

NASA Before Apollo

HONR 269i

To the Moon and Back: The Apollo Program

Topics for Tonight

- Lecture
 - The birth of NASA
 - Project Mercury
- Discussion groups
- Activity: Tweeting 1969

"All the News
That's Fit to Print"

The New York Times.

LATE CITY EDITION

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FIVE CENTS

SOVIET FIRES EARTH SATELLITE INTO SPACE; IT IS CIRCLING THE GLOBE AT 18,000 M. P. H.; SPHERE TRACKED IN 4 CROSSINGS OVER U. S.

HOFFA IS ELECTED TEAMSTERS' HEAD; WARNS OF BATTLE

Defeats Tom Fork 3 to 1
—Says Union Will Fight
"With Every Gun"

Text of the radio address
is printed on Page 3.

By A. H. BARRON
Special to The New York Times.
WILSON BRADEN, 46, the
ex-convict, elected International
Brotherhood of Teamsters presi-
dent James H. Hoffa as its presi-
dent today.

He won by a margin of nearly
3 to 1 over the combined vote
of two rivals who campaigned
as opponents to elect the ex-
convict's biggest rival.

Several months' investigations
and raids ended in the
conviction of the union's
operating officers to strip the 44-
year-old former merchandise
man of his position as
president.



ON TORCH OF VICTORY: James Hoffa, entering head of the Teamsters Union, raises
head of James H. Hoffa upon his election as union's president. At right is Tom Fork.

COURSE RECORDED

Navy Picks Up Radio Signals—4 Report Sighting Device

By WALTER WINSTON
Special to The New York Times.
WASHINGTON, Oct. 5.—The Navy Research Service
today announced that it had recorded four crossings
of the Soviet earth satellite
over the United States.

It said that the last crossing
over Washington. The crossings
were made by the use of
the location of the device was
not made available immediately.

It added that tracking would
be continued in an attempt to
pin down the exact altitude
to obtain scientific information
of the type sought in the Inter-
national Geophysical Year.

Other radio sightings, one of
which was in conjunction with
a radio contact, were reported
by early morning hours. The sightings were made at
Columbus, Ohio, and one each
from Torr State, Ind., and
Wichita, Kan.



The satellite's orbit of the Russian earth satellite is
shown by black line. The rotation of the earth will bring
the United States under the orbit of the satellite.

Device Is 8 Times Heavier Than One Planned by U.S.

560 MILES HIGH

Visible With Simple Binoculars, Moscow Statement Says

Text of this announcement
appears on Page 3.

By WALTER J. WINSTON
Special to The New York Times.
MOSCOW, Saturday, Oct. 5.—
The Soviet Union announced
today that it has launched a man-made
earth satellite into space probably
today.

The statement indicated the
satellite's orbit as a maximum
of 560 miles above the earth
and its speed at 28,000 miles an
hour.

The official Soviet news
agency Tass said the satellite
weighs 3,480 pounds and is 8 times
heavier than the satellite
planned by the United States.
The satellite, it was said, was
launched from the Plesetsk
range near the town of
Plesetsk, 100 miles from
Moscow.

Chronology

- First Soviet Satellite: Sputnik 1 (October 1957)
- Vanguard 1 Launch Failure (December 1957)
- First American Satellite: Explorer 1 (January 1958)
- Senate Committee on Space and Aeronautics (February 1958)
- Space Act (July 1958)
- NASA established (October 1958)

Space Act of 1958

The Congress declares that the general welfare and security of the United States require that adequate provision be made for aeronautical and space activities. The Congress further declares that **such activities shall be the responsibility of, and shall be directed by, a civilian agency exercising control over aeronautical and space activities sponsored by the United States, except that activities peculiar to or primarily associated with the development of weapons systems, military operations, or the defense of the United States ... shall be the responsibility of, and shall be directed by, the Department of Defense ...**

Space Act of 1958

The aeronautical and space activities of the United States shall be conducted so as to contribute materially to one or more of the following objectives:

- (1) The expansion of human knowledge of phenomena in the atmosphere and space;
- (2) The improvement of the usefulness, performance, speed, safety, and efficiency of aeronautical and space vehicles;
- (3) The development and operation of vehicles capable of carrying instruments, equipment, supplies and living organisms through space;**
- (4) The establishment of long-range studies of the potential benefits to be gained from, the opportunities for, and the problems involved in the utilization of aeronautical and space activities for peaceful and scientific purposes.
- (5) The preservation of the role of the United States as a leader in aeronautical and space science and technology and in the application thereof to the conduct of peaceful activities within and outside the atmosphere.
- (6) The making available to agencies directly concerned with national defenses of discoveries that have military value or significance, and the furnishing by such agencies, to the civilian agency established to direct and control nonmilitary aeronautical and space activities, of information as to discoveries which have value or significance to that agency;
- (7) Cooperation by the United States with other nations and groups of nations in work done pursuant to this Act and in the peaceful application of the results, thereof; and
- (8) The most effective utilization of the scientific and engineering resources of the United States, with close cooperation among all interested agencies of the United States in order to avoid unnecessary duplication of effort, facilities, and equipment.

Space Act of 1958

... the President, for a period of four years after the date of enactment of this Act, may transfer to the Administration any functions ... of any other department or agency of the United States, or of any officer or organizational entity thereof, which relate primarily to the functions, powers, and duties of the Administration ...

Major NASA Facilities



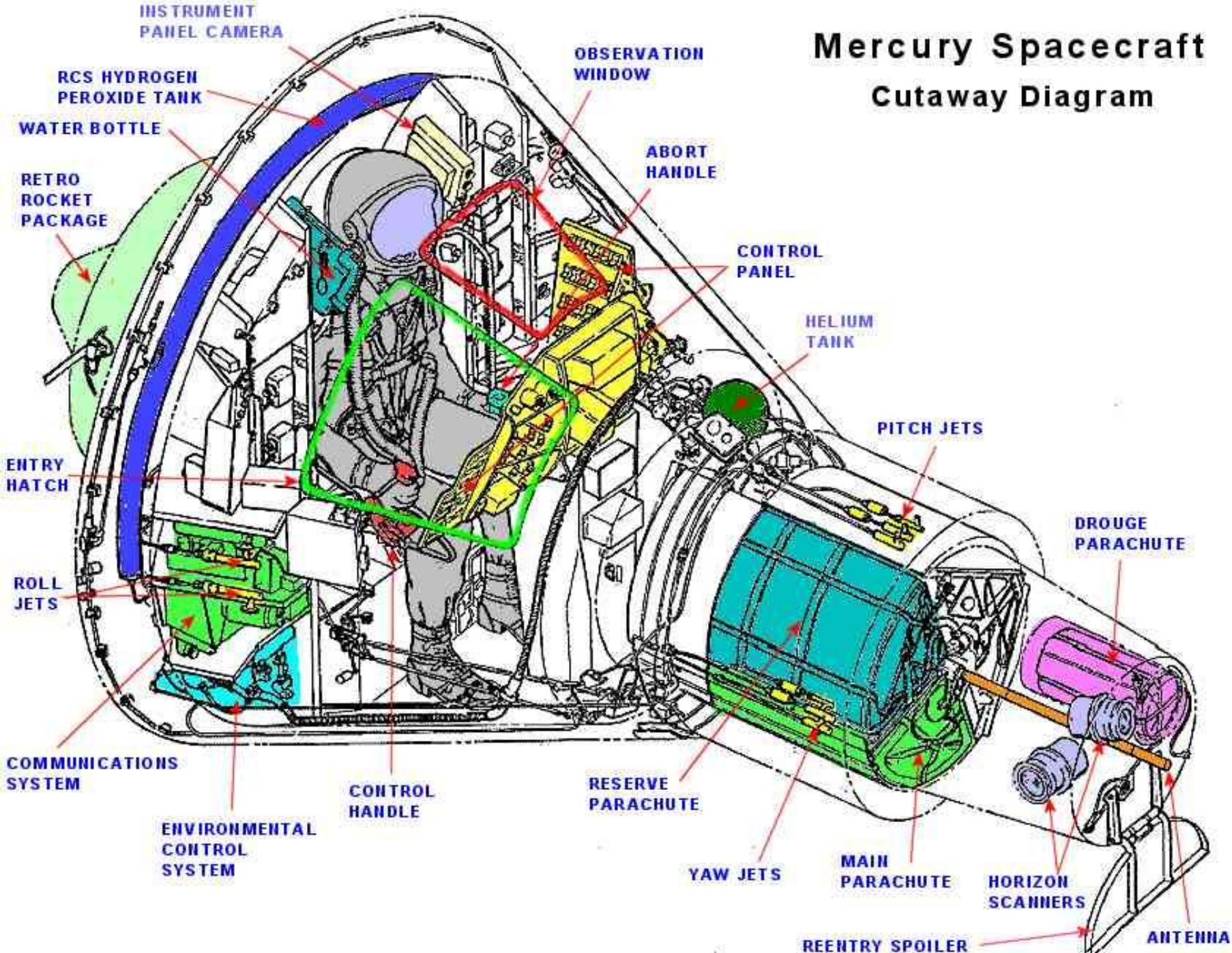
Operational Missions of NASA

- Earth satellites
 - Communication, weather, scientific, ...
 - DoD: Reconnaissance
- Human spaceflight
 - Mercury, Gemini, Apollo ...
 - DoD: Dyna-Soar, Manned Orbiting Laboratory
- Planetary exploration
 - Moon, Venus, Mars, ...
- Aeronautics research

Project Mercury Chronology

- Mercury spacecraft contract award (January 1959)
- First Mercury Little Joe test (August 1959)
- First Mercury Atlas test (September 1959)
- First Mercury Redstone test (November 1960)
- First manned Soviet orbital flight (April 1961)
- First manned suborbital Mercury flight (May 1961)
- 25.3-hour Soviet orbital flight (August 1961)
- First manned orbital Mercury flight (February 1962)
- Fourth (and last) manned orbital Mercury flight (May 1963)

Mercury Spacecraft Cutaway Diagram



McDonnell Aircraft, St. Louis, MO



Mercury Redstone 1



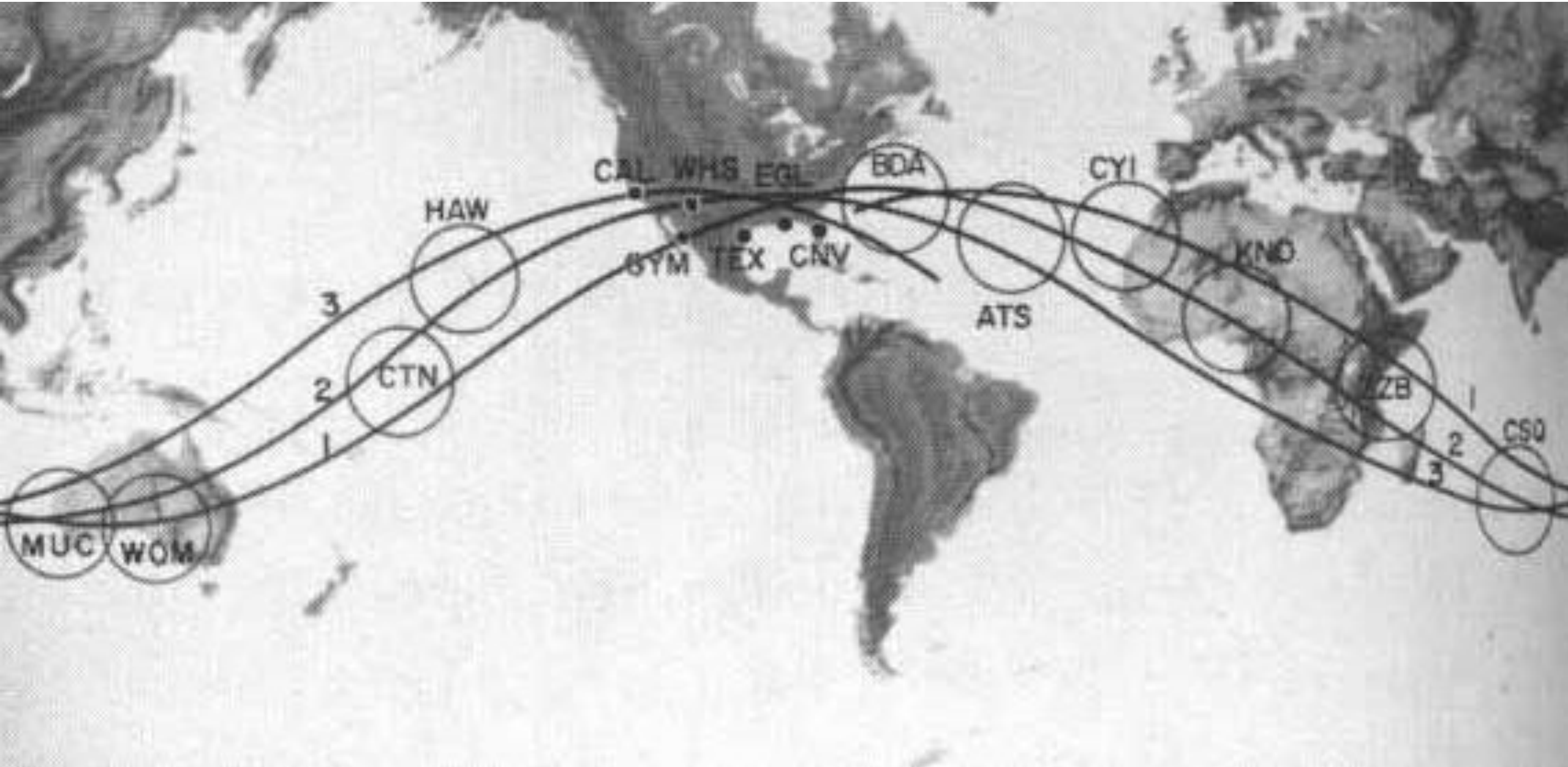
Mercury Atlas 1



Mercury-Redstone 4 (Gus Grissom)



Mercury Manned Spaceflight Network





GREENWICH MEAN TIME
17:42:31.00

COUNTDOWN
00
ELAPSED TIME
0:00:00
TIME TO REENTRY
17:44:30



A panel of multiple small monitors or data displays, likely showing real-time data for the shuttle mission. The panel is divided into several sections, each containing a different type of data or visualization. The data appears to be organized into a grid-like structure, with each cell containing a different set of information. The panel is located on the right side of the control room, above the operators' consoles.



Mercury-Atlas 6 (John Glenn)



Discussion Groups

- McDougall Chapter 7 (“The Birth of NASA”)
 - “Inside baseball” from the American political system
- Cox Chapter 1 (“The Famous Space Task Group is akin to the Mayflower”)
 - A vivid picture of the beginning of human space flight at NASA
- Swenson Chapter 5 (“Specifications for a Manned Satellite”)
 - Describes the process of selecting the Mercury prime contractor
- The Right Stuff (motion picture)
 - An interpretation of the test pilot culture at the founding of NASA

Tweeting 1969

- What was happening? Where?
- Who was making these decisions?
- How was all this being coordinated?