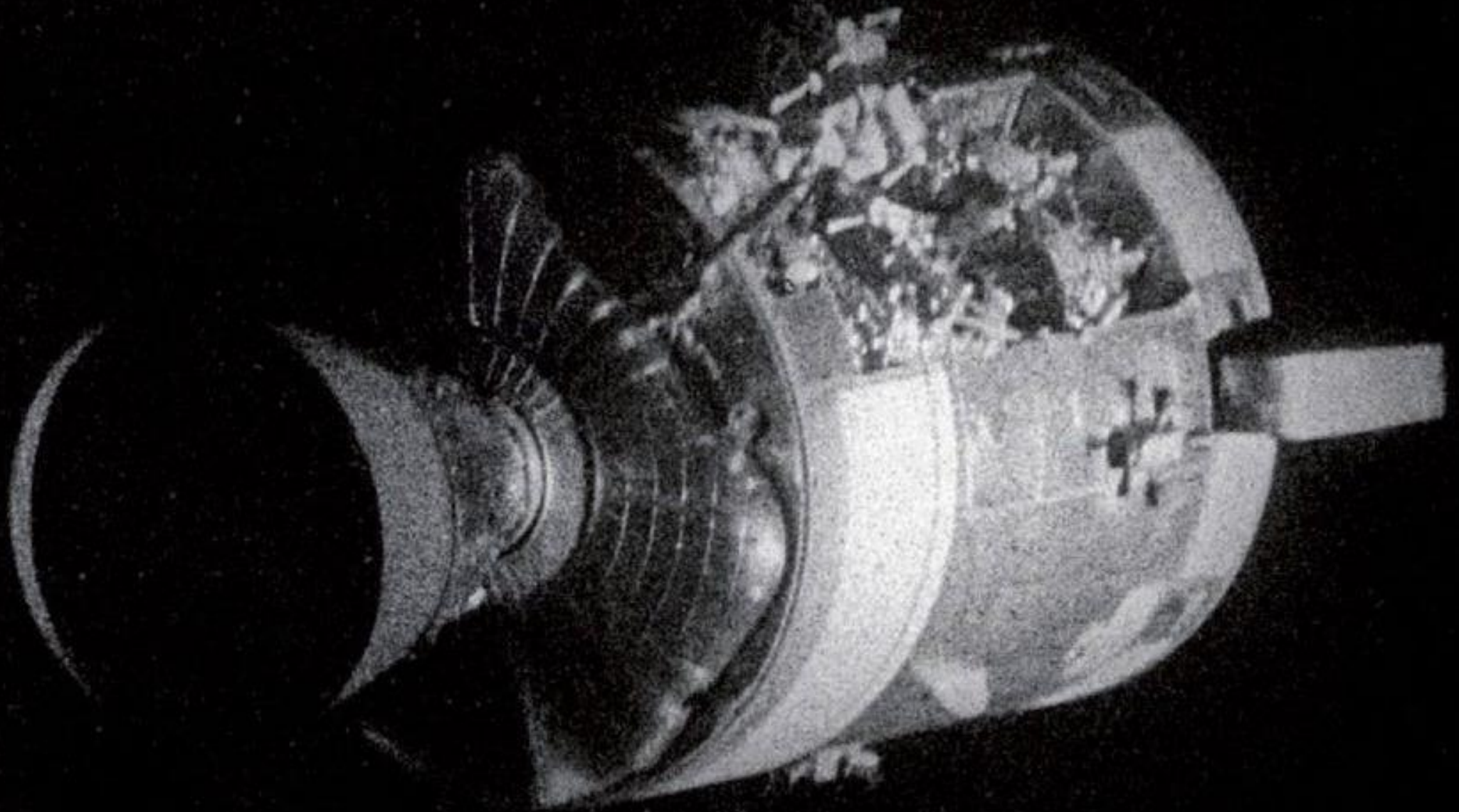




EECOM Audio







10 11:43 A.M. APRIL 17  
CREW TRANSFER TO CM  
JETTISON OF LM  
LIFEBOAT

8 11:31 P.M. APRIL 15  
MID-COURSE CORRECTION

SERVICE MODULE  
COMMAND MODULE  
LUNAR MODULE

DESCENT  
ENGINE

6 3:43 A.M. APRIL 14  
APOLLO CHANGES BACK  
TO FREE-RETURN TRAJECTORY

FREE RETURN  
164 MI. HIGH

S-IVB IMPACTED  
ON MOON

5 EXPLOSION  
10:08 P.M. APRIL 13  
205,000 MI. FROM EARTH

7 9:41 P.M. APRIL 14  
4 1/2 MINUTE BURN BY  
LM DPS

4 8:54 P.M. APRIL 12  
APOLLO CHANGES TO  
NON FREE-RETURN  
TRAJECTORY TO  
PREPARE FOR MOON  
LANDING

3 TRANSPOSITION  
AND DOCKING

1 LIFTOFF,  
2:13 P.M.  
APRIL 11

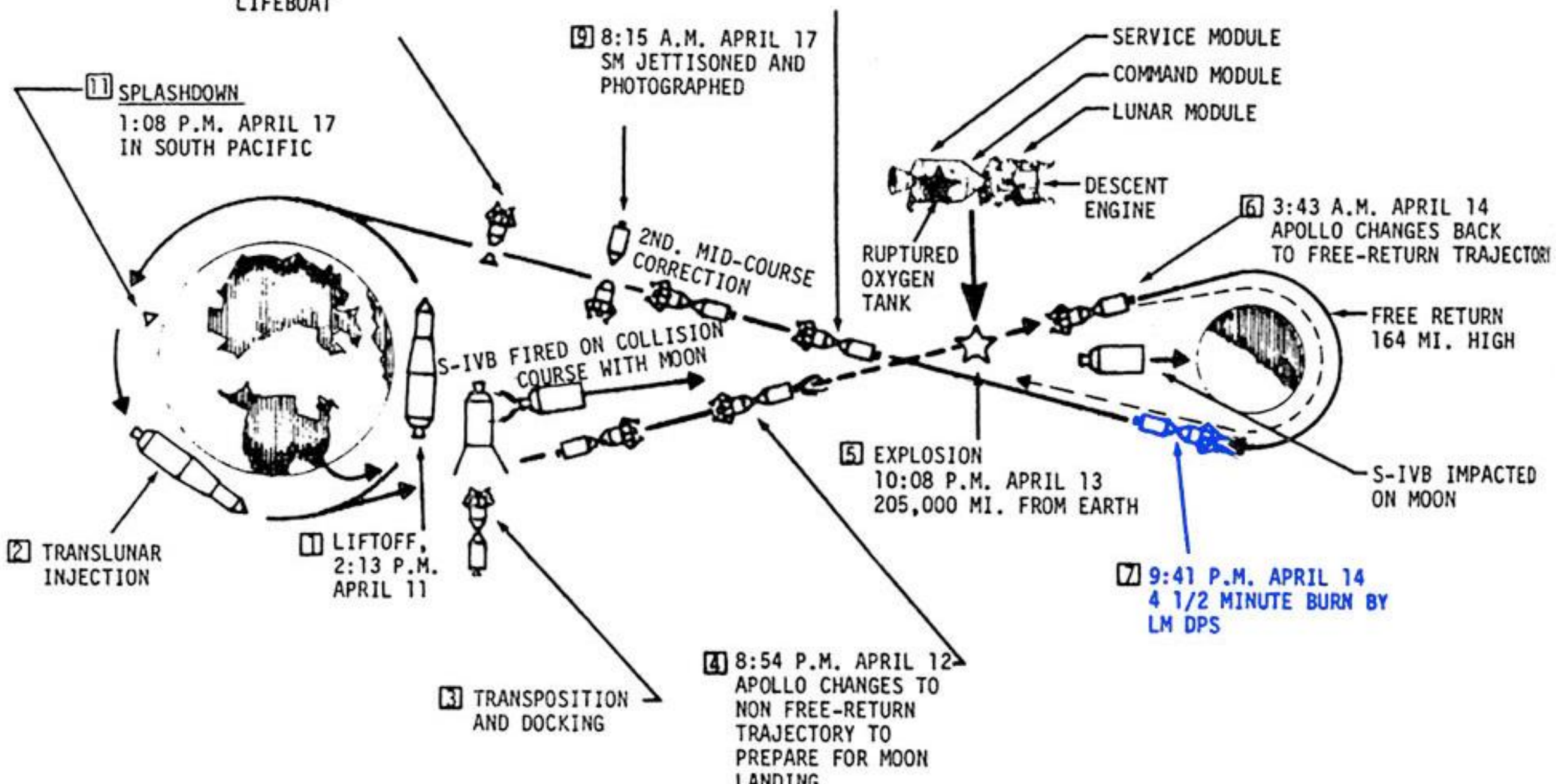
2 TRANSLUNAR  
INJECTION

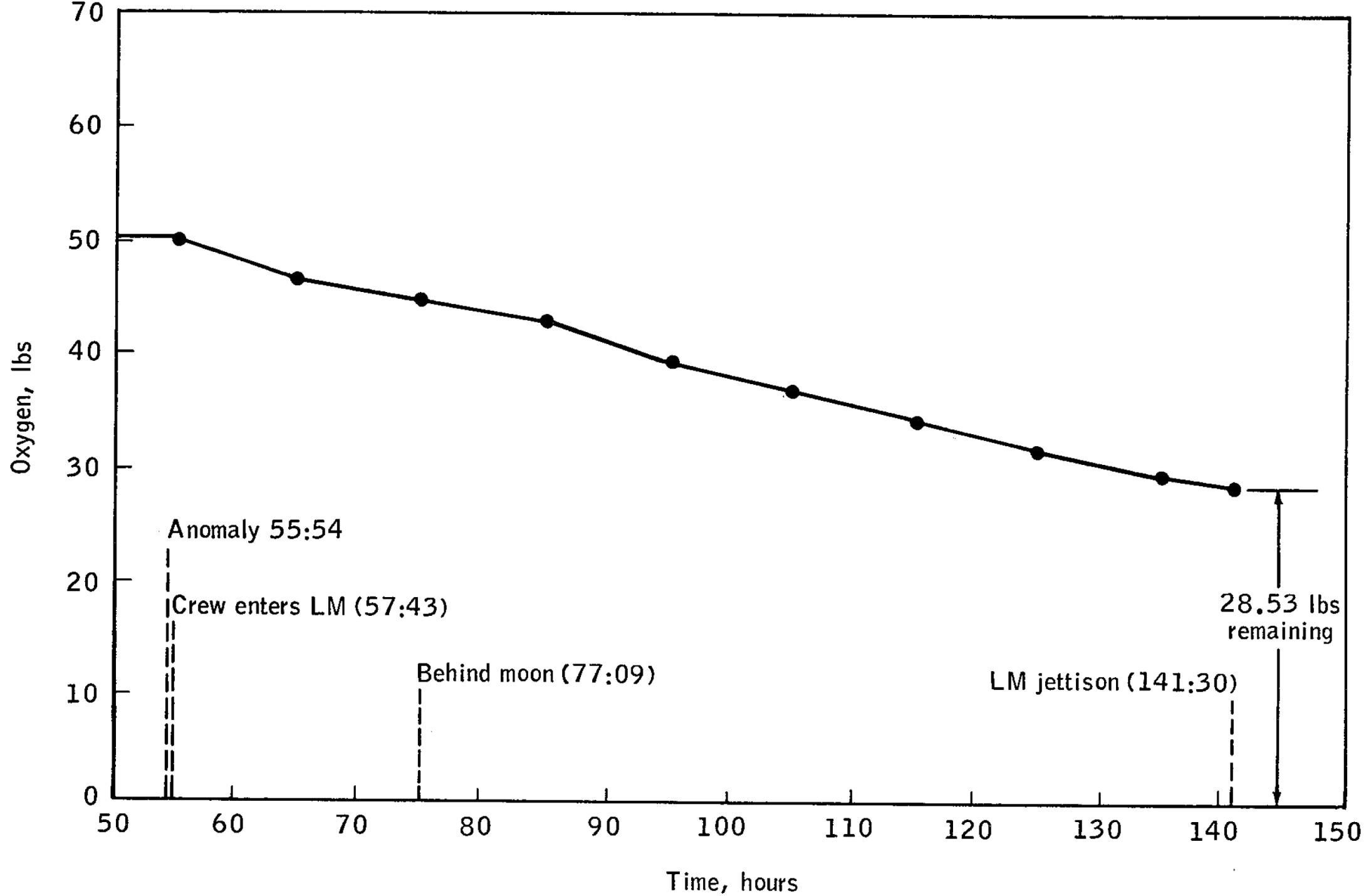
11 SPLASHDOWN  
1:08 P.M. APRIL 17  
IN SOUTH PACIFIC

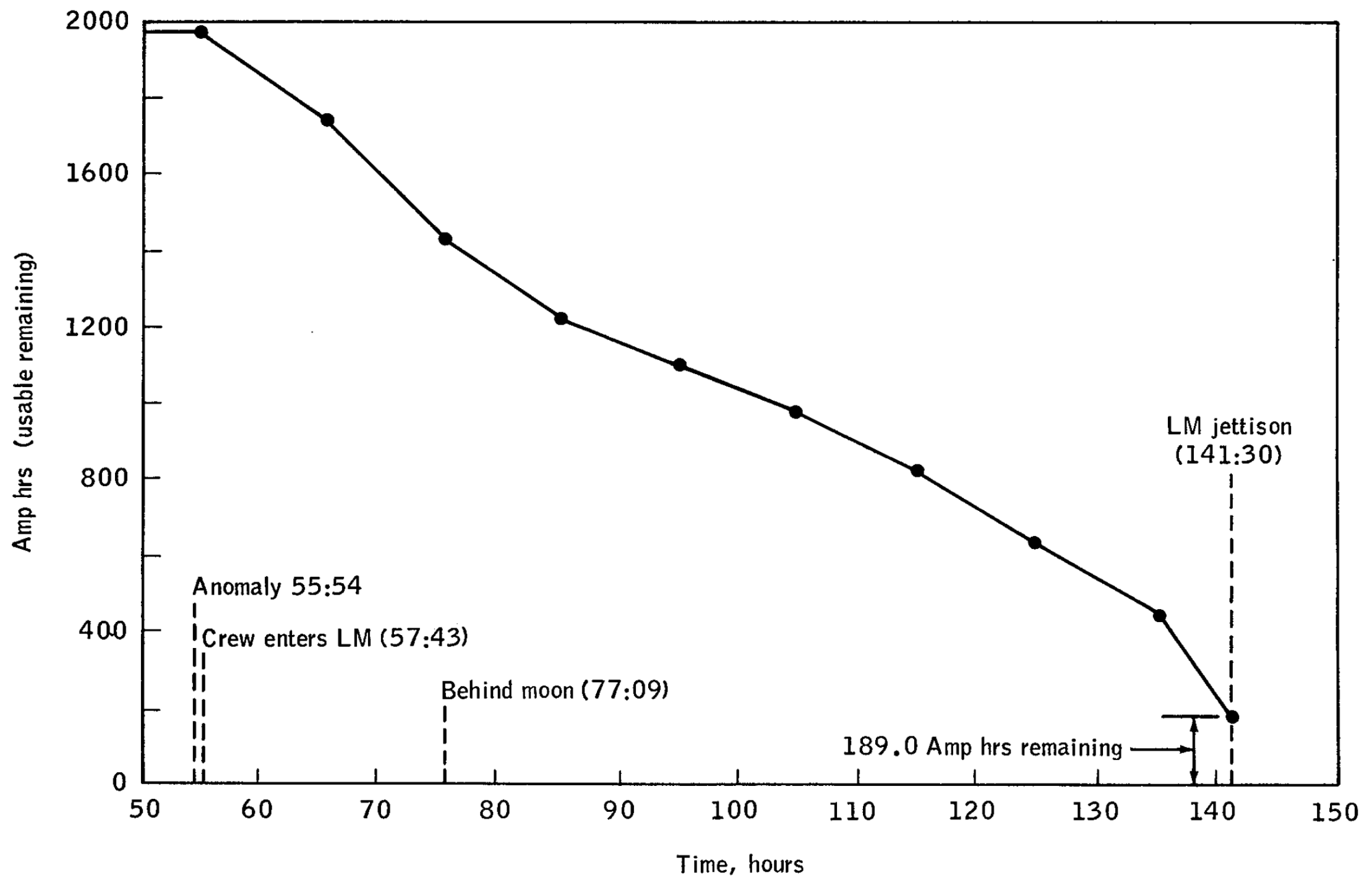
9 8:15 A.M. APRIL 17  
SM JETTISONED AND  
PHOTOGRAPHED

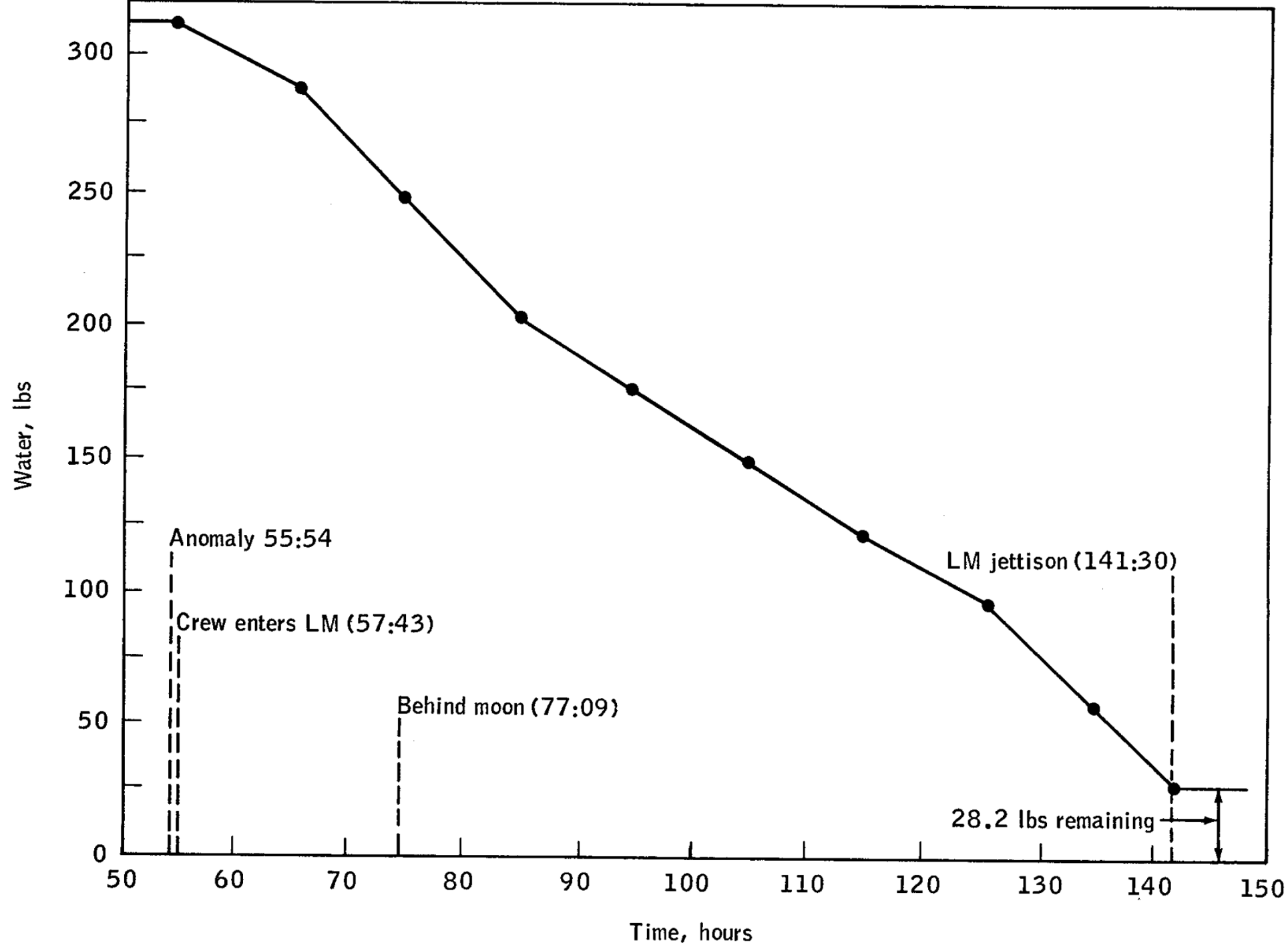
2ND. MID-COURSE  
CORRECTION

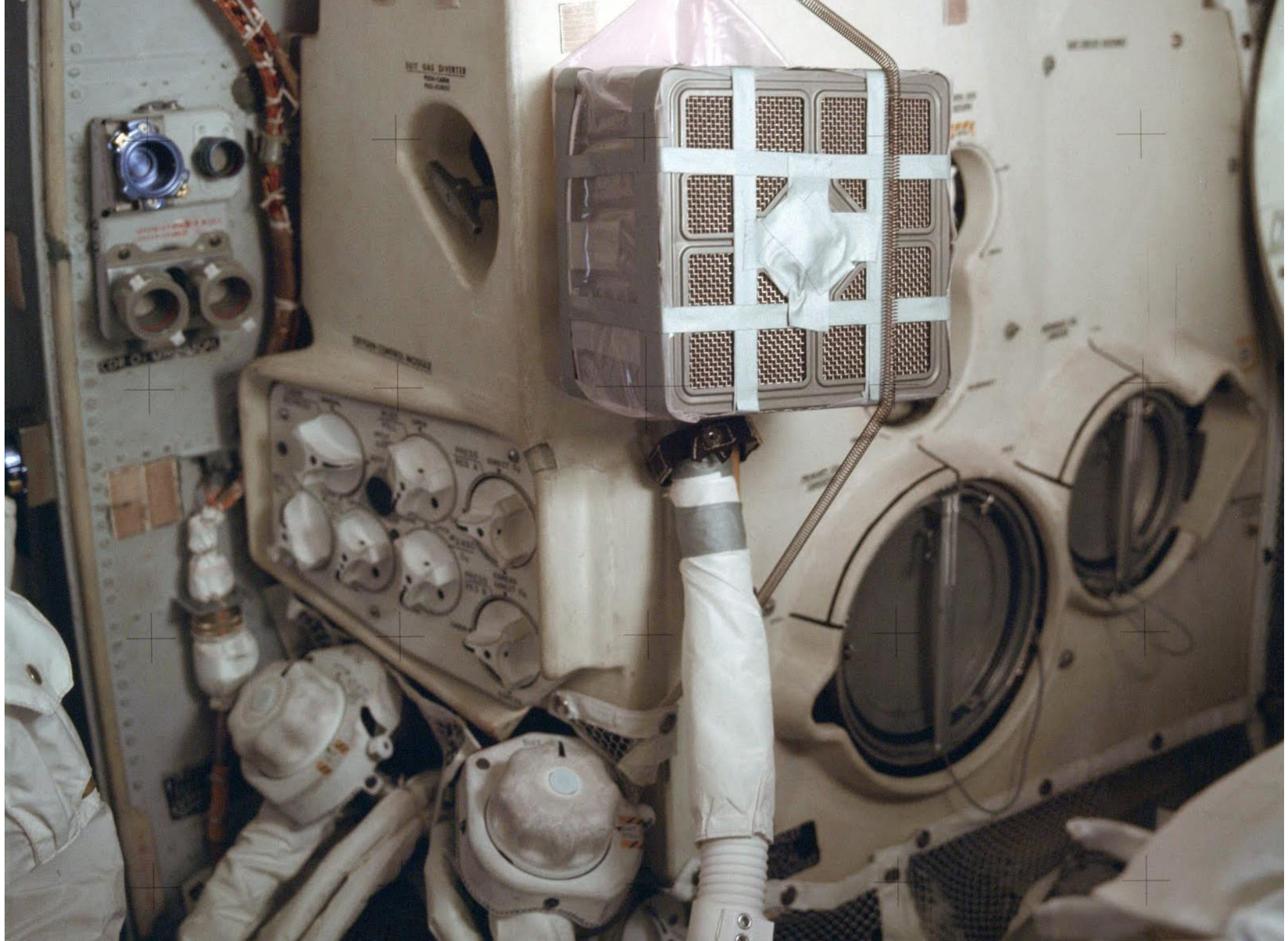
S-IVB FIRED ON COLLISION  
COURSE WITH MOON











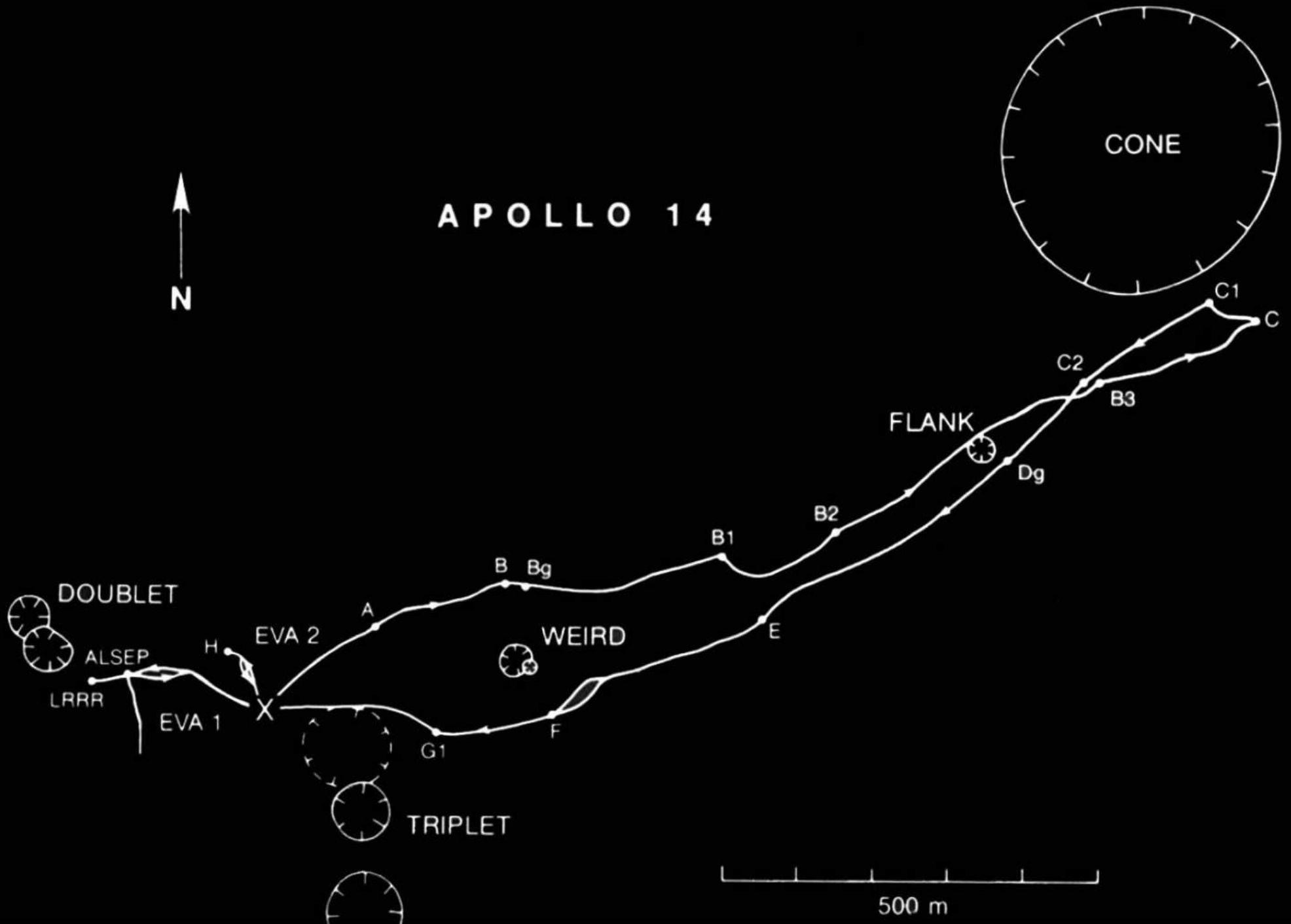


- #1) Place the LCG bag over the top of the square lithium-hydroxide canister. The bag must be pulled down to just over the triangular ventilator slots on the side. **NOTE: Be careful not to rip the bag because there are only three bags onboard.**
- #2) Tear the duct tape down the middle lengthwise to double the linear length.
- #3) Seal the bag to the square canister by wrapping the duct tape around the canister where the bag opening is. **NOTE: The tape must seal the opening to prevent leakage of air flow.**
- #4) Poke or cut a hole in the middle of the top of the covering bag approximately the diameter of the hose from the red suit.
- #5) Insert the hose into the hole. Secure the hose connection into the LCG bag with duct tape. **NOTE: The tape must seal the opening to prevent leakage of air flow.**
- #6) Cover the top of the LCG bag and hose attachment with the flight plan cover in an arch. The hose will stick out of one side of the arch.
- #7) Attach the two sides of the cardboard flight plan cover that make contact with the square filter using a six inch long piece of duct tape over the top. **This will prevent crushing the hose and air entry on the final mounting in step #19.**
- #8) Wrap the entire top sides of the filter cube with a three foot (about an arms length) piece of duct tape. Repeat wrapping on the bottom of the sides of the cube. **NOTE: The tape must seal the opening to prevent leakage of air flow.**
- #9) Secure the bag with strips of duct tape two per side running from one side, under the bottom and back up the other side. Repeat on the other side. **The bottom of the cube will resemble a tic tac toe board when this step is completed.**
- #10) Stuff the sock into the ventration hole in the center of the square scrubber. **This will prevent the air from bypassing the filter. Cover the hole with a couple of pieces of tape to keep it from falling out.**
- #11) Repeat steps #3 through #10 for the second canister. **This will be the replacement when the first filter becomes saturated.**
- #12) Open the sensor relief valve. **This will normalize the pressure and allow you to attach the hose to the intake valve.**
- #13) Attach the free end of the hose to the scrubber intake.
- #14) Attach the end of the bungee cord to the hook above the lithium canister mounting location on the bulkhead.
- #15) Secure the canister to the bulkhead by hooking the other end of the bungee cord below the mounting location.
- #16) Attach the crossover hose to the secondary air cleaner.
- #17) Close the sensor relief valve opened in step 12.
- #18) Set the CO2 select to secondary using the LM air cleaner selection switch on panel eleven.
- #19) Engage the air cleaning scrubber fan by flipping the ACSF switch located on panel eleven.

INVOICE DATE	PACKING SHEET NO.	DATE SHIPPED	PROJECT NO.	TERMS NET FOR BETHPAGE, N.Y.
CUSTOMER ORDER OR CONTRACT NO.	OUR ORDER NO.	BILL OF LADING NO.	SHIPPED VIA	
ITEM NO.	QUANTITY	UNIT	DESCRIPTION	AMOUNT
1	400,001 Miles		Towing, \$4.00 first mile, \$1.00 each additional mile Touble call, fast service Battery charge (road call + \$.05 KWH)	\$400,004.00
2	1 KWH		Customer's jump cables	4.05
3	50 Lbs.		Oxygen at \$10.00/lb.	500.00
4	1		Sleeping accomodations for 2, no TV, air-conditioned, with radio, modified american plan, with view	Prepaid
5			Additional guest in room at \$8.00/night (1) Check out no later than noon Fri. 4/17/70, accomodations not guaranteed beyond that time	32.00
6			Water	N/C
7			Personilized "trip-tik", including all transfers, baggage handling and gratuities	N/C
				<u>\$400,540.05</u>
			20% commercial discount + 2% cash discount (net 30 days)	83,118.81
			Charges for keeping this invoice confidential	<u>100,000.00</u>
				<u>\$417,421.24</u>



# APOLLO 14



# Discussion Groups

- Apollo 13 Review Board Report
  - The reconstruction of what happened
- Chaikin Chapter 7
  - The astronaut's view of Apollo 13
- Cox Chapter 27
  - The initial response from Mission Control
- Apollo 13 movie
  - A unified dramatization of the events