

- **Brief History of Manned Spaceflight**

- **SC Rotary**

- **5/01/11**

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# Dr. Robert Goddard

Inventor of 1<sup>st</sup> Liquid Fuel Rocket

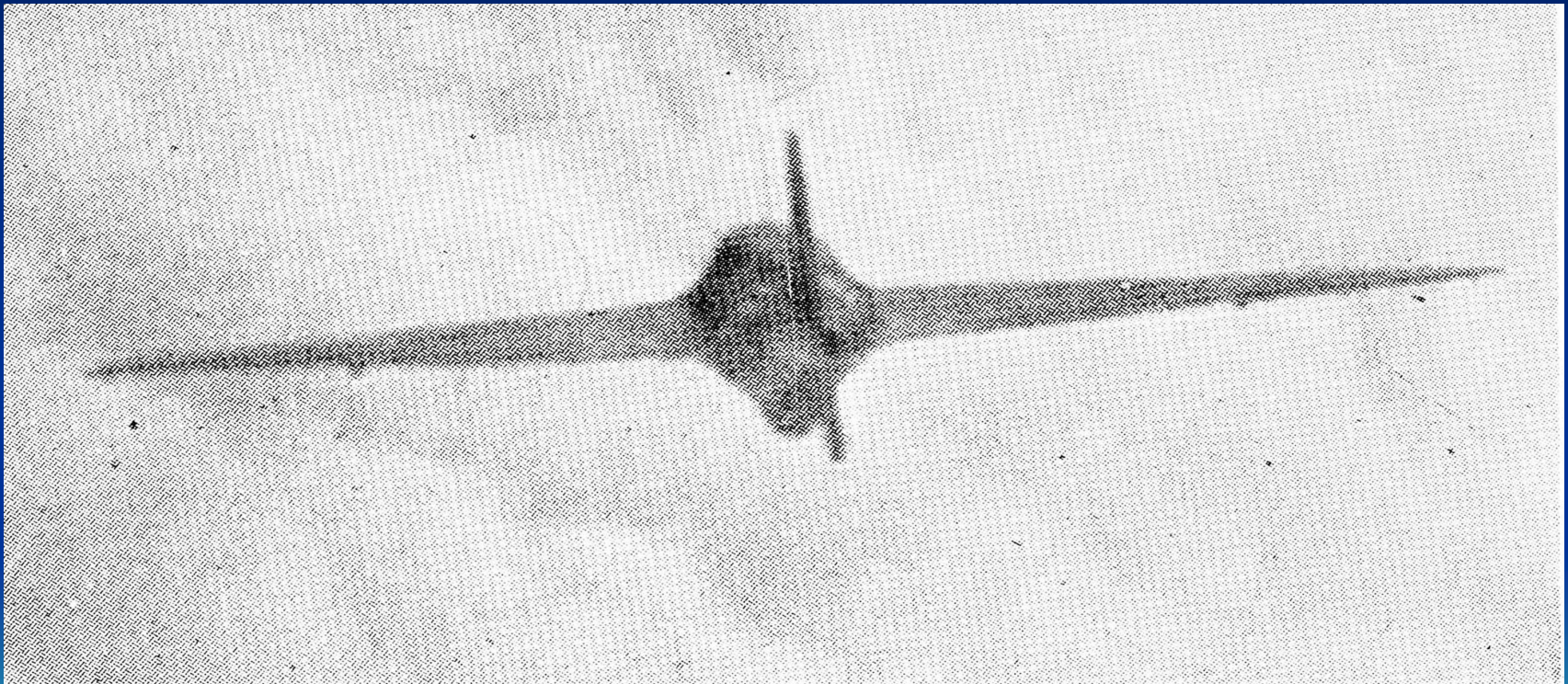




- German V-II Rocket
- 1<sup>st</sup> Operational Liquid Fuel Rocket
- Developed by Wernher von Braun
- Model at Space Center Houston



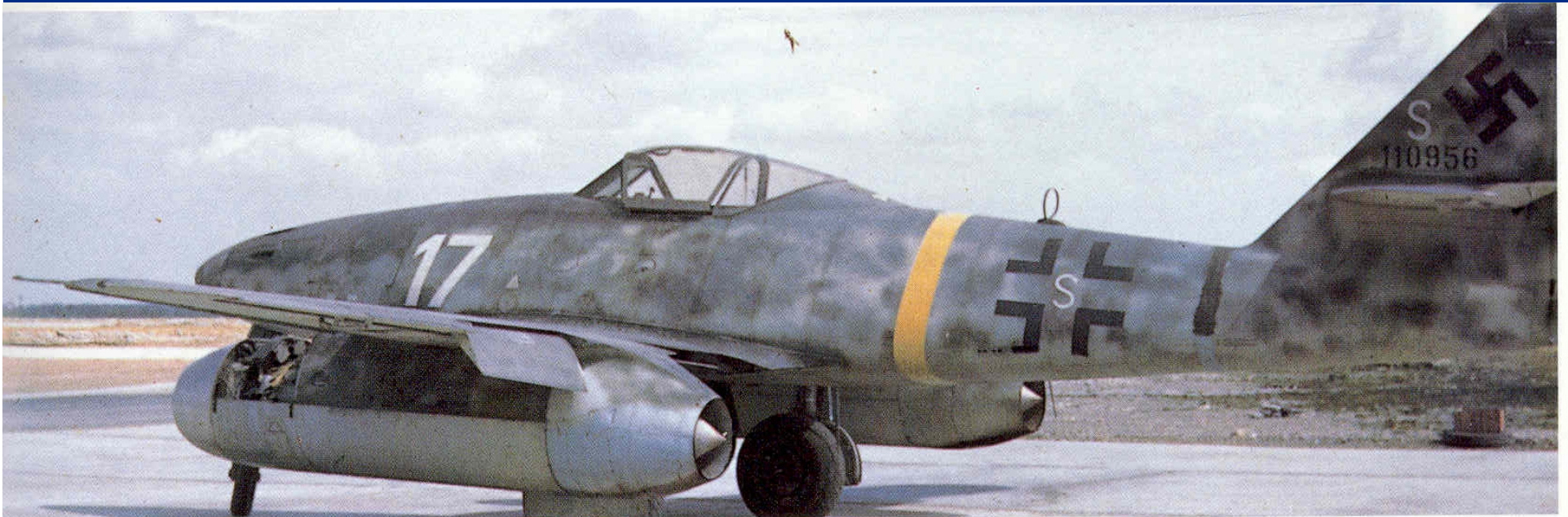
# German Me-163, WW-II 1<sup>st</sup> Operational Rocket Airplane





# German Messerschmitt Me 262

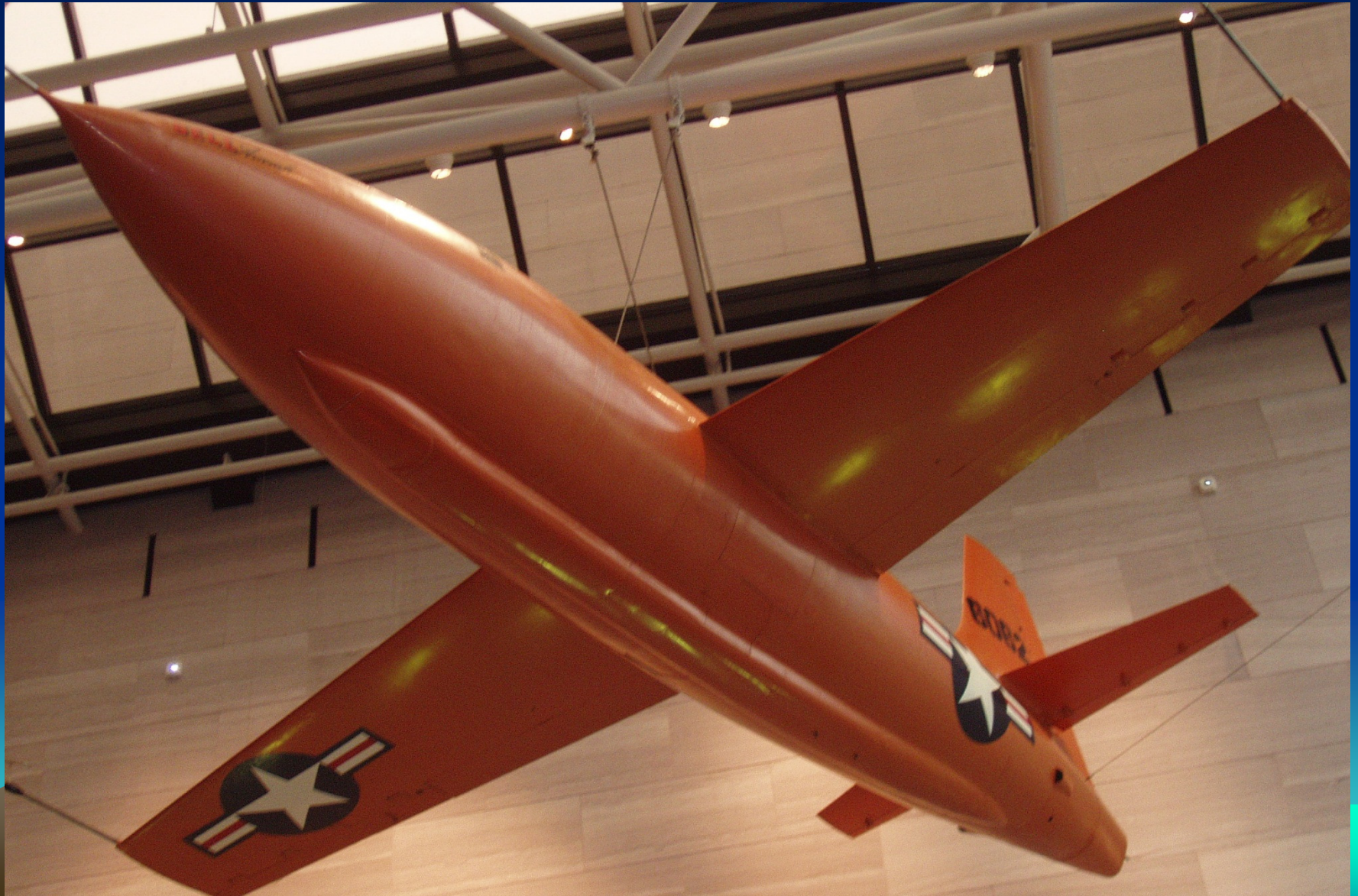
1<sup>st</sup> Operational Jet Airplane





# Bell X-1, 1<sup>st</sup> US Supersonic Rocket Aircraft

Smithsonian Air and Space Museum  
Joint NACA, Air Force Project



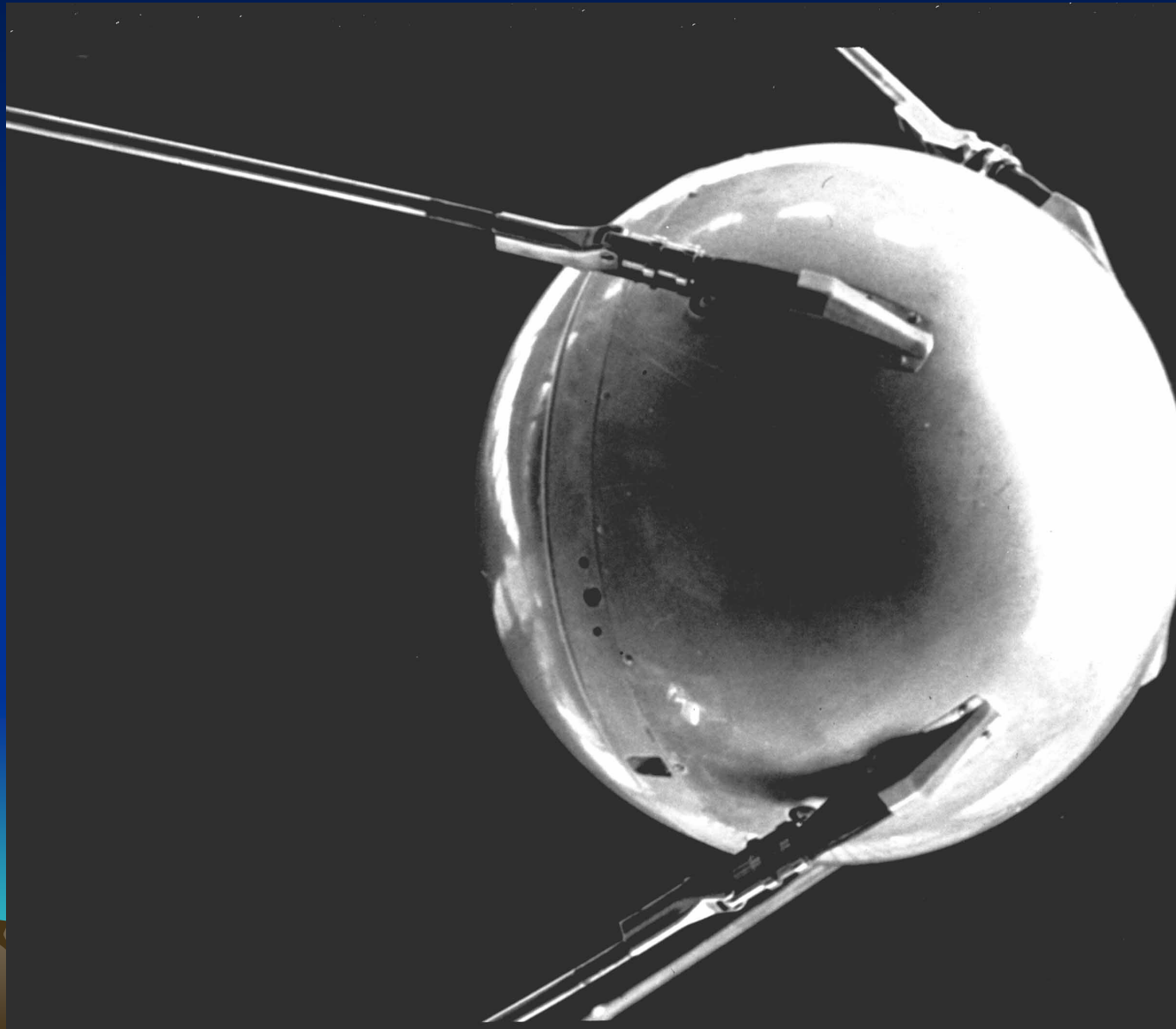


# Northrop Talon T-38

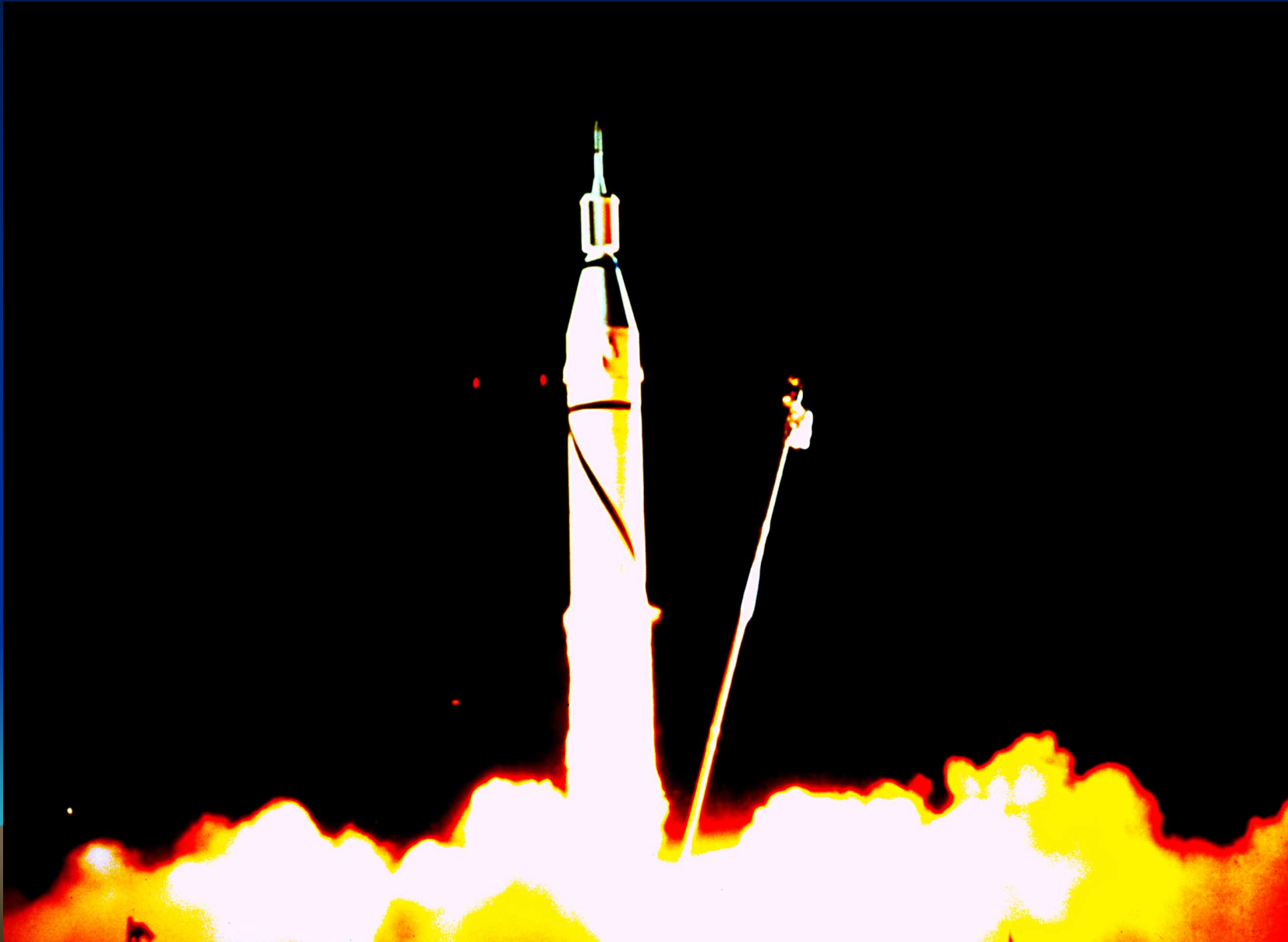
## Astronaut Supersonic Trainer



# Russian Sputnik Satellite



# Explorer-1 Satellite/Jupiter C Booster Launch By Wernher von Braun





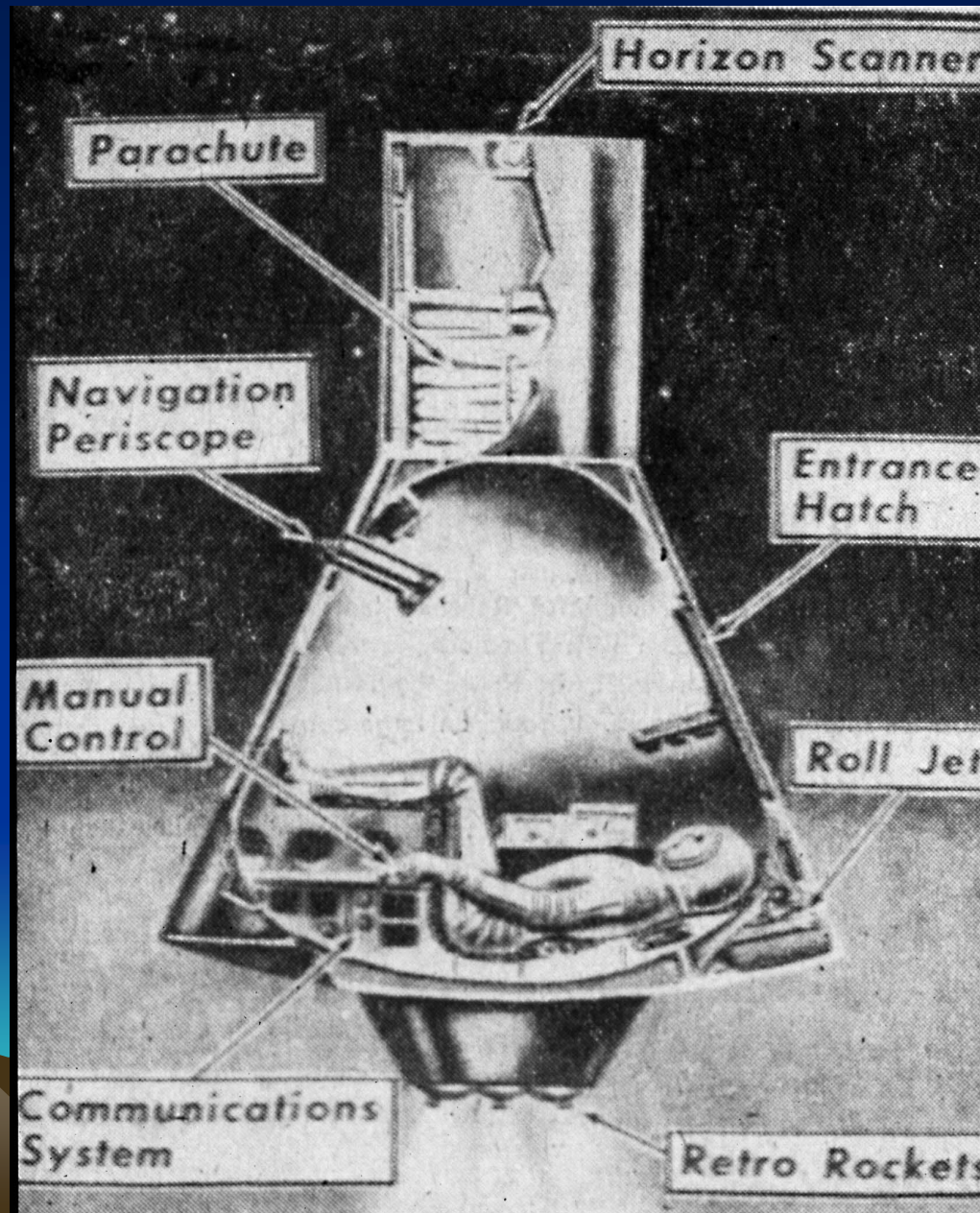
# Mercury Spacecraft Planning Session

Charlie Donlan, Robert Gilruth, Max Faget, Bob Piland





# Sketch Of Mercury Spacecraft





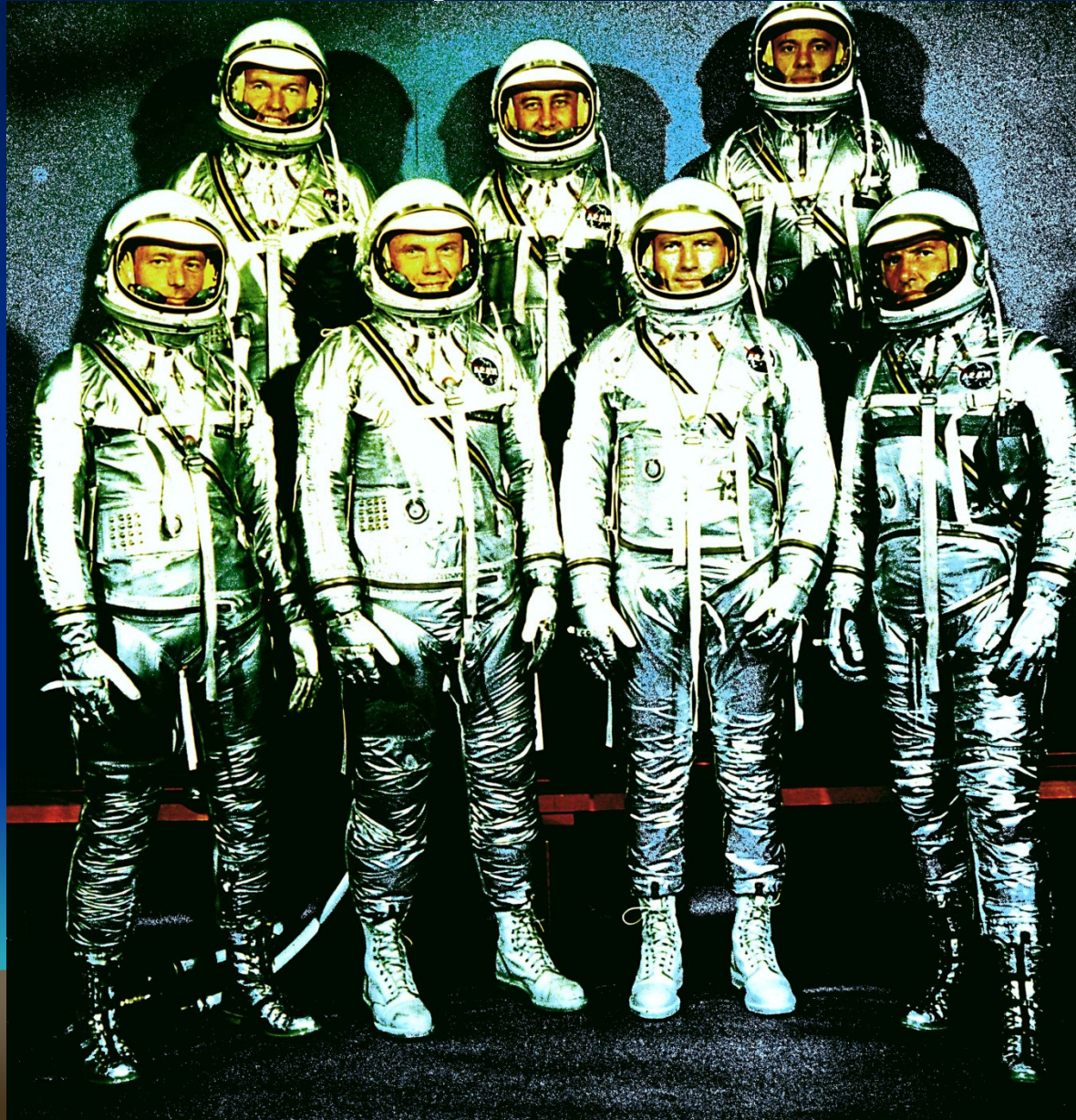
# Original 7 Astronauts

Scott Carpenter, Gordon Cooper, John Glenn, Gus Grissom,  
Wally Shirra, Alan Shepard, Deke Slayton





# Astronauts in their Space Suite Built by B. F. Goodrich





- “Ham”
- The 1<sup>st</sup>. American Astronaut
- “Astrochimp”



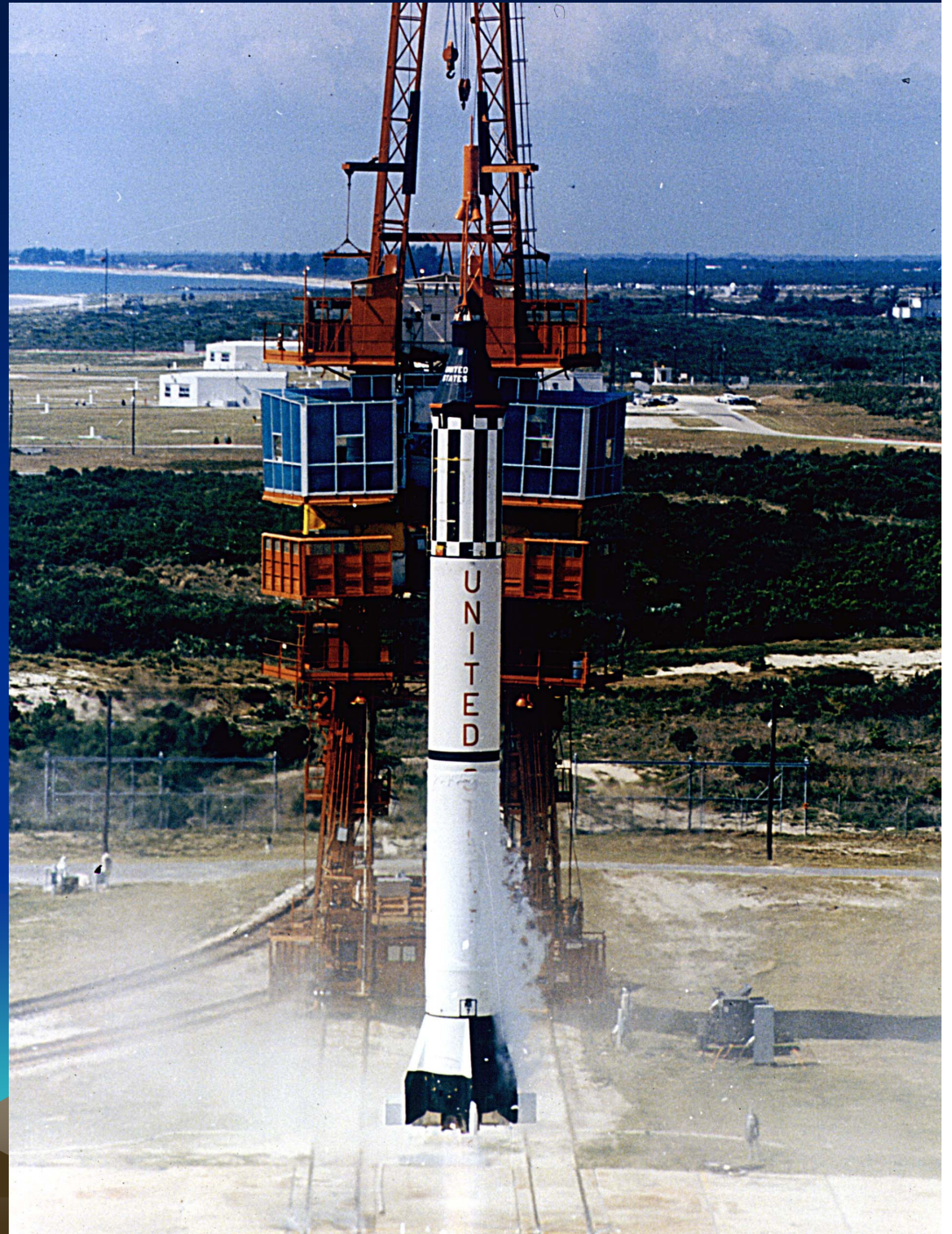


- Alan Shepard
- Mercury Spacecraft
- Freedom 7
- 1<sup>st</sup> US Manned Suborbital Flight





- Alan Shepard
- Mercury-Redstone Booster Launch
- Freedom 7
- Cape Canaveral, Florida







*MSC SITE JANUARY 1962*





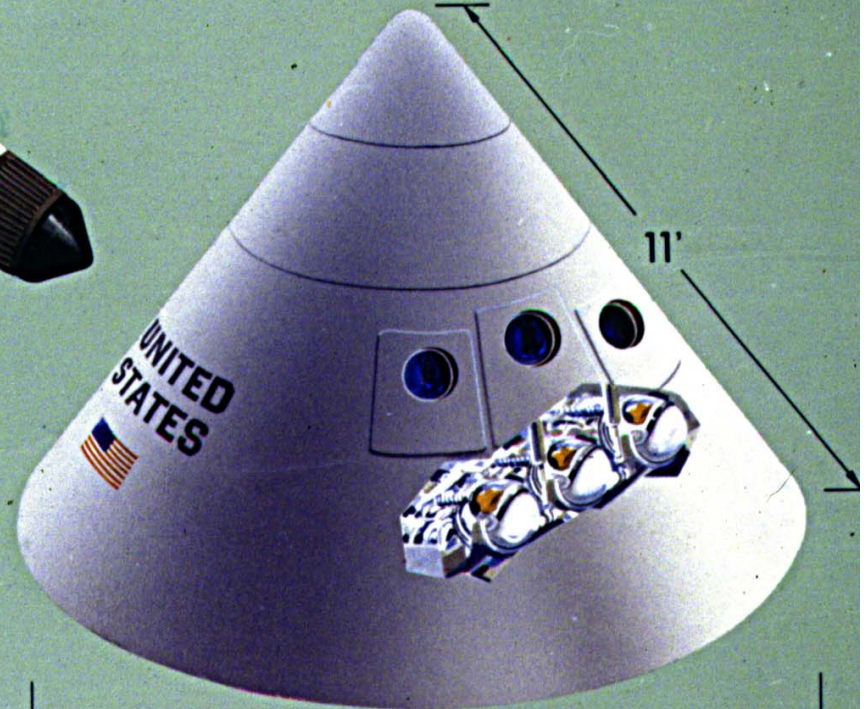
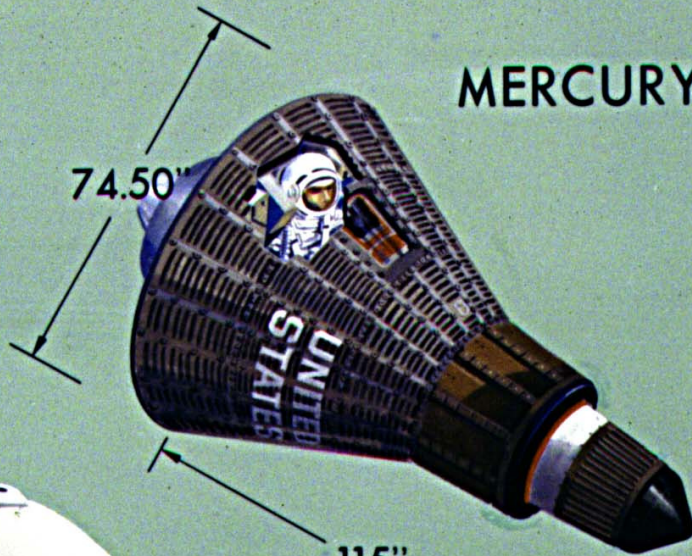
NASA

**Johnson Space Center**  
1620 Acres  
20 Major Research/Development Facilities

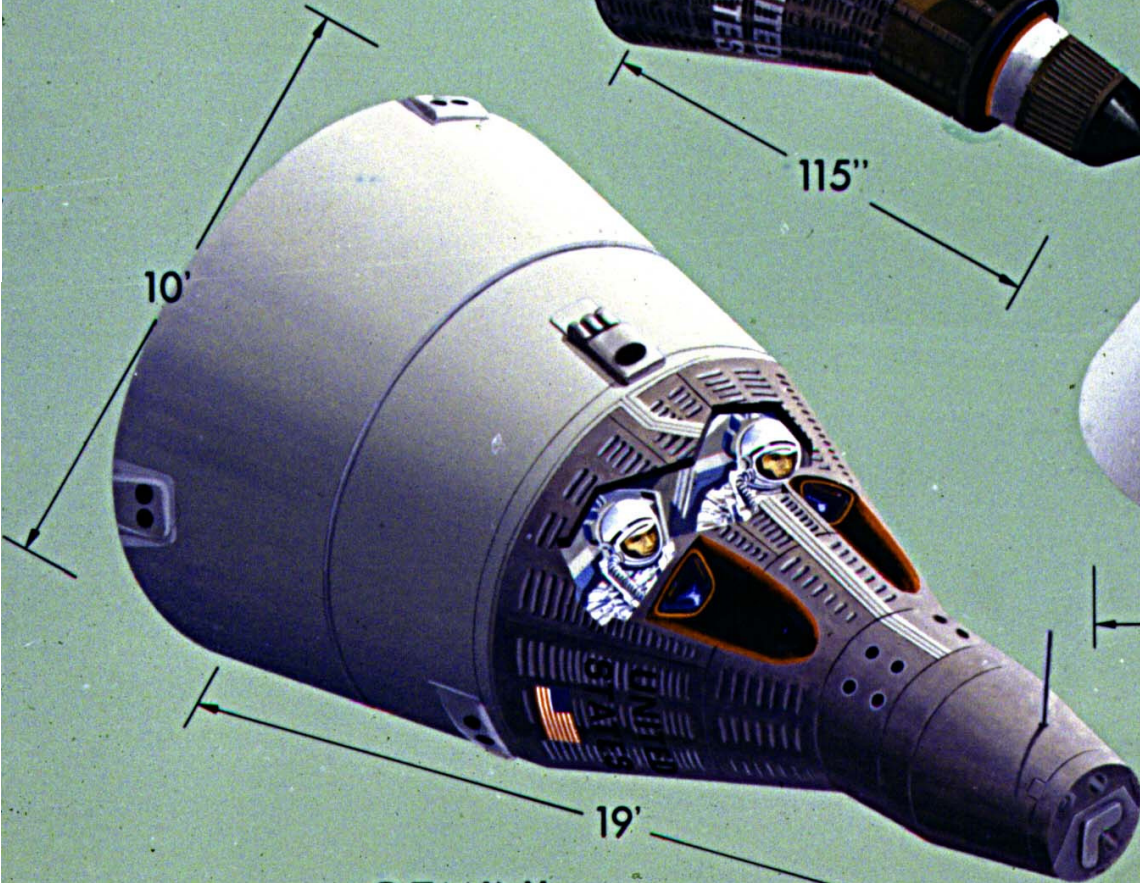
**Space Shuttle Test Facility**  
54,000 Acres  
5 Major Research/Development Facilities



MERCURY



APOLLO



GEMINI



# John Glenn, 1st US Orbital Flight

Dr. Douglas, & Space Suit Technician, Joe Smith

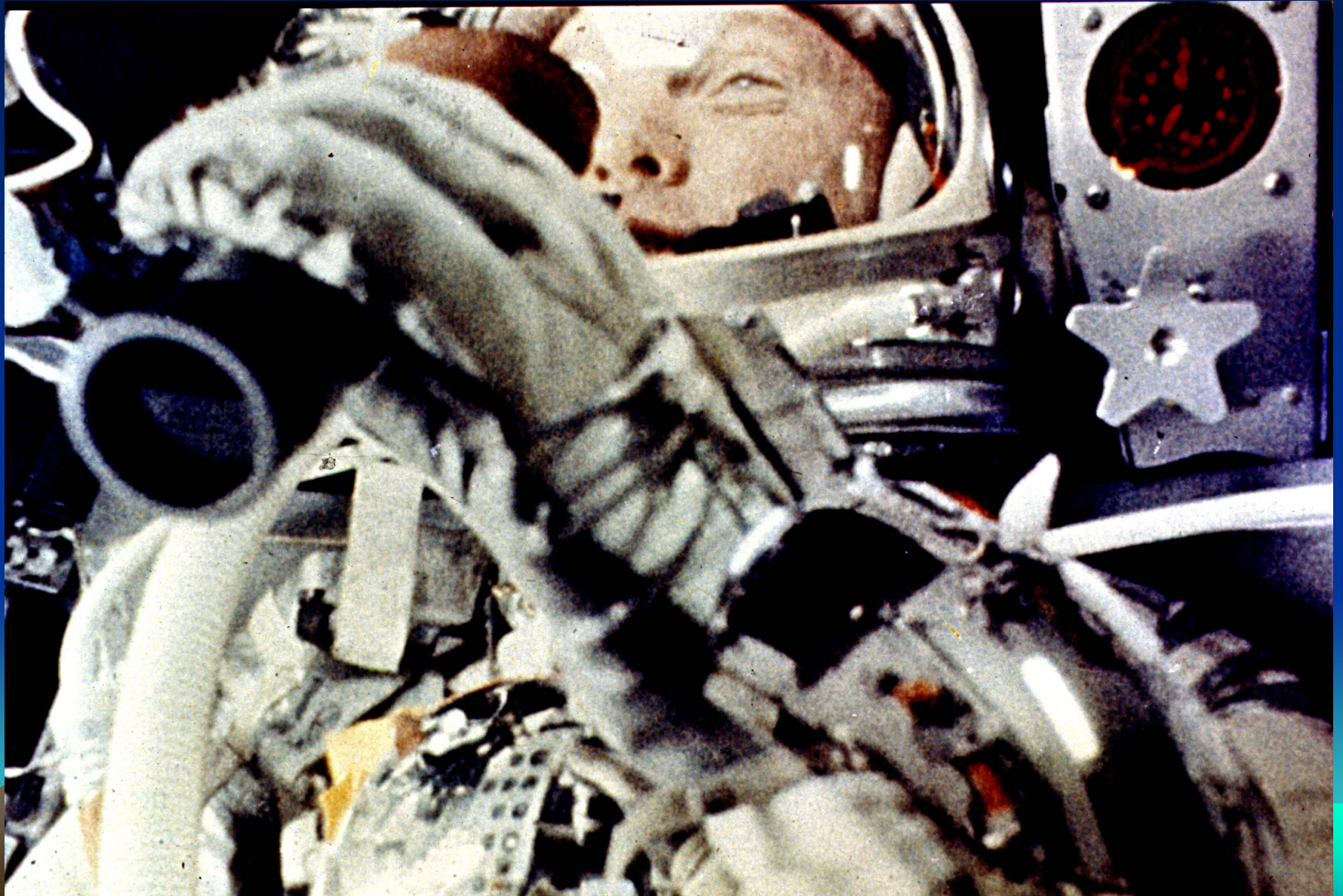


- John Glenn
- 1<sup>st</sup> US Orbital Flight
- “Friendship-7”  
Launch
- Air Force Atlas  
Booster
- Cape Canaveral,  
Florida
- February 20, 1962



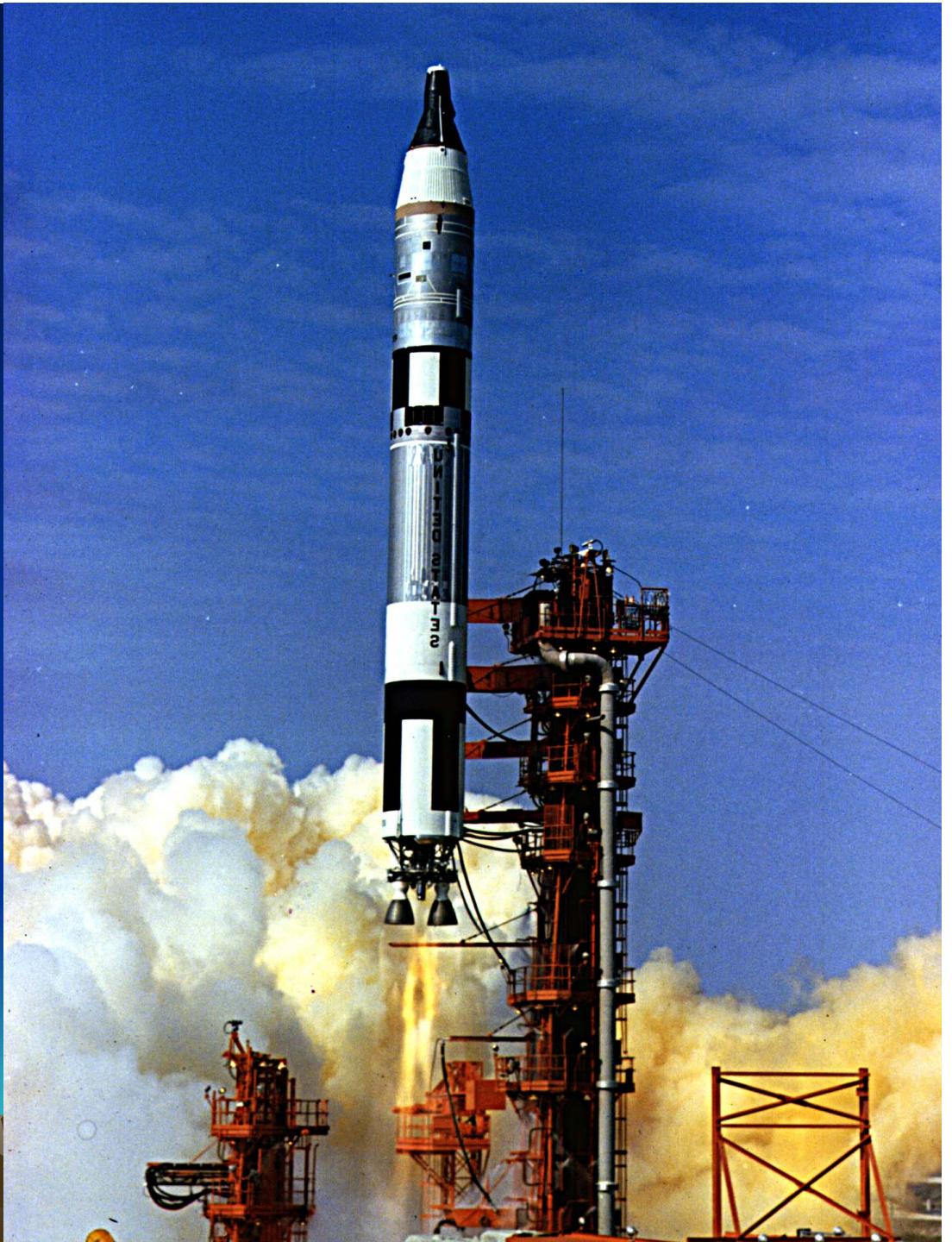


# John Glenn in Orbit Experiment





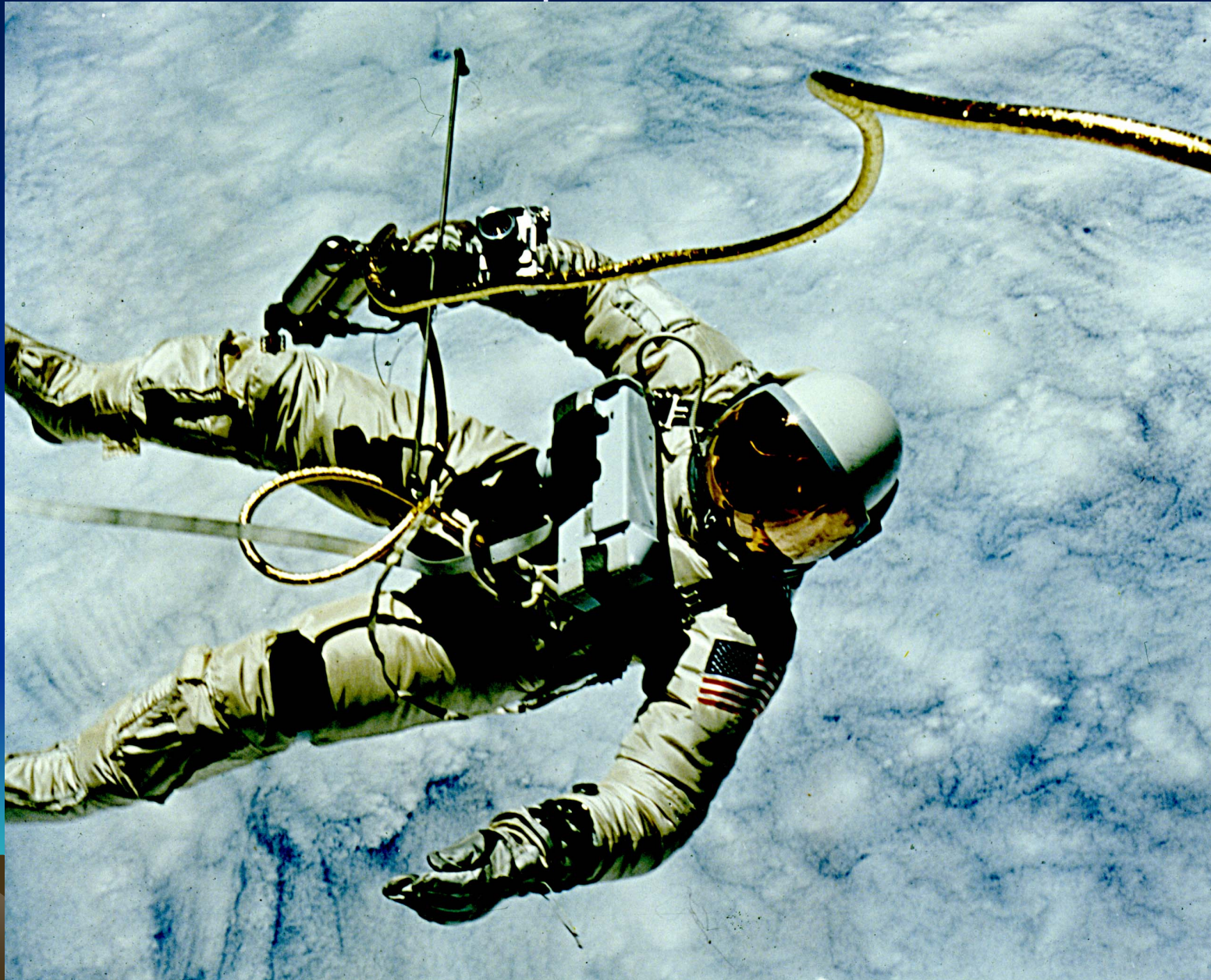
- Jim McDivitt & Ed White
- Gemini IV-Titan Booster Launch
- Cape Canaveral, Florida
- 1st Launch Controlled from Houston Space Center





# Astronaut Ed White

## 1<sup>st</sup> American Space Walk With Jets



- Dr. Wernher von Braun
- Director of Marshall Space Flight Center
- Developed the Redstone Rockets used on Mercury Suborbital Flights
- Developed the Saturn Rockets for Apollo



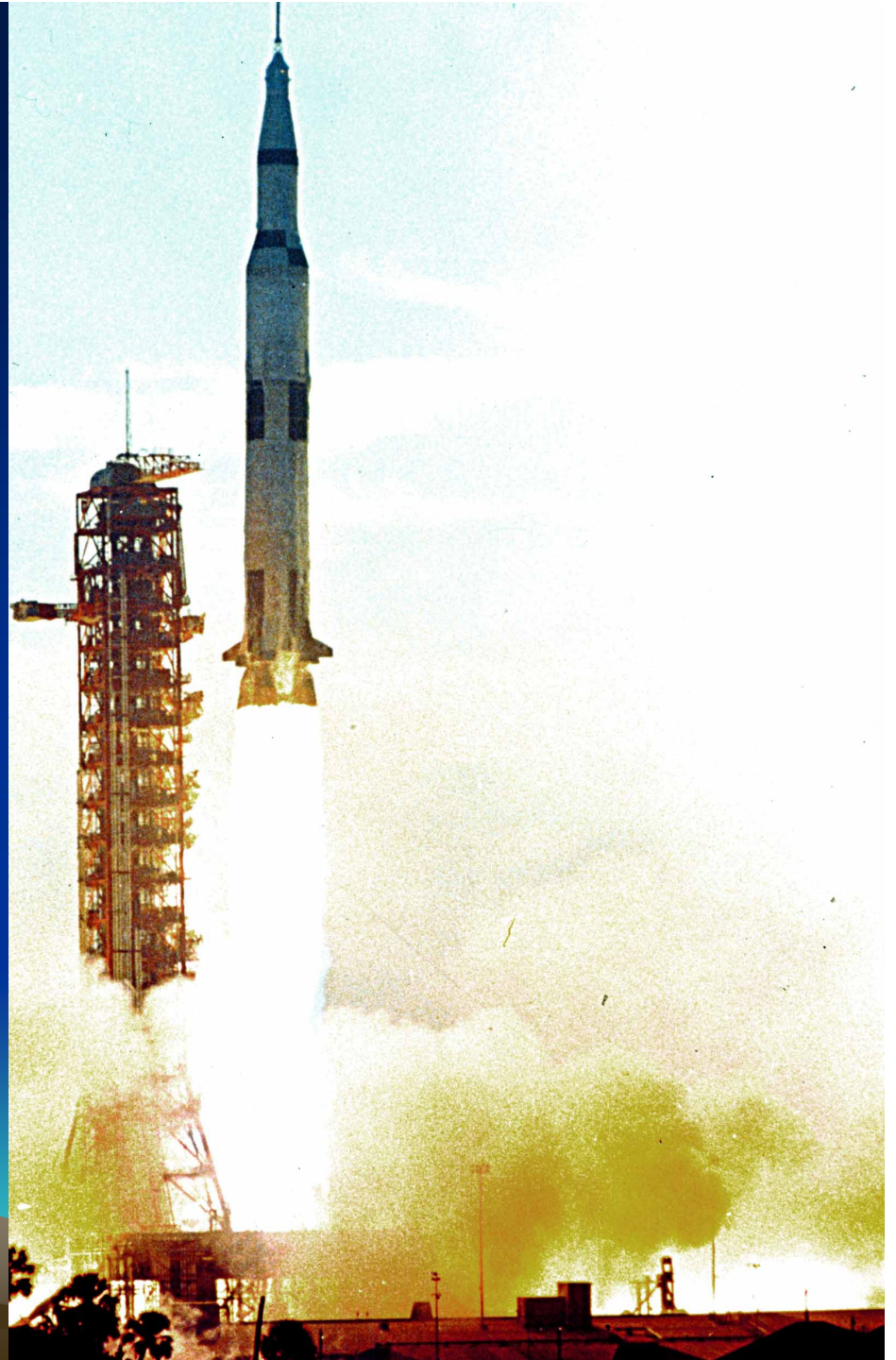


- Apollo 8 Astronauts
- Jim Lovell, Bill Anders, & Cmdr. Frank Borman
- 1<sup>st</sup> Manned Lunar Orbit





- Apollo 8-Saturn V Booster Launch
- 1<sup>st</sup> Manned Spacecraft to Orbit the Moon on Xmas Eve 1958
- Cape Kennedy Launch



# Earth Rise @ the Moon



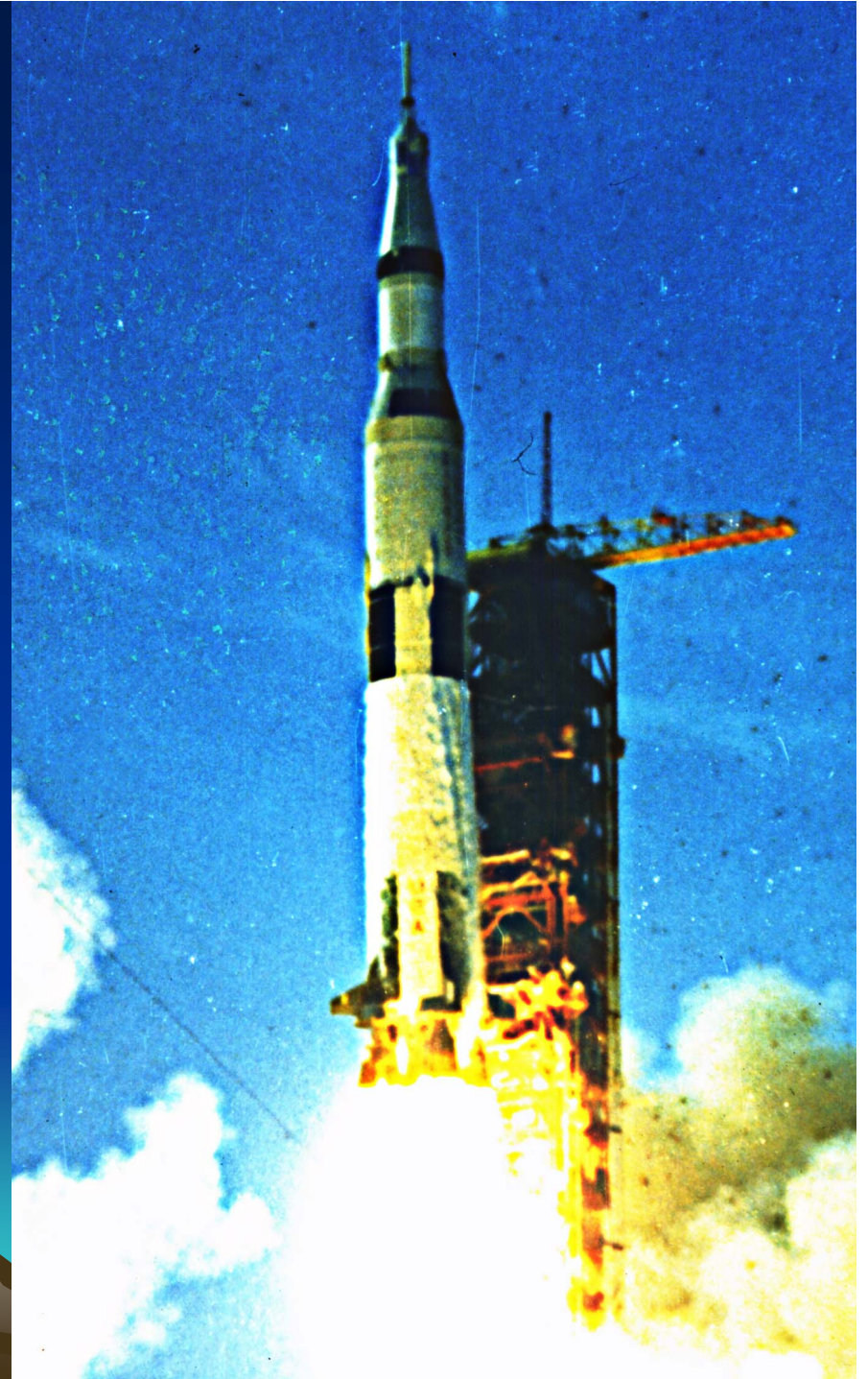


# Apollo 11 Astronauts

Commander Neil Armstrong, Mike Collins, "Buzz" Aldrin

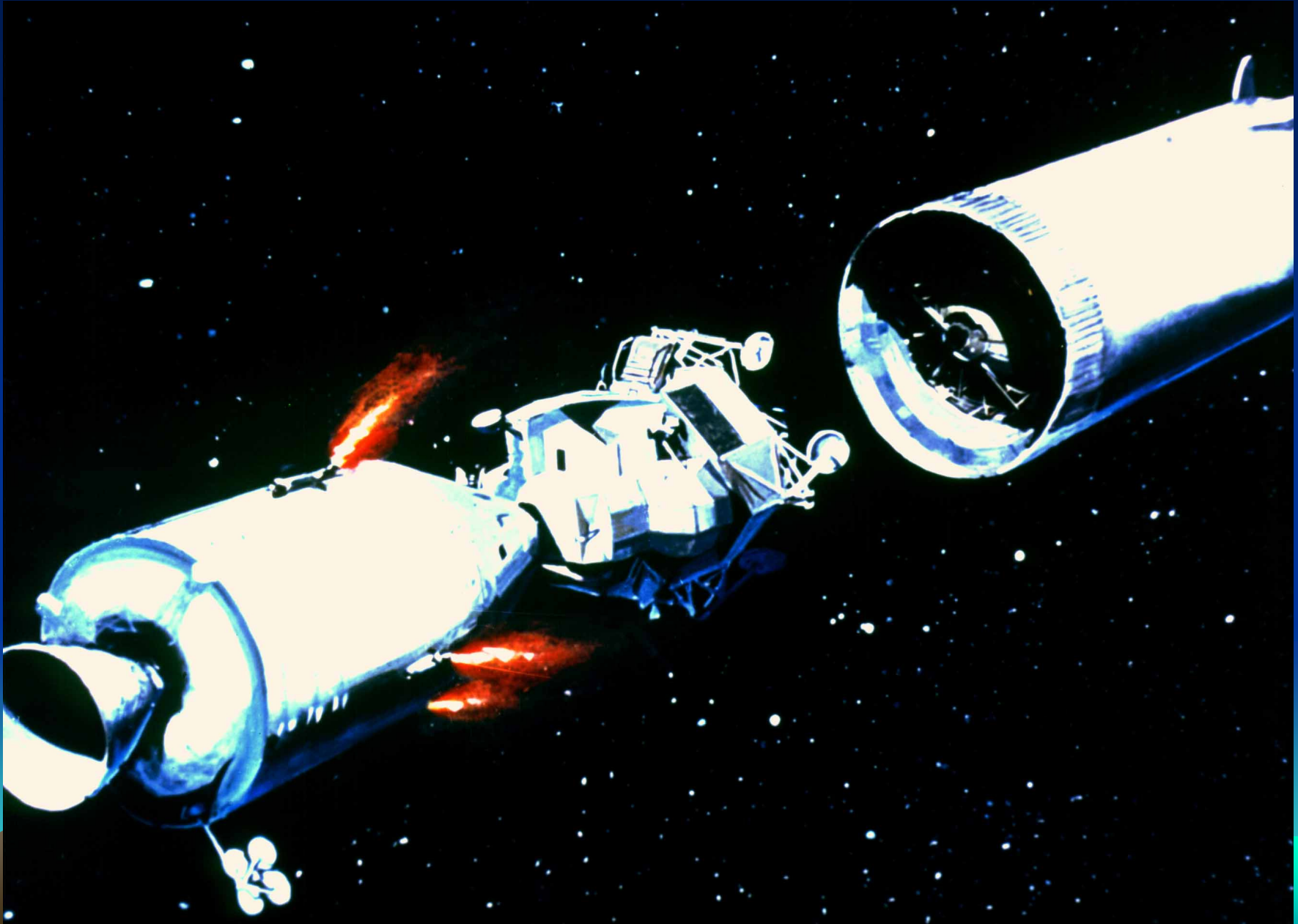


- Apollo 11/Saturn V Booster Launch
- Cape Kennedy, Florida
- 1<sup>st</sup> Manned Lunar Landing





# Spacecraft Staging in Earth Orbit





# Mission Control Center Celebration

Dr. C. Kraft, (lighting Dr. Faget's cigar), Dr. George Low, Dr. Robert Gilruth

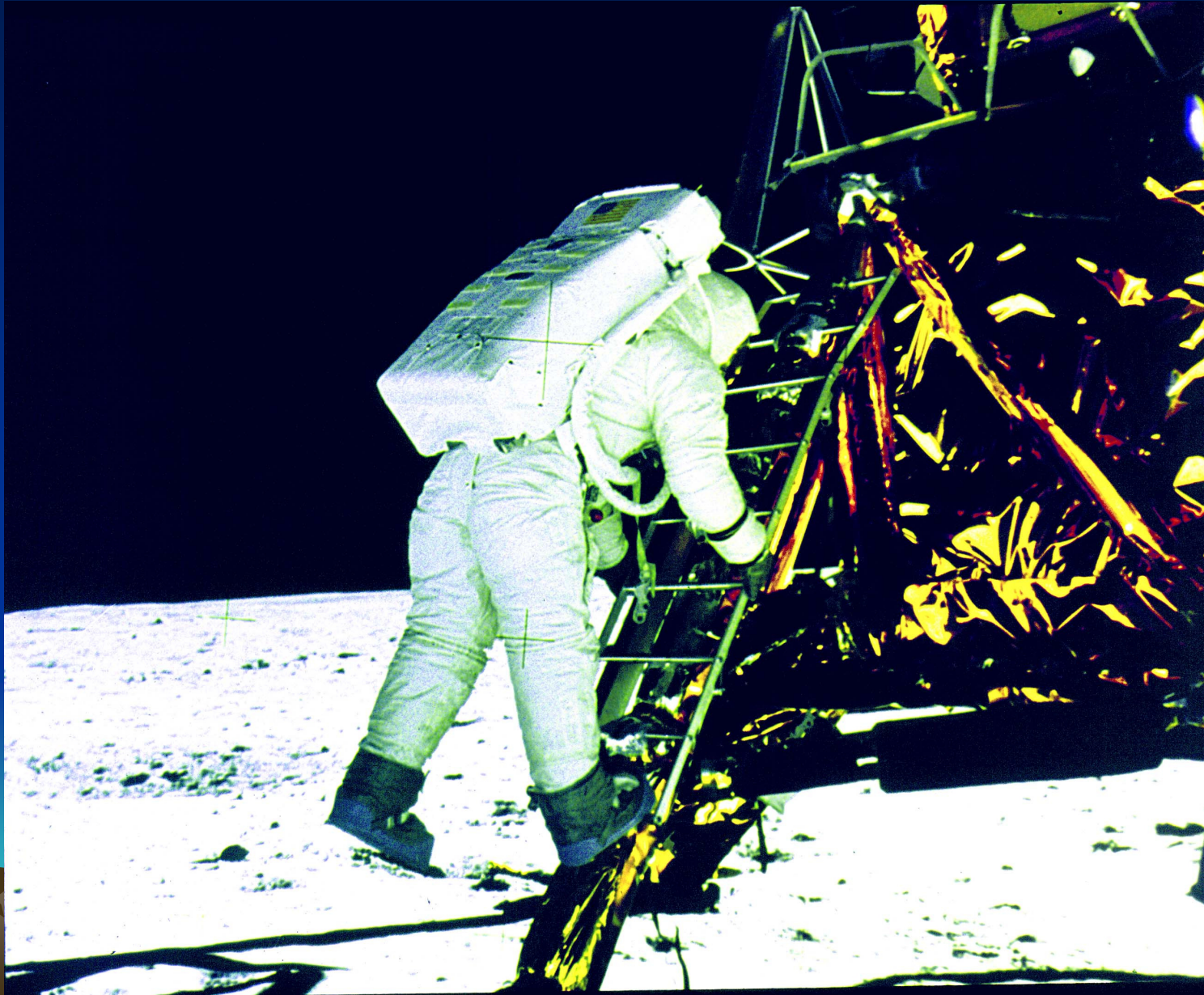




Dick Johnston, Dr. Gilruth, Dr. Faget, Dr. George Mueller,  
NASA Administrator Thomas Paine

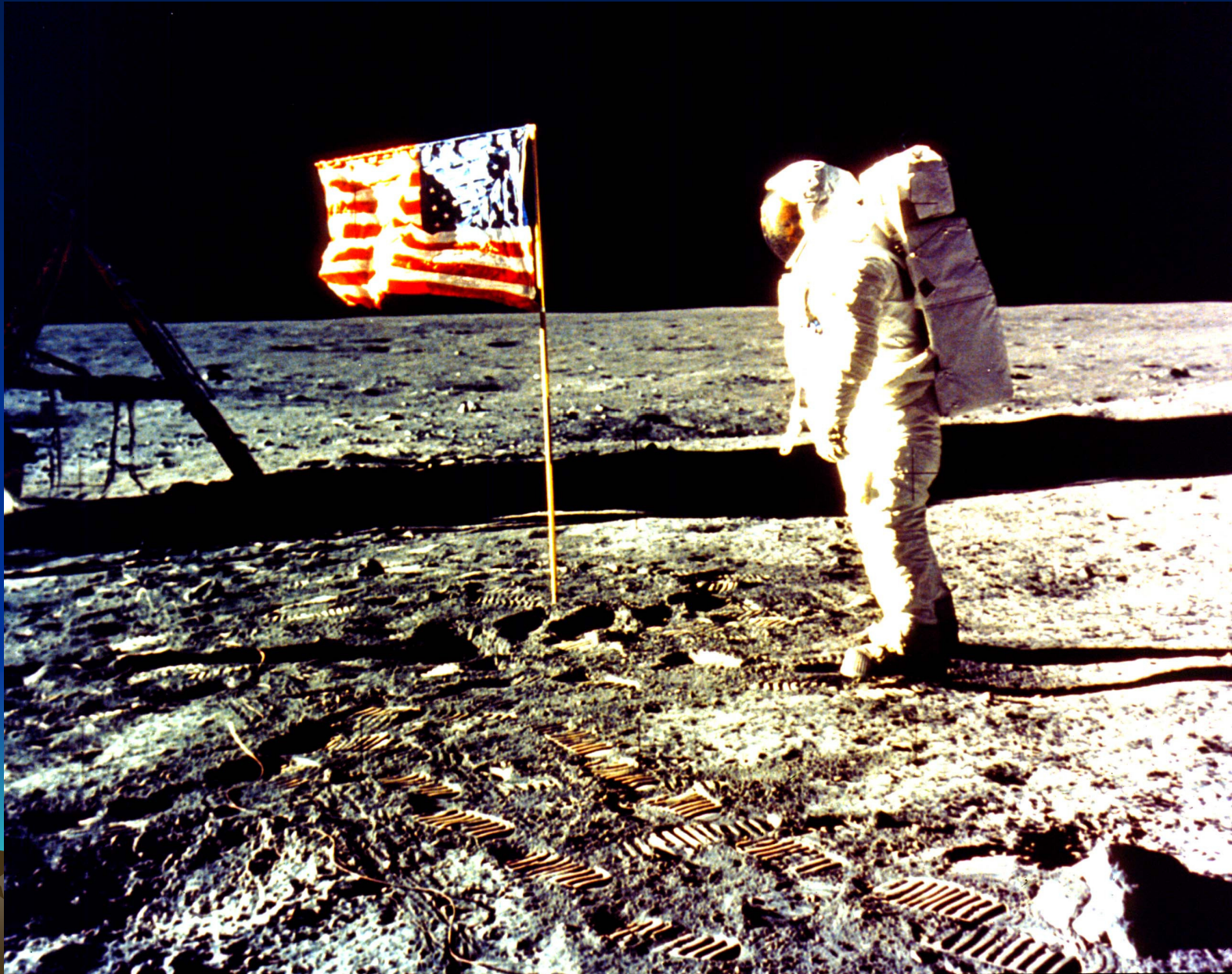


# Buzz Aldrin Descent to Moon (Photographer Neil Armstrong)



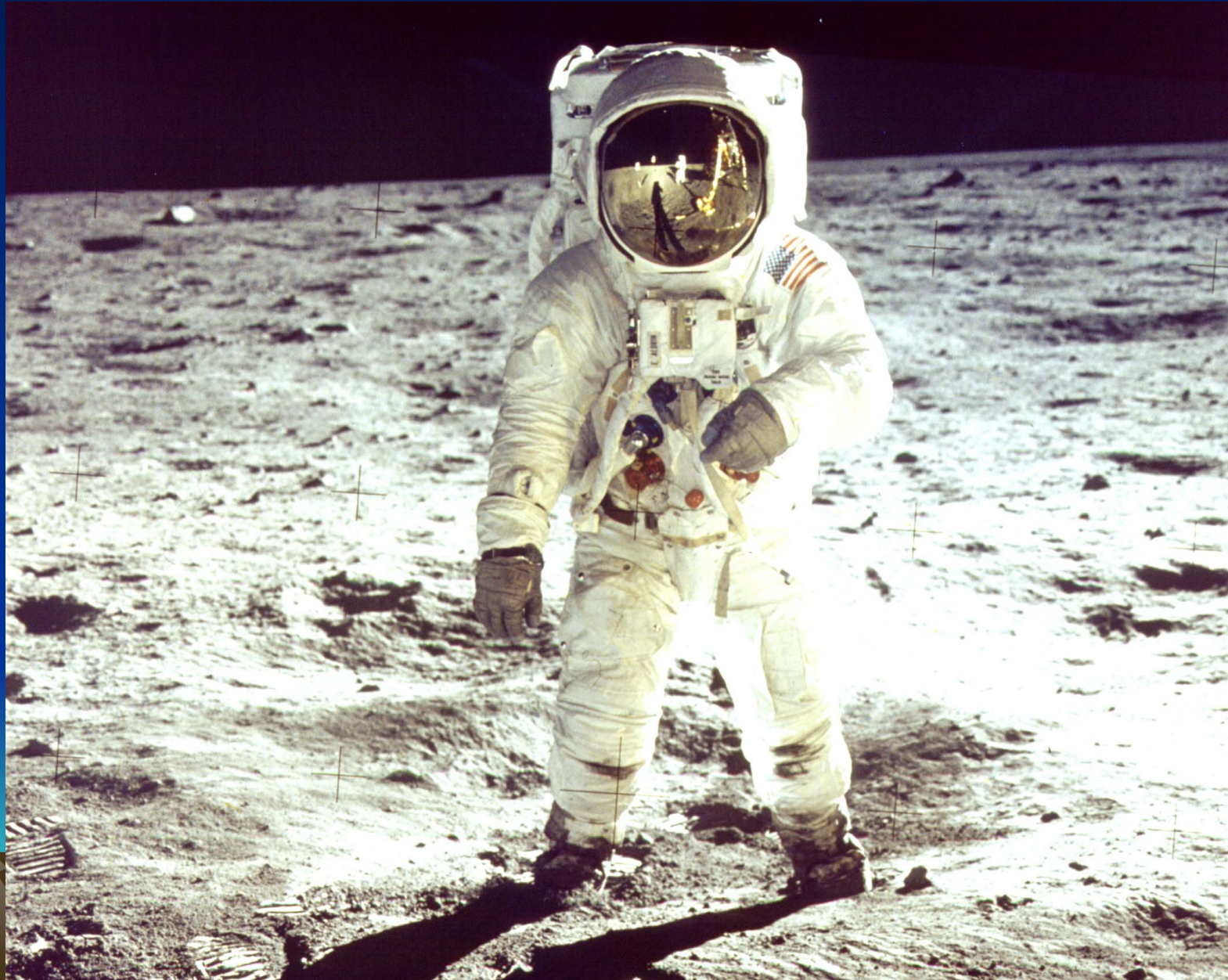


# “Buzz” Aldrin Planting the US Flag on the Moon





# Photograph of Buzz Aldrin (Neil Armstrong reflection in Visor)



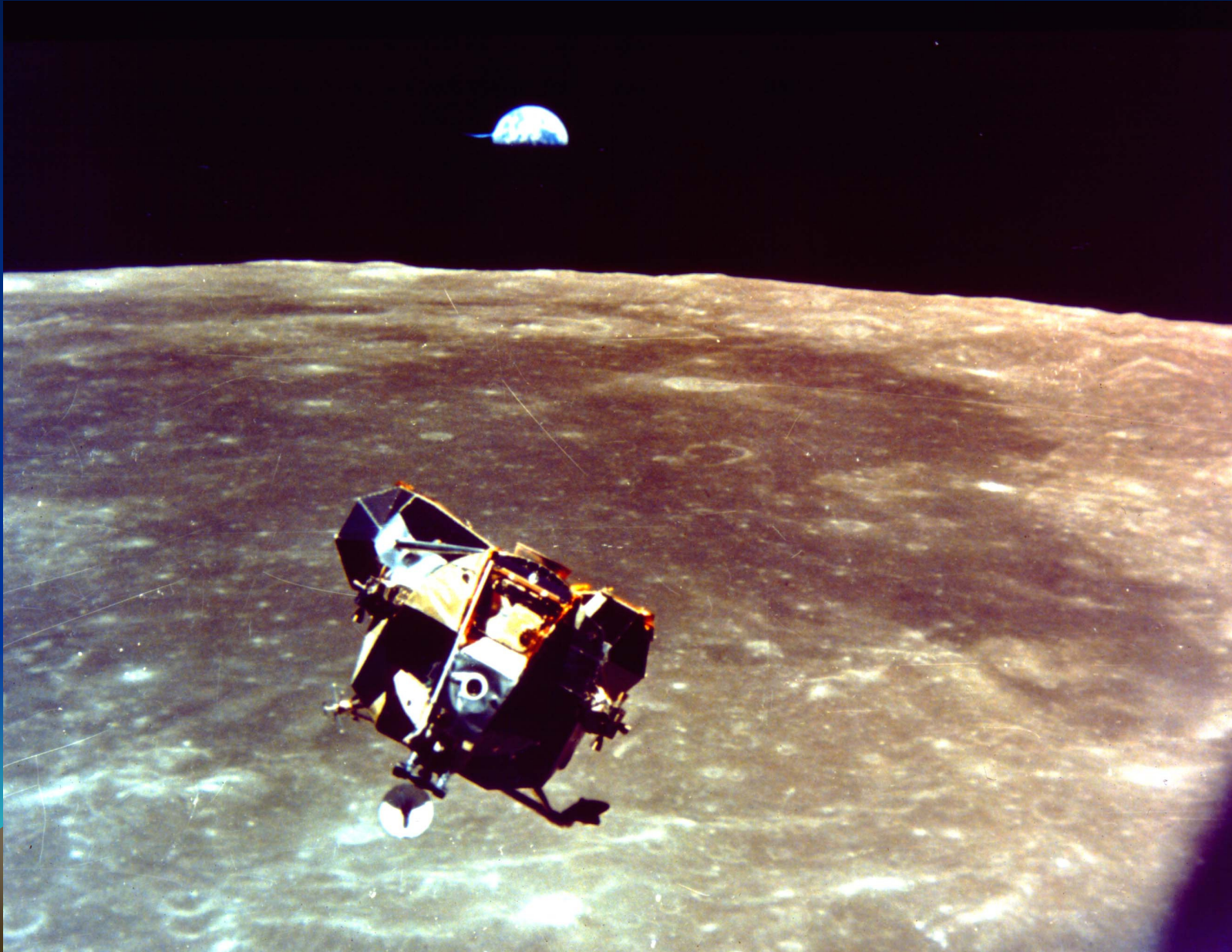


- Plaque on the Leg of the Lunar Descent Engine, left on the Moon
- “HERE MEN FROM MOTHER EARTH FIRST SET FOOT UPON THE MOON  
July 1969, A.D.  
We came in peace for all Mankind”
- Signed: Astronauts Neil Armstrong, Michael Collins, “Buzz” Aldrin, & President Richard Nixon



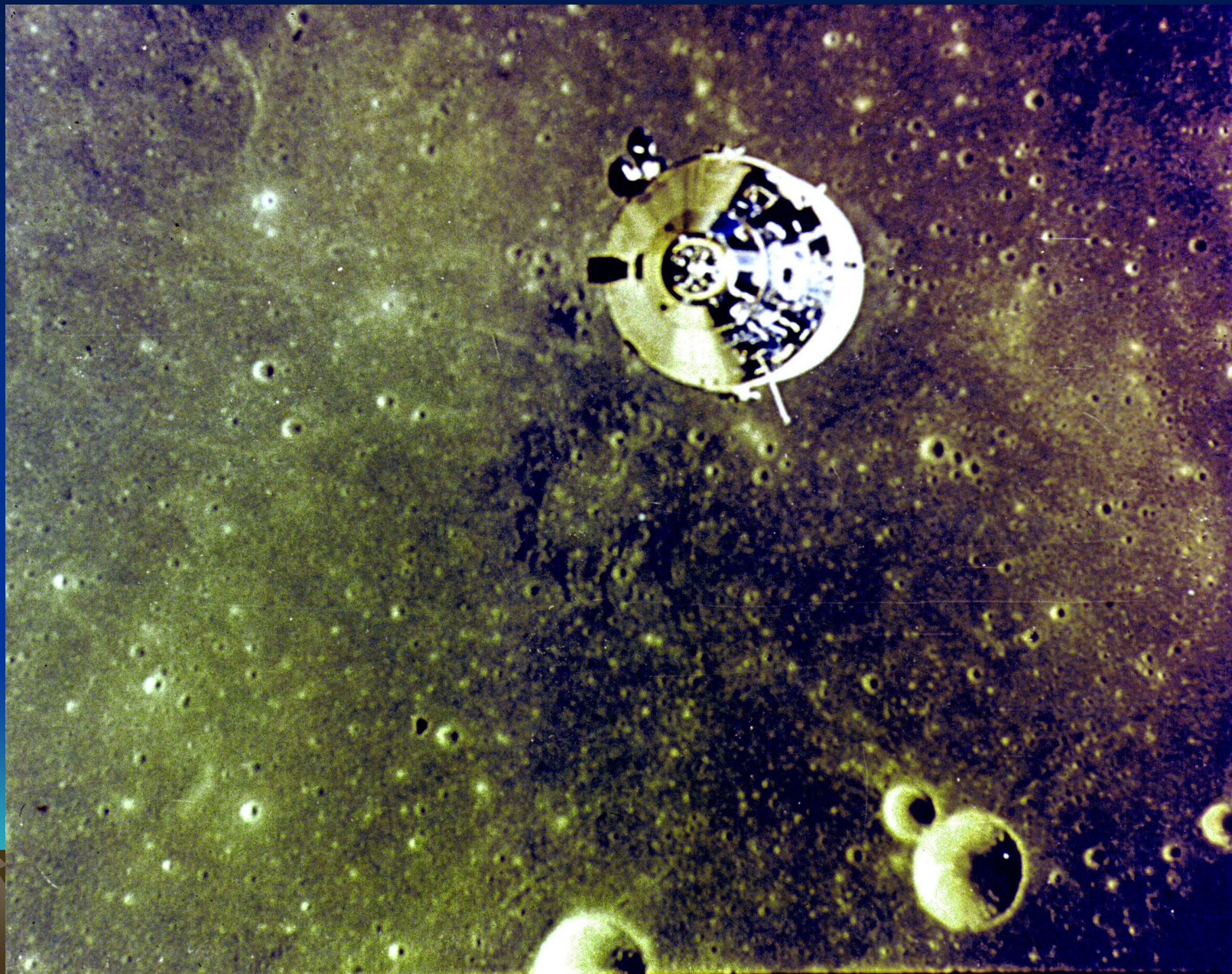


# LEM Ascent Engine Approaching the CSM



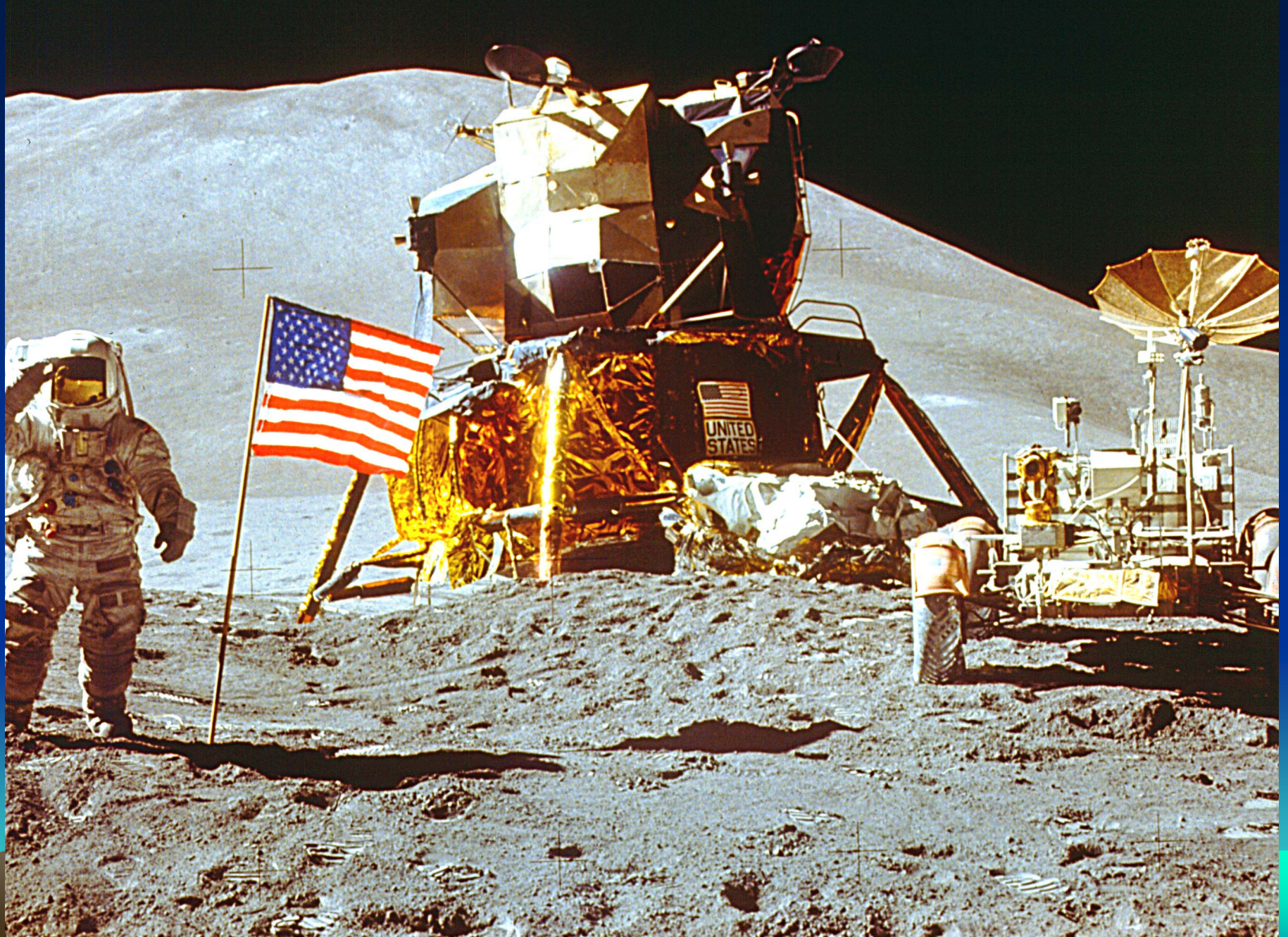


# Photo of CSM from LEM Ascent Engine



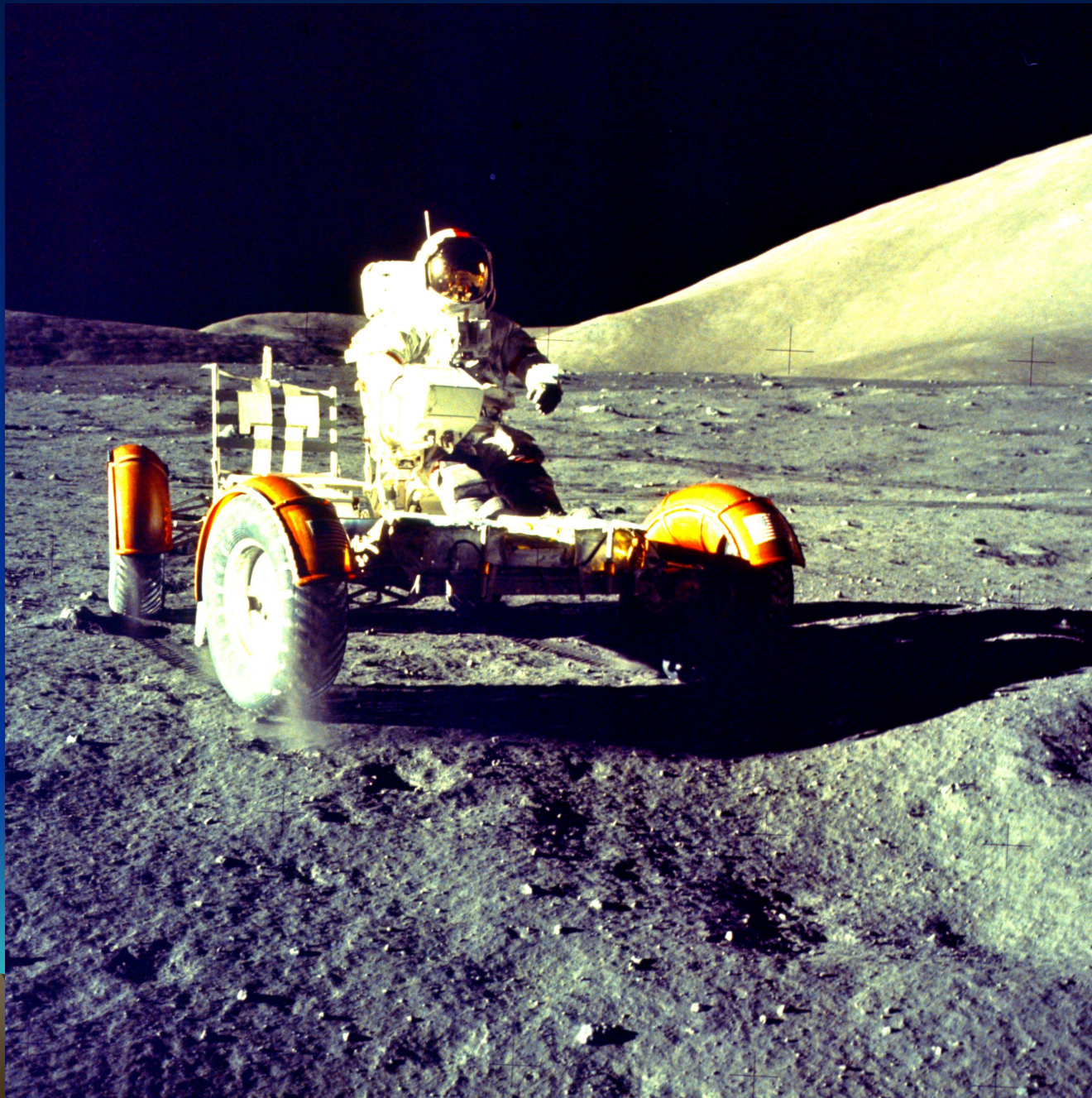


# Cmdr. Erin, Apollo 15, Flag & Lunar Rover





# Lunar Rover Transverses the Moon





# Commander Gene Cernan, Apollo 17

## Last Foot Print on the Moon



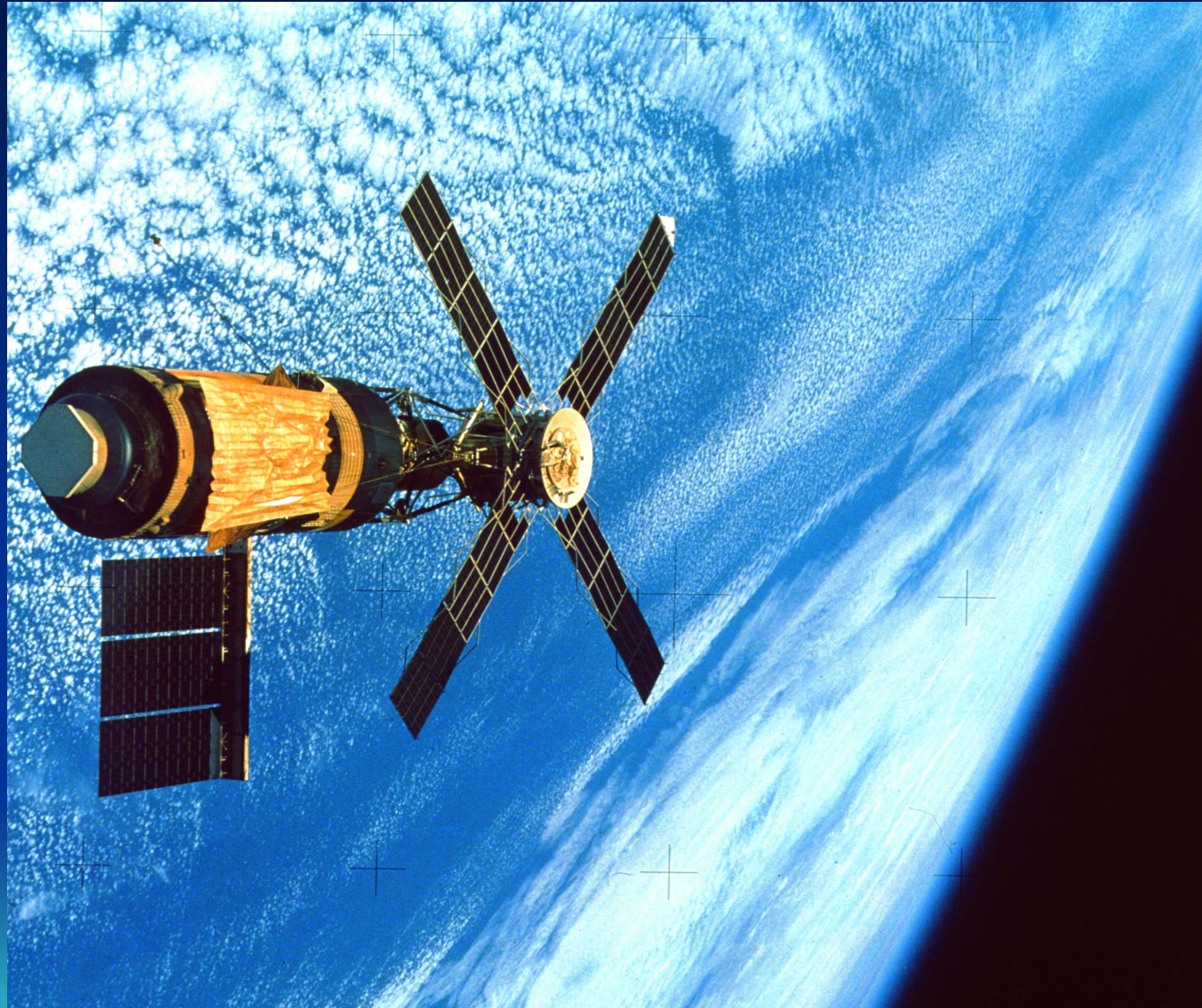


# Earth & Moon Photo in Earth Orbit



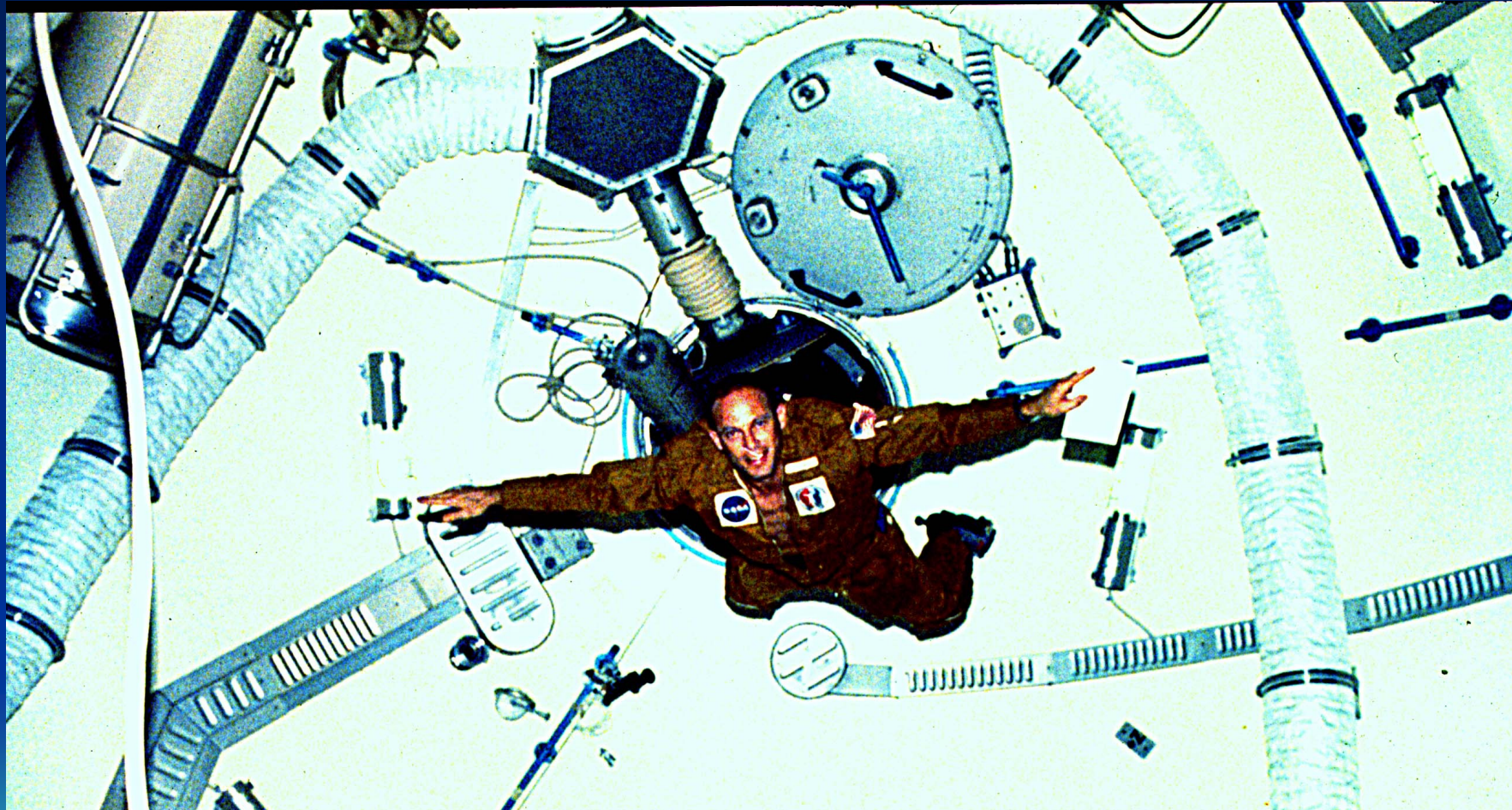


# Skylab with Parasol



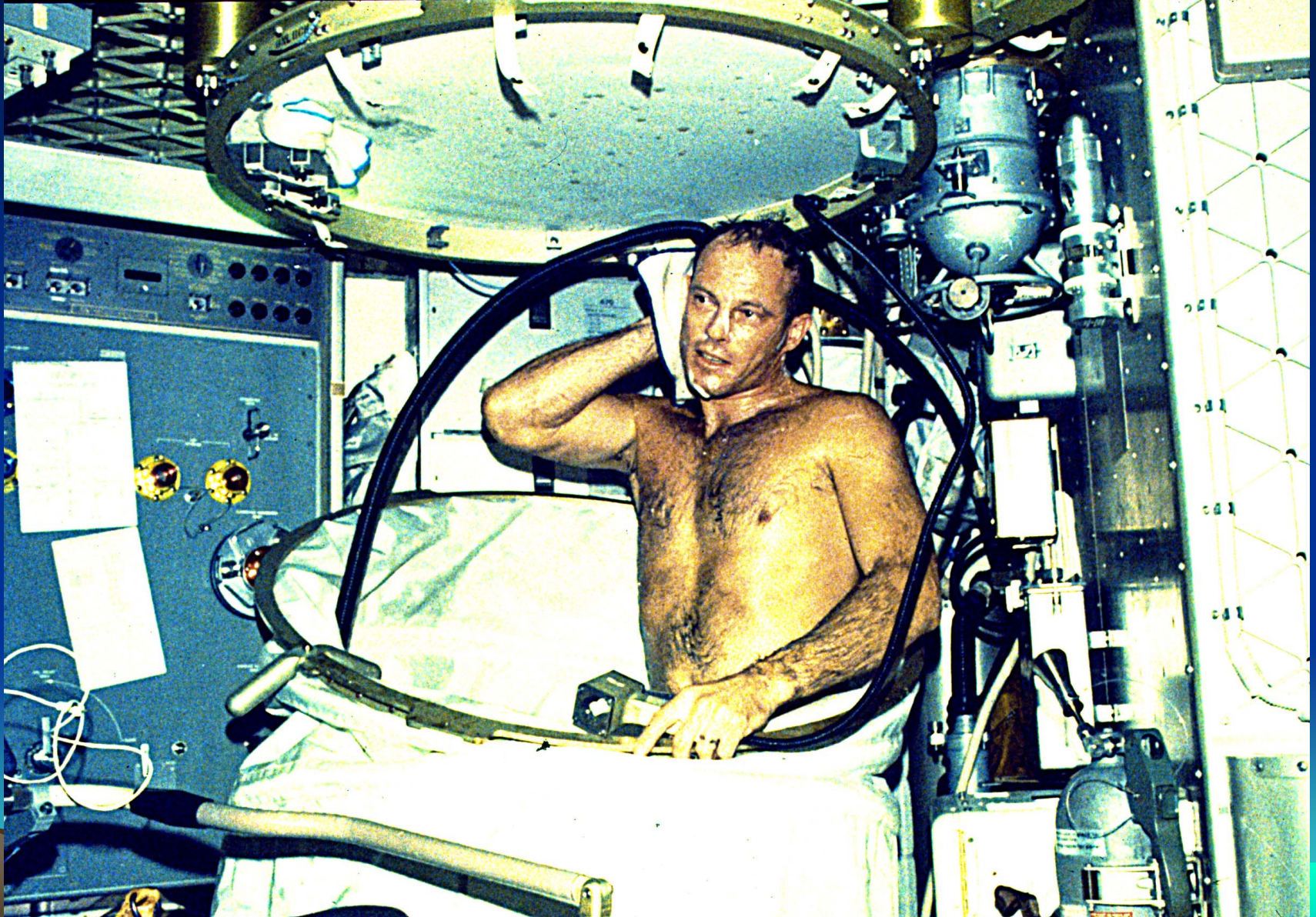


# Astronaut in Skylab



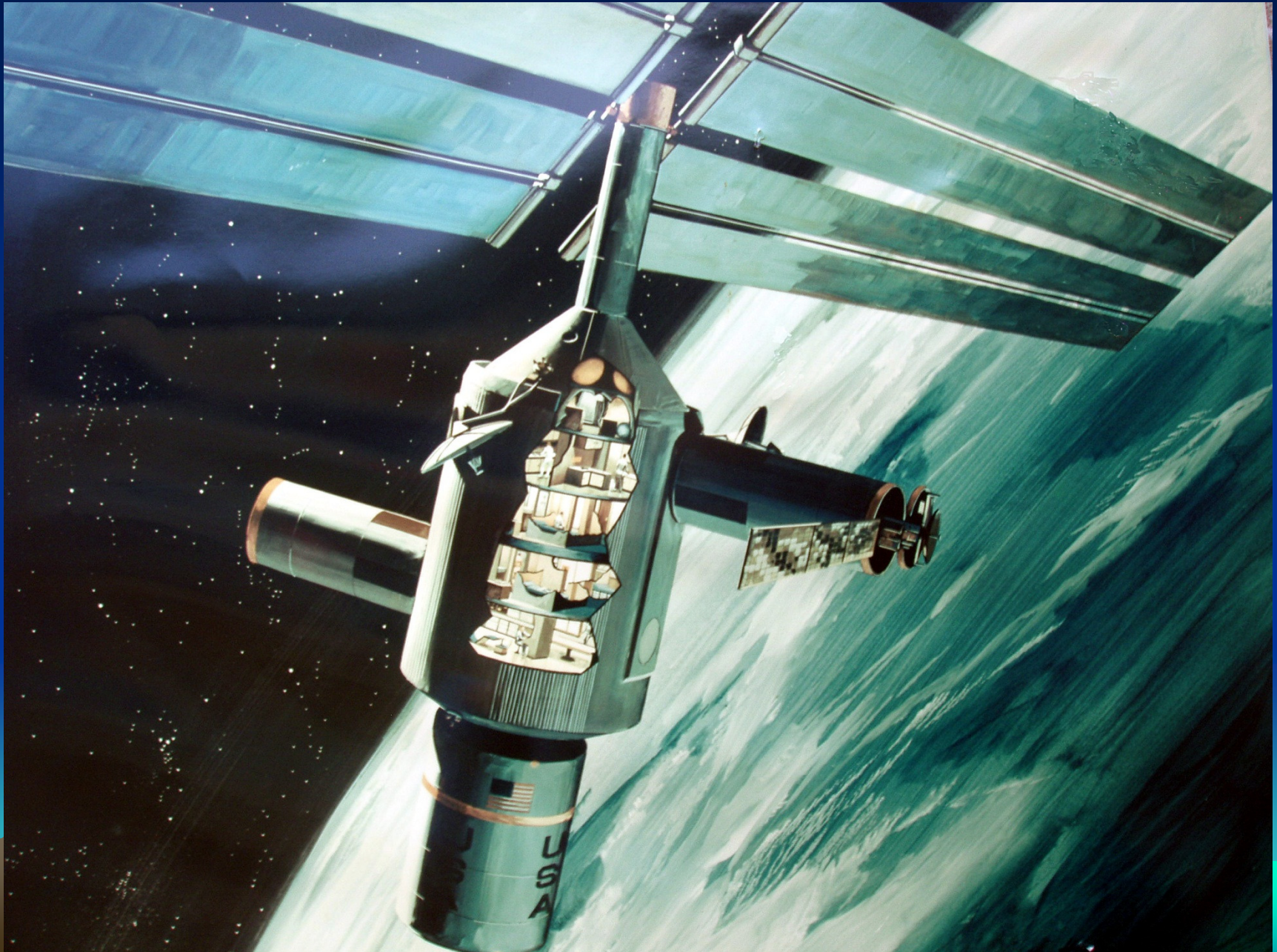


# Astronaut bathing



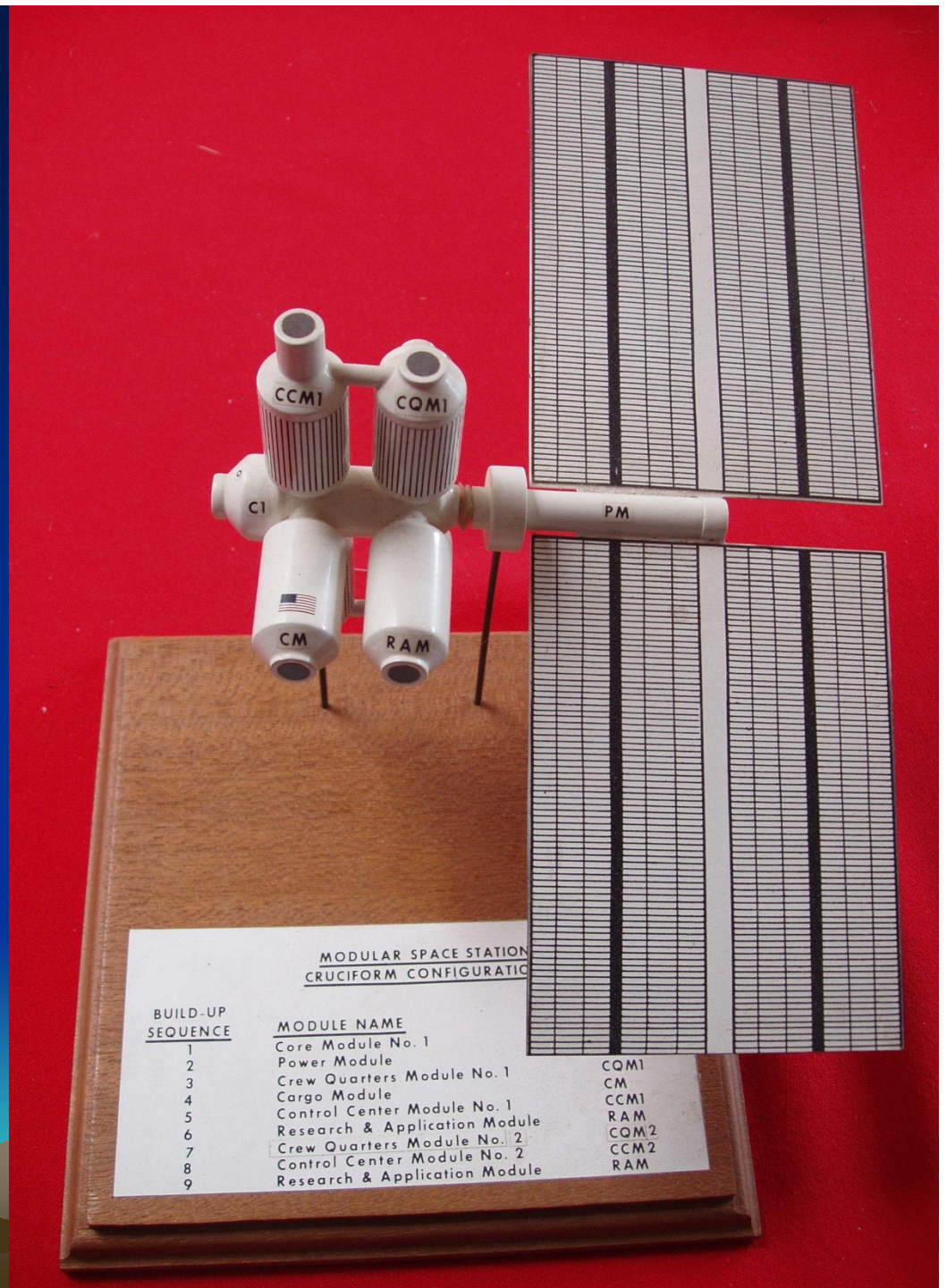


# Saturn Boosted Space Station



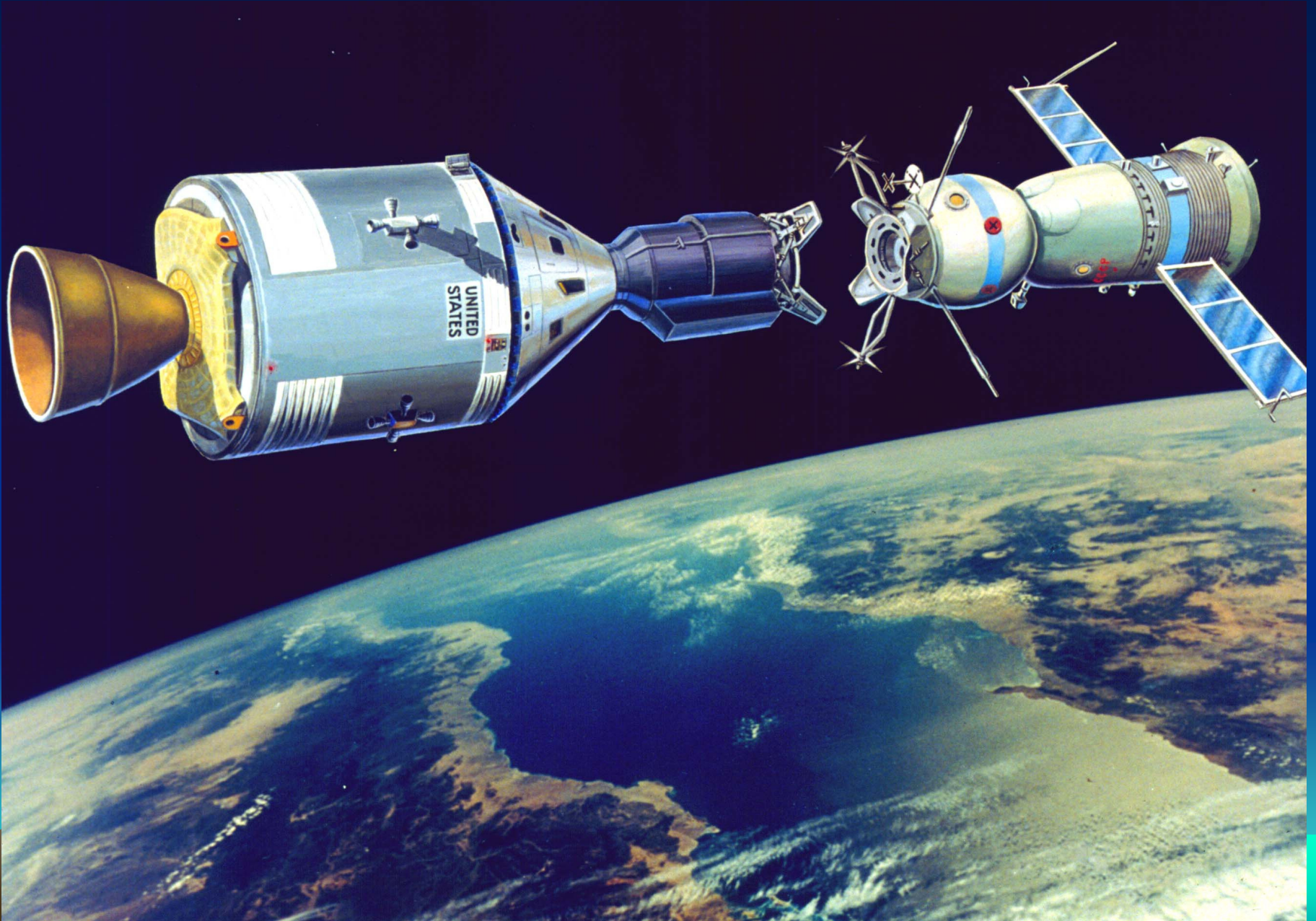


- 1<sup>st</sup>. Concept for putting Space Station up with the Shuttle
- Designed in Early 1970s
- Canceled Lack of funds





# Artist Concept of Apollo-Soyuz Docking





# Space Shuttle Being Transport by Boeing 747 Over Johnson Space Center



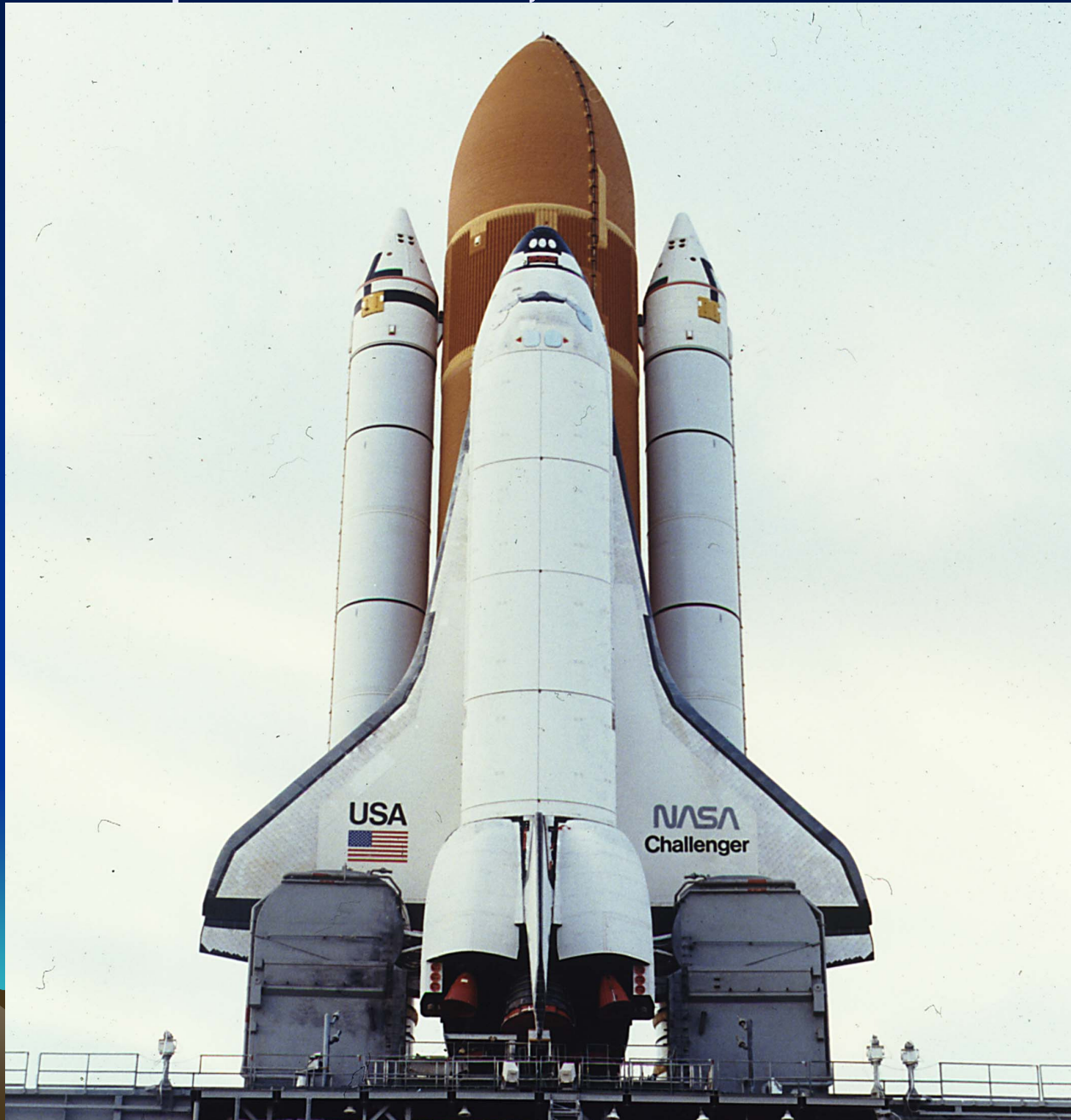


# Space Shuttle @ Apollo Vertical Assembly Bldg. Cape Kennedy, Florida



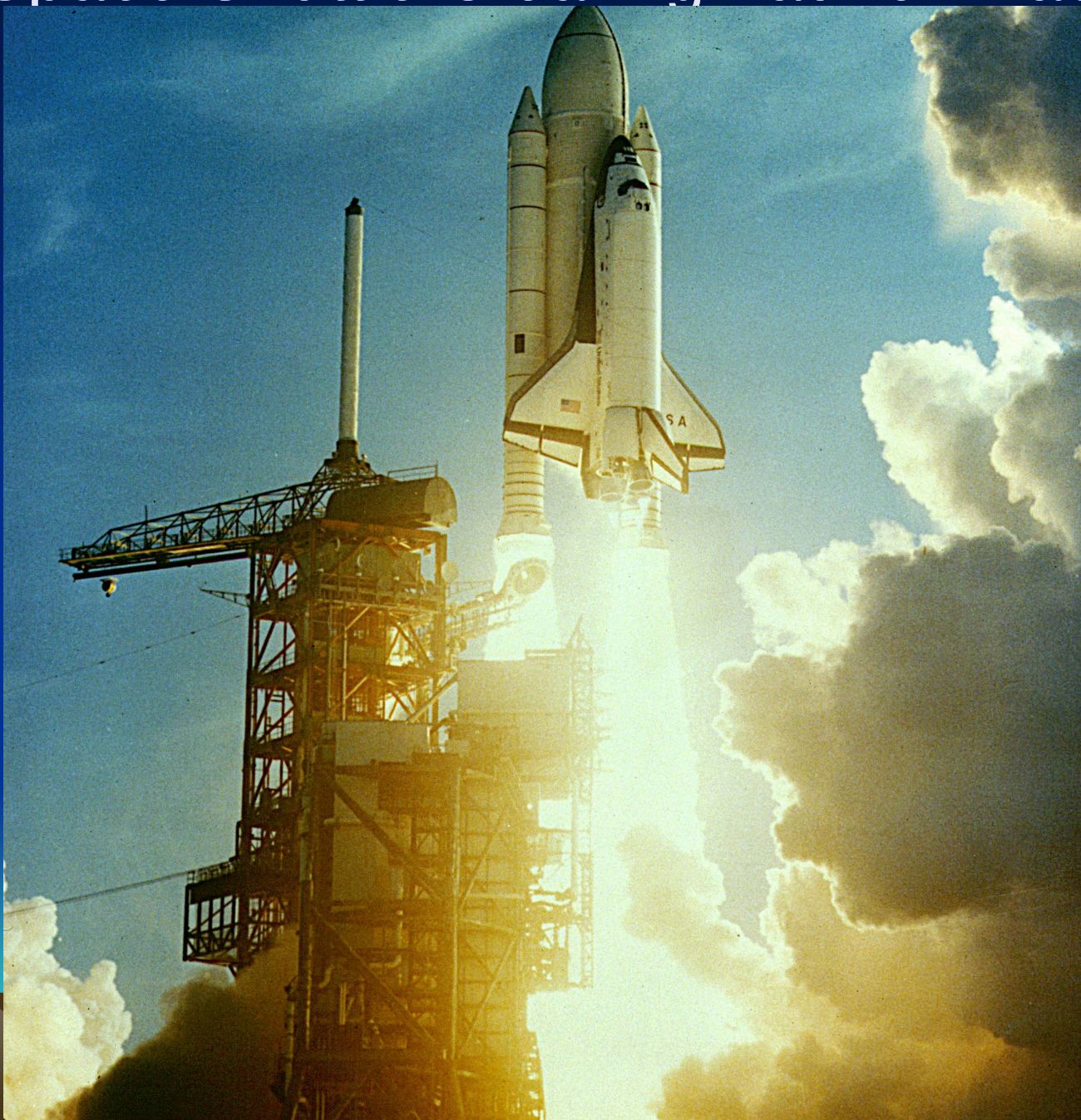


# Space Shuttle, On Launch Pad





# Space Shuttle Clearing Launch Pad





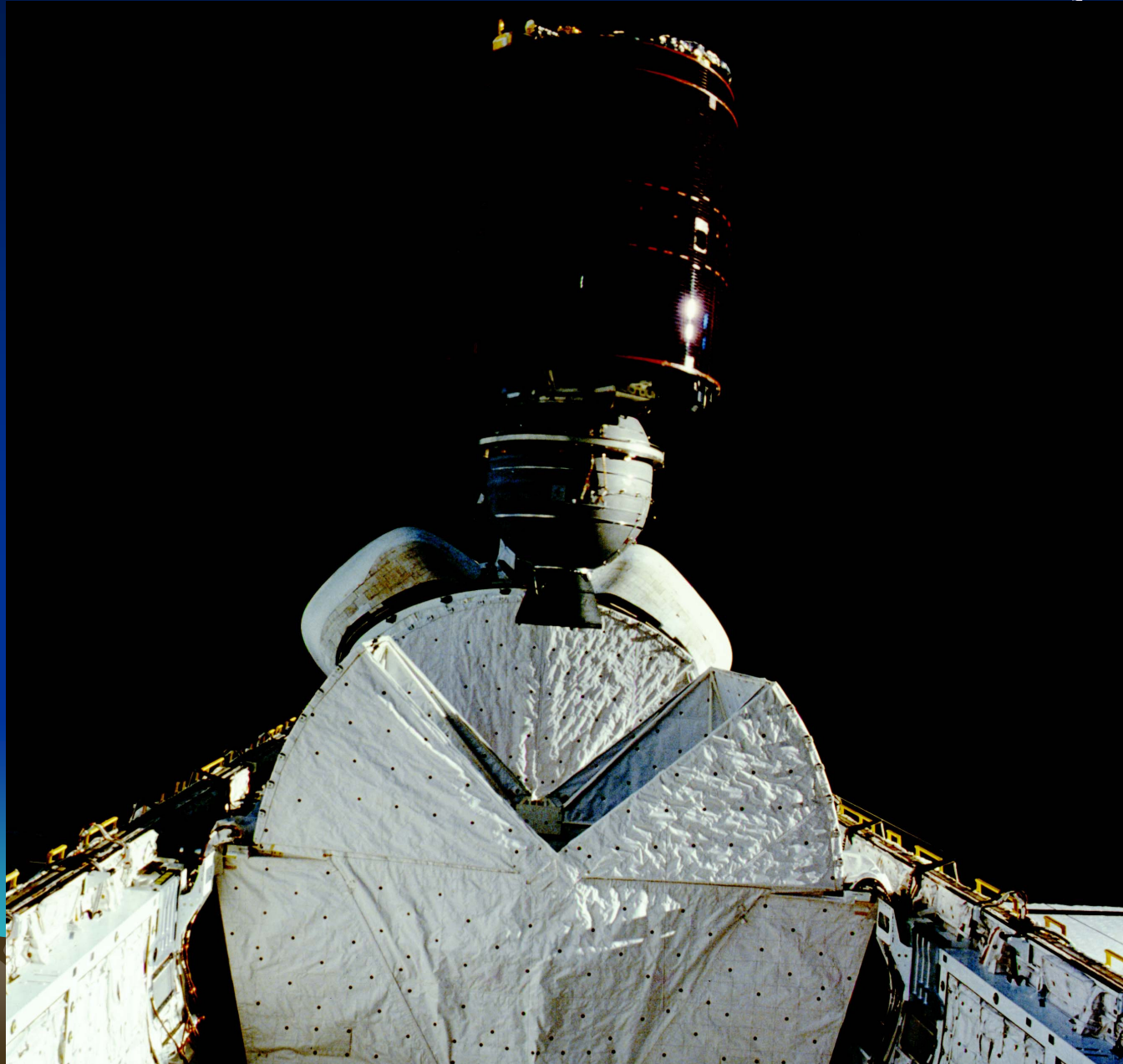
# Space Shuttle Launch





# Satellite Business System SBS-3

## Launch of Satellite Rocket from Shuttle Bay



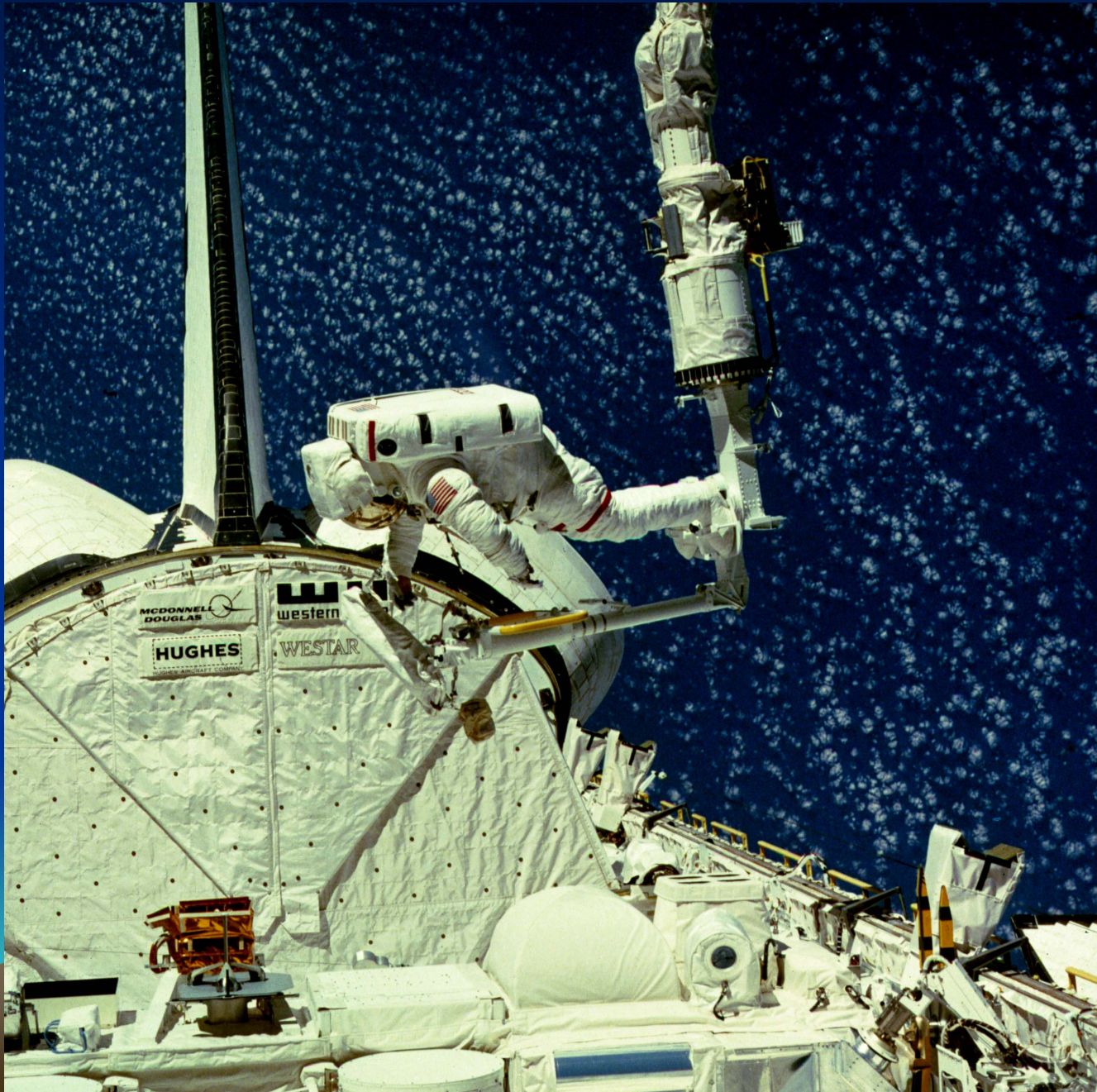


# Intelsat VI Repair, 3 Man EVA





# Astronaut on Manipulator Arm, built by Canadians





# McCandless: Manned Maneuvering Unit (MMU)

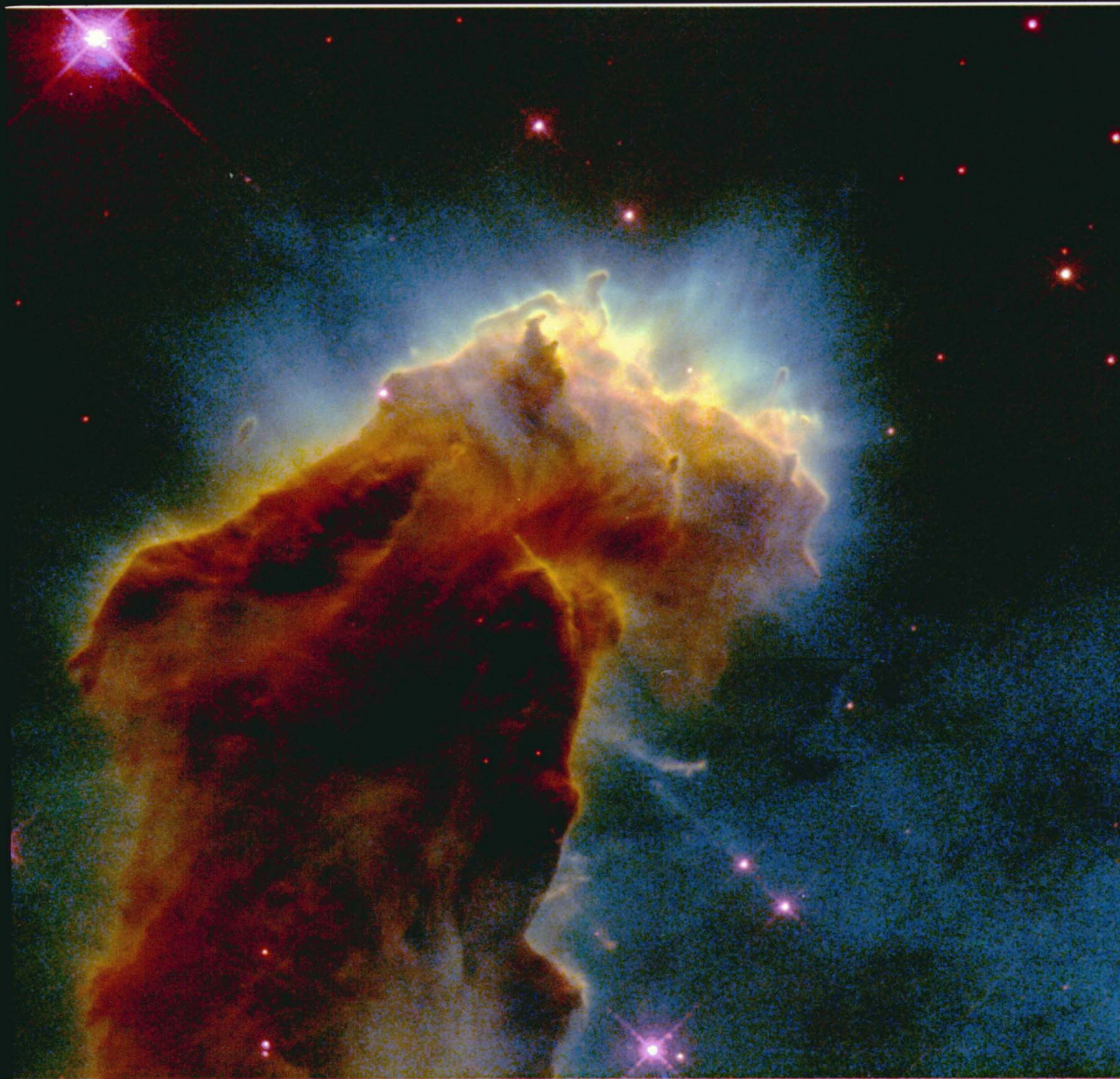




# Hubble Telescope Lens Repair from Shuttle Bay



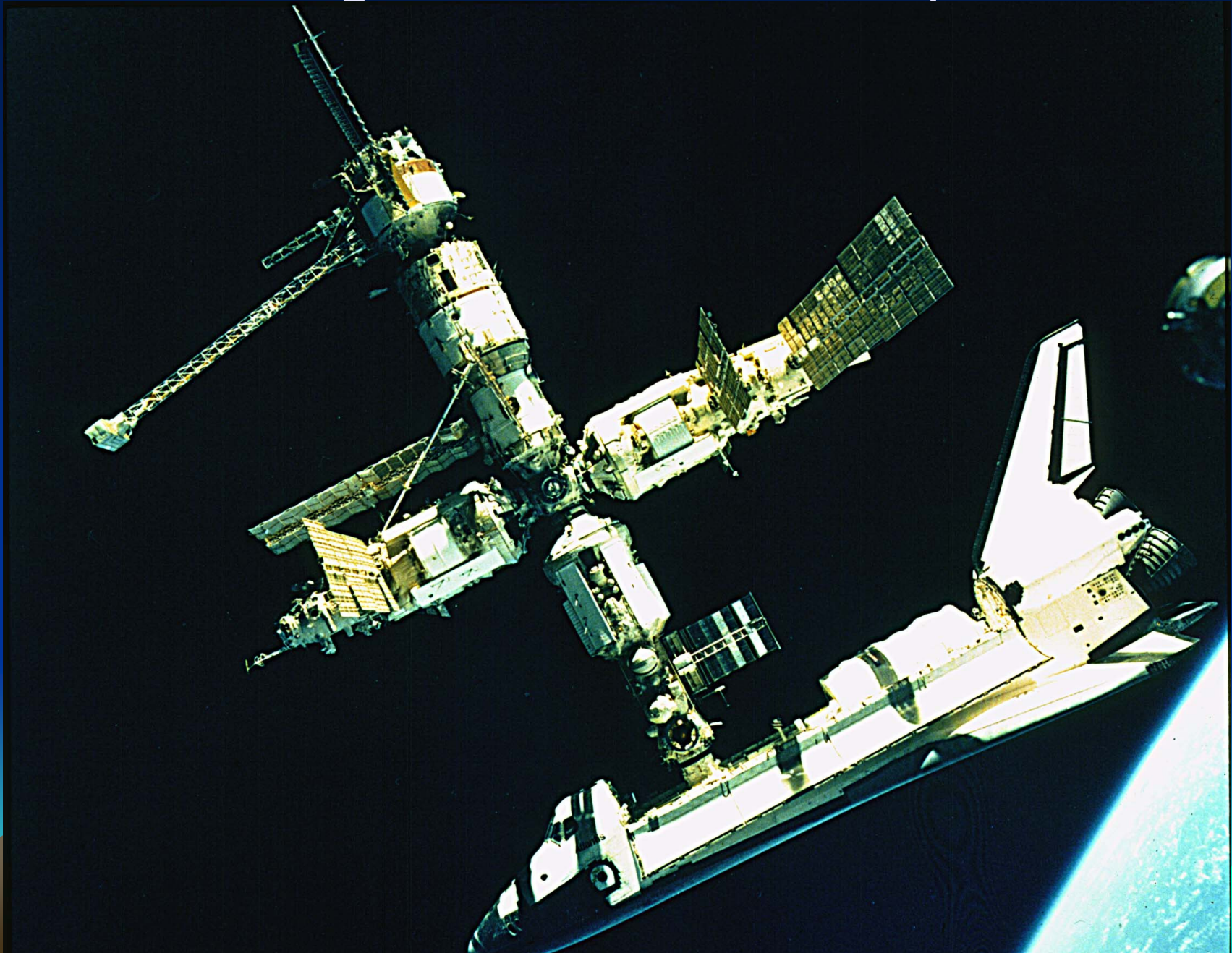




**Star-Birth Clouds • M16**  
Hubble Space Telescope • WFPC2



# Shuttle Docking with Russian MIR Space Station





# MIR & Shuttle Astronauts Meet

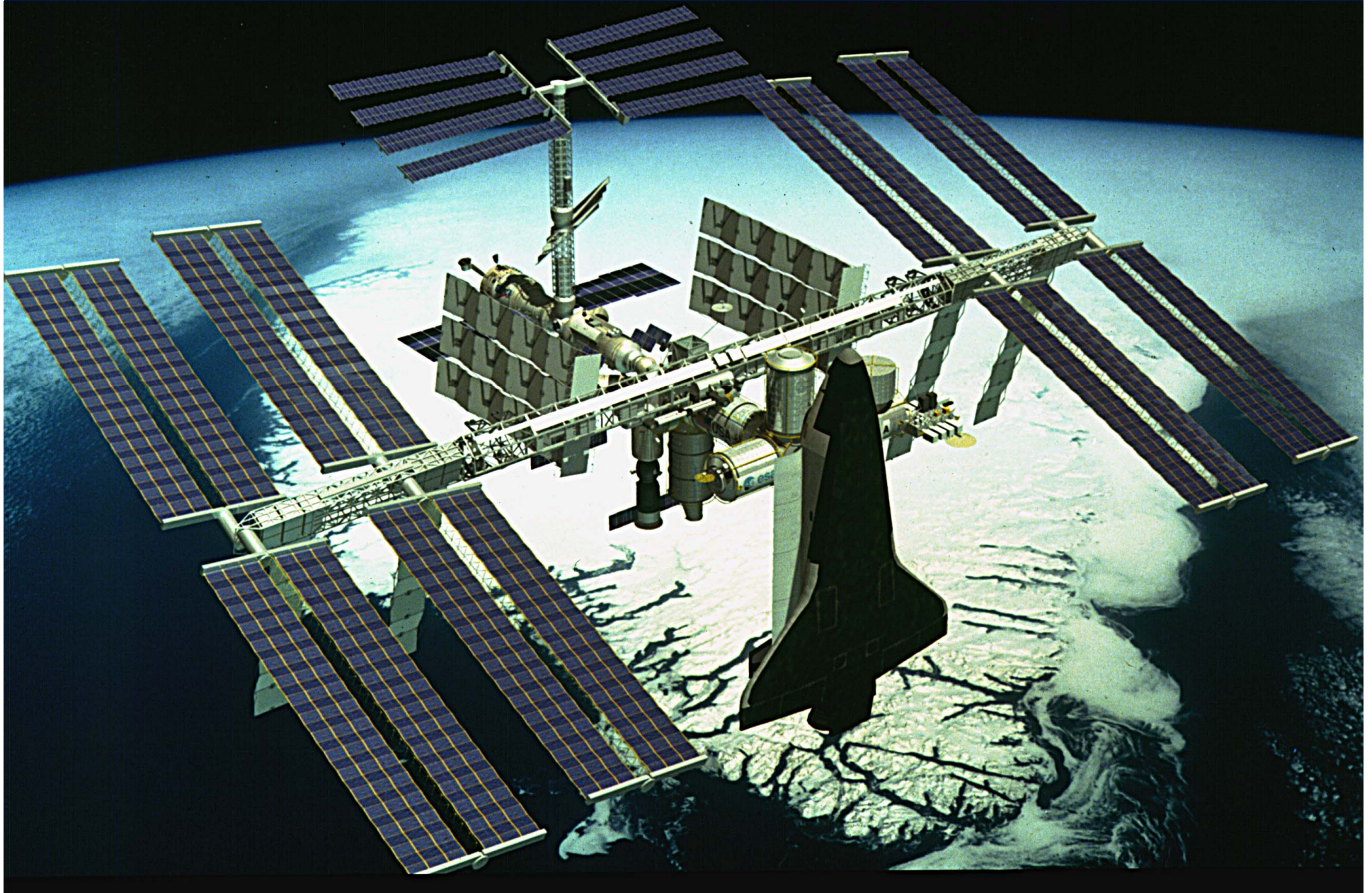






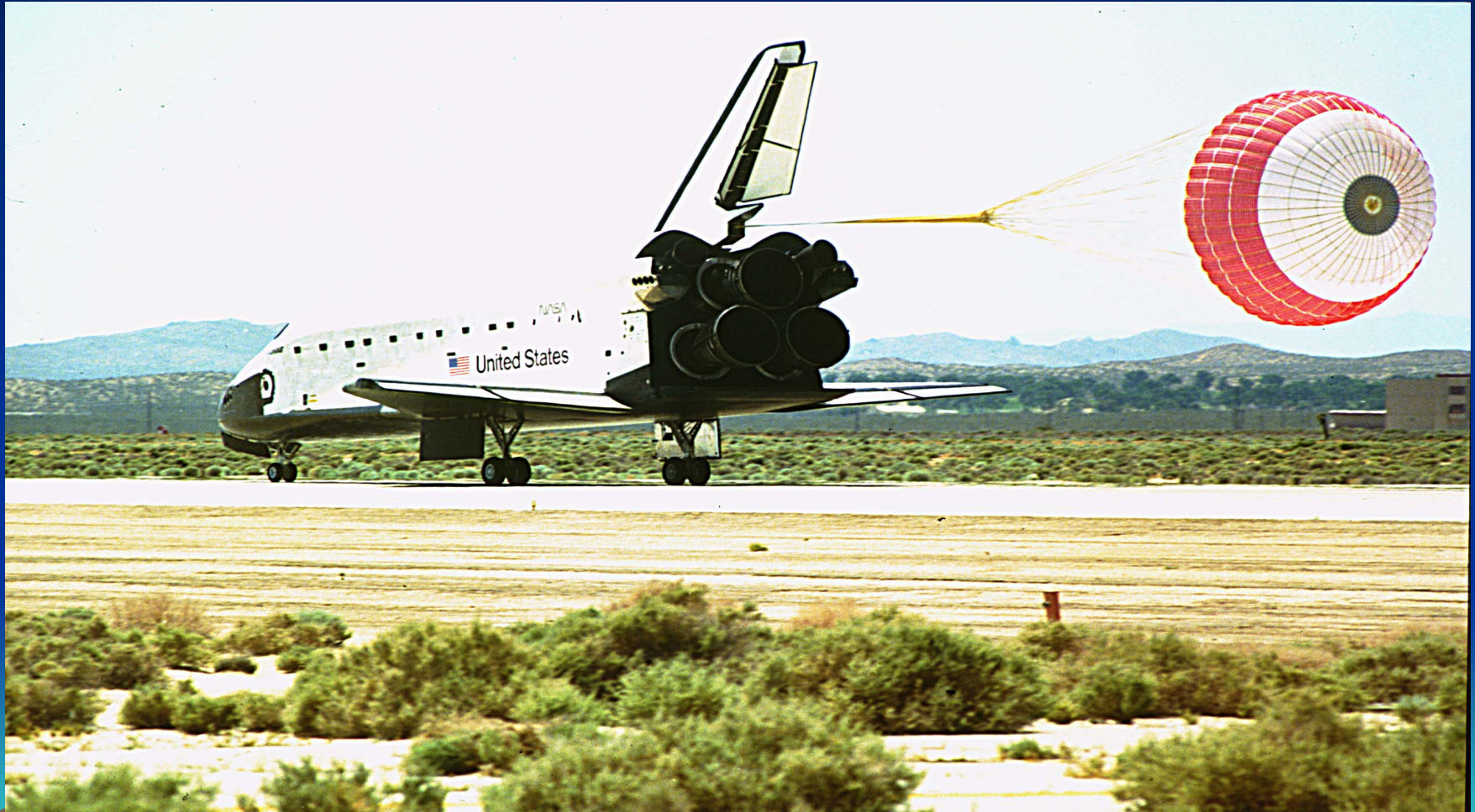


# Shuttle Docked with International Space Station





# Shuttle Landing with Drogue Parachute





# Old Mission Control Center Historical Museum





# New Mission Control Center





