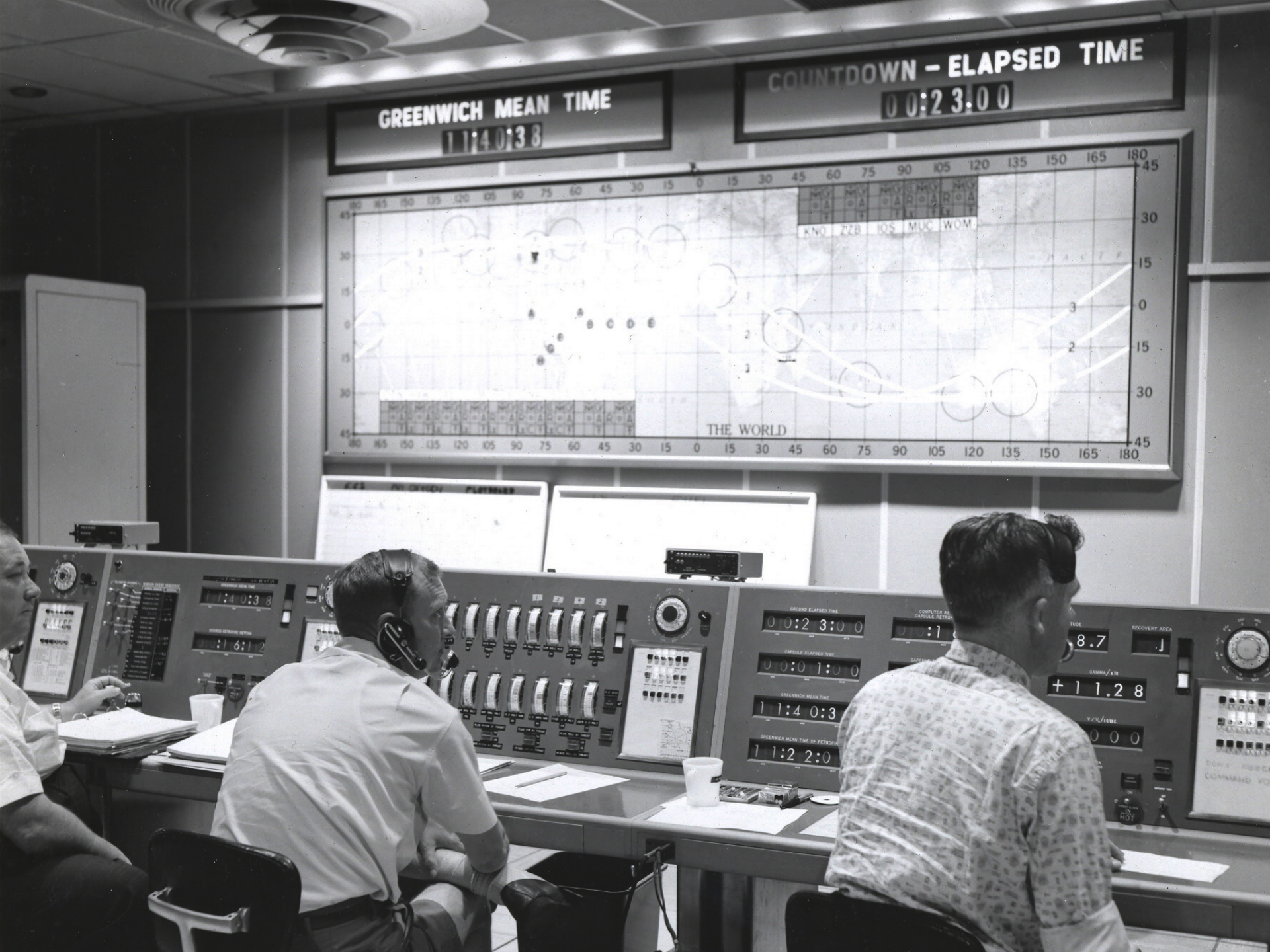
Failure Is Not An Option !

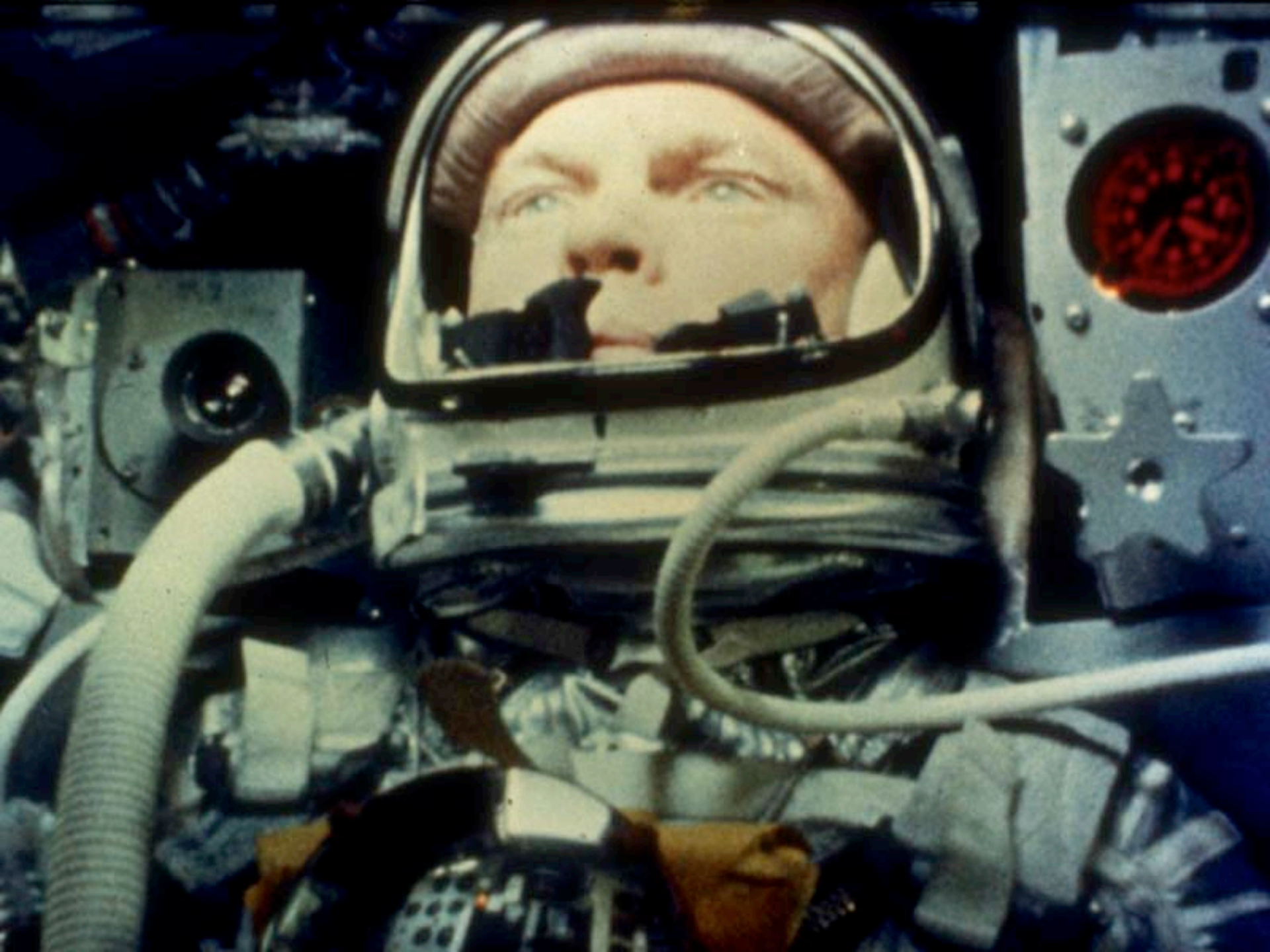
"My Darling"
Marta

U.S. AIR FORCE

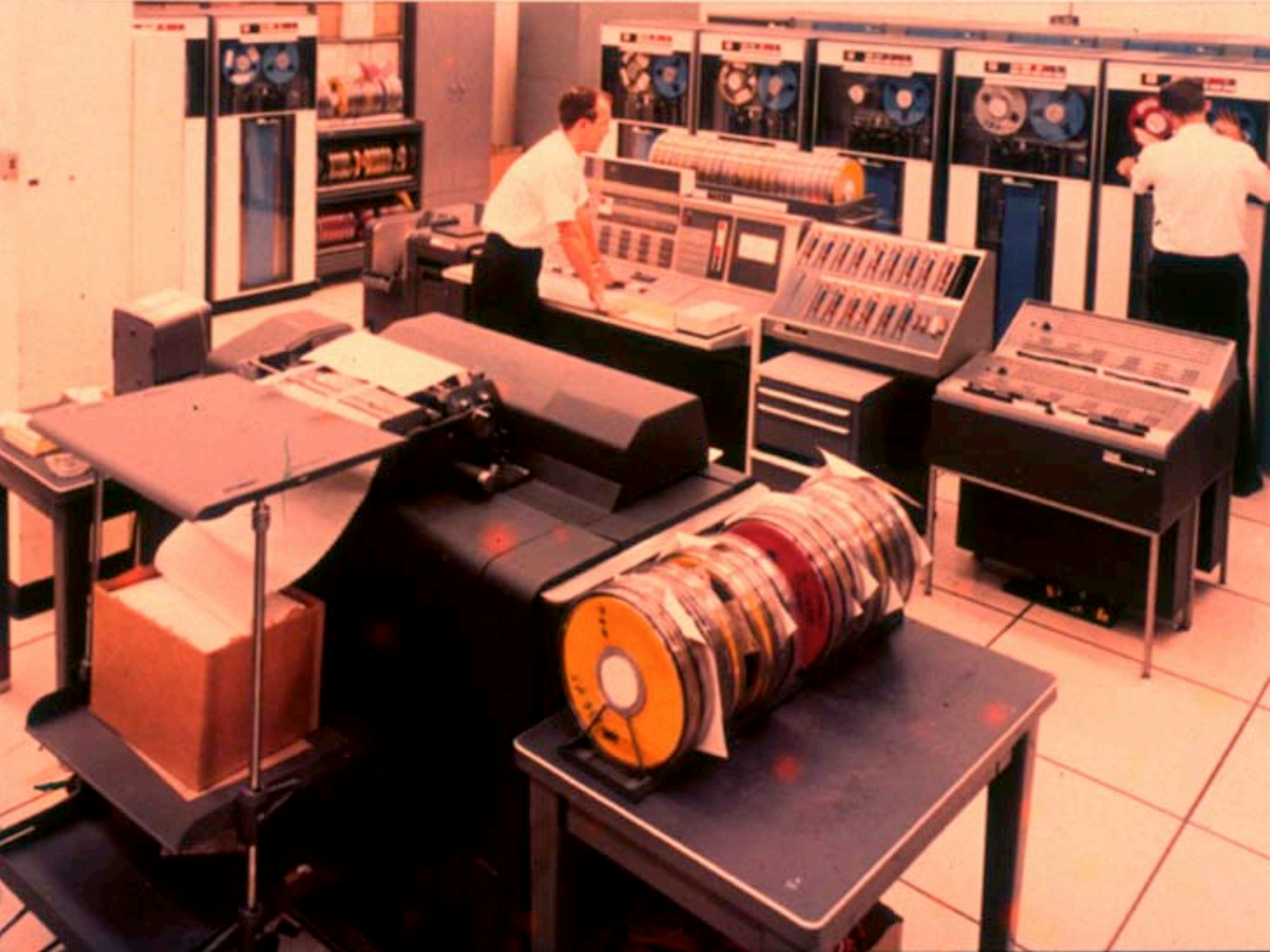
SEAL OF THE PRESIDENT OF THE UNITED STATES

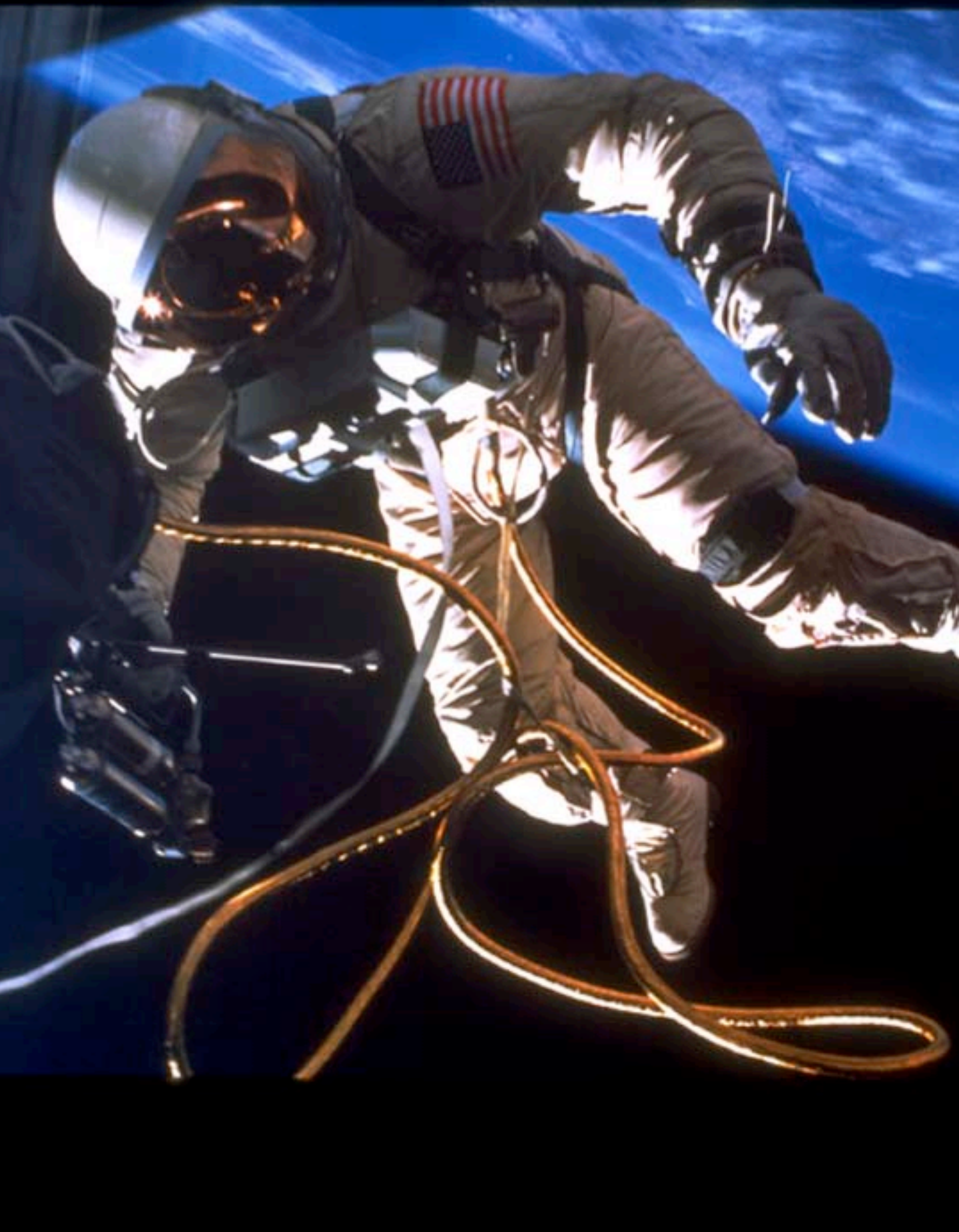
90158


GREENWICH MEAN TIME
COUNTDOWN – ELAPSED TIME
THE WORLD



LEADERSHIP

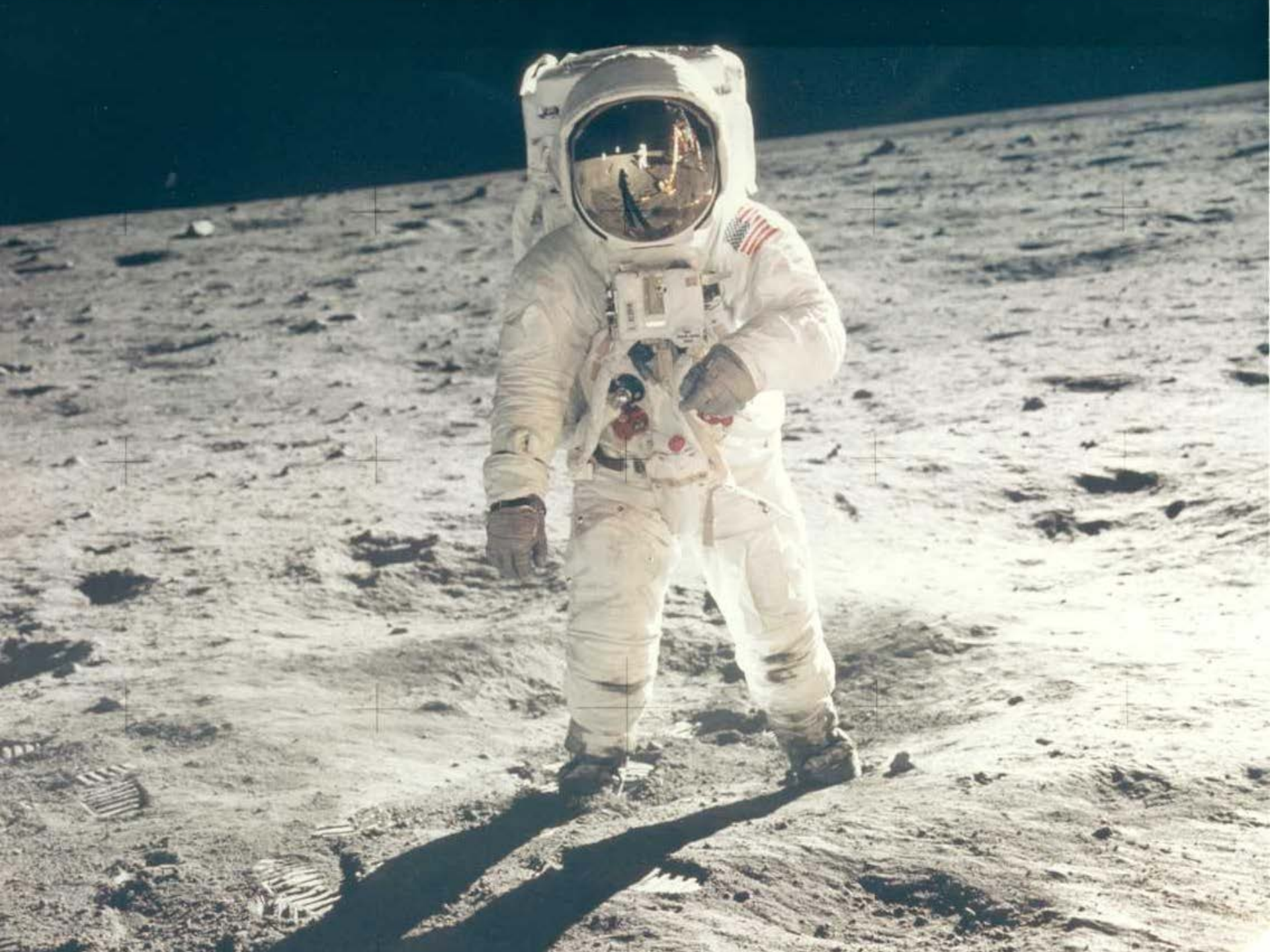


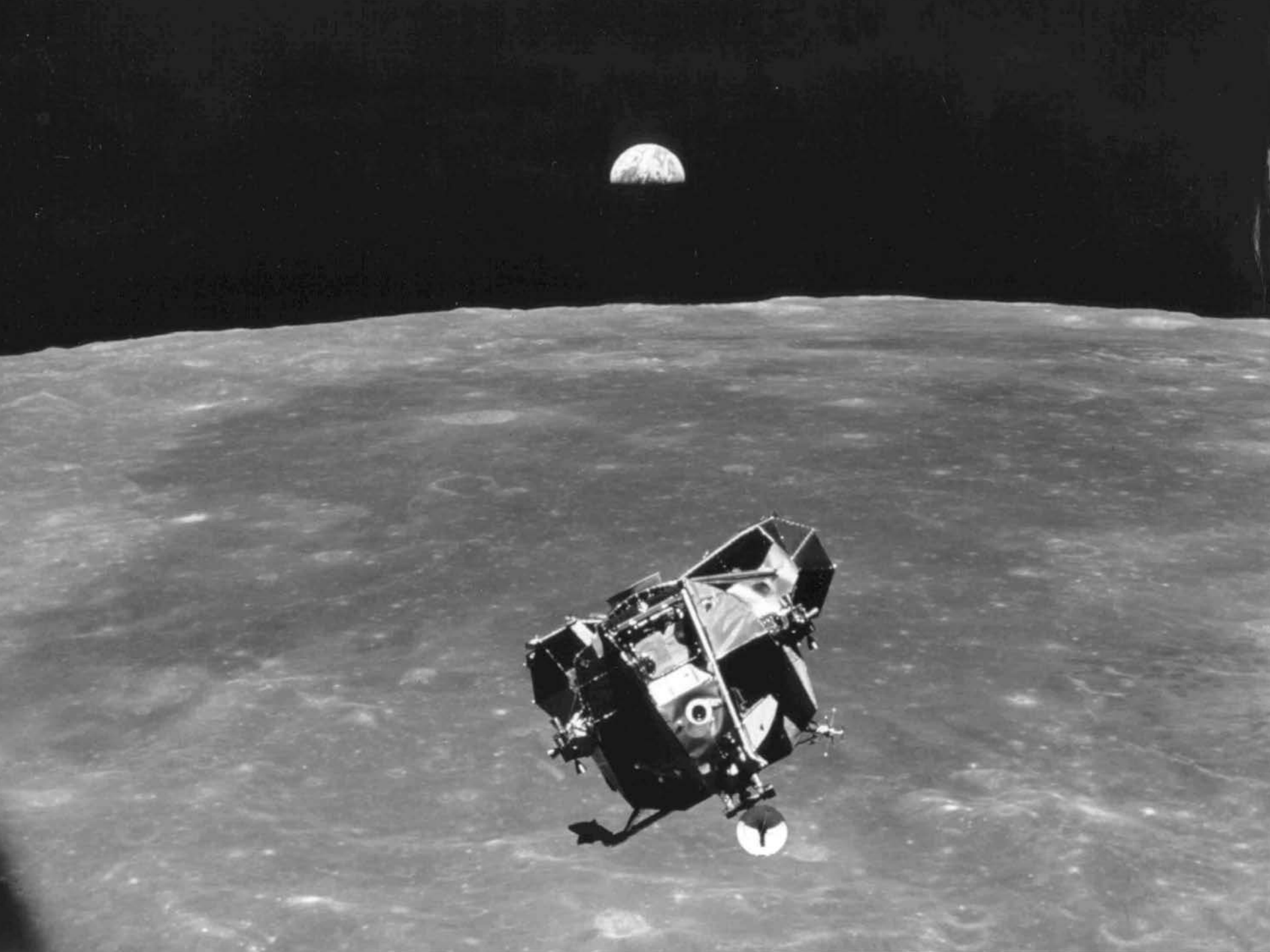


UNITED STATES

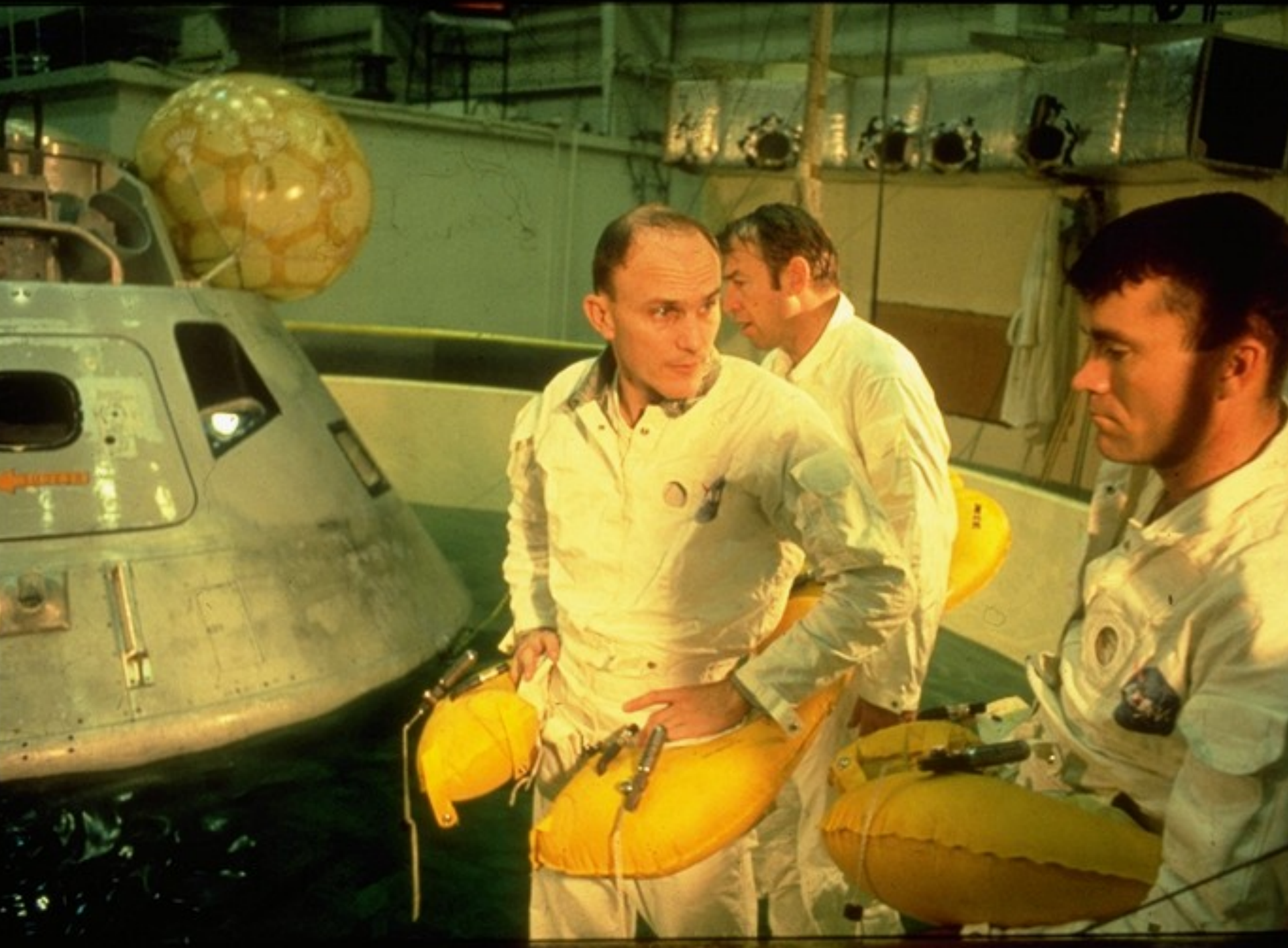
VALUES

believe that this nation
itself is achieving its
this decade is out of
on the moon and returning
to earth".
John F Kennedy
to Congress
May 1961
Task Accomplished.....
July 1969
APOLLO 11

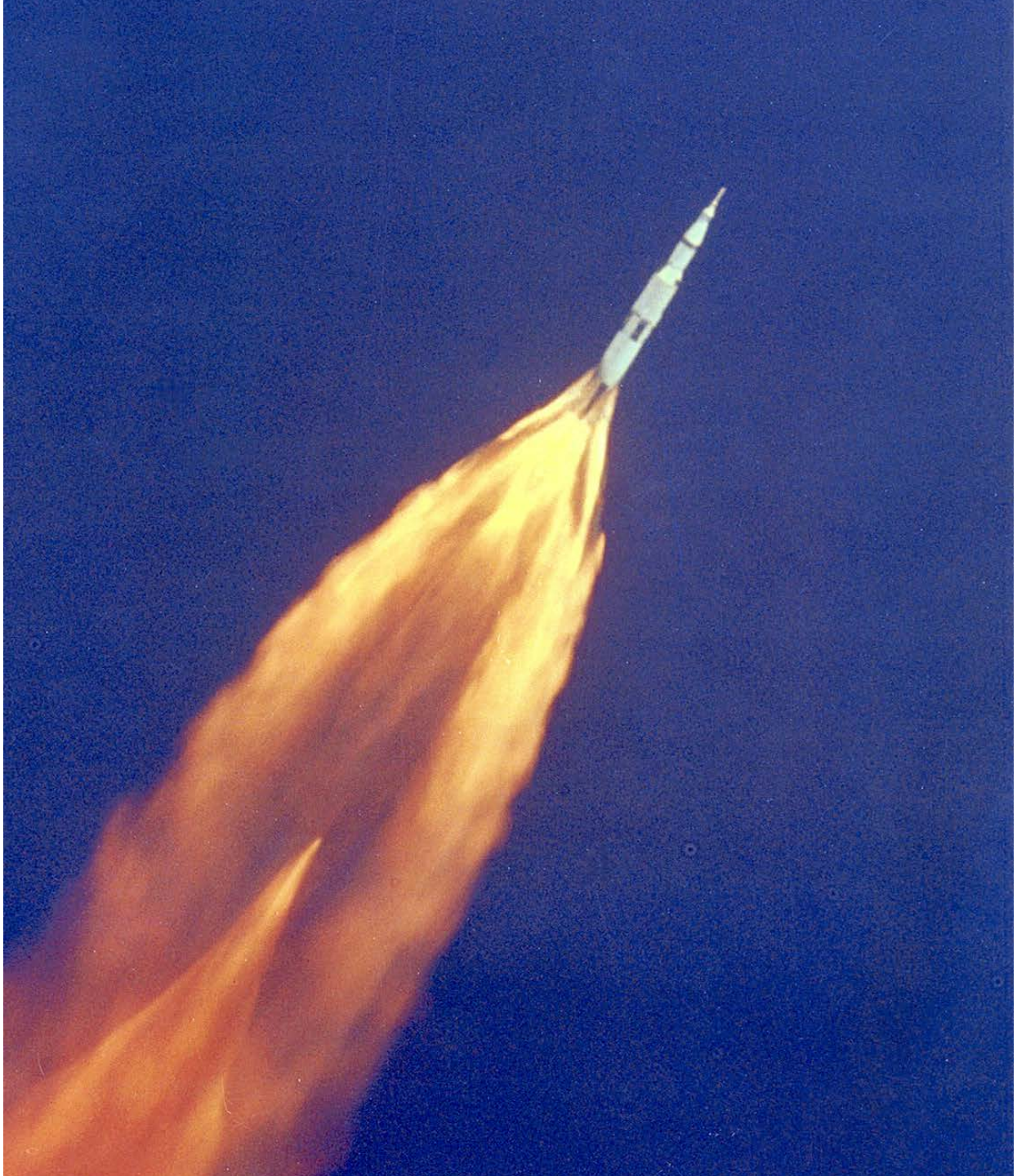




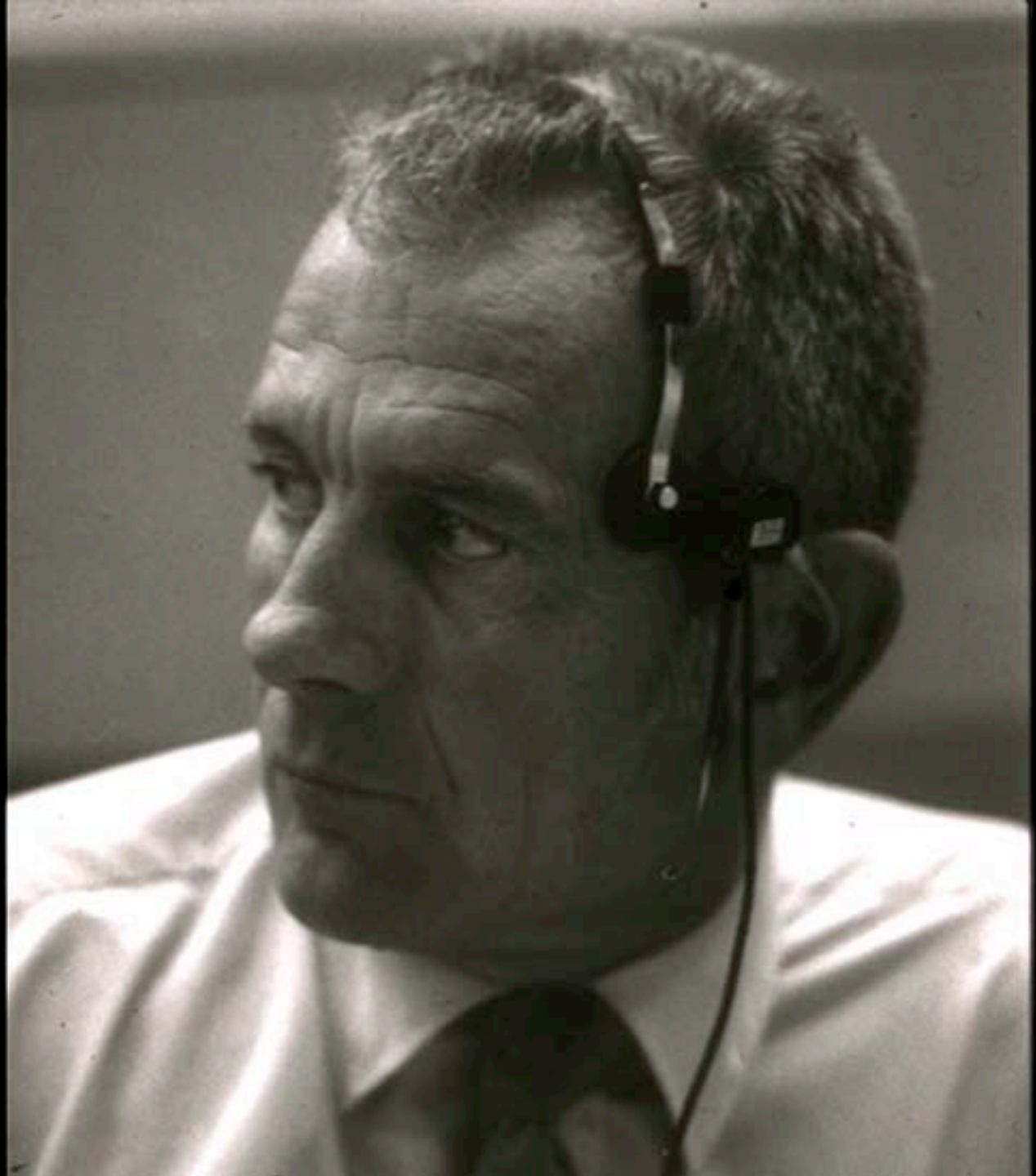
APOLLO XIII
EX LUNA, SCIENTIA



TRUST

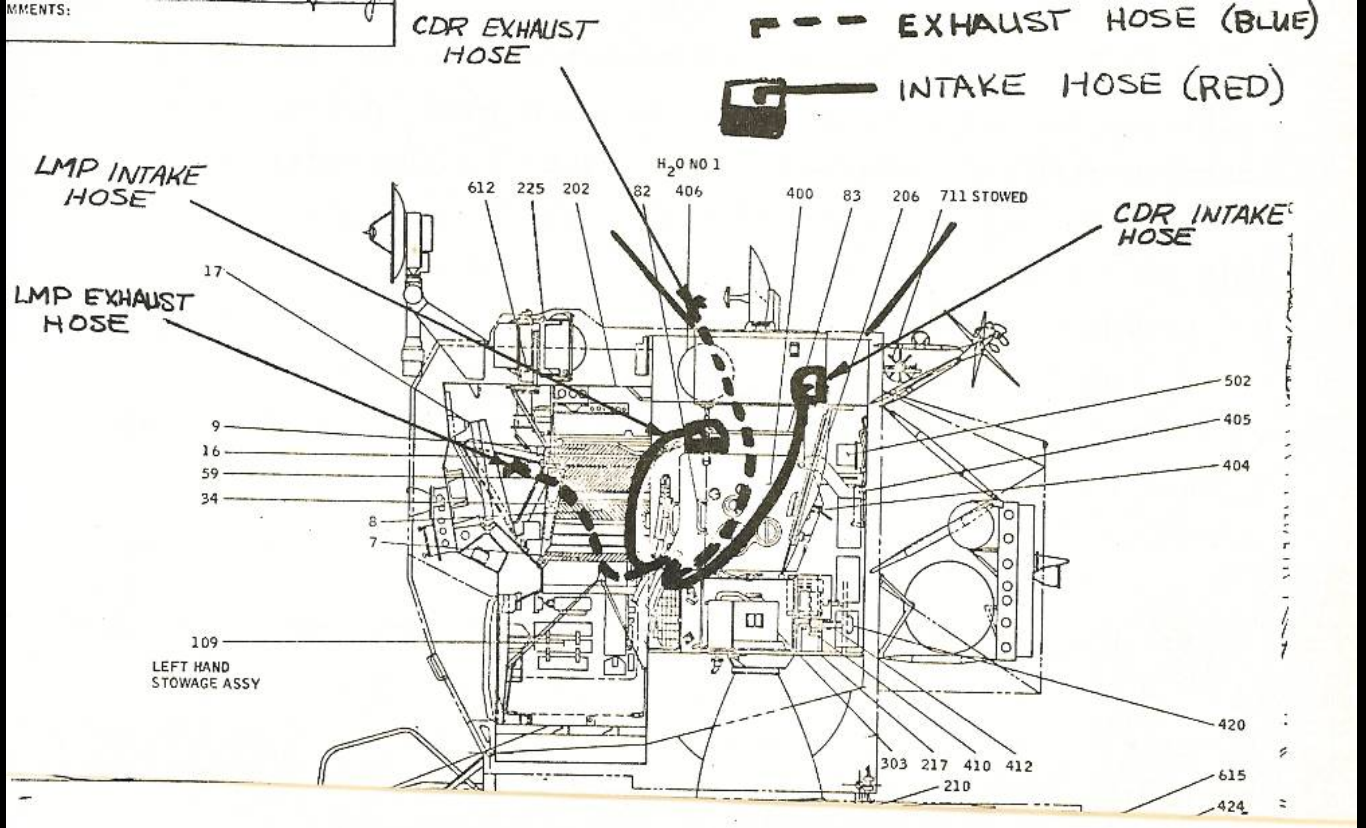


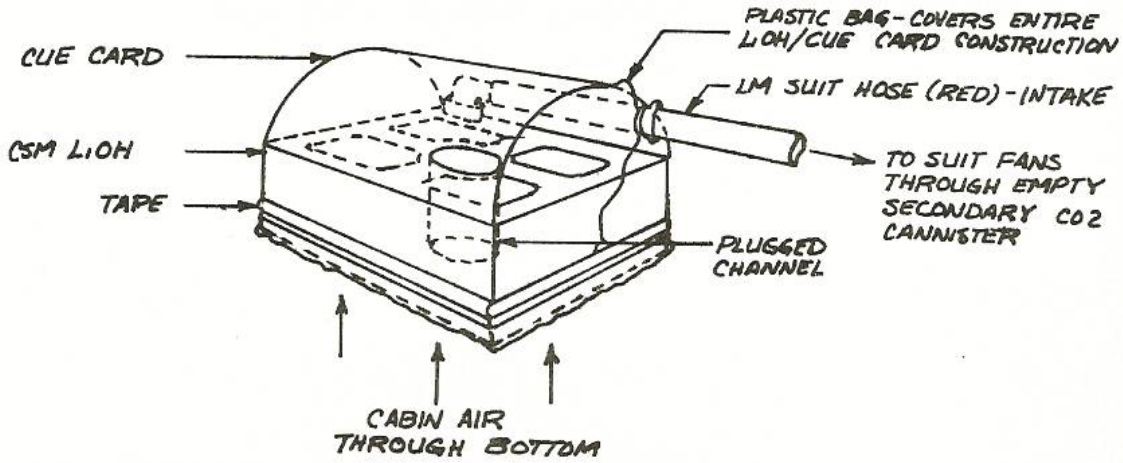
H14



TEAMWORK

MMENTS:



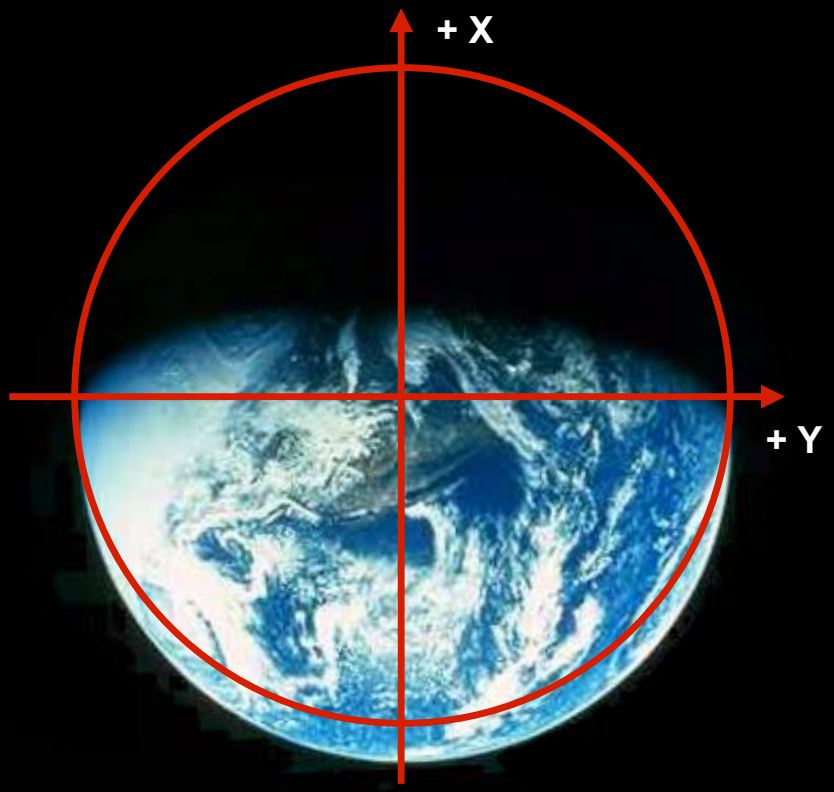


CSM LiOH CARTRIDGE ADAPTOR

APOLLO XIII

MID COURSE CORRECTION – 5

MET 105:18 DV = 7.8 fps Tb = 13.8 sec



RETROGRADE

ENTRY LM PREP

4/17/70
~~17:15~~
~~19:00~~
~~21:30~~
23:00

ELP-1

EI-6:00 PWR UP AGS

BAT 5 ~~ON~~ NORM FEED -ON
USE MODIFIED LM DPS/RCS 30-MIN ACTIVATION CHECKLIST
EXCEPT ~~CHGE PG 28 STEP 2 TO VOICE & RANGE~~ AS FOLLOWS:

EI-5:00 ~~MCC 7 [illegible]~~ MCC 7, If Req

~~5:00~~ LM PRE-ENTRY PROCEDURE

MANEUVER TO SM SEP ATTITUDE
CONFIGURE FOR CSM HOT FIRE
DEADBAND - MAX
ATT CONTROL: (3) PULSE
PERFORM CSM HOT FIRE
~~CONFIGURE FOR~~ MANEVUER BACK TO SM SEP ATT
ATT CONTROL - P,R PULSE
- YAW - MODE CONTROL
~~MANEUVER TO SEP ATT~~

EI-4:30 CONFIGURE FOR CM/SM SEP
BAL COUPLE - ON
AGS 404+0, 405+0, 406+0, 470R
TRANSLATE +X .5FPS
CM/SM SEP
~~TRANS -X .5FPS~~ {NULL 470 TO ZERO} AFTER SEP
ATT CONT (3) - PULSE
PITCH TO ACQUIRE SM FOR PHOTOS (USE ACA FOR CONTROL)

EI-3:00 MANEUVER AND ATT HOLD FOR ~~CSM P51 & P52~~ MCON VIEW ATT UNTIL CM
~~MANEUVER FOR CSM/LM JET~~ PLATFORM RELEASE

EI-2:30 POWER REMOVAL FROM CM/LM UMBILICAL — NEED HBR AND Sho have it

Could be eliminated if needed

ASSUMES ALL DESCENT BATTERIES ON-LINE AND ASCENT BATTERIES 5&6 ON NORMAL FEED

CSM CB-LM PWR-1 MNB - OPEN
CB-LM PWR-2 MNB - OPEN
~~CB EPS SENSOR SIGNAL MAIN B - OPEN~~ Should with LMP

LM CB (11&16) EPS: CROSS TIE BAL LOADS - CLOSE
CB(16) EPS: BAT FEED TIE (2) - OPEN — CB(16) EPS: ASC ECA CONT-CLOS
BAT 1 HV - OFF/RESET
~~BAT 5 - OFF/RESET~~ BAT 5 NORM FEED - OFF/RESET
BAT 2 LV - OFF/RESET THEN ON (WAIT ~~5 SEC~~ FOR MSFN GO)
BAT 2 HV - OFF/RESET THEN ON
BAT 1 HV - ON
~~BAT 5 NORM FEED ON~~ BAT 5 NORM FEED-ON
CB(16) EPS: BAT FEED TIE (2) - CLOSE — {Cb(16) EPS: AS ECA CONT-OPE
LMP XFER TO CM
1:45 MANUVER TO CM/LM JETT ATT — after this

Monitor ΔVX Via [redacted], 470 NPS AND 470

~~When PRPLNT QTY - 27%~~
~~DES He REG 1 - CLOSE~~

~~TTCA (CDR) - Reduce to 10% when Vgo = 10.0 fps~~
SHUT DOWN ON BURN TIME (MINUS) 1 SEC

~~When ΔVX - Final ΔVX:~~
~~ENG STOP - PUSH~~
~~ATT CONT: YAW - PULSE~~

~~Damp Excessive Rates Via LM Y, Z Translation~~
NULL ERROR Needles - Trim Address 470 to 0.1 4 sec
~~GSM Resume Attitude Control~~

~~PRO, VGSE~~
~~ENG ARM - OFF~~
~~PRPLNT QTY MON - OFF~~
~~ENG STOP - RESET~~
~~TTCA (CDR) - JETS~~
TURN TO ENTRY LM ✓ LIST @ EI - 5 hrs

~~Reestablish BTC~~

~~1. att control (3) to pulse~~
~~2. Roll with TTCA until attitude [illegible] ±90~~
~~pitch = 0 and y = 0~~
~~3. When att attitude ACA out of detent~~
~~4. att control yaw to mode control~~
~~5. When rates are less than .05 °/sec att control yaw to pulse.~~
~~6. Spin up to .3 °/sec in yaw (12 pulses)~~
~~7. Mode control AGS - off.~~
~~8. PWR DWN per contingency checklist PWR 5.~~

Basic Date 1/6/70
Changed 3/23/70

LM-7

30-MIN ACTIVATION

DOCKED APS BURN

(PGNS)

2 HOUR ACTIVATION

P30 UPDATE (LM)

DOCKED ARS BURN

P30 LM MANEUVER

N85 +0.1 +0.1 +0.1
Q70 +2.6

PURPOSE		DPS/PERICYNCIAN+2	MCC-7
HR	N33	+ 00079	+ 00137
MIN TIG		+ 00025	+ 00039
SEC		+ 026.48	+ 048.39
ΔVX	N81	+ 1633.0	− 0003.1
ΔVY	LOCAL	− 0014.5	+ 0000.0
ΔVZ	VERT	− 0751.5	+ 0000.1
HA	N42	+ N/A .	+ N/A .
HP		+ 0020.5	+ 0020.5
ΔVR		+ 1797.7	+ 0003.1
BT		X X X 8:35	X X X 0:23
R	FDAI	X X X 268	X X X 008
P	INER	X X X 264	X X X 359
ΔVX AGS	N86	+ 1641.0	ULLAGE +X, 4 JET RCS
ΔVY AGS		− 0014.5	
ΔVZ AGS		− 0733.8	N/A .
BSS		X X X N/A	X X X LMWT 25181
SPA		X X .	X X CSM 62468
SXP		X X X .	X X X

REMARKS:

~~DPS GDA P 5.85~~
~~P 6.75~~

EPS 30 / 630

1600 / 620 / 12220

2220 / 630 / 1590 / 1040 / 550

133 / 59 / 74 / 22 / 52 / 20

22 / 30 / 10

1540 / 260 / 1280

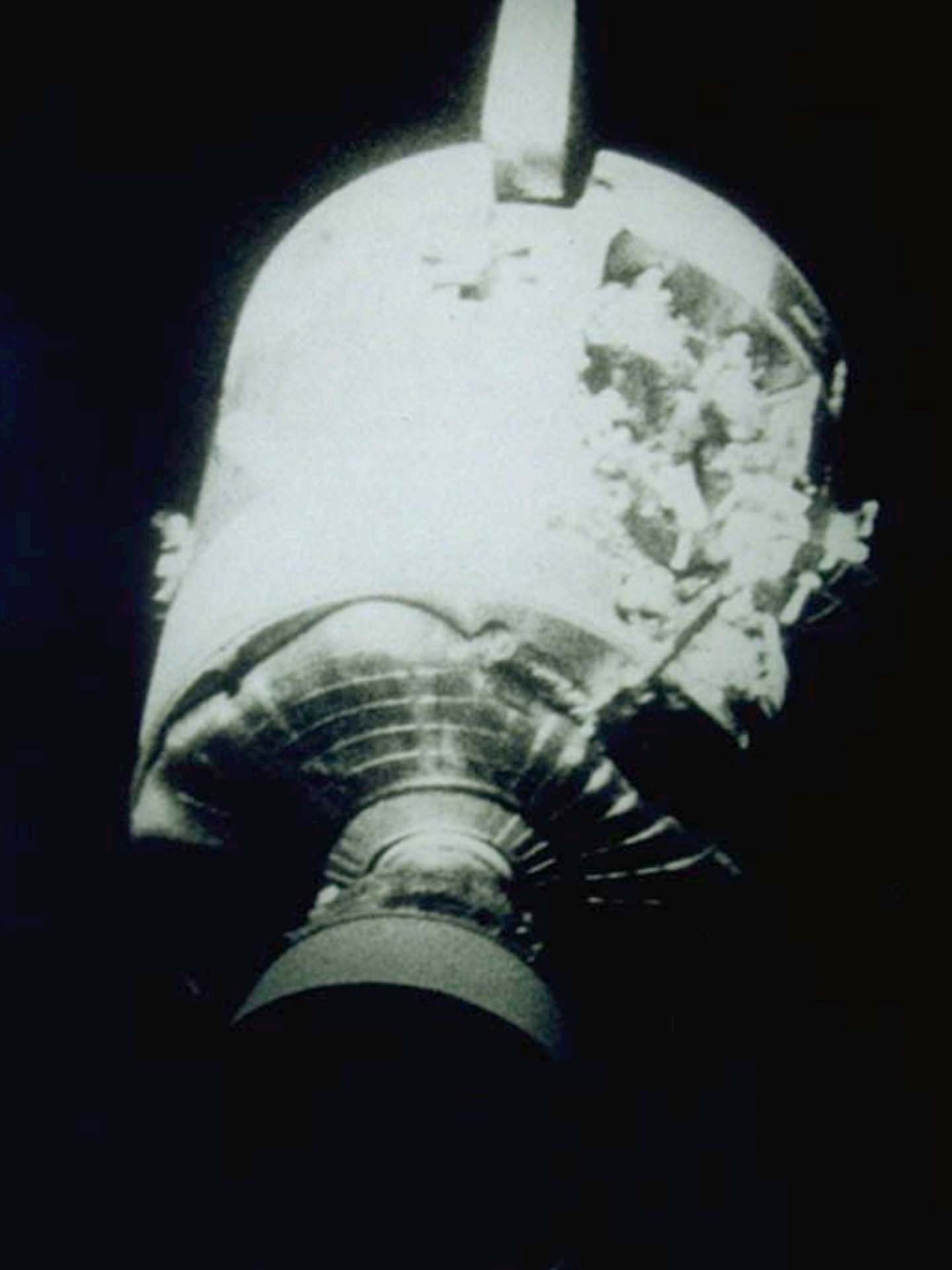
42+47 / 79+41

79 / 57+11 / 22 / 63 / 85

WATER 333 # DESC
85 # ASC
12 # PLSS
430 # TOTAL
5 #/HR or hr

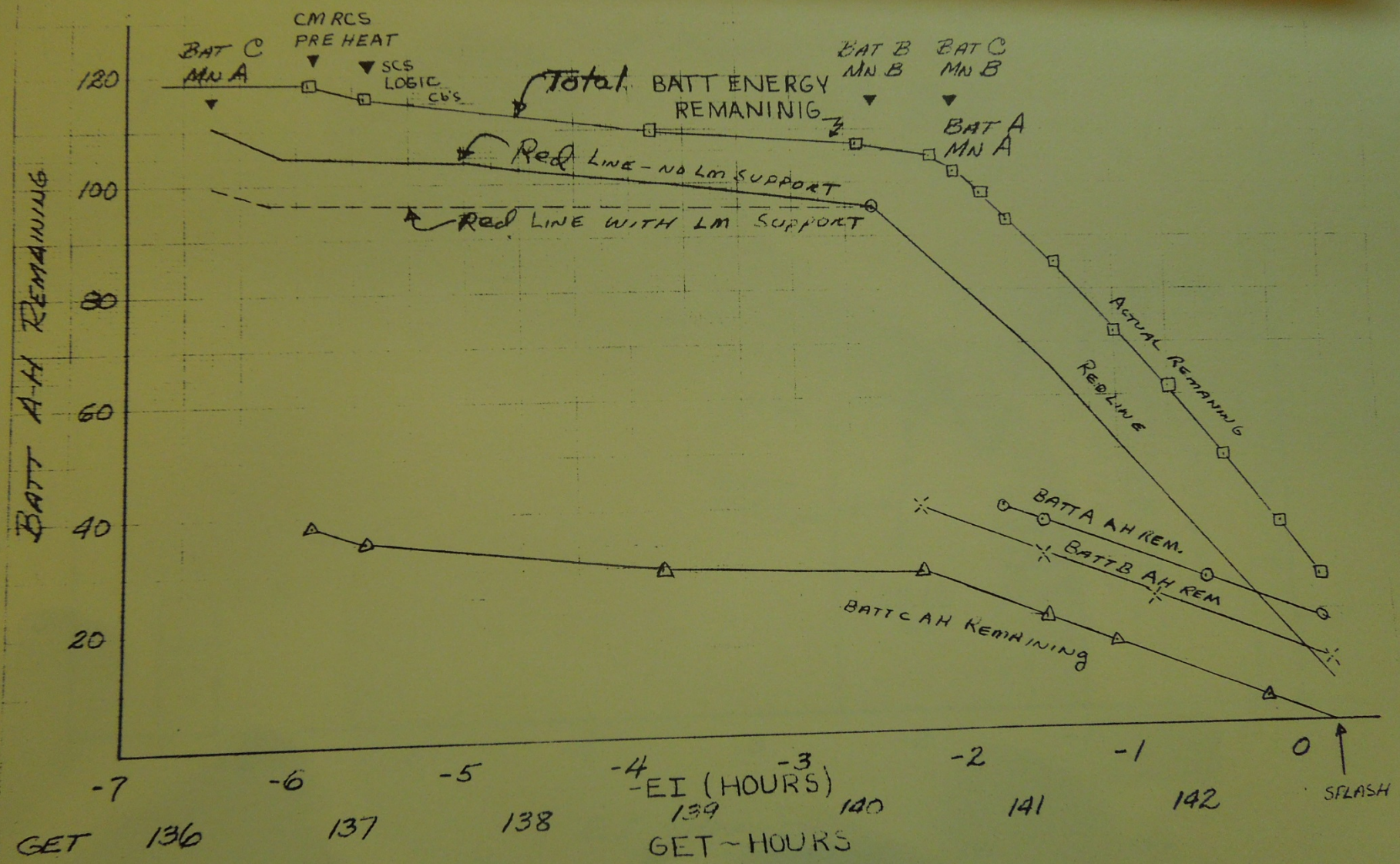
Basic Date 1/5/70
Changed

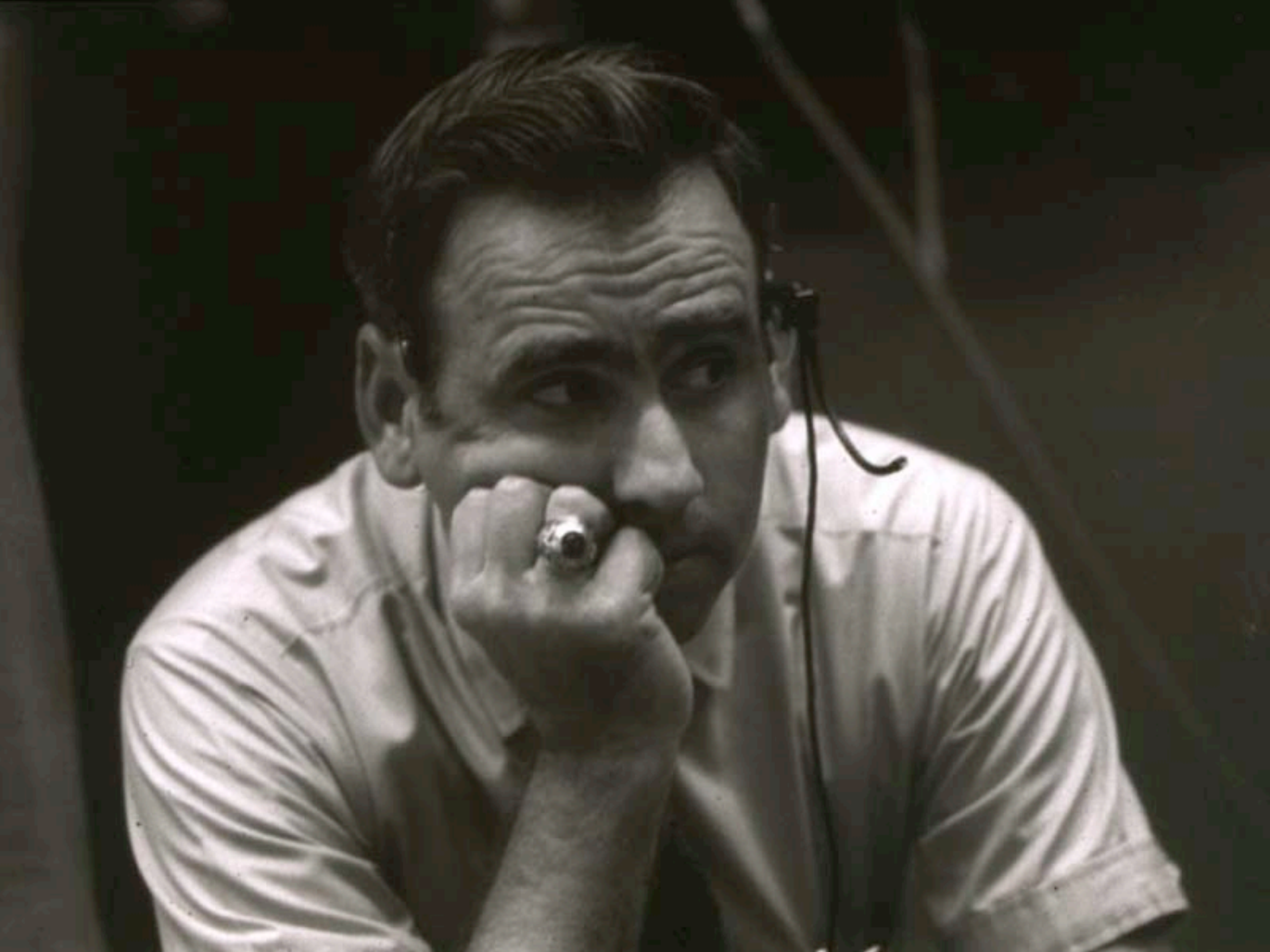
LM-7



APOLLO 13 BATTERY ENTRY DATA

Fig 4.





003
NAVY

C
NASA

WELCOME BACK!
VIII
IX
X
XI
XII
XIII
ODYSSEY
APOLLO XIII

ASTRONAUT
HAISE
APOLLO 13
SEAL OF THE PRESIDENT OF THE UNITED STATES

WELCOME BACK!
VIII
IX
X
XI
XII
Glynn S. Lunney
Milton L. Kindler

Failure Is Not An Option !

2
C
238050
U
U
BN

EXIT
N427E
F
6094

BLUE ANGELS
DANGER

FF
AF 03 044
K RF

EMBRY-RIDDLE
AERONAUTICAL UNIVERSITY
EMBRY-RIDDLE
compuSIGN.com
HARTZELL
GREAT PLANES
Futaba
THUNDERBOLT
GOODYEAR

RES GESTA PAR EXCELLENTIAM
MISSION CONTROL

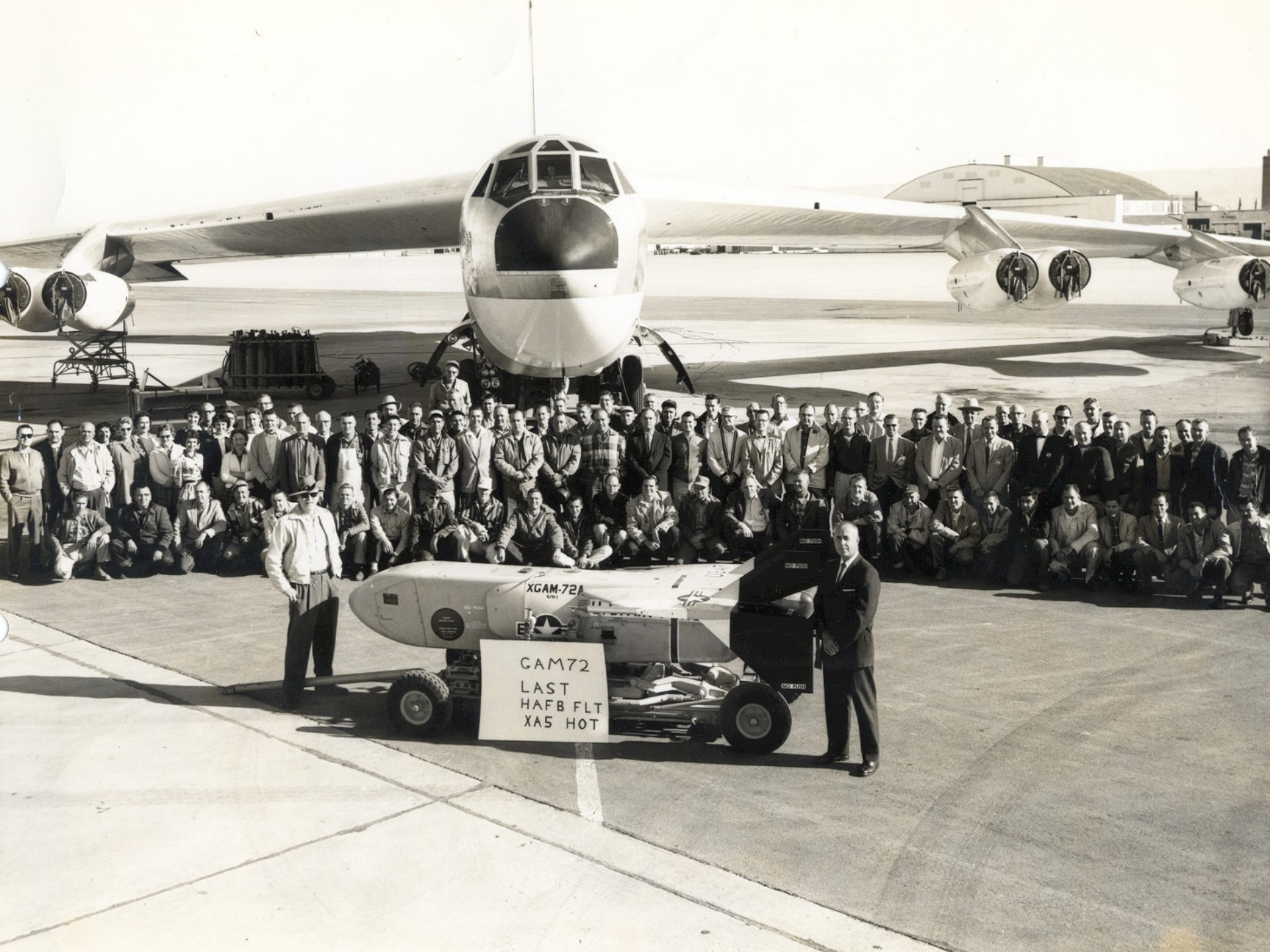
EMBRY
AERONAUTICAL
RIDD
UNIVER
EMBRY-RIDDLE

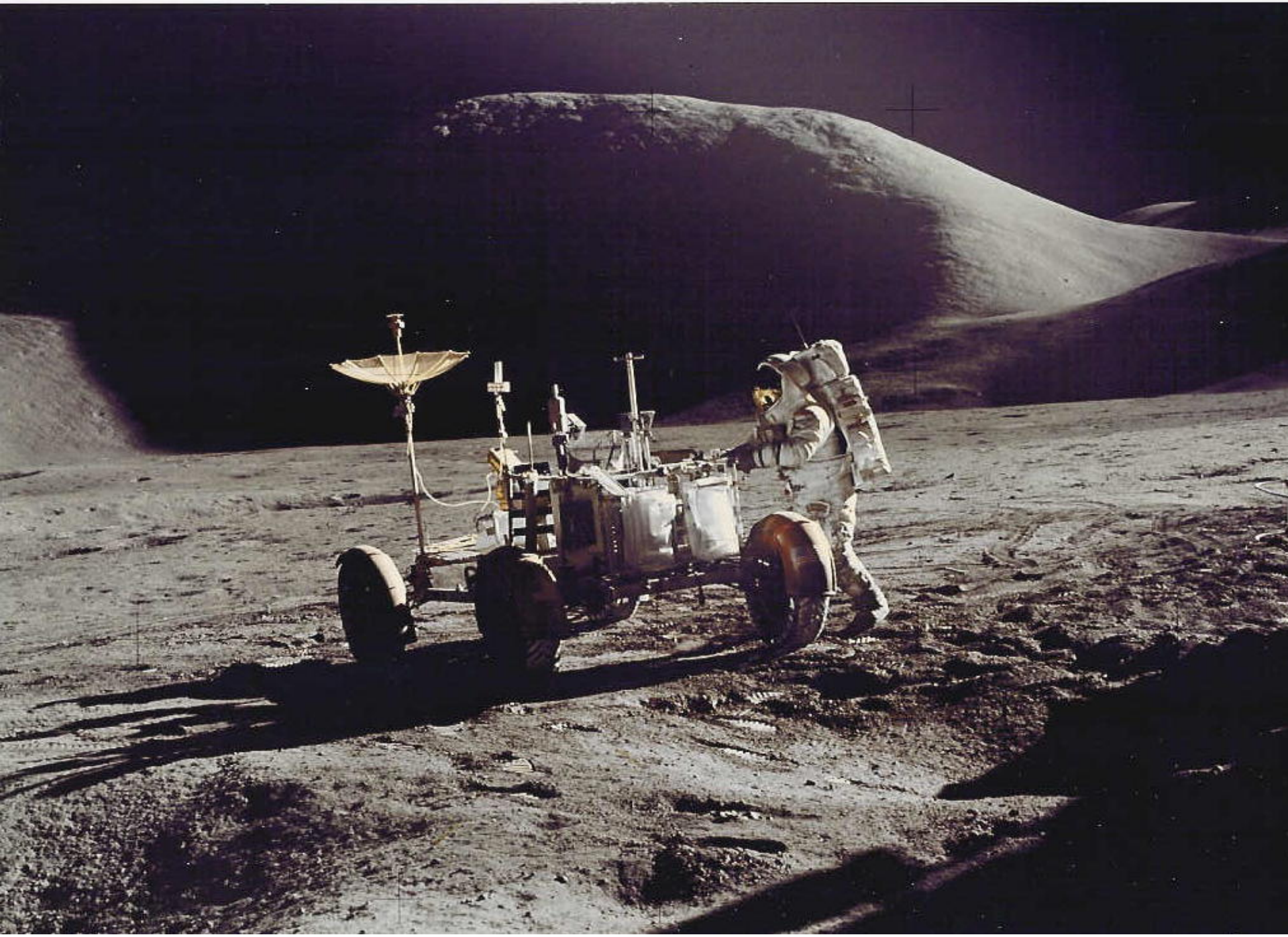
Lt Craig Olson
Maj Chandler Seagraves
Blue Angels

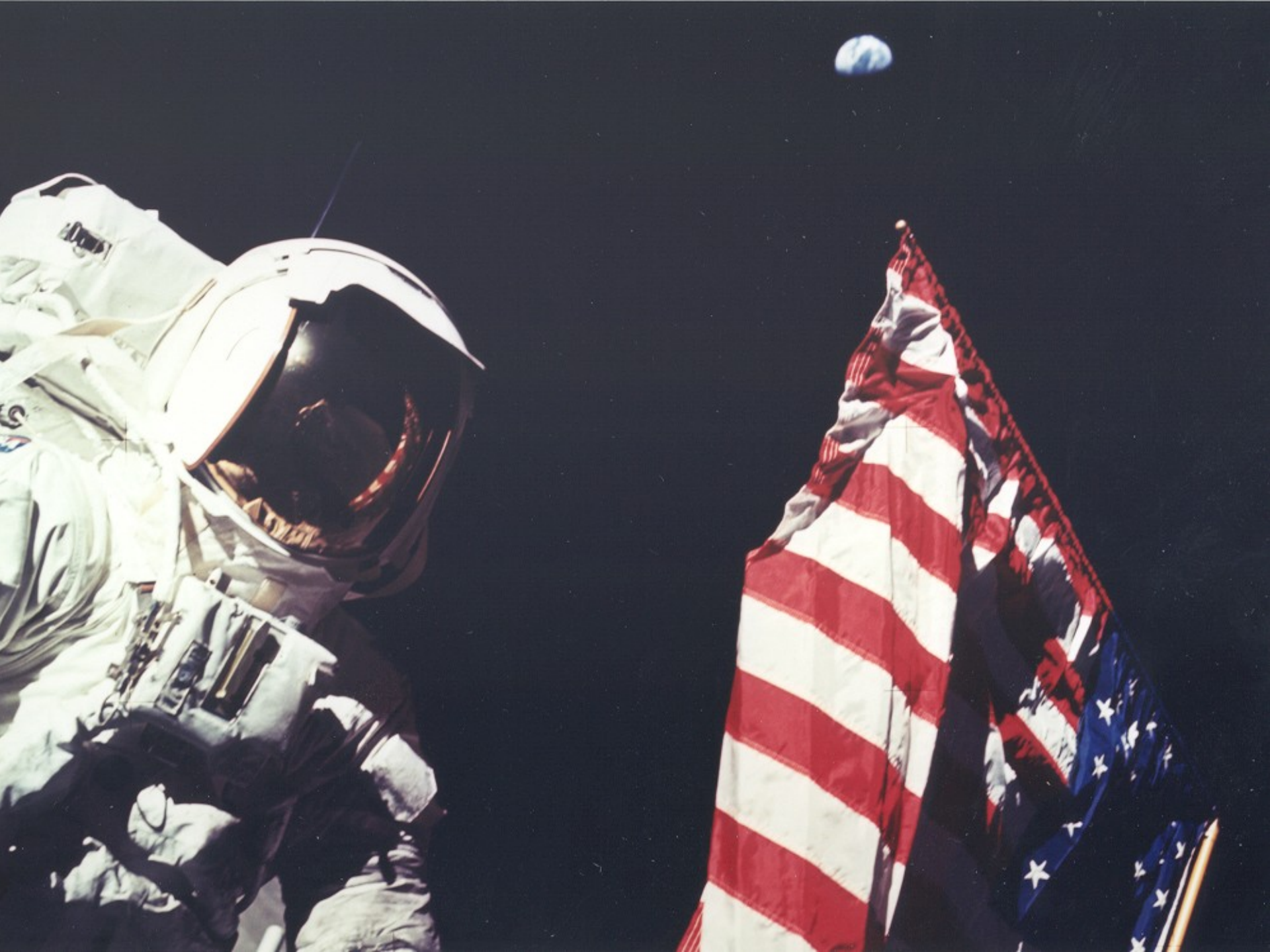
Darling

FIRE EXIT
FIGHTING
BB

U.S. AIR FORCE
"My Darling"
Marta


XGAM-72A
CAM72
LAST
HAFB FLT
XA5 HOT



FF
AF
03 044

Capt. WM. T. WHISNER