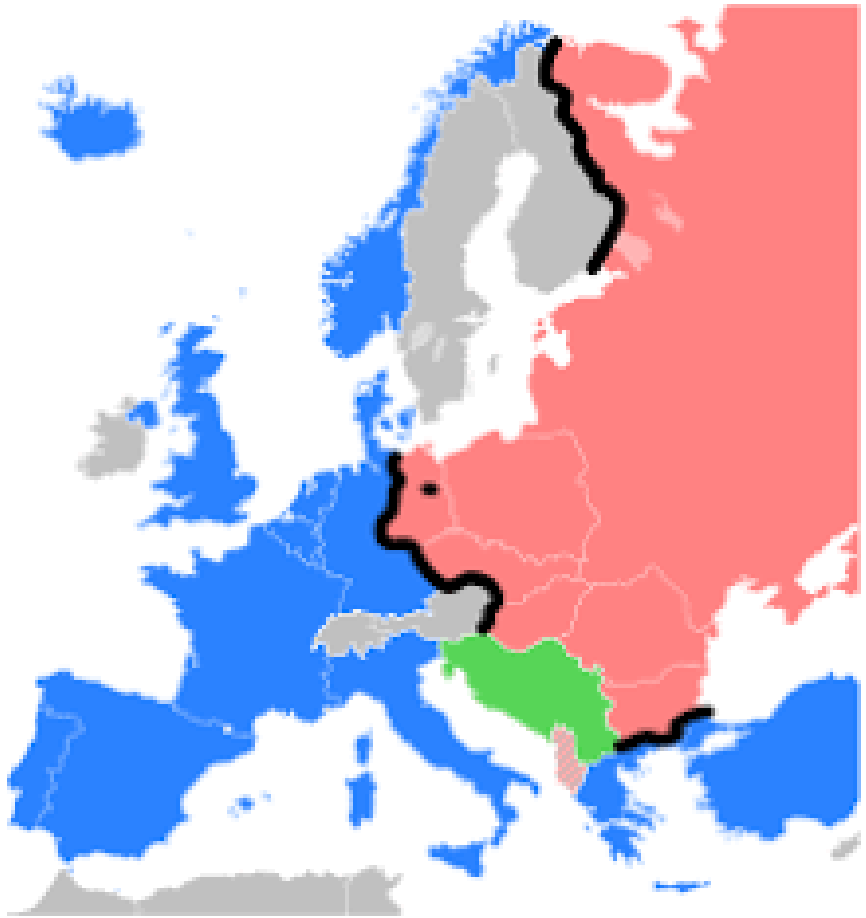
Apollo in 60 Minutes

INST 154

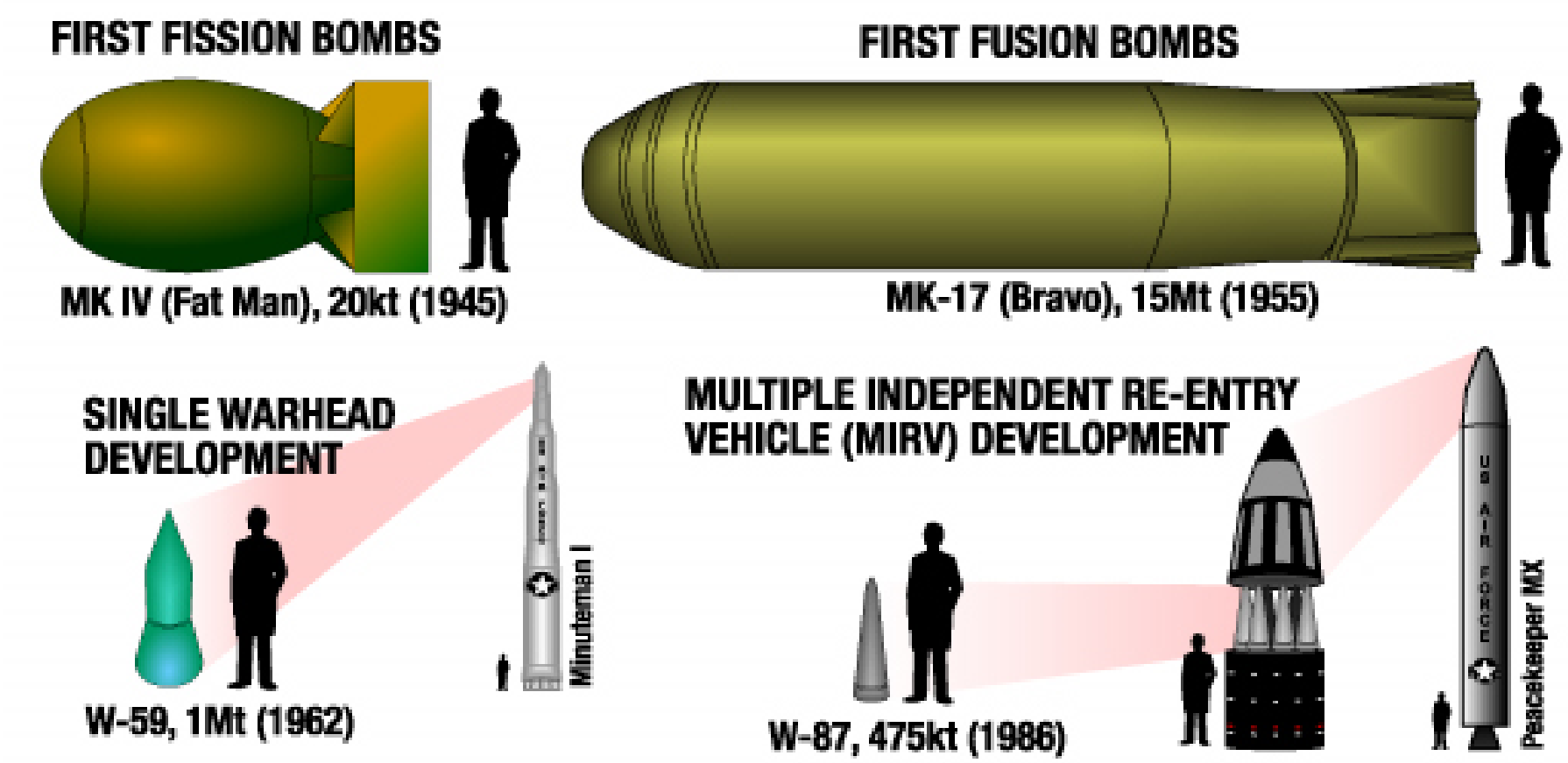
Apollo at 50

The View From Moscow

The “Cold War”

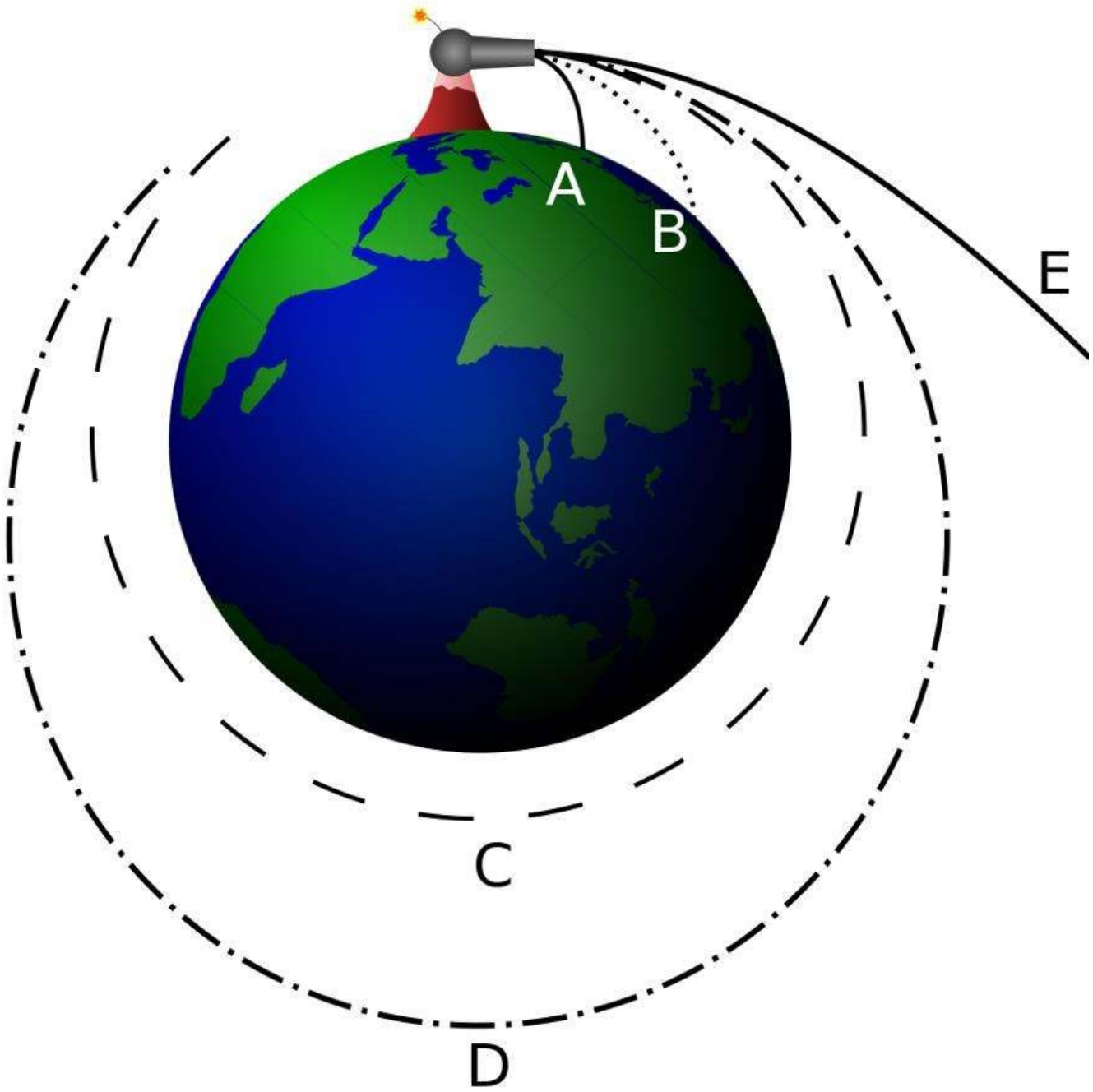


Nuclear Weapons

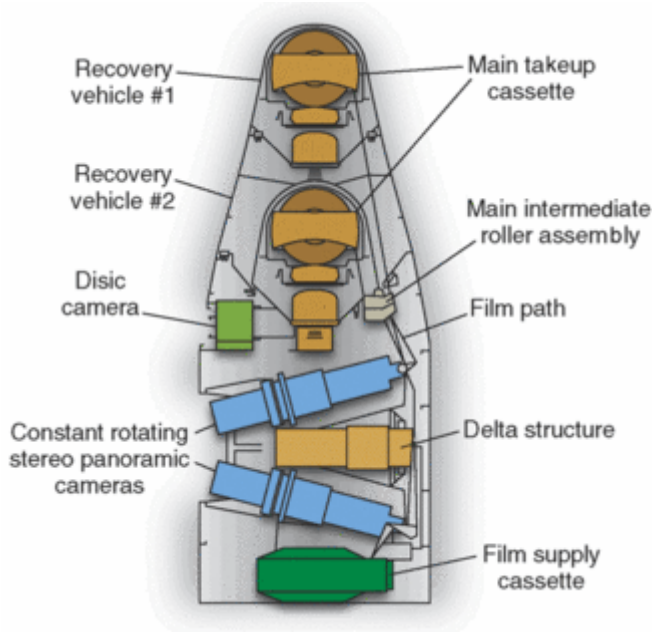


Intercontinental Ballistic Missiles

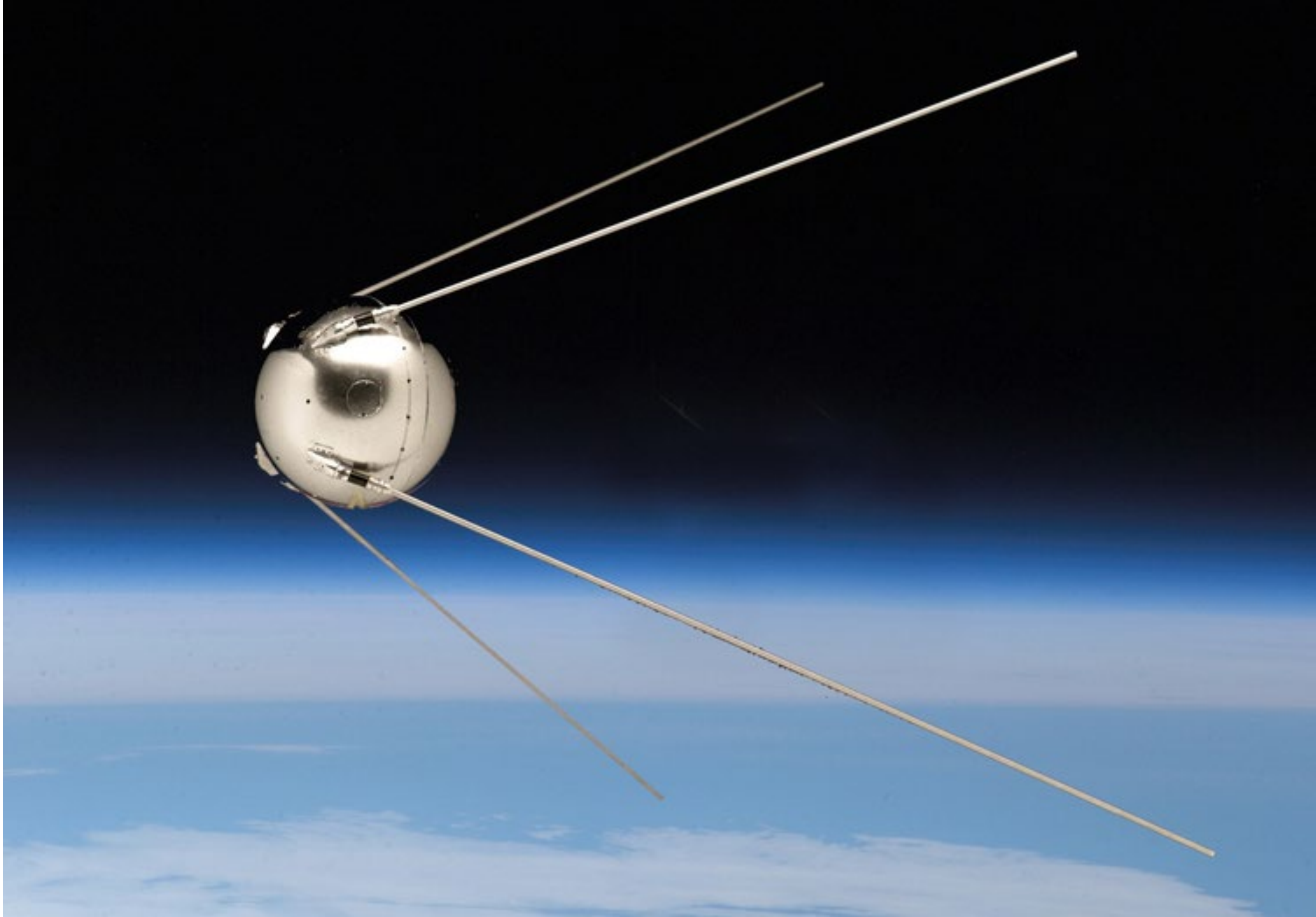
Orbital Mechanics



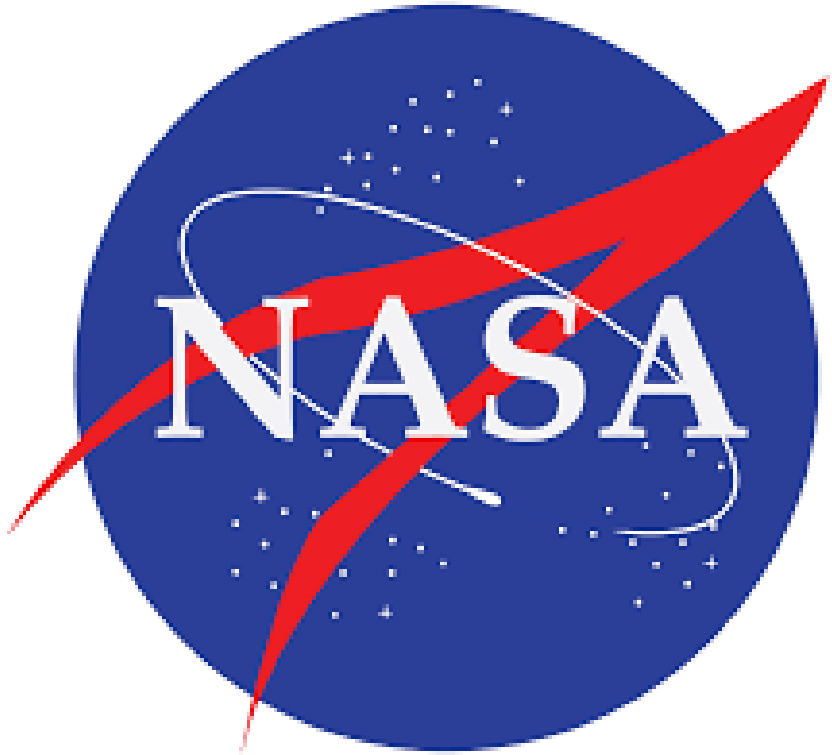
Reconnaissance

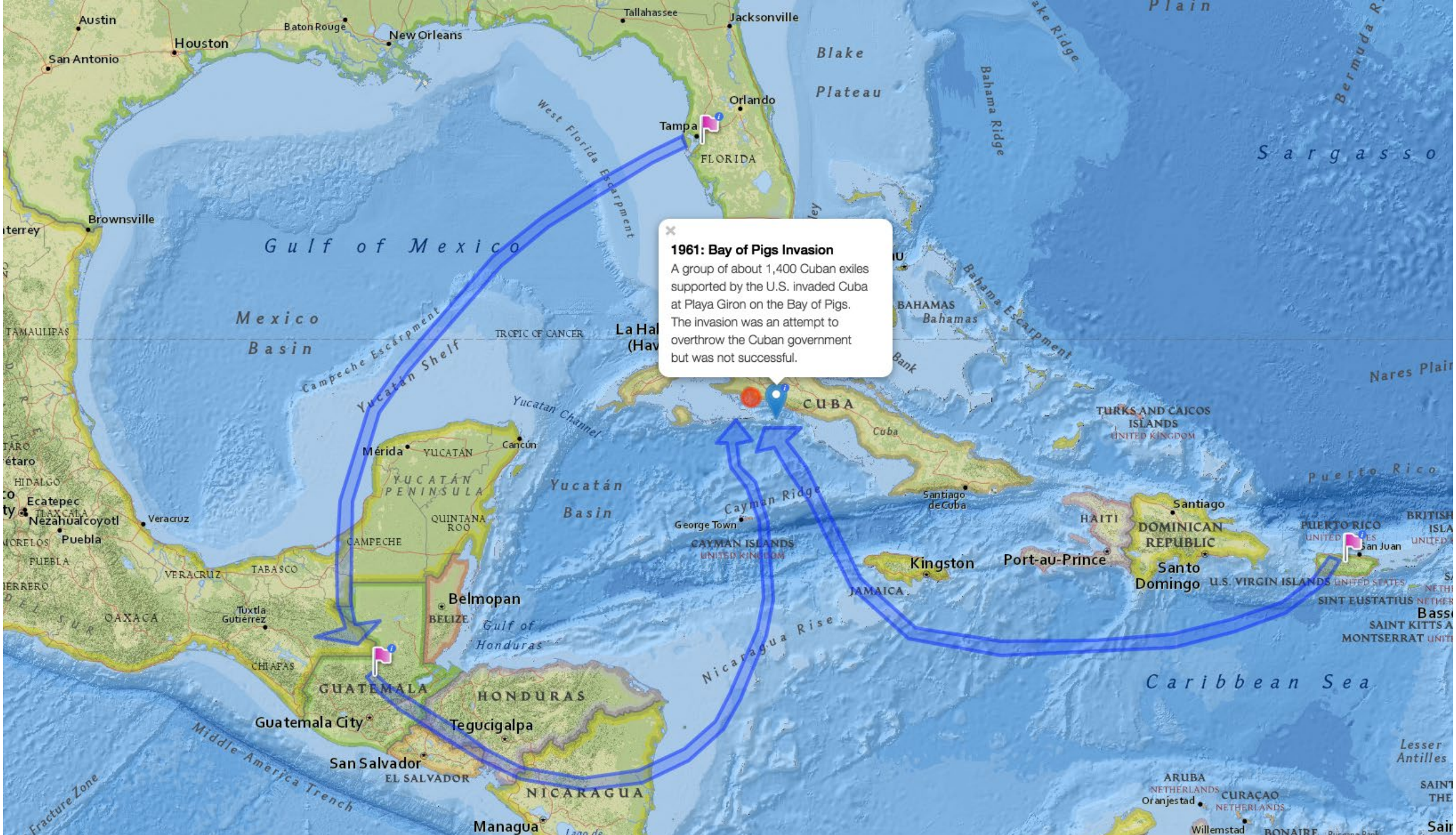


Sputnik

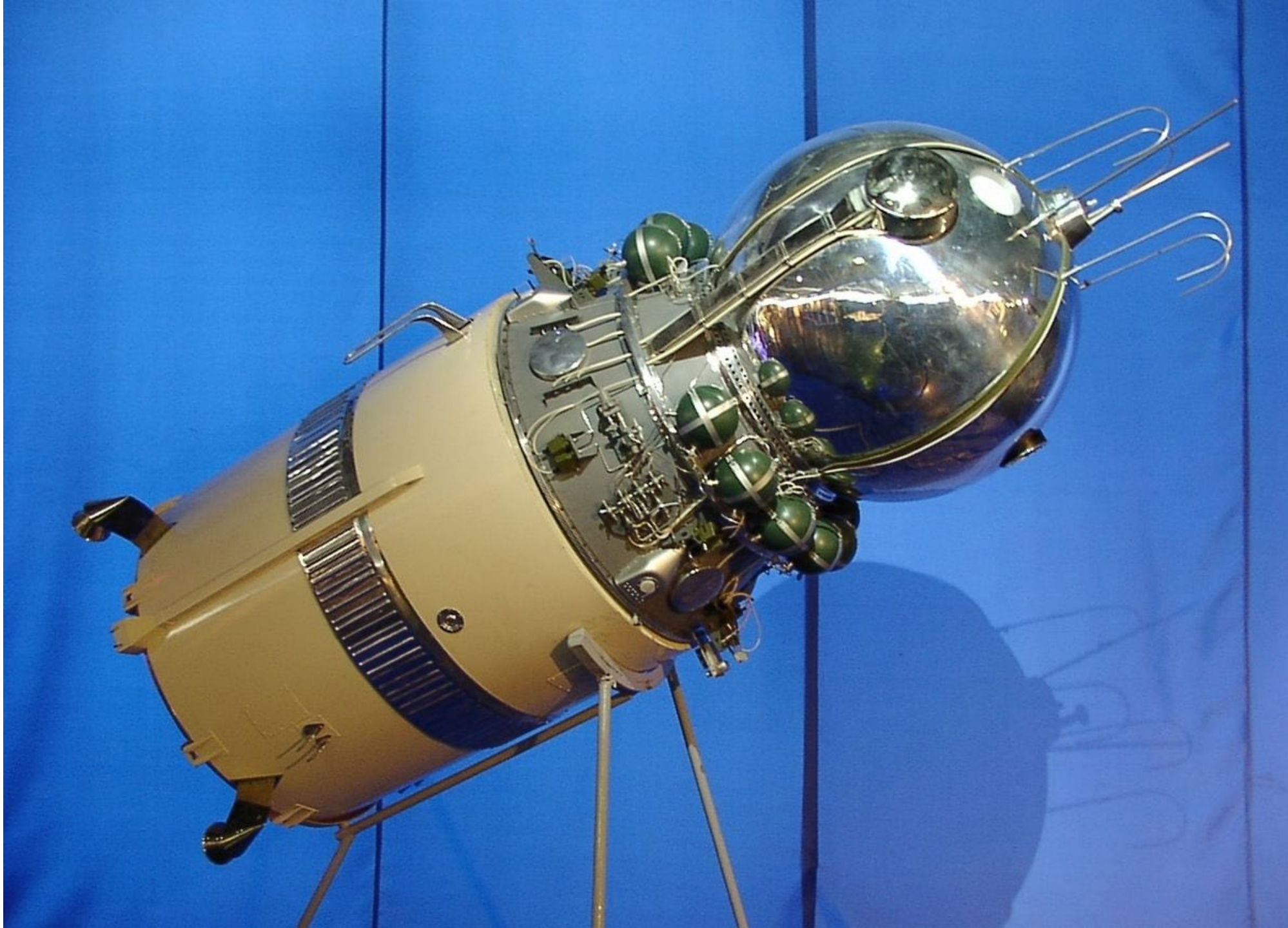


American Domestic Politics


NASA

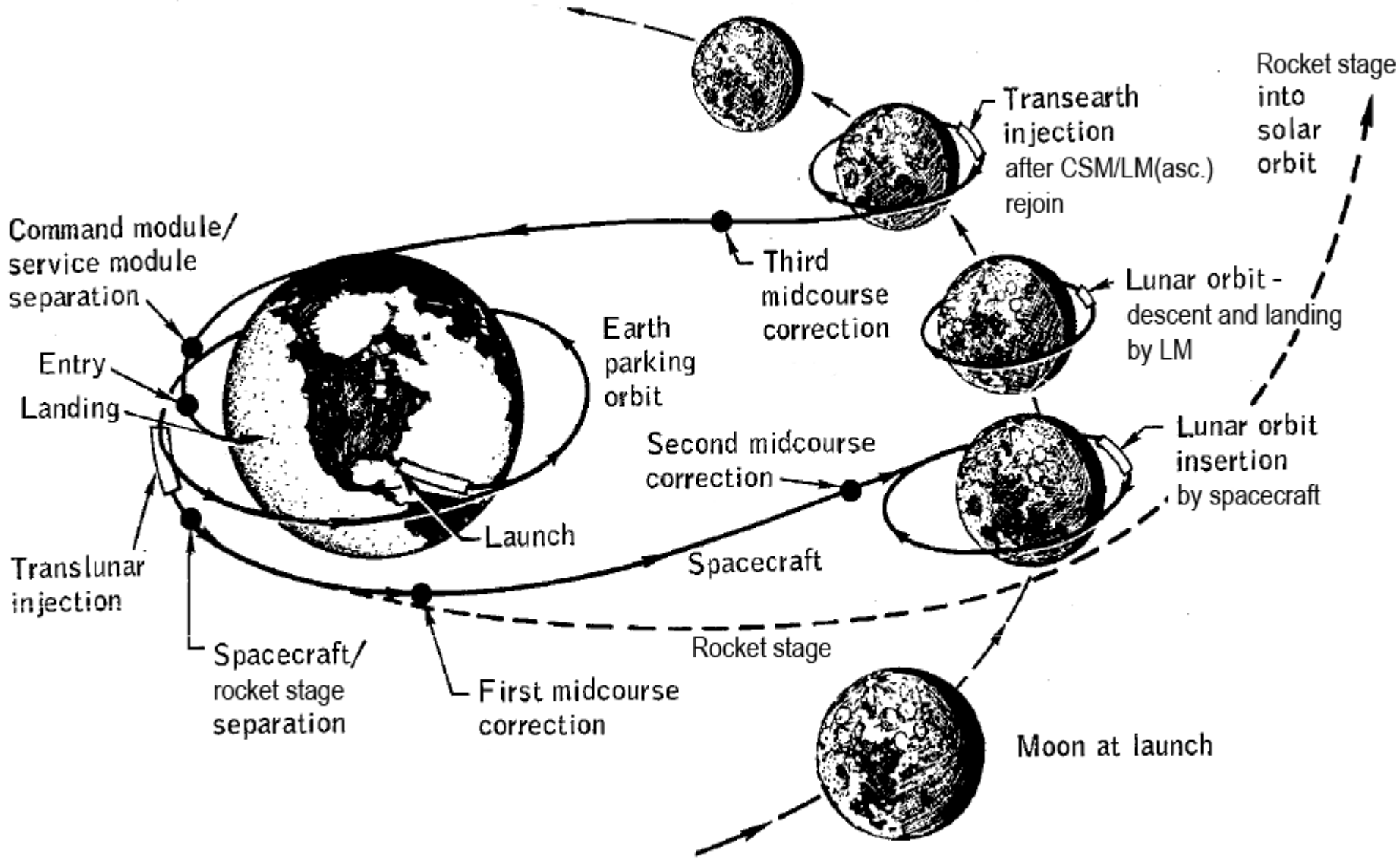

1961: Bay of Pigs Invasion
A group of about 1,400 Cuban exiles supported by the U.S. invaded Cuba at Playa Giron on the Bay of Pigs. The invasion was an attempt to overthrow the Cuban government but was not successful.
Austin
Houston
San Antonio
Baton Rouge
New Orleans
Tallahassee
Jacksonville
Orlando
Tampa
FLORIDA
Brownsville
Gulf of Mexico
Mexico Basin
West Florida Escarpment
Campeche Escarpment
Yucatan Shelf
TROPIC OF CANCER
Blake Plateau
Bahama Ridge
Bahama Escarpment
BAHAMAS
Bahamas
Sargasso
Bermuda Rise
Nares Plain
CUBA
Cuba
Yucatan Channel
Yucatán Basin
Cayman Ridge
Nicaragua Rise
Caribbean Sea
Mérida
YUCATÁN
Cancún
YUCATÁN PENINSULA
QUINTANA ROO
CAMPECHE
TABASCO
VERACRUZ
TAMAULIPAS
HIDALGO
TLAXCALA
Ecatepec
Nezahualcoyotl
Puebla
Veracruz
MORELOS
PUEBLA
GUERRERO
OAXACA
Tuxtla Gutiérrez
CHIAPAS
Belmopan
BELIZE
Gulf of Honduras
GUATEMALA
HONDURAS
Guatemala City
Tegucigalpa
San Salvador
EL SALVADOR
NICARAGUA
Managua
Middle America Trench
Fracture Zone
George Town
CAYMAN ISLANDS
UNITED KINGDOM
Santiago de Cuba
TURKS AND CAICOS ISLANDS
UNITED KINGDOM
Kingston
JAMAICA
Port-au-Prince
HAITI
Santiago
DOMINICAN REPUBLIC
Santo Domingo
PUERTO RICO
San Juan
U.S. VIRGIN ISLANDS
SINT EUSTATIUS
SAINT KITTS A
MONTSERRAT
Lesser Antilles
ARUBA
NETHERLANDS
Oranjestad
CURAÇAO
NETHERLANDS
Willemstad

Vostok



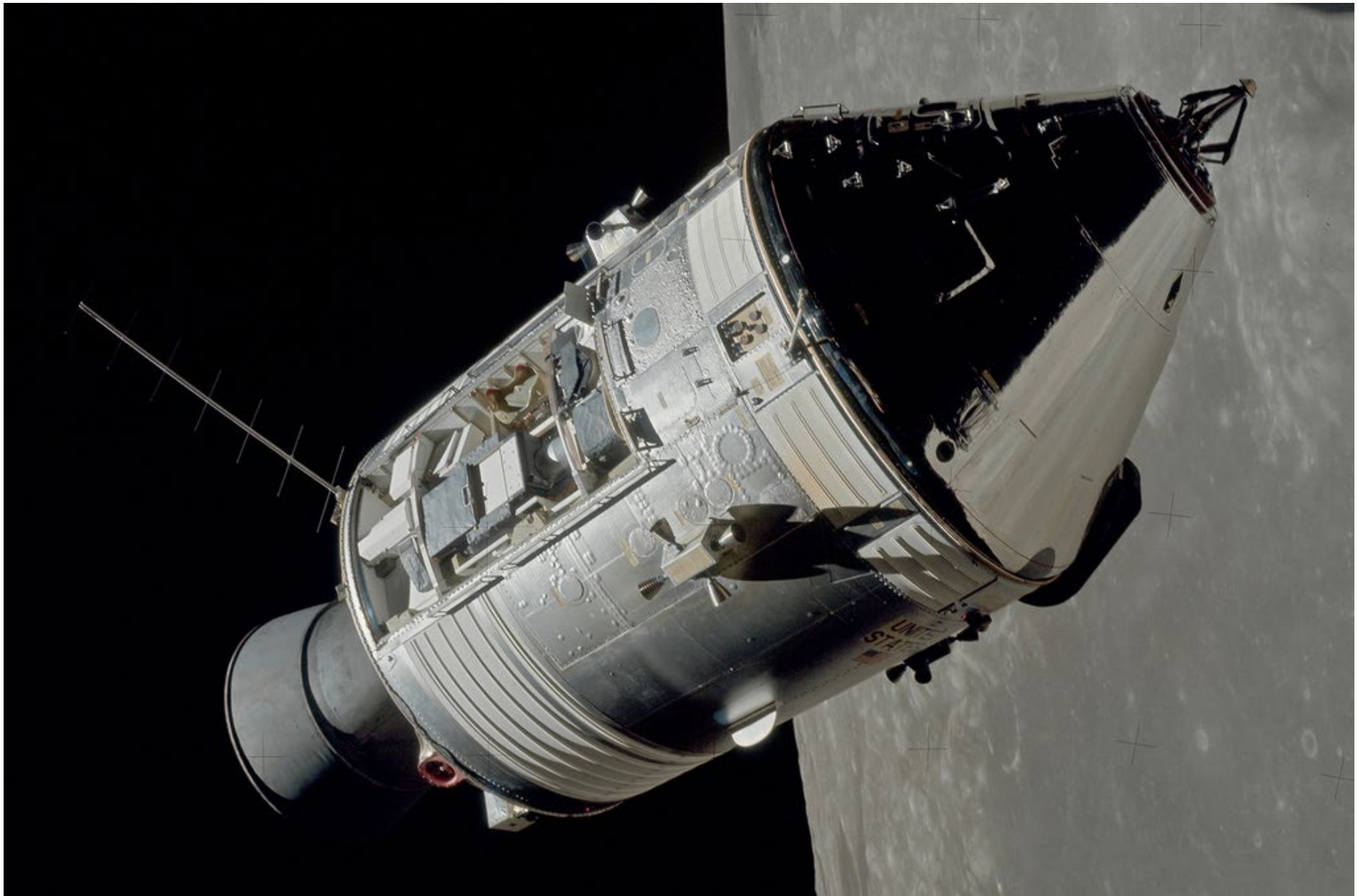
The Apollo Decision

Lunar Orbit Rendezvous

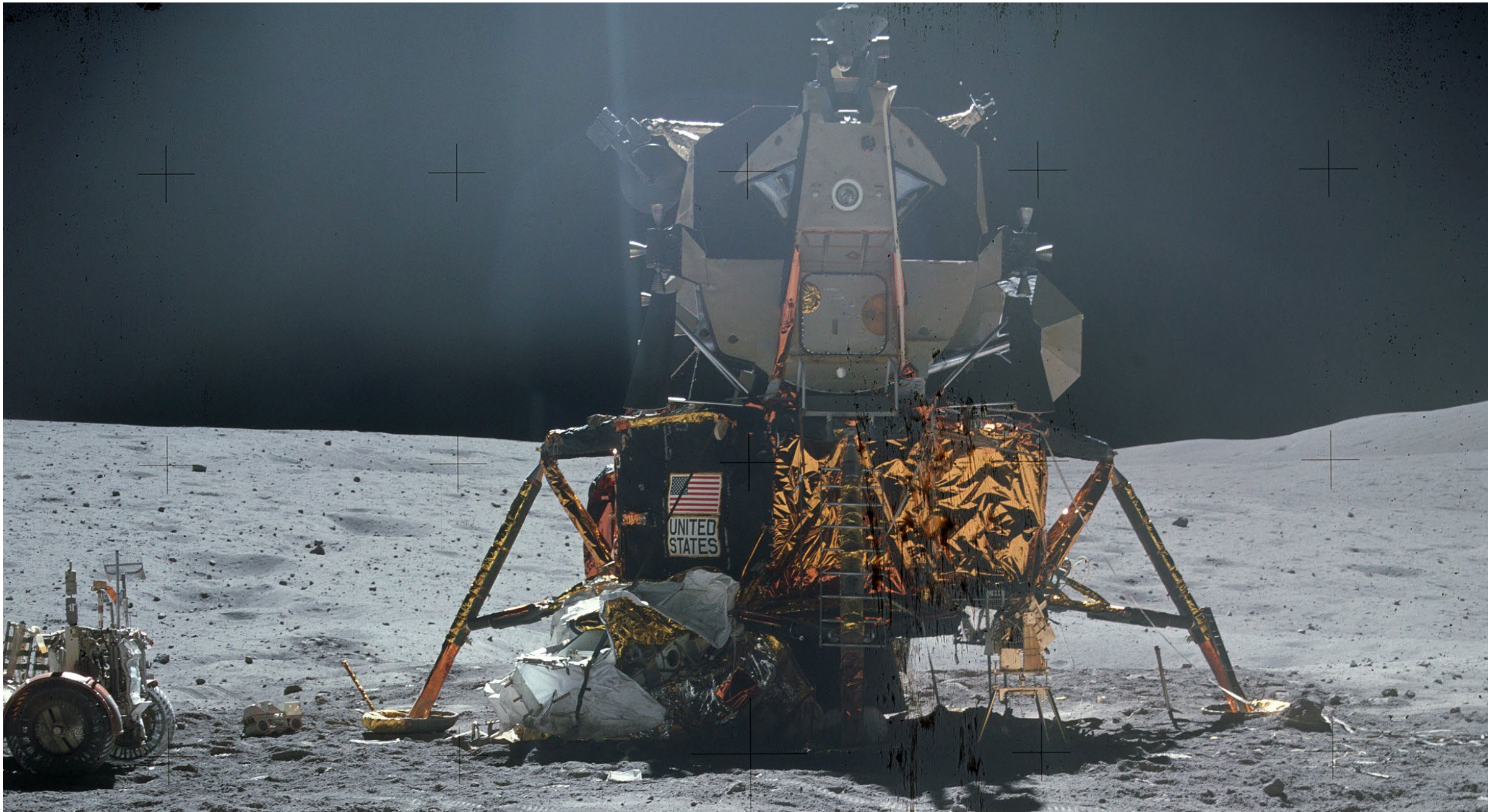


The Saturn V Rocket

The Apollo Command and Service Modules



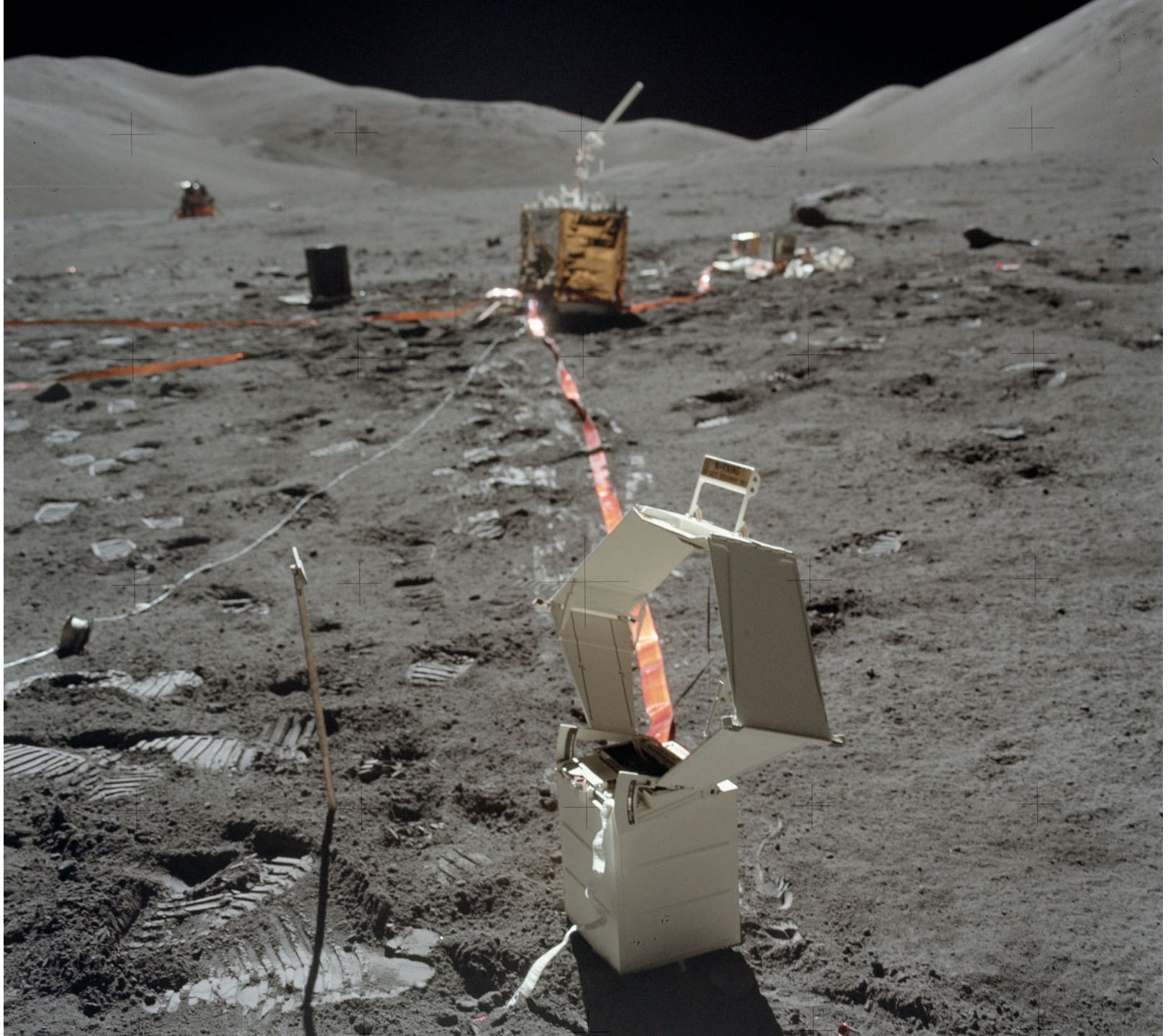
The Lunar Module



Astronauts

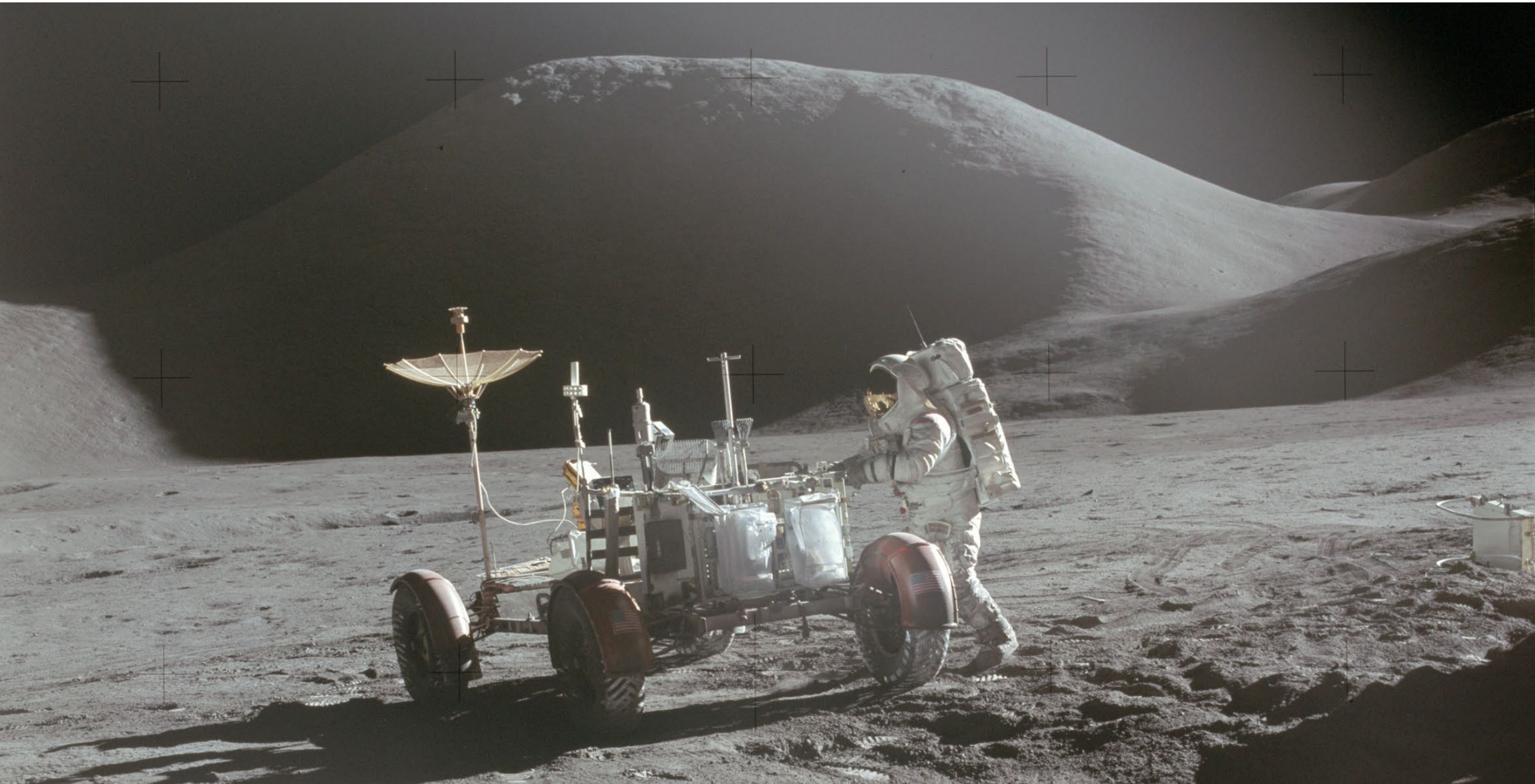
Gemini

Science



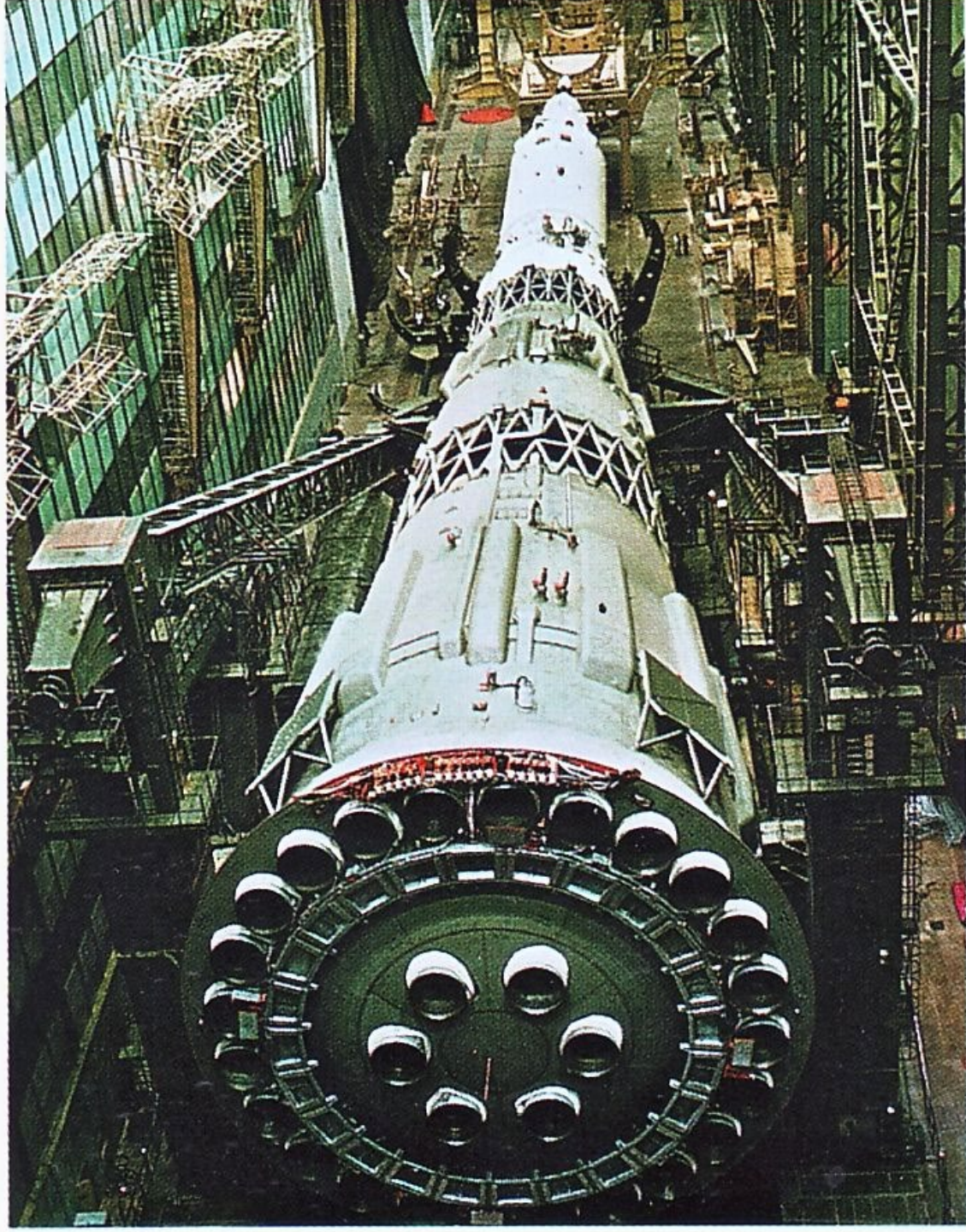
Public Relations

Operational Apollo



The Space Shuttle Decision

The Soviet Lunar Program



Some Lessons of Apollo

- Clarity
- Political commitment
- Societal support
- Near-term time frame
- Economic capacity
- Organizational capacity
- Technology readiness
- Existing infrastructure
- …

Wicked Problems

1. The problem is not understood until after the formulation of a solution.
2. Wicked problems have no stopping rule.
3. Solutions to wicked problems are not right or wrong.
4. Every wicked problem is essentially novel and unique.
5. Every solution to a wicked problem is a 'one shot operation.'
6. Wicked problems have no given alternative solutions.

Jeff Conklin, Wicked Problems and Social Complexity, 2005

Learning Together

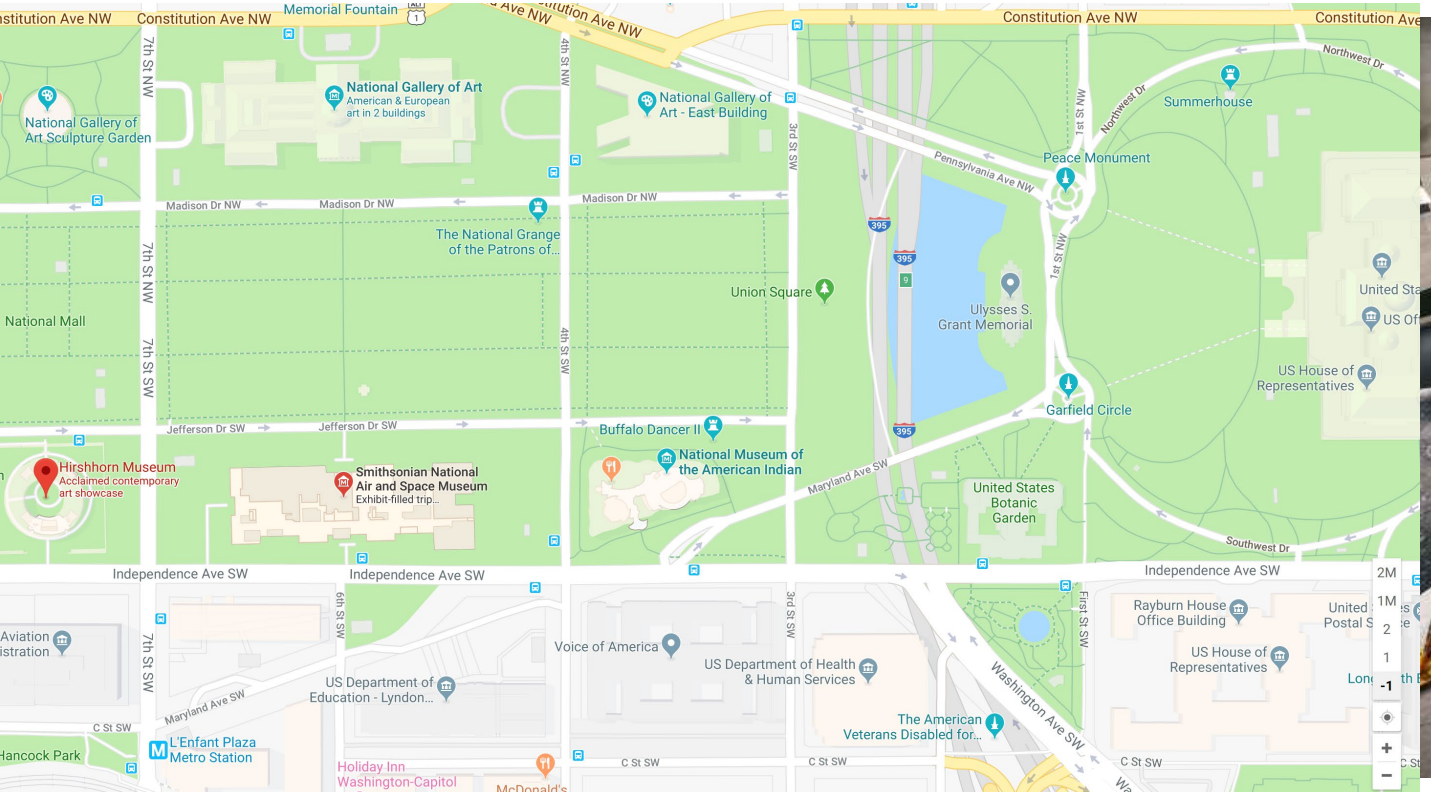
- 40-minute lecture
  - Provides some common background
- 15-minute group discussion
  - Collective sensemaking
  - Guided by written discussion questions
  - Scribe uploads a one-page summary to ELMS (same day)
- 10 minutes of full-class sythesis
- 10-minutes of support for your current “activity”
  - Activities are designed to be completed in 3 hours per week
  - Class discussion is intended to help you make progress

Reading, Watching, Listening, and Discussing

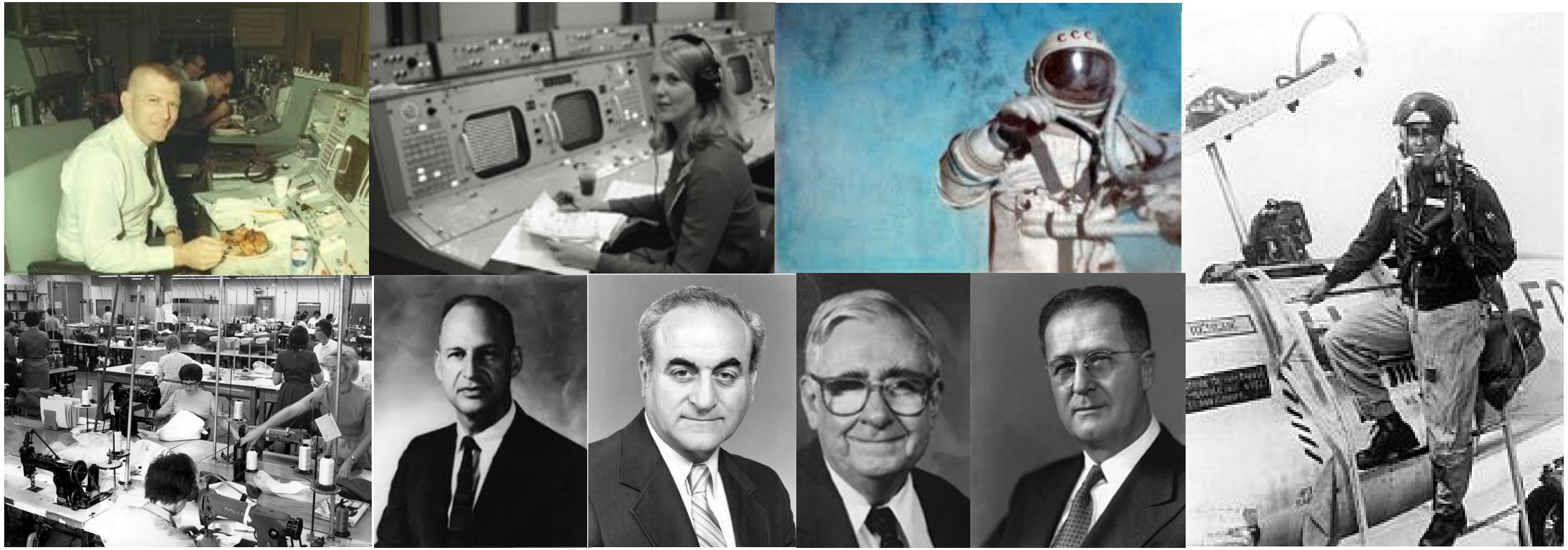
- One hour of preparation for **every** class session
  - One reading, video, or audio
  - Assignments are linked from the schedule
    - Different students have different readings assigned (keyed to “student number”)
  - 5-10 random quizzes on the reading, promptly at the start of class

- Read for comprehension, not for detail
  - Goal is to bring important points to the discussion
  - Finish in an hour!

National Air and Space Museum



Adopt Someone: An Individual Perspective



Mission Control: An Organizational Perspective

Term Paper

- Pick one big thing to study
  - A social challenge, a large-scale technology challenge, an armed conflict, …
  - Choice is due after team project is submitted
- Draw on the lessons of Apollo
  - Compare and contrast, at the level of enablers and inhibitors
  - Learn about your chosen challenge –what do we know already?
  - Compile insights throughout the semester
  - Write early and then get several people to read it!
- No final exam

What's Where

- Course Web Site
  - Schedule, including reading list and assignments
  - Contact information, policies, how grades are computed, …
  - Links to most things (including most readings)
- ELMS
  - All copyrighted materials (**Files** for PDF, **Modules** for Video)
  - Recorded class sessions (**Panopto**)
  - Everything that includes student names (table assignments, team assignments, …)
  - Grades
- Email for getting quick answers
  - Please **don't use ELMS to send messages** or comments on grades!
- Office Hours to discuss anything
  - Class-related or not