

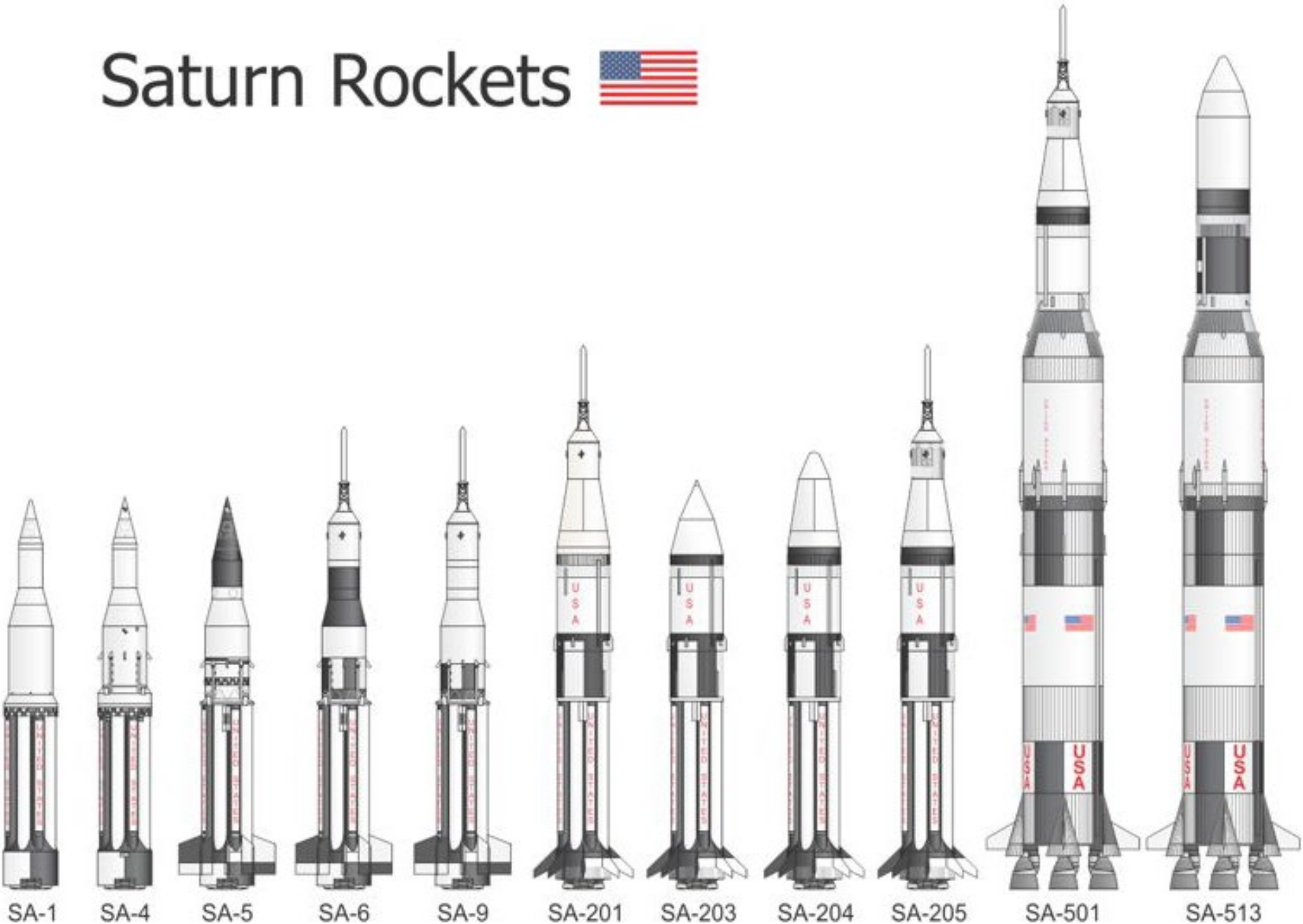
# The Saturn V

INST 154

Apollo at 50

[Apollo 11 Launch](#)

# Saturn Rockets



SA-1

SA-4

SA-5

SA-6

SA-9

SA-201

SA-203

SA-204

SA-205

SA-501

SA-513

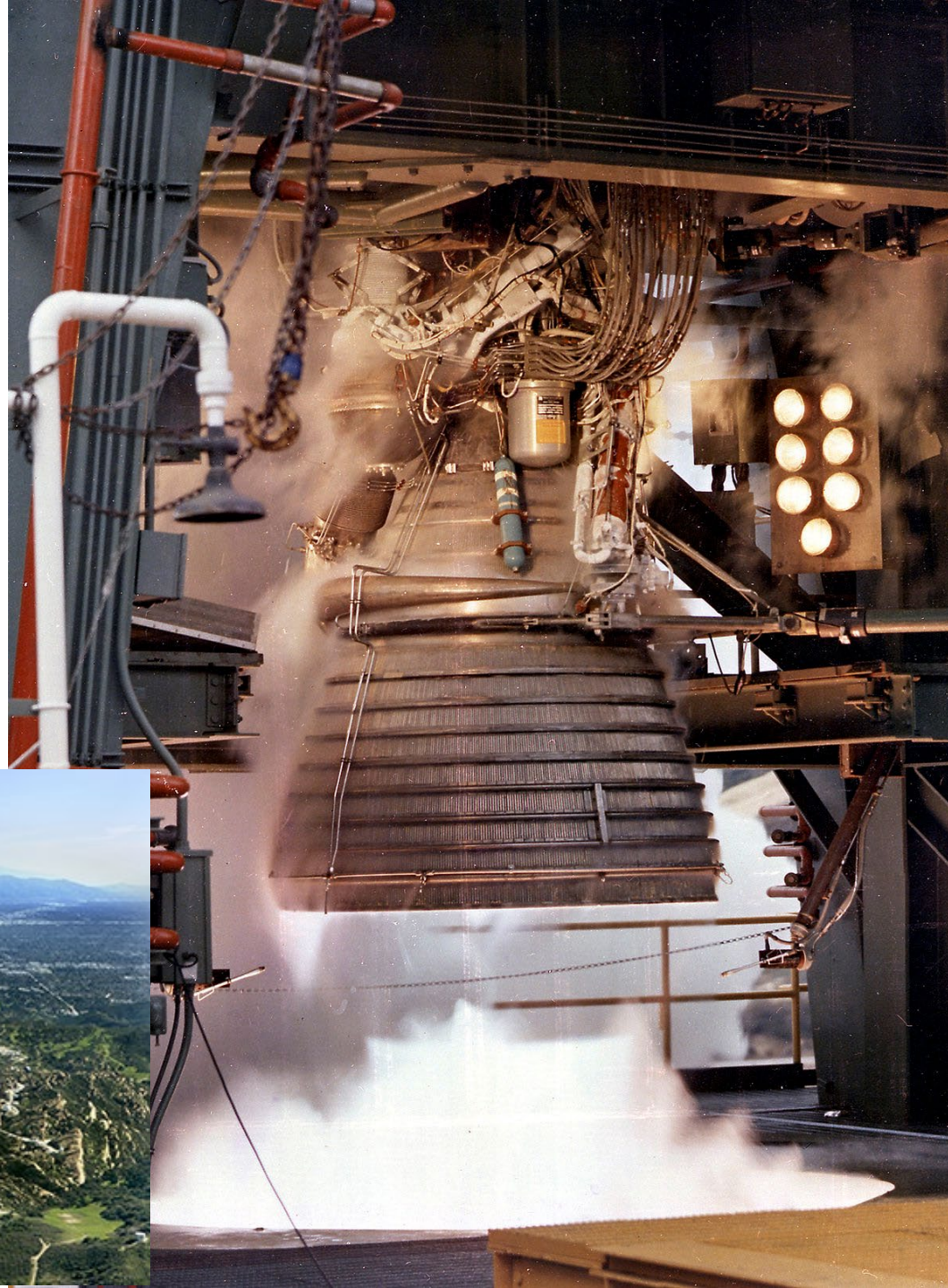




J-2 →

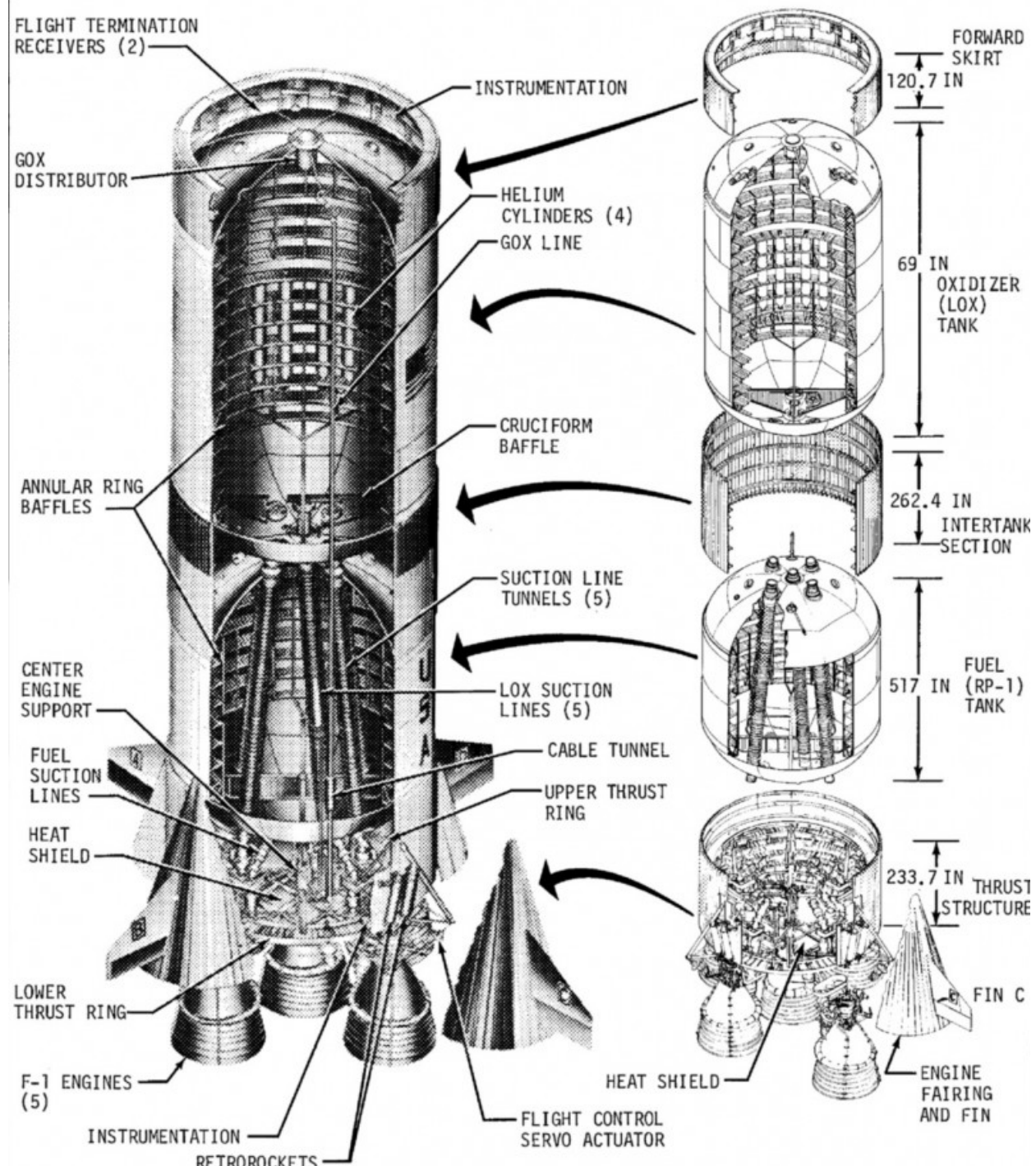
← F-1

(Rocketdyne)  
Santa Susana  
Field Laboratory





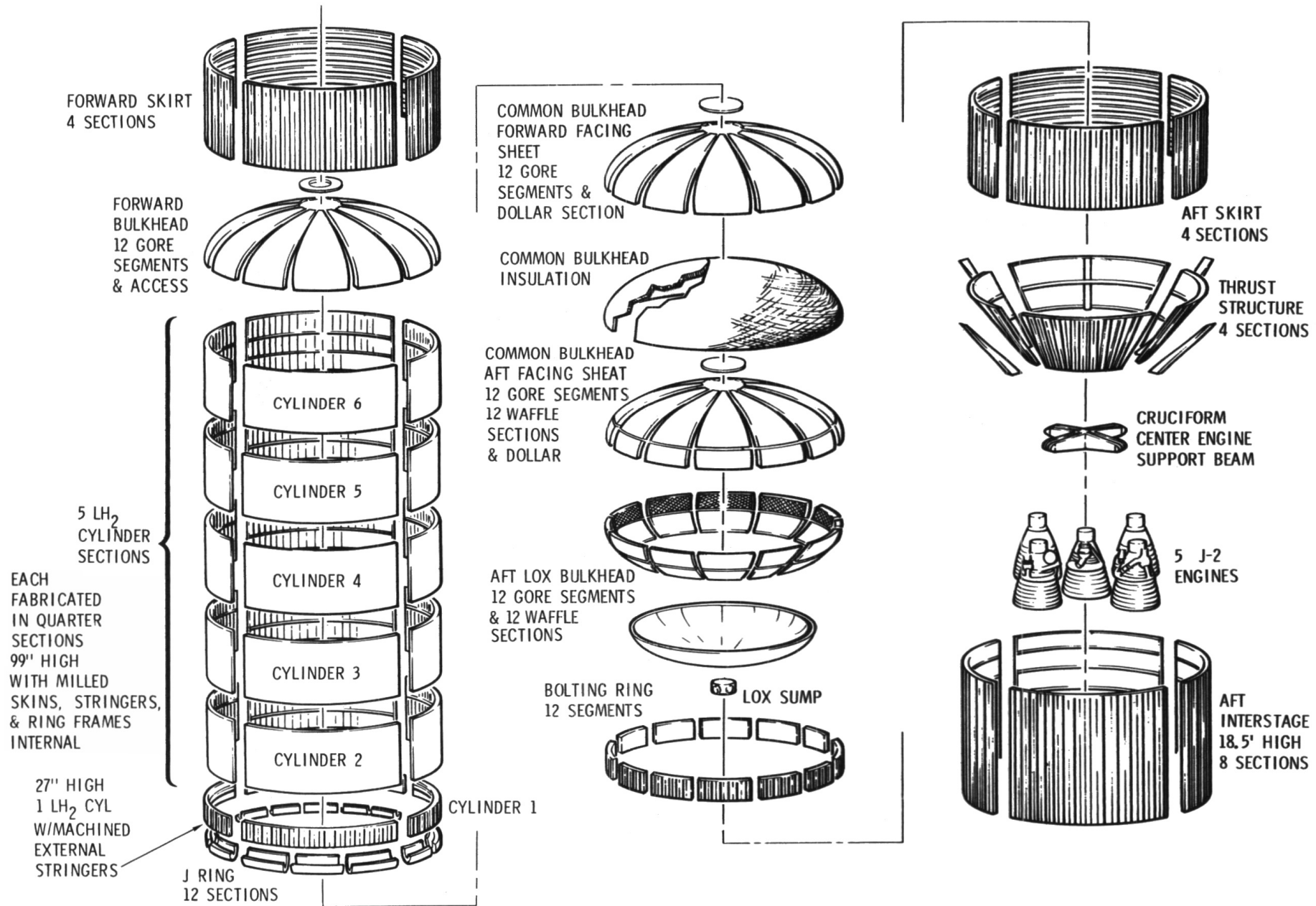
# S-IC First Stage





# (Boeing) Michoud Assembly Facility (S-IC)





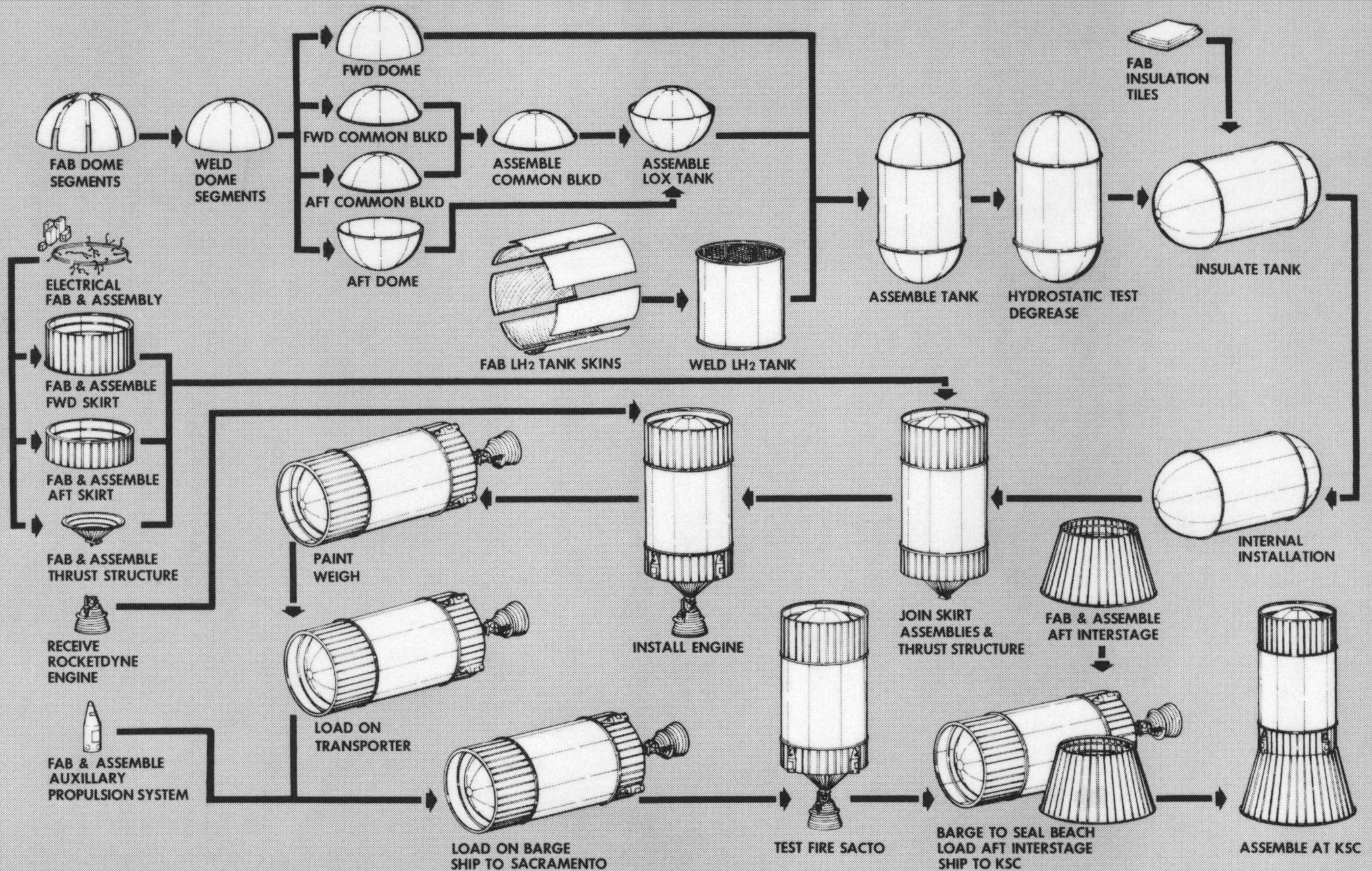
S-II EXPLODED VIEW



(North American)  
Seal Beach  
Assembly Facility  
(S-II Second Stage)

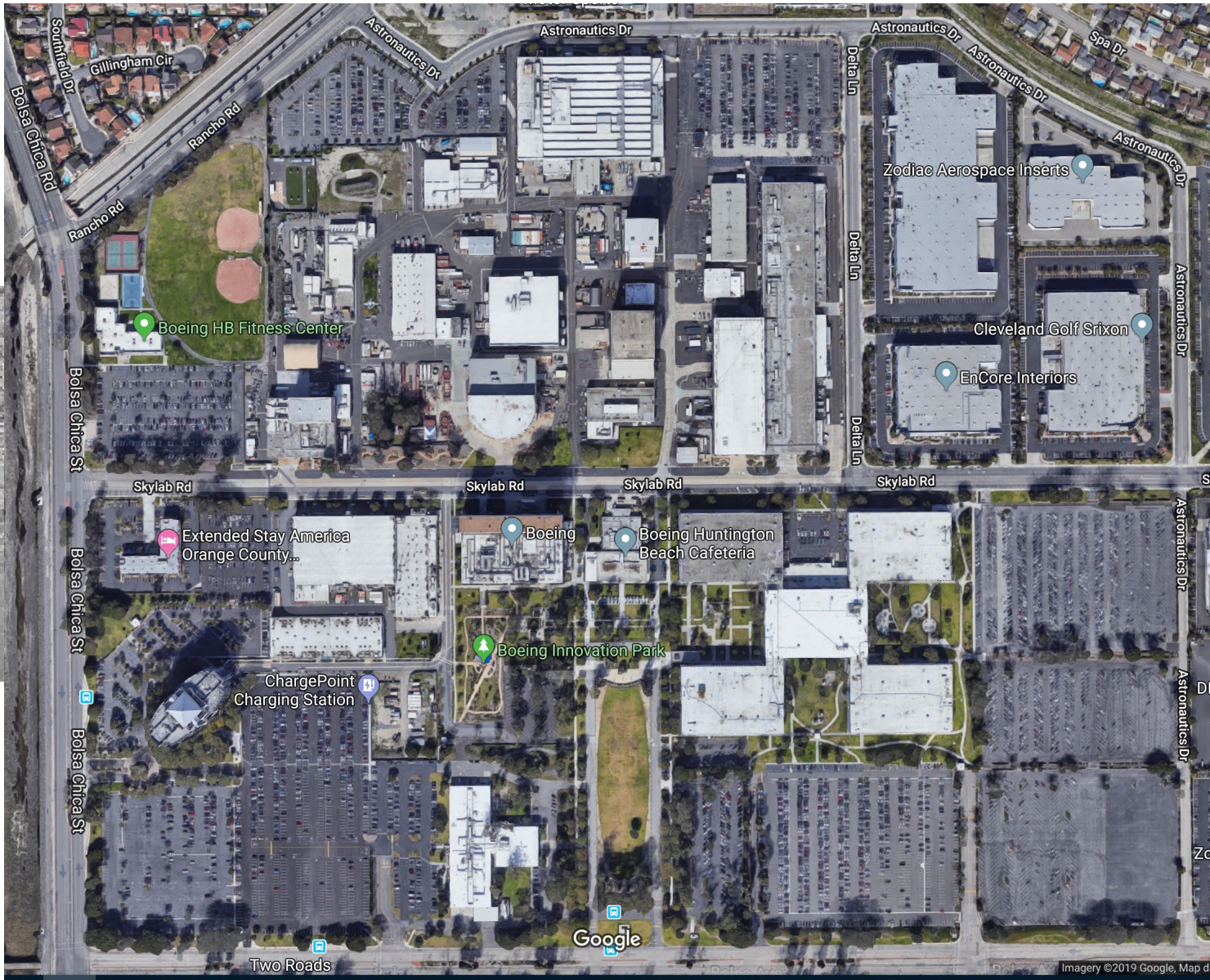


# SIVB-V MANUFACTURING FLOW SEQUENCE



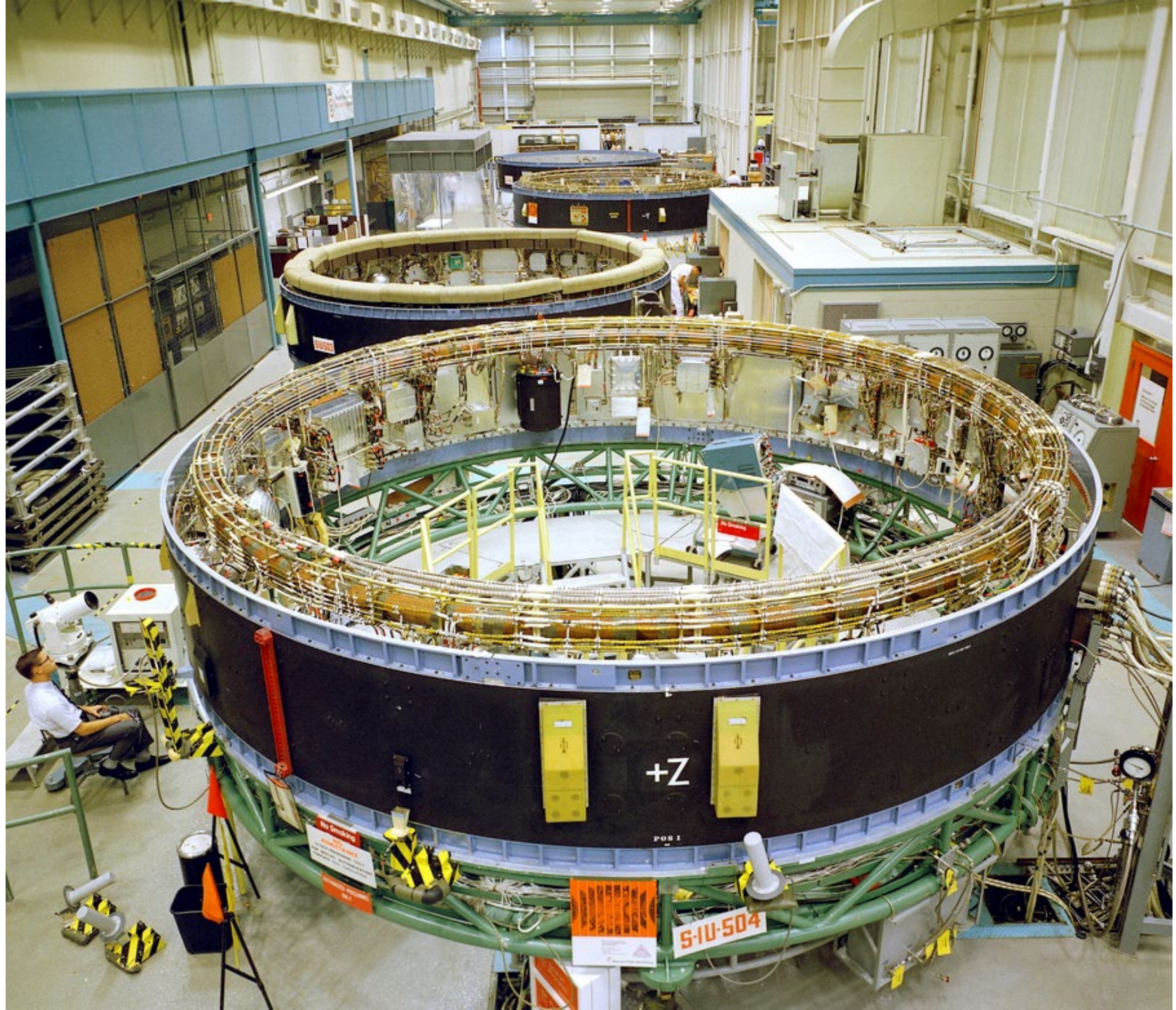


# (Douglas) Huntington Beach Facility (S-IVB Third Stage)





(IBM)  
Huntsville Plant  
(Instrument Unit)





# The Pregnant Guppy



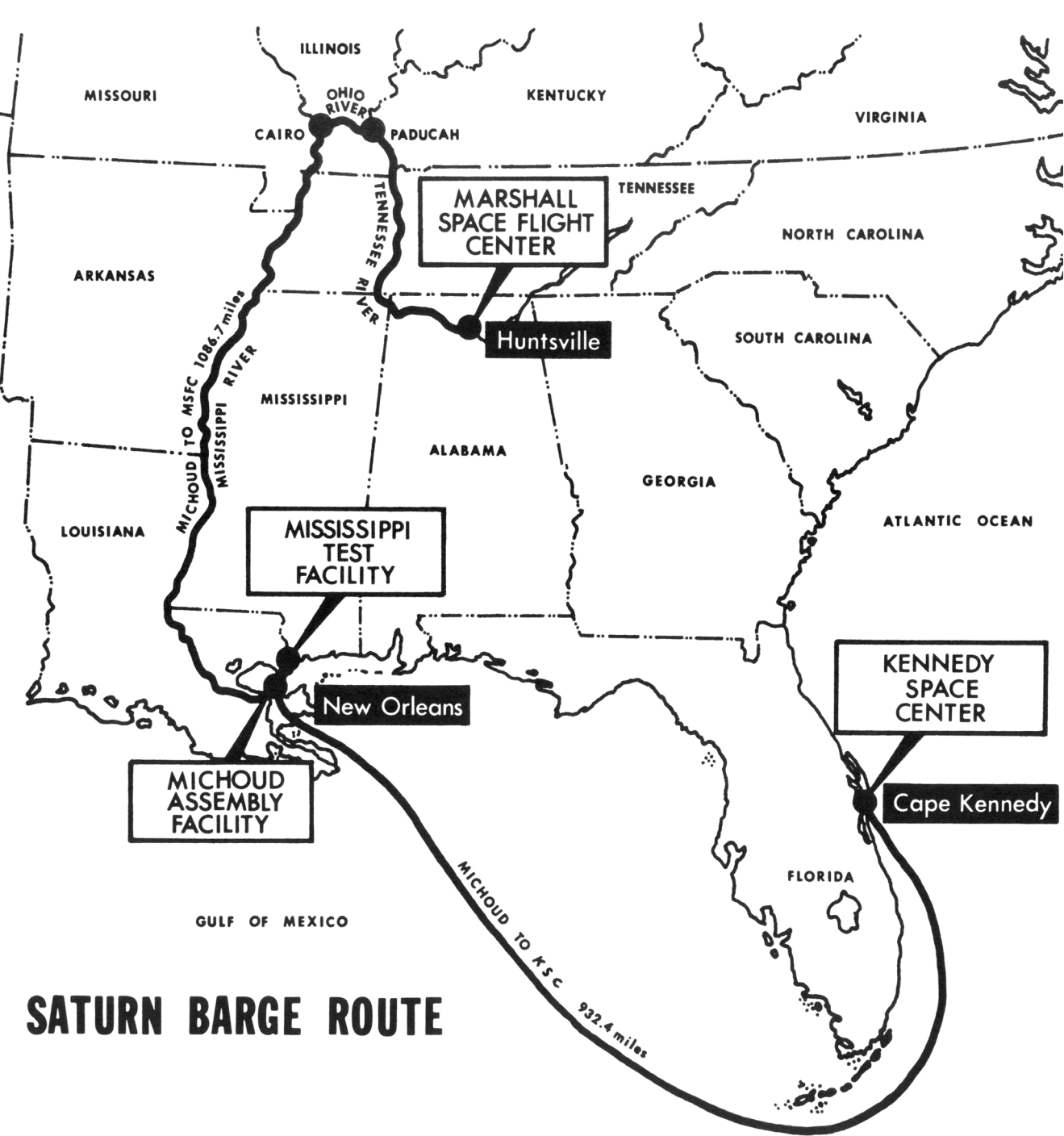














# Dynamic Test Facility (Marshall Space Flight Center)





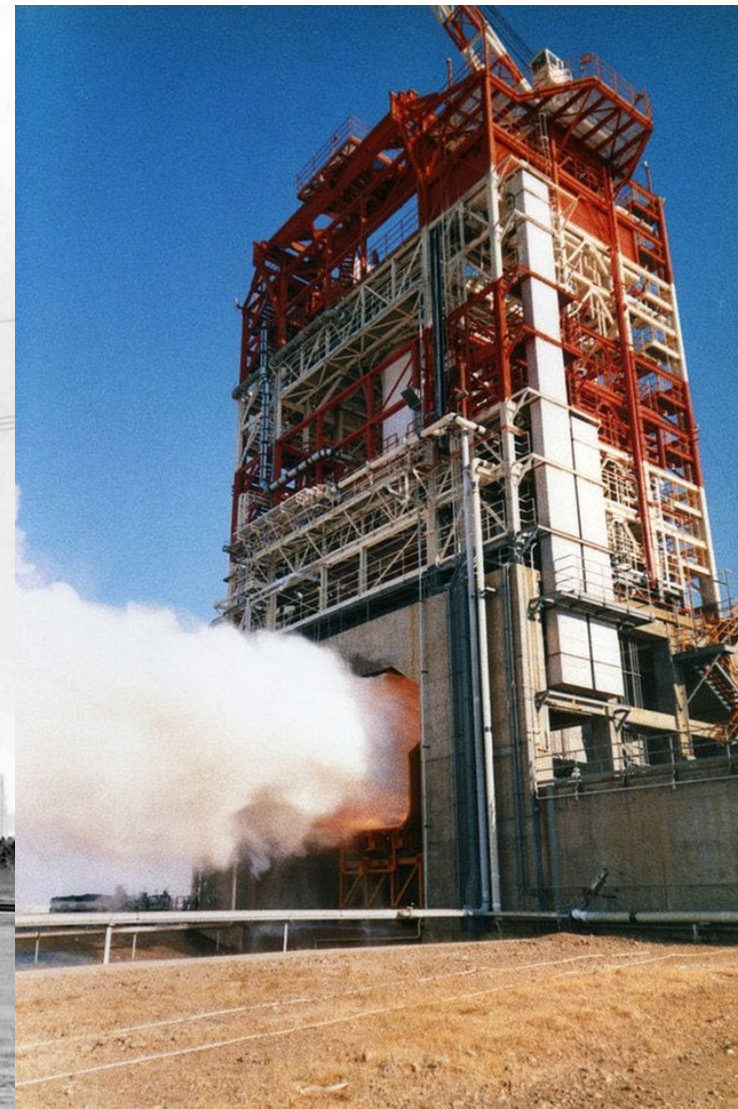
# Mississippi Test Facility

S-IC S-II

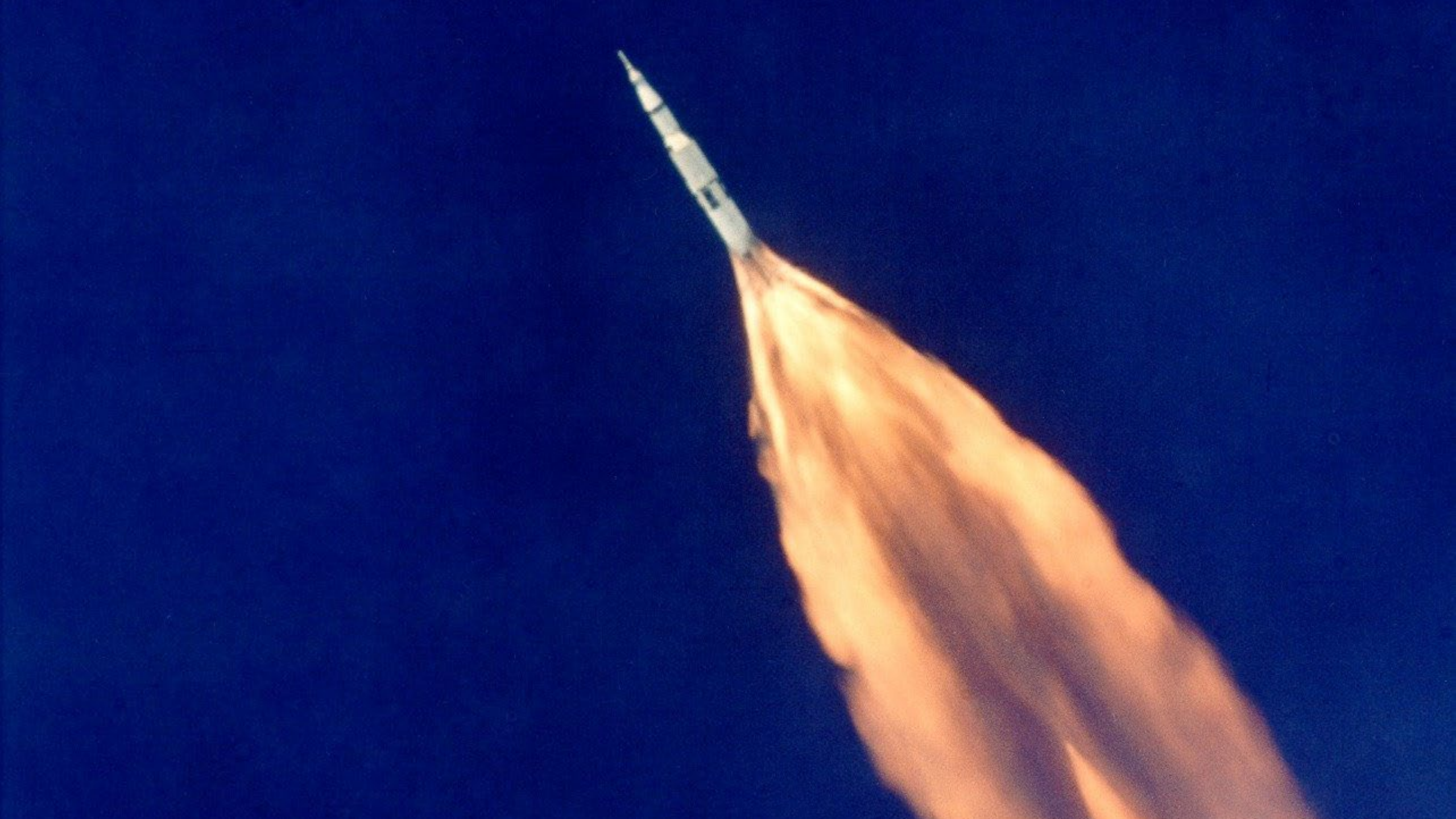


# Sacramento Test Facility

S-IVB









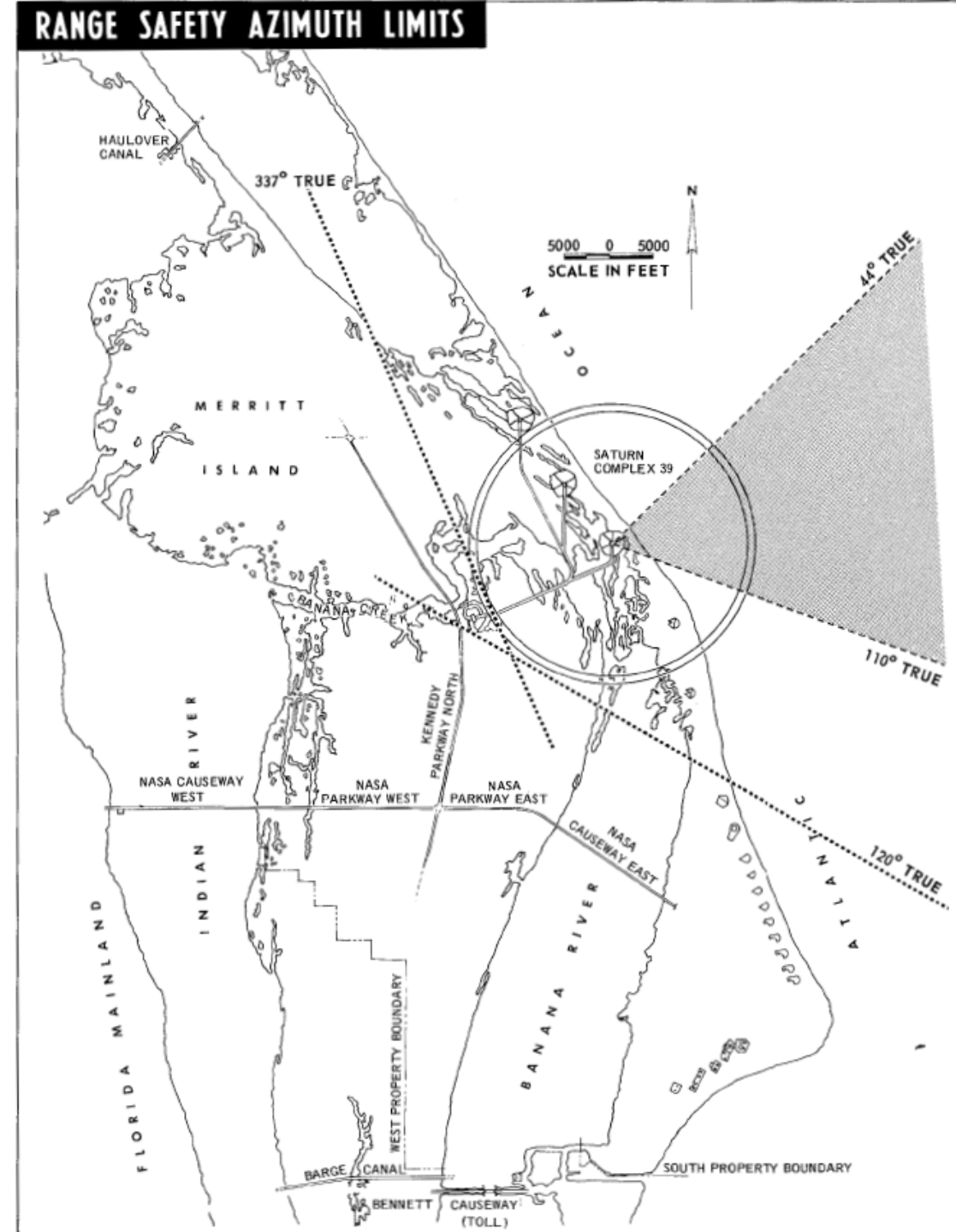
A  
Used  
F-1





# Saturn V Mission Sequence

- SA-500F (May-October 1966)
  - Facilities integration vehicle
- Apollo 4 (November 1967)
  - All-up test
- Apollo 6 (April, 1968)
  - Pogo
  - SLA failure
  - Two S-II engine failures
  - S-IVB restart failure
- Apollo 8 (December, 1968)
  - First crewed flight





# Discussion Groups

- Moon Machines Video (“Saturn V”)
  - An overview of Marshall Space Flight Center’s Saturn V development
- Bilstein Chapter 2 (“Aerospace Alphabet: ABMA, ARPA, MSFC”)
  - The evolution of the Saturn design
- Bilstein Chapter 7 (“The Lower Stages: S-IC and S-II”)
  - Development of the second stage