

# Launch Operations

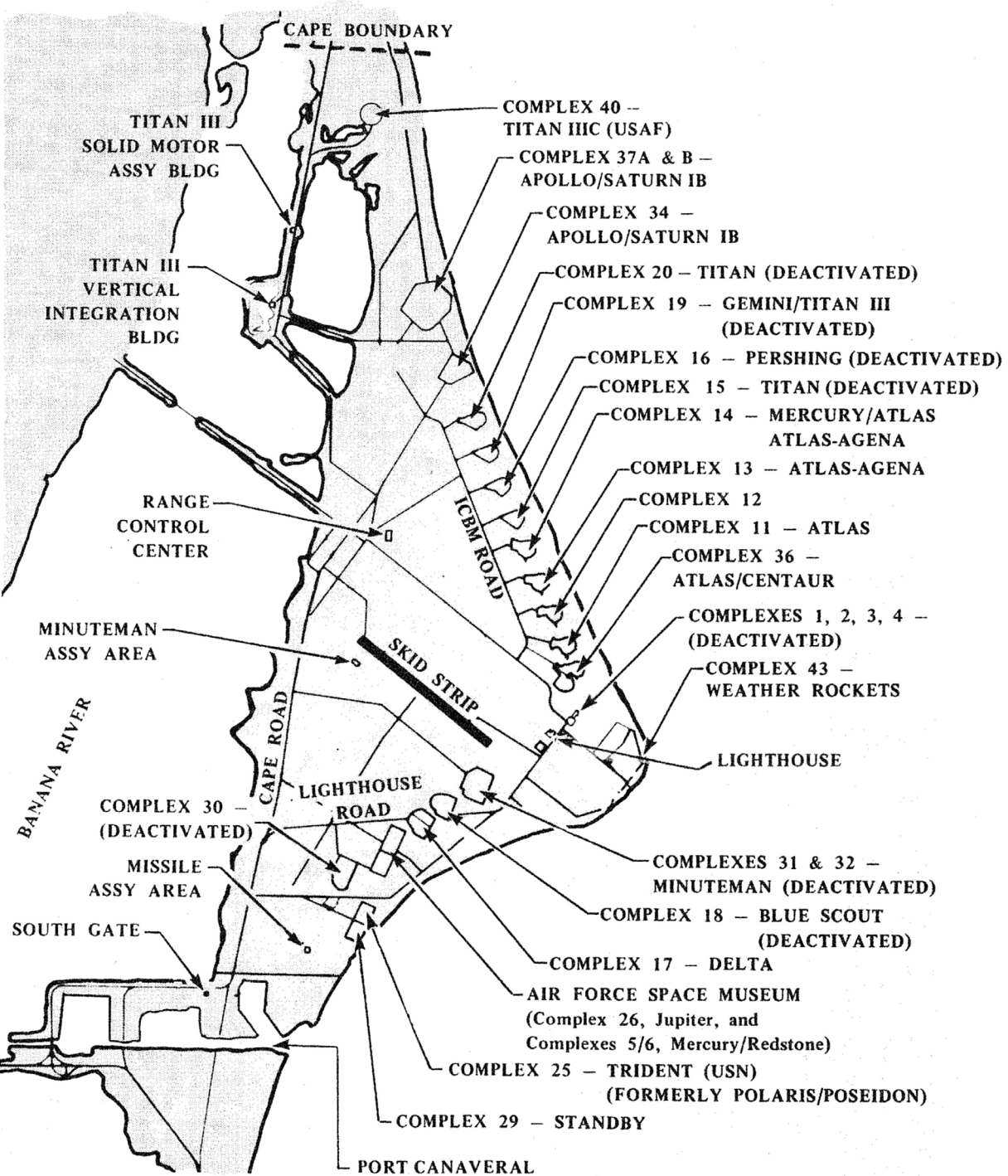
INST 154

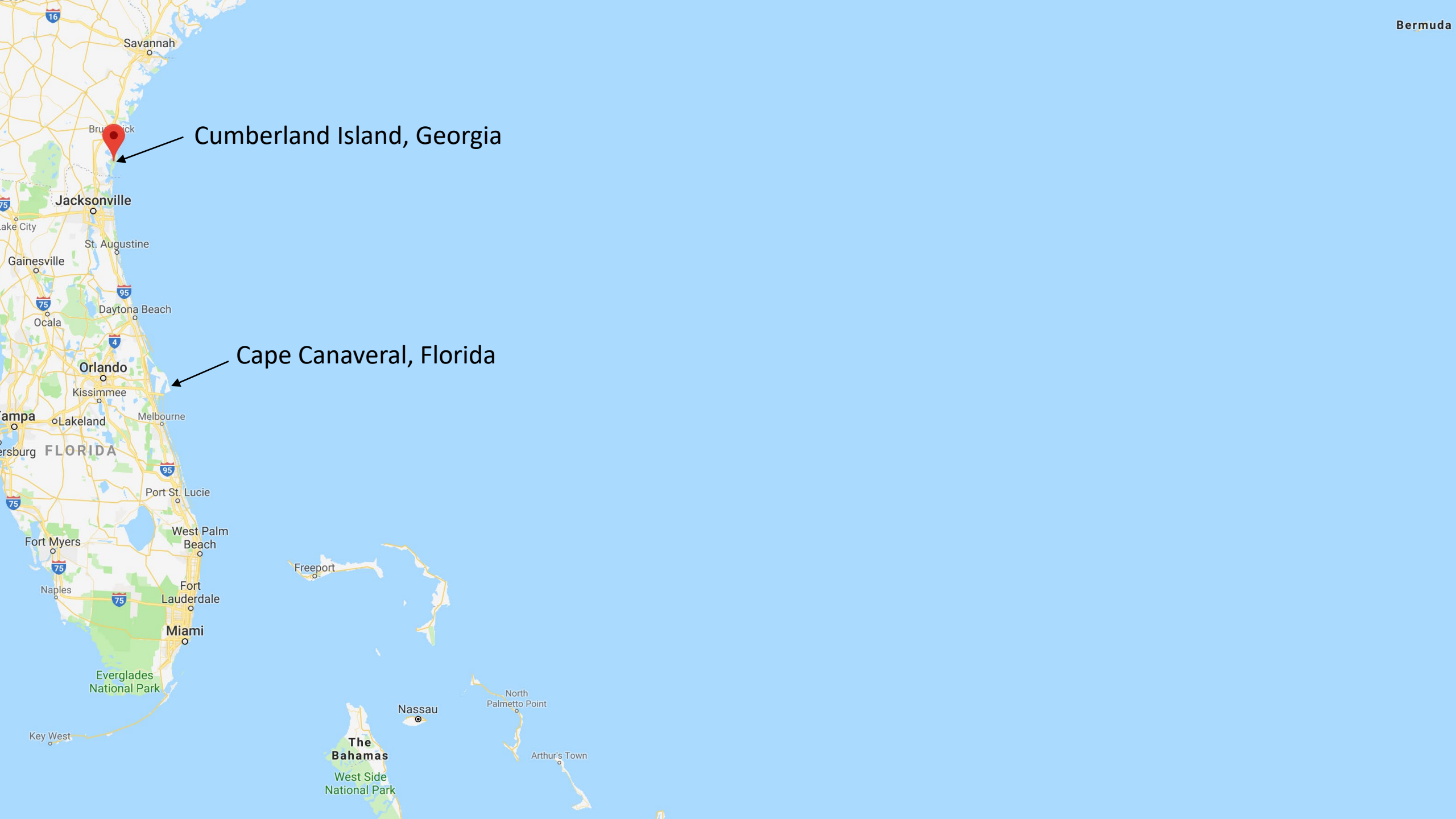
Apollo at 50

[Stacking Apollo 13 in the VAB](#)

# Some Big Questions

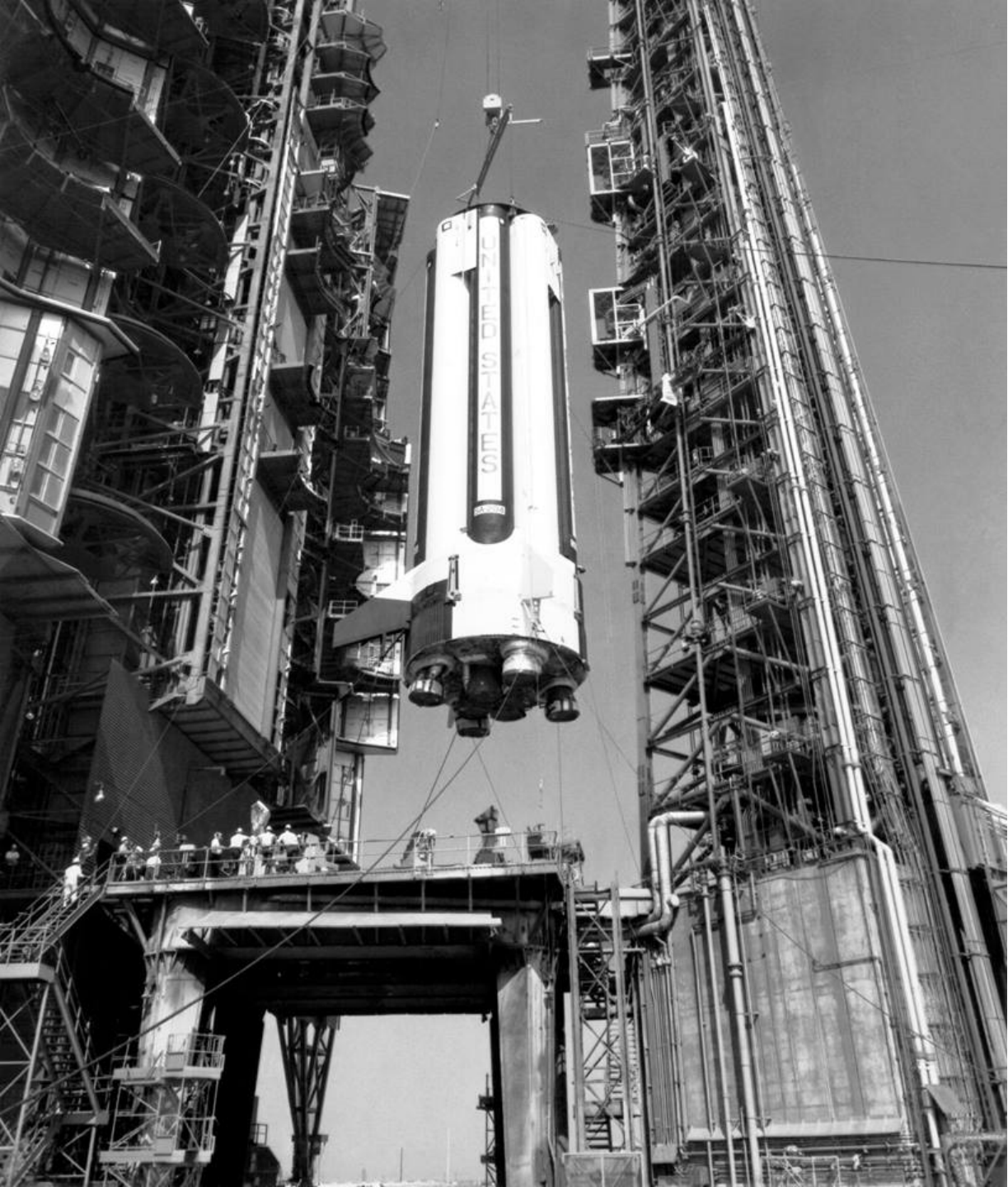
- Where to launch from
  - Florida or Georgia?
- Where to assemble the rocket
  - On the pad or in a separate building (with vertical or horizontal transport)?
- How to check out the rocket and the spacecraft
  - Manual or automatic?
  - On the pad, in some other place, or in parts in different places?
- How will range safety be assured?



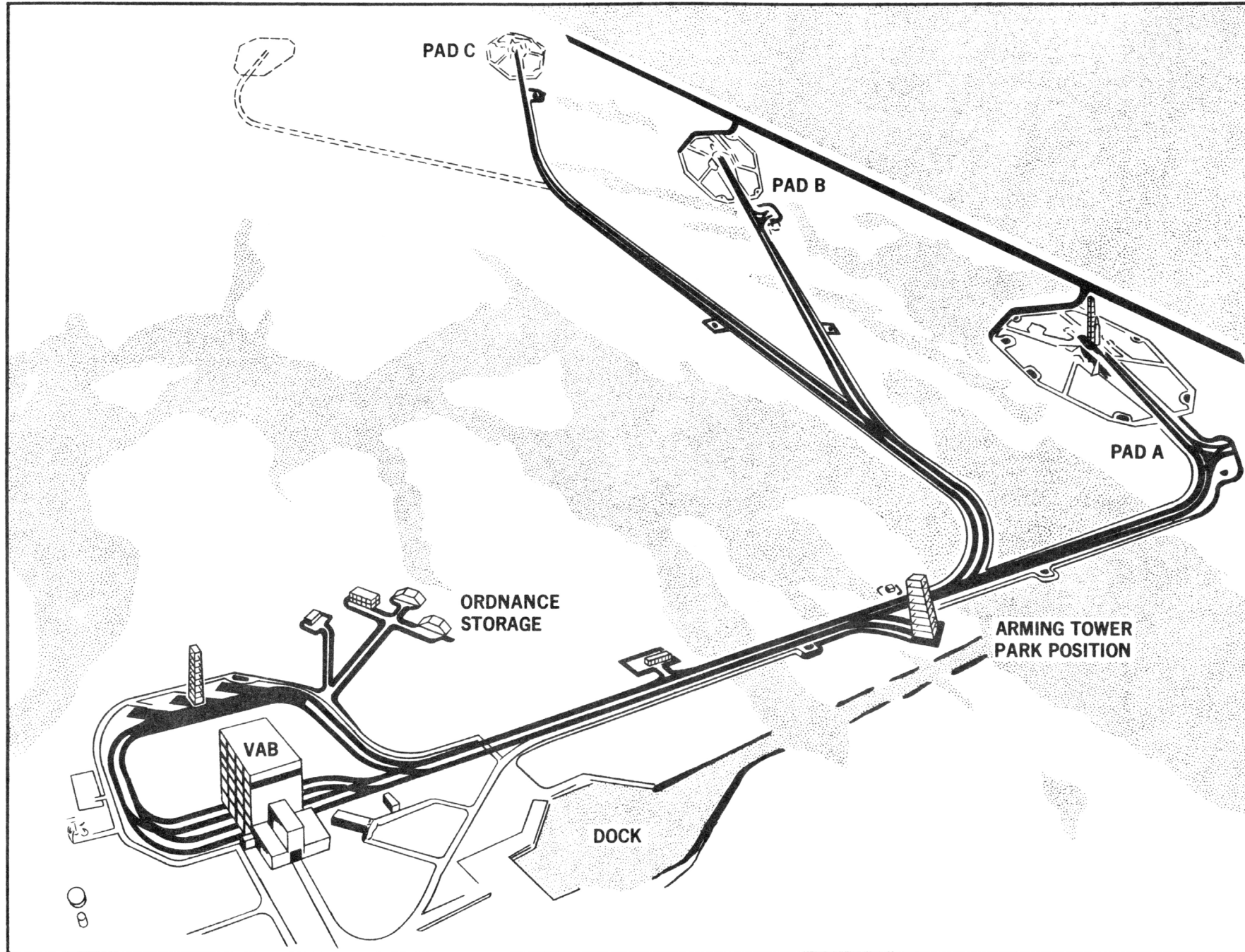


Cumberland Island, Georgia

Cape Canaveral, Florida



# SATURN V LAUNCH COMPLEX 39











MSOB  
High Bay

MSOB  
Low Bay

ACE  
Rooms

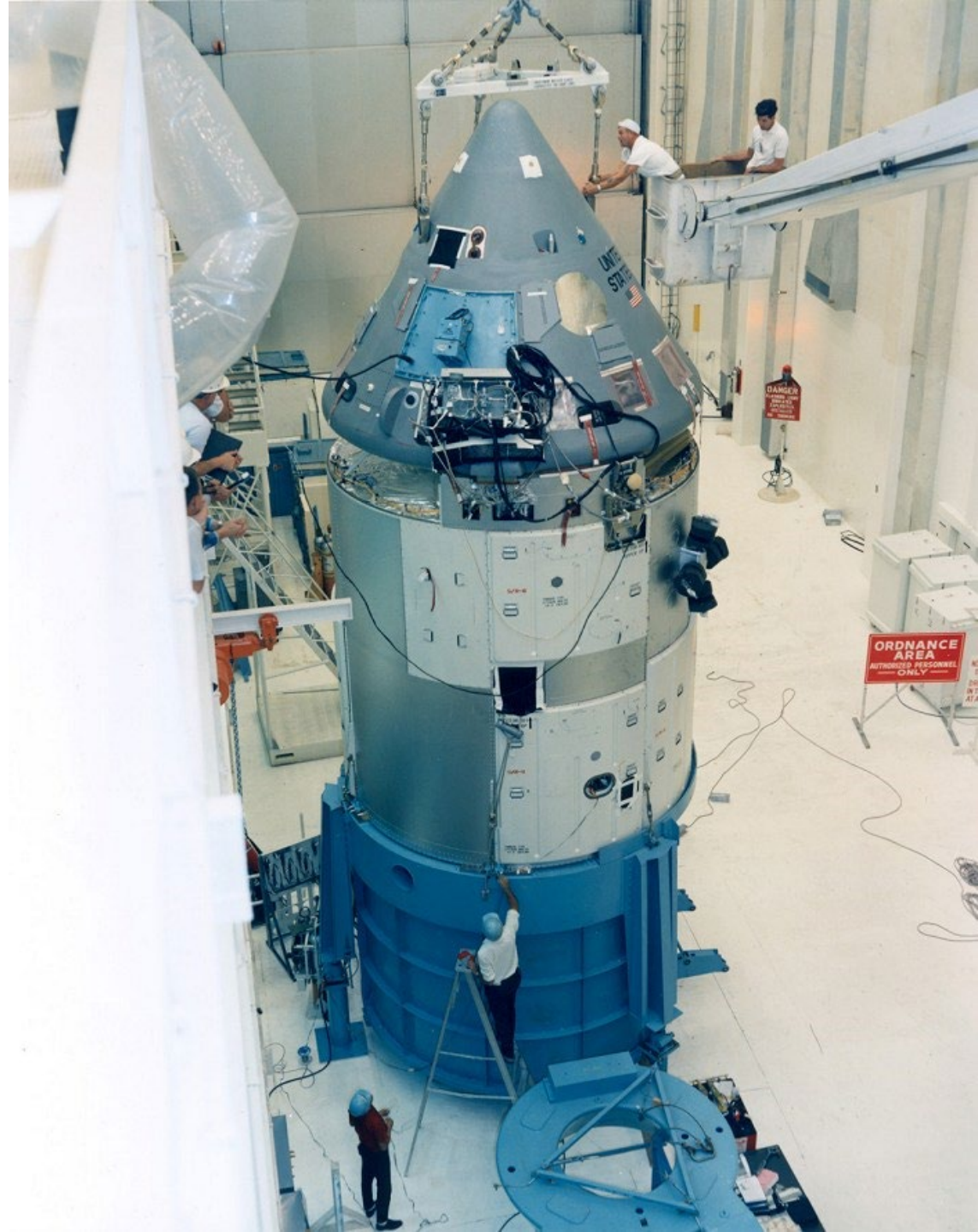
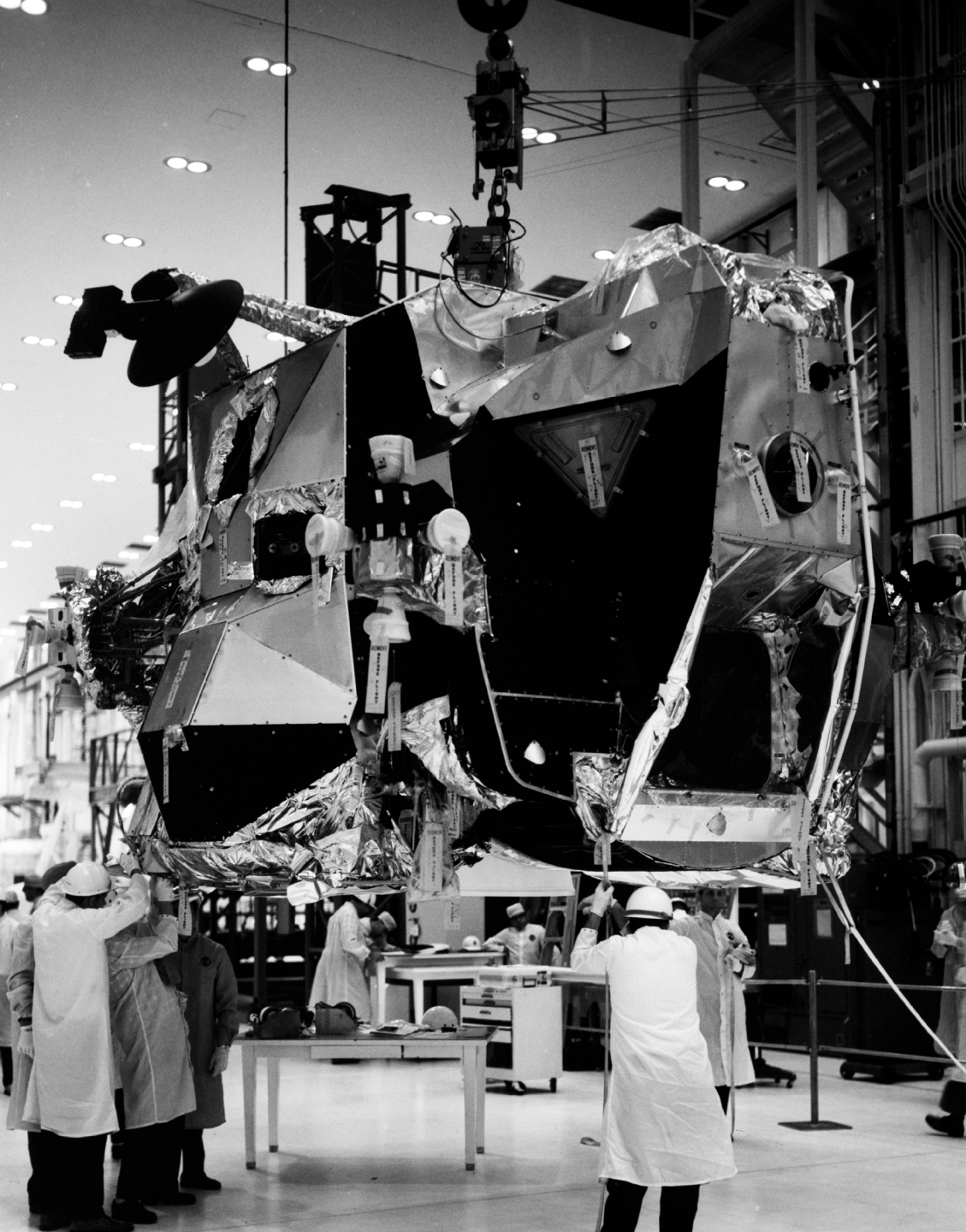
Astronaut  
Quarters

KSC  
HQ

CIF

MSOB  
Offices

(c) 2015 Jonathan H. Ward







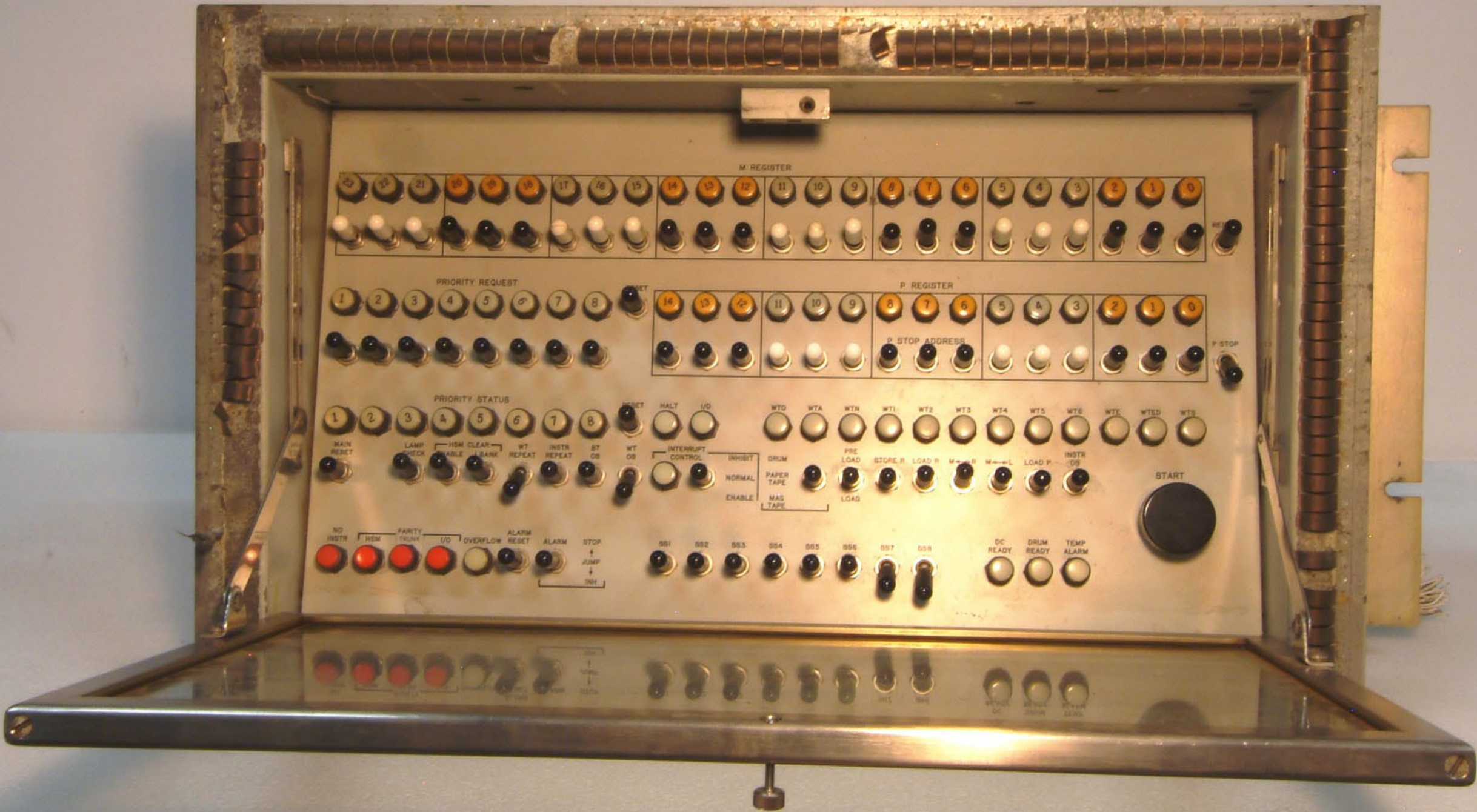




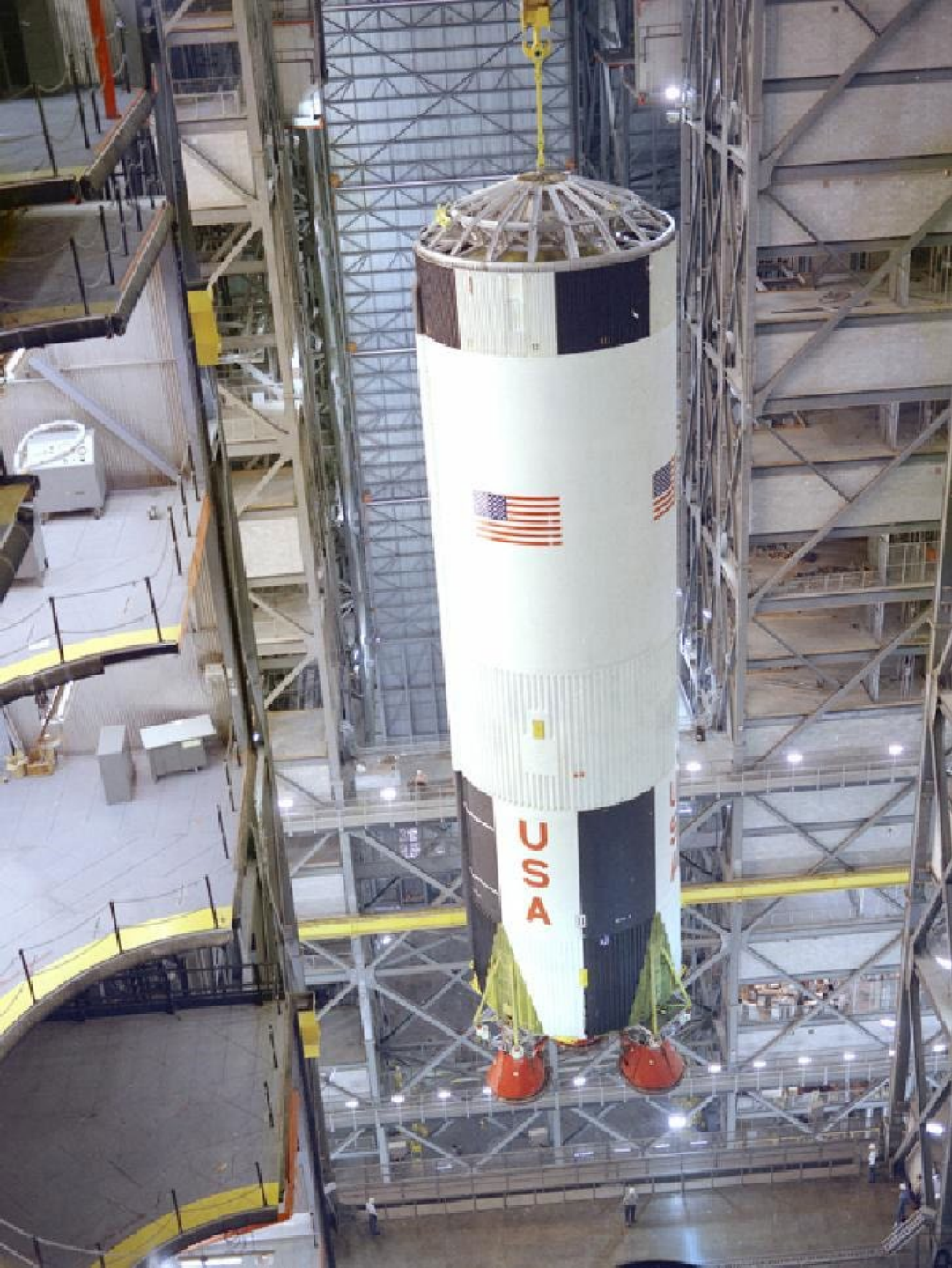


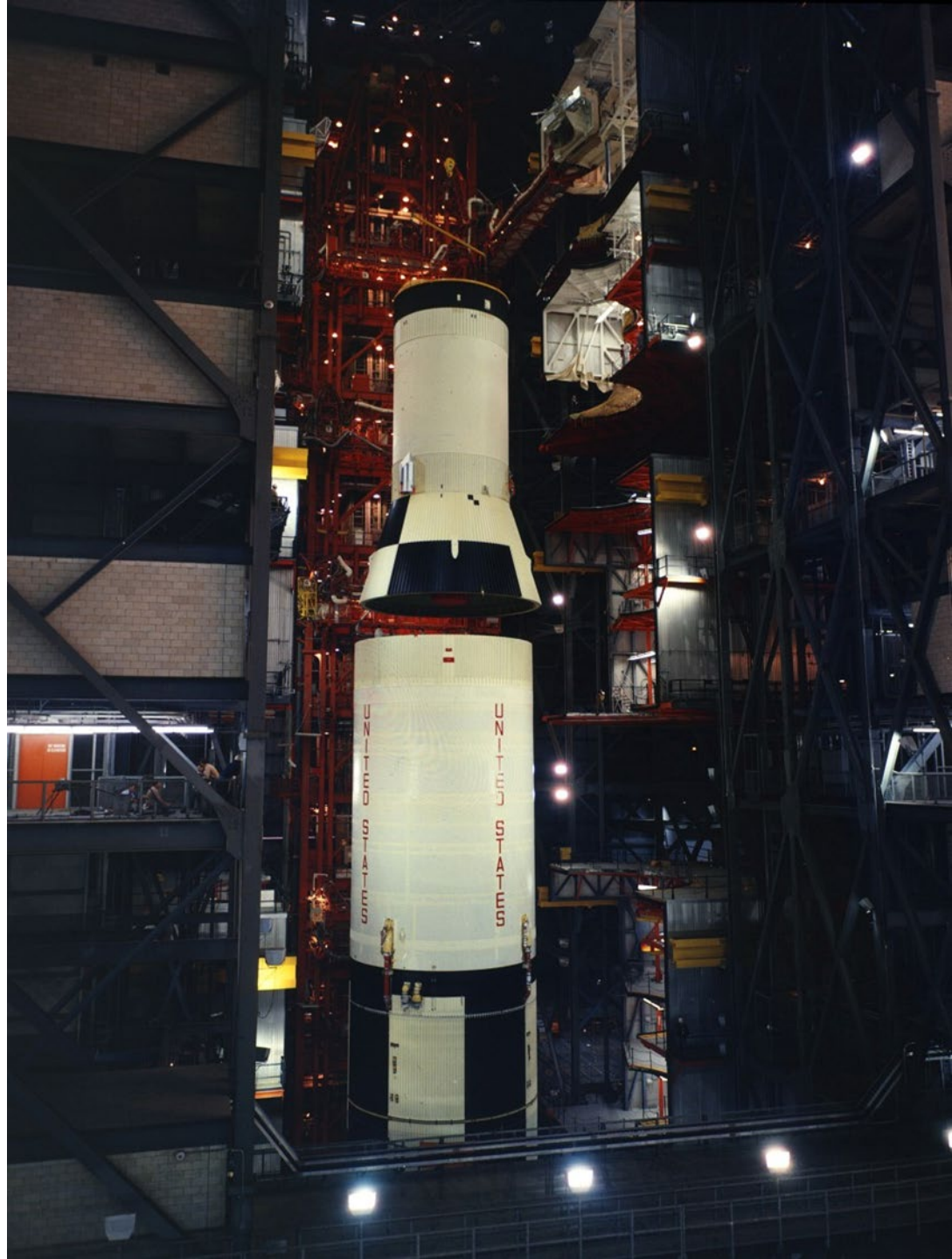


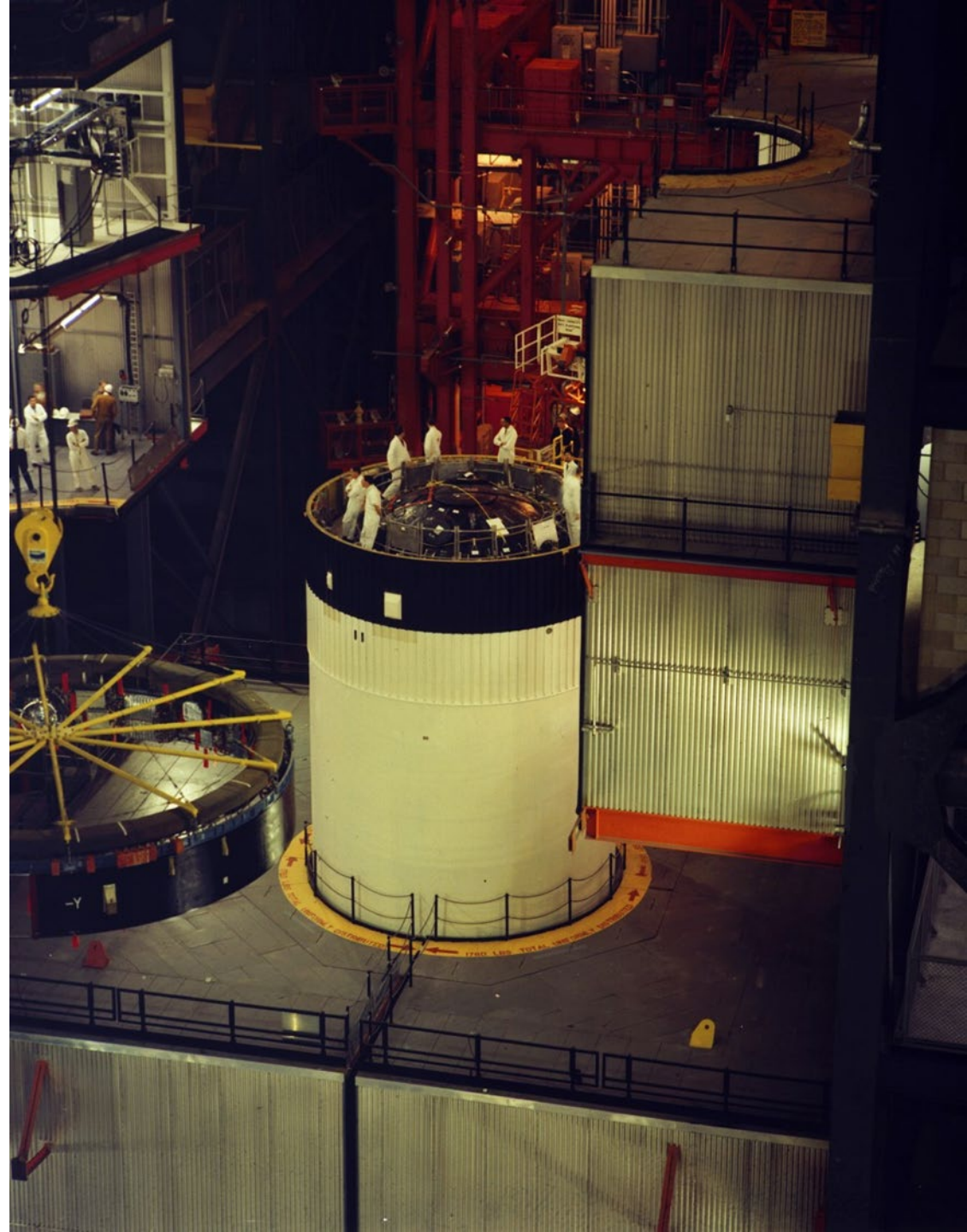


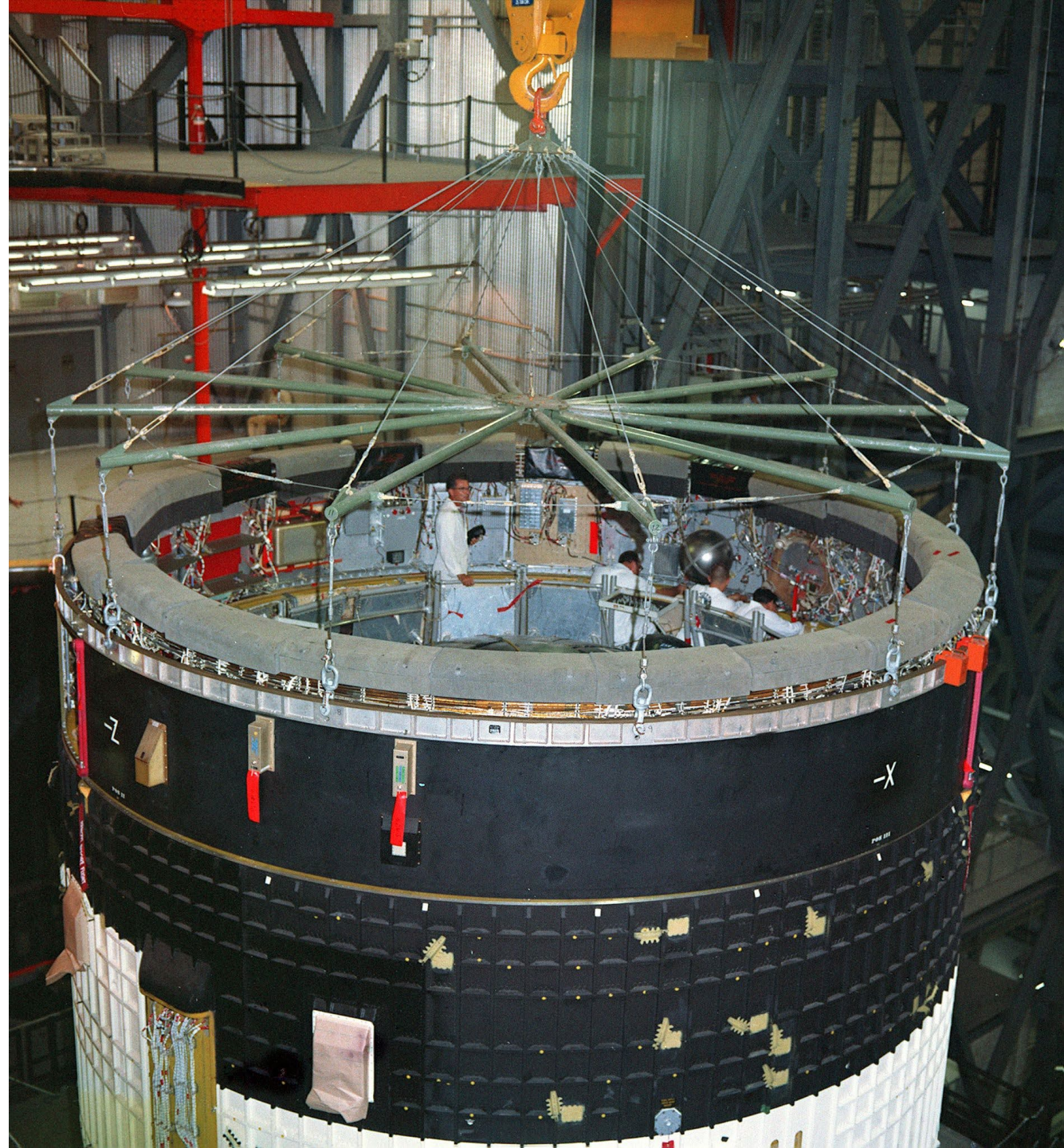


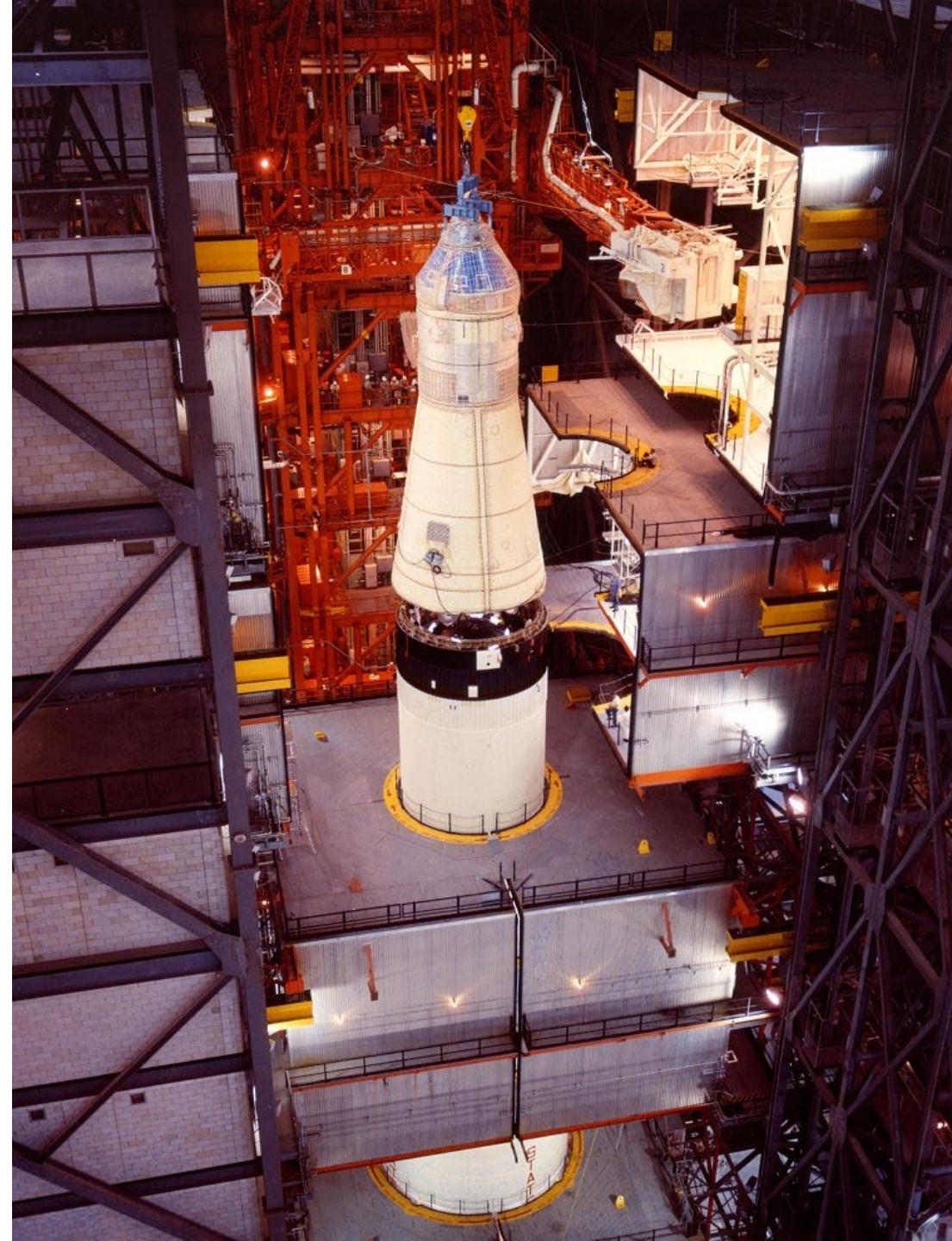


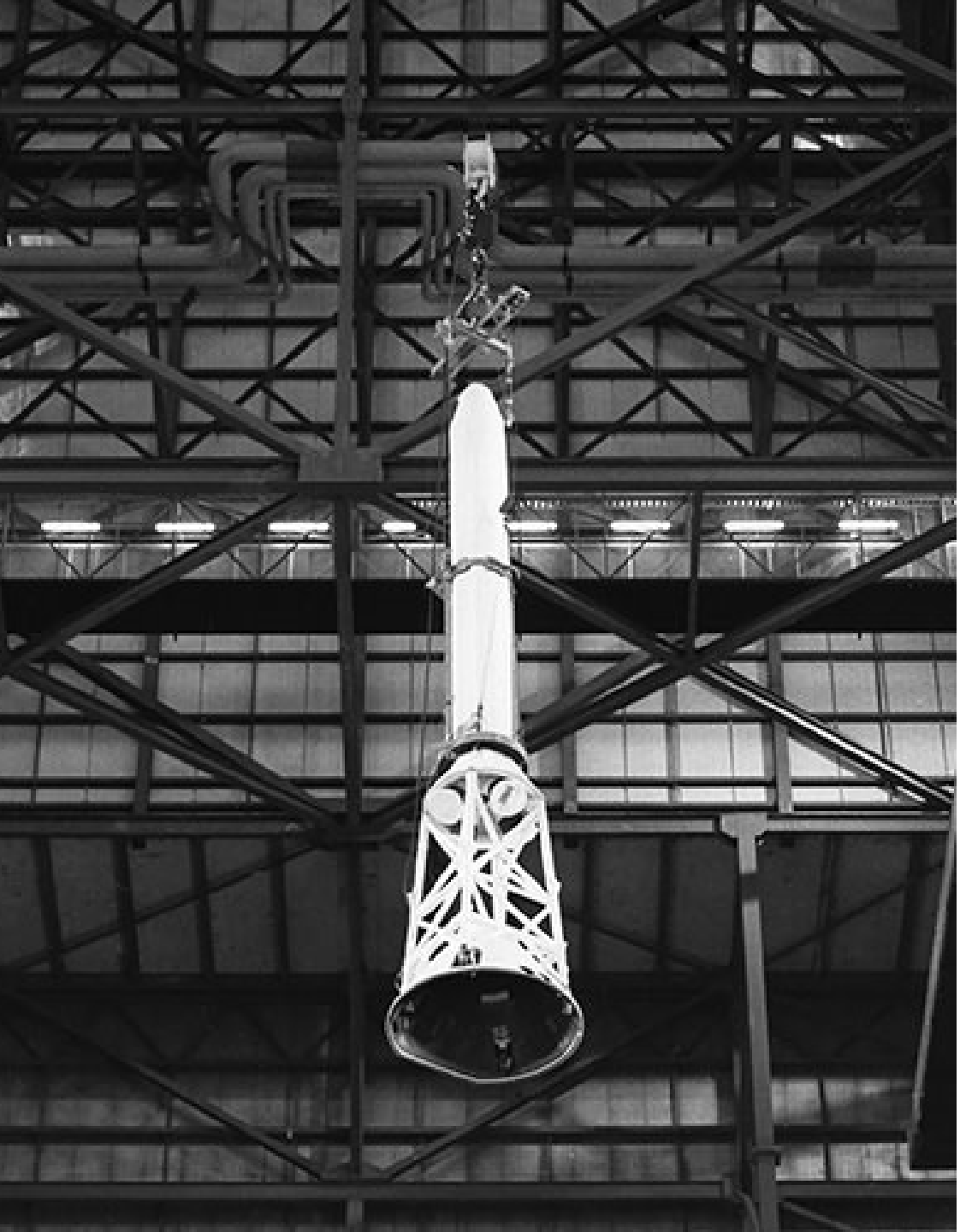












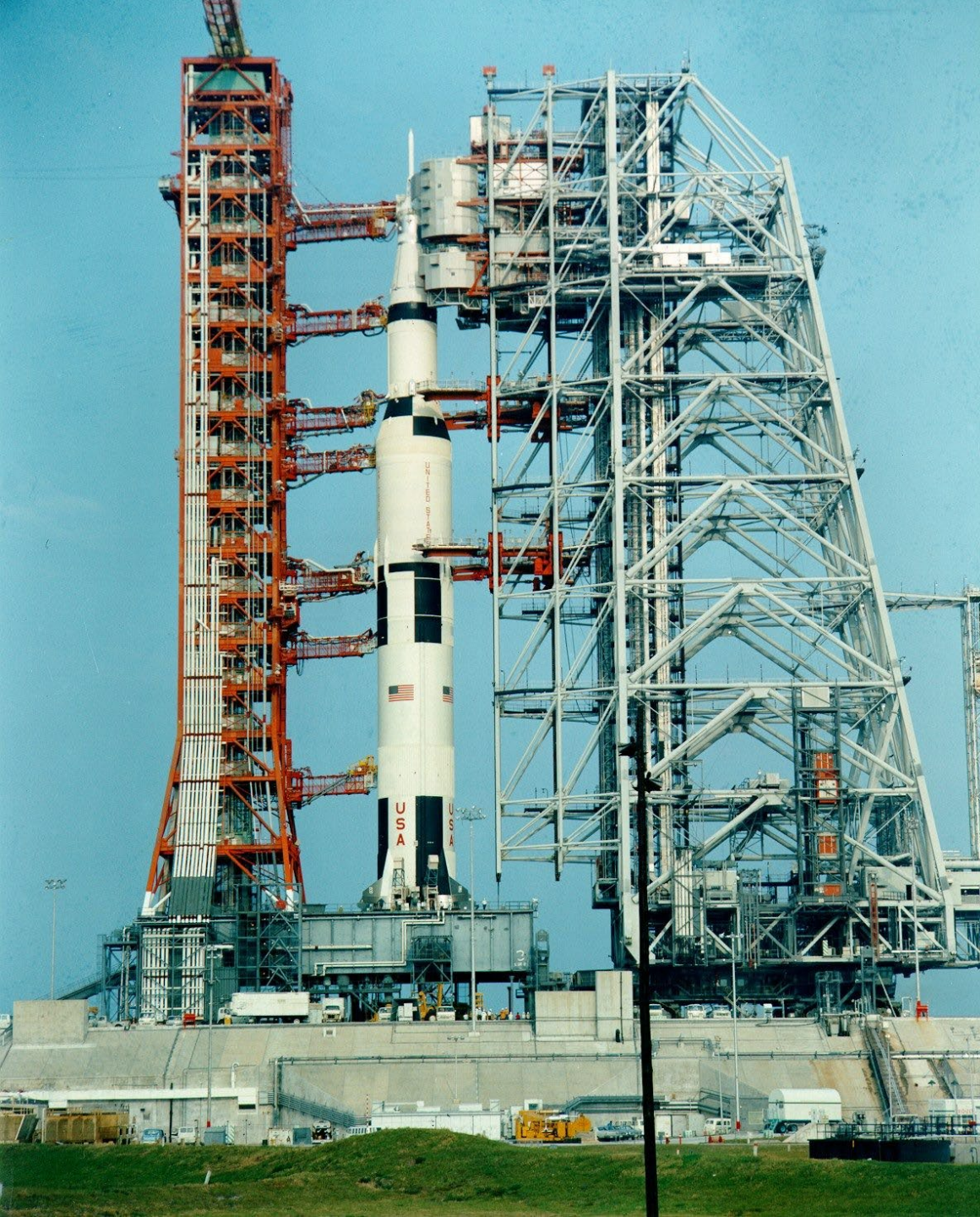


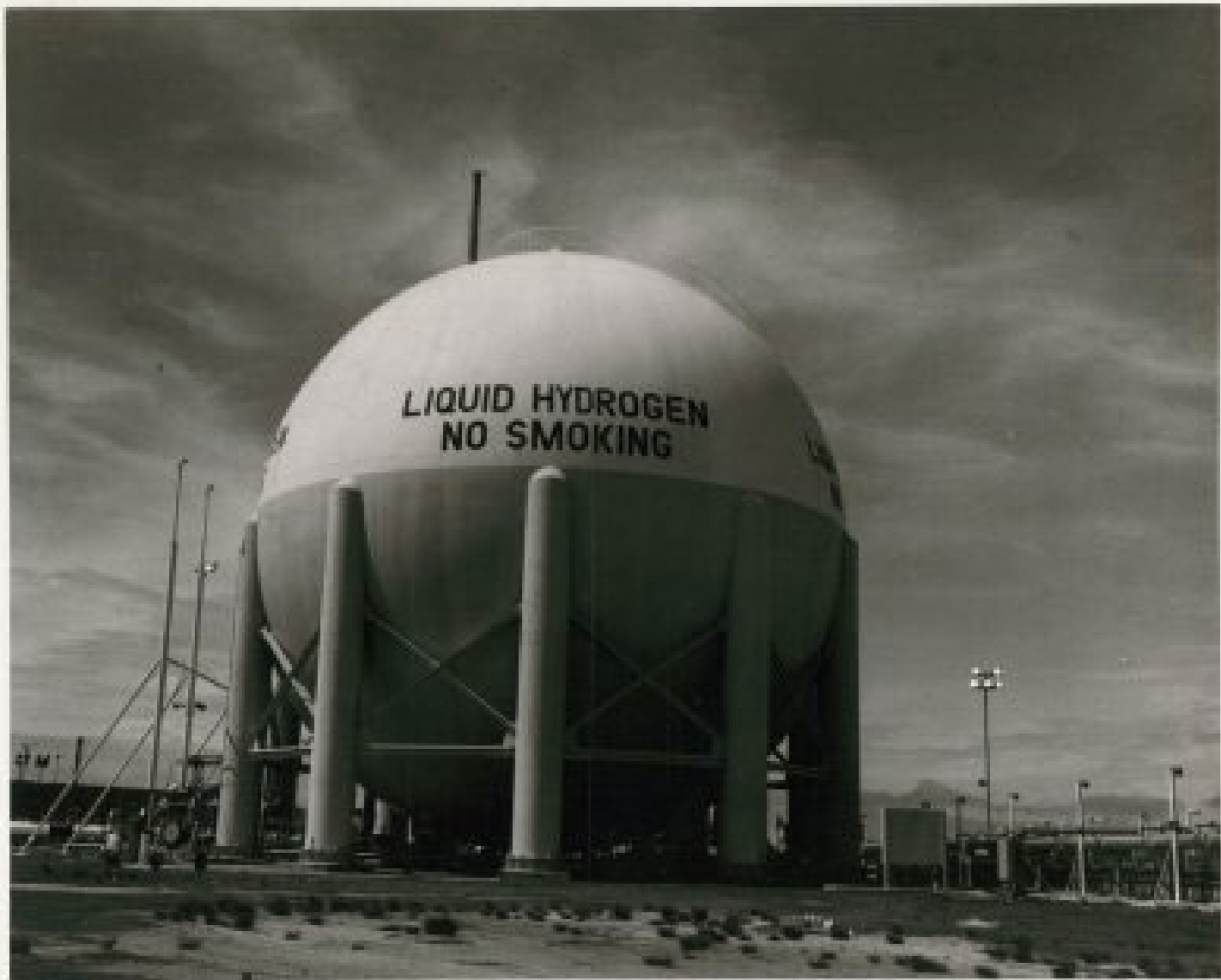


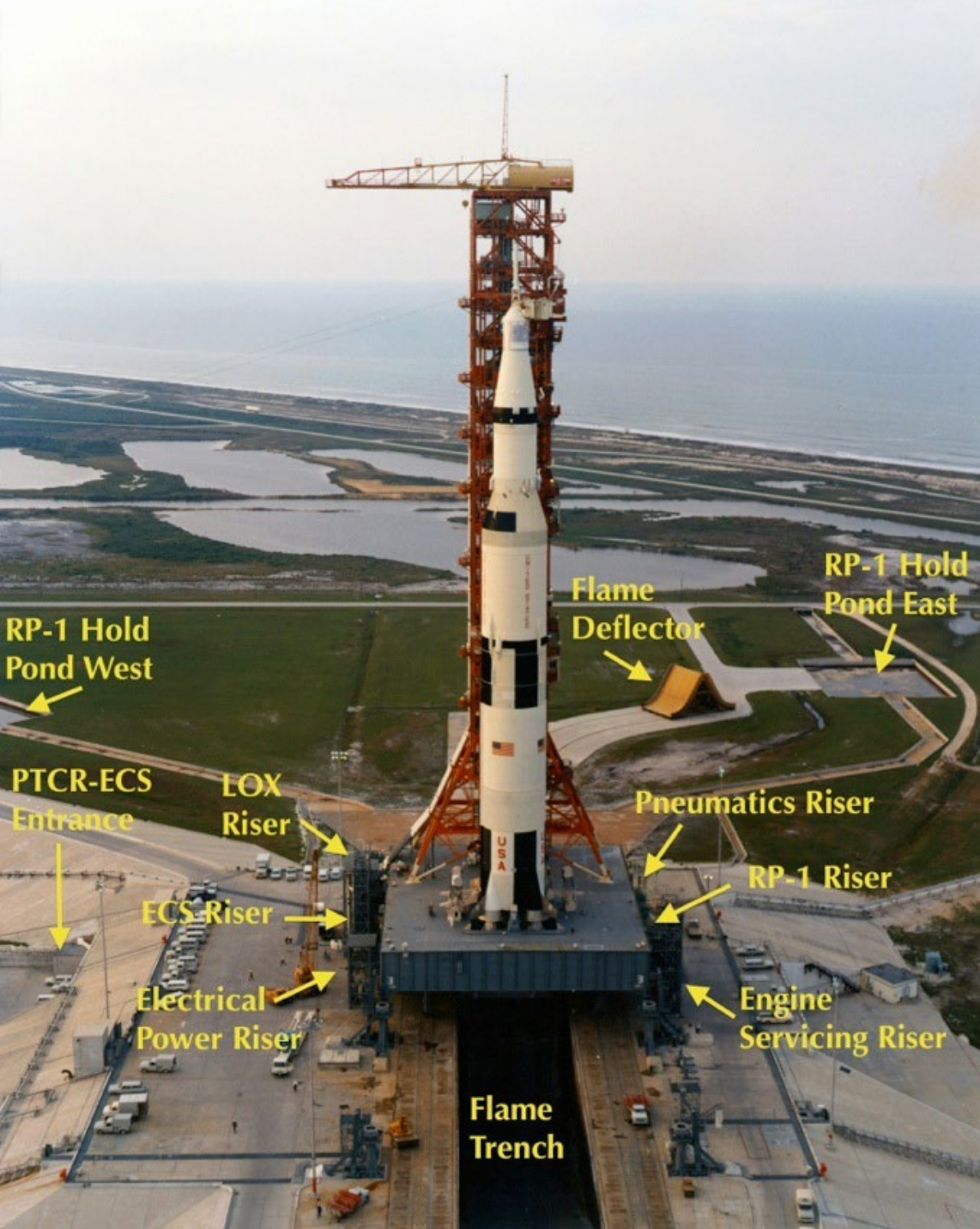


# Discussion Groups

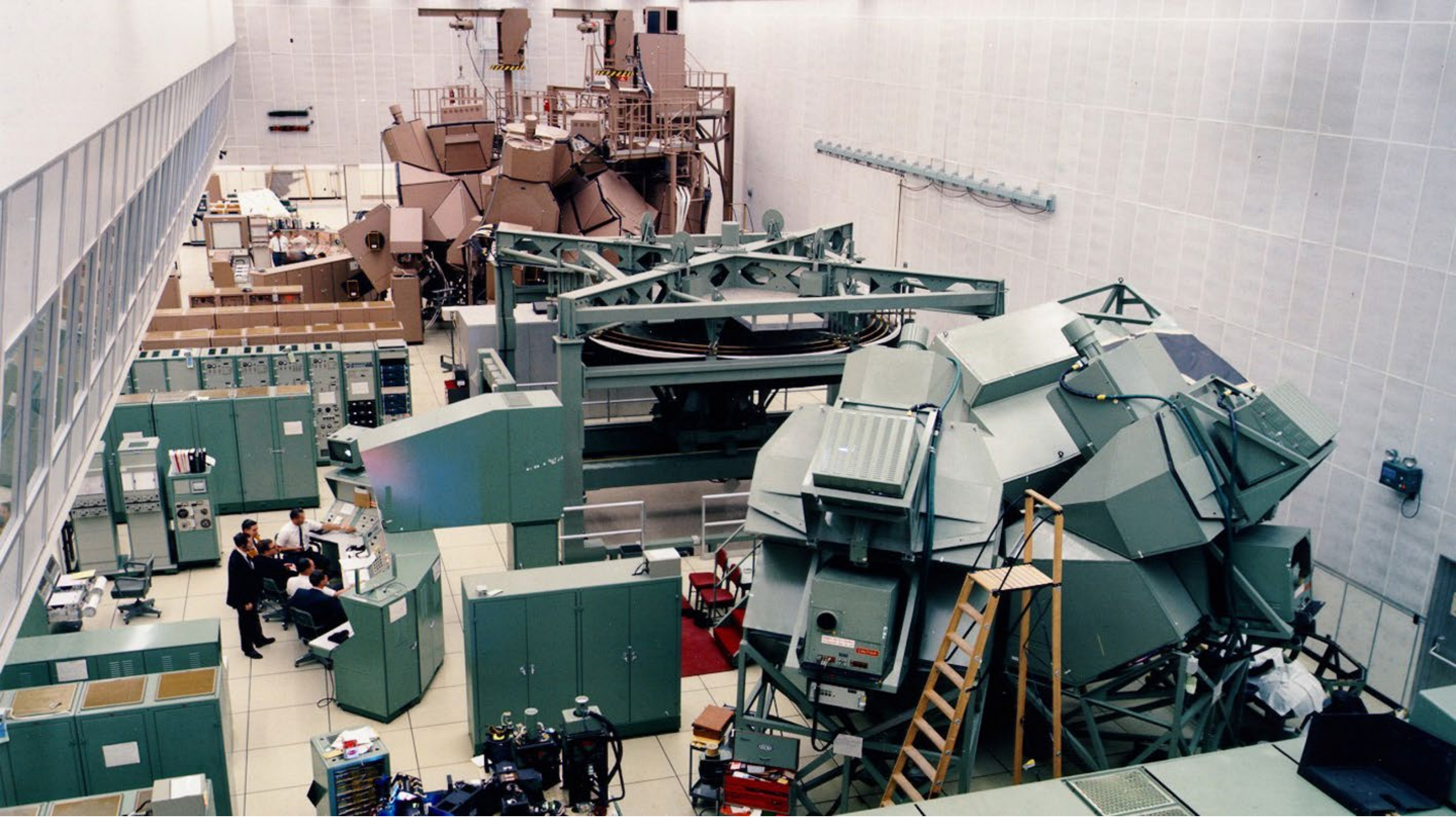
- Benson Chapter 6 (“LC-39 Plans Take Shape”)
  - Figuring out that a road was better than railroad or canal
- Ward Chapter 5 (“The VAB and the Mobile Launcher”)
  - How the pieces were put together
- Ward Chapter 8 (“Life at the Launch Pad”)
  - Safety, Security, and Mission requirements

















AS-107	LAUNCH SEQUENCE START	S-IC INTERTANK ARM RETRACTED	S-IC IGNITION	ENGINE STOP
RANGE SAFE	S-IC LOS TANK PROTECTIVE	S-IC NO. 1 INITIAL POWER	CONDUIT	ENGINE STOP
ENGINE SUPPORT PUMP COMPLETE	S-IC LOS TANK PROTECTIVE	S-IC NO. 2 INITIAL POWER	LIFTOFF	CON STOP
S-IC PRESS COMPLETE	S-IC LOS TANK PROTECTIVE	S-IC NO. 3 INITIAL POWER	S-IC FORWARD ENGINE STOP	S-IC BEHIND ENGINE STOP
S-IC PRESS COMPLETE	S-IC LOS TANK PROTECTIVE	S-IC PROPELLANTS PRESSURIZED	S-IC FORWARD ENGINE STOP	S-IC BEHIND ENGINE STOP
S-IC READY	S-IC LOS TANK PROTECTIVE	S-IC FORWARD ARM RETRACTED	S-IC ENGINE START	TEST HOLDING
ENG READY	S-IC PROPELLANTS PRESSURIZED	S-IC FORWARD ARM RETRACTED	S-IC ENGINE STOP	TEST COUNTING
S-IC INTERTANK ARMER DISARMED	S-IC PROPELLANTS PRESSURIZED	S-IC FORWARD ARM RETRACTED	S-IC ENGINE STOP	TEST COUNTING



