

Astronauts

INST 154

Apollo at 50

[Mercury 7 Press Conference](#)

“Mercury 7” Astronaut Selection

- Criteria
 - Age < 40, Height < 5'11", Hours ≥ 1500, Test Pilot, Jets, B.S., Active Duty
- Screened 110 of 508 military test pilot records
 - 58 Air Force, 47 Navy, 5 Marine
- Interviewed 69 of those 110
 - 16 declined, 21 were rejected (6 for height!)
- Ran medical tests on the remaining 32
 - 1 failed (Lovell)
- Selected 7 of the remaining 31
 - 2 more were selected in later rounds (Conrad, Givens)
- Six flew in Project Mercury



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER Houston
1, Texas

Walnut 8-2811
Extension 3751



MSC 63-95
June 5, 1963

HOUSTON, TEXAS - The National Aeronautics and Space Administration will recruit to 15 new astronaut trainees this summer.

The program is opened to both civilian and military volunteers. Cut-off date for applications is July 1, 1963. The military services which will pre-screen its pilots, will have until July 15, 1963, to pass on to NASA its recommended applicants.

Pilots selected will join the current astronaut pilot pool in October, based at NASA's Manned Spacecraft Center, Houston, Texas.

With slight exception, selection criteria are similar to those used in the selection of 9 new manned space flight candidates chosen by NASA in 1962. To qualify for this selection, a candidate must:

1. Be a United States citizen born after June 30, 1929 and 6 feet or less in height.
2. Have earned a degree in engineering or physical sciences.
3. Have acquired 1,000 hours jet pilot time or have attained experimental flight test status through the Armed Forces, NASA, or the aircraft industry.

Add 1
MSC 63-95

4. Be recommended by his present organization.

NASA also announced that conversation will be begun with representatives of nation's scientific community with regard to finding the earliest practicable ways in which scientists can be included in the Apollo mission.

Compared to 1962 selection criteria, the maximum age requirement has been reduced from 35, and certification as a test pilot, while still preferred, is no longer mandatory.

The age reduction is to insure a broad age spread in the pilot pool. Average age of the original group of 7 astronauts is 38; the second group, 34.

In addition, successful applicants will have to be in excellent physical and mental condition.

Applications are to be addressed to the NASA Manned Spacecraft Center, Personnel Office, P. O. Box 18534, Houston 1, Texas, Attn: JOHN CAIRL.

Civilian applications must be postmarked no later than midnight July 1, 1963.



October 19, 1964
Released 8:45 am CST

WASHINGTON, D. C. -- NASA will recruit 10 to 20 scientist-astronauts for the Nations future manned spaceflight missions.

The recruiting process will begin at once, with a December 31 application deadline. Selection of this first group of scientist-astronauts is to be completed by next spring.

A vast scientific frontier is being opened to direct scientific exploration by man. Observation made by scientist-astronauts will provide new information on the solar system and on man's ability to perform effectively in prolonged spaceflight.

The office of Space Science and Application and the National Academy of Sciences have cooperated in developing the scientific criteria of the selection process and the Academy will conduct the screening for scientific qualifications of the applicants. The Office of Manned Space Flight and the Manned Spacecraft Center, Houston, Texas, will be responsible for all other aspects of selection criteria and screening.

On April 16, 1964, the National Academy of Sciences was requested to participate in establishing scientific criteria for scientist-astronauts by Dr. Homer E. Newell, Associate Administrator for Space Sciences and Applications, in a letter to Dr. Harry H. Hess, Chairman of the Academy Research Council Space Science Board.

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Add 1

Scientific criteria were developed by the Space Science Board Adhoc Committee on Scientific Qualifications of Scientist-Astronauts which began a series of meetings in May.

The scientist-astronaut program is opened to scientists in scientific, medical or engineering specialty or any combination of those specialties. To be eligible for the scientist-astronaut program, an applicant must:

1. Have been born on or after August 1, 1930; be a citizen of the United States; and be no taller than six feet.
2. Have (a) a bachelor's degree (b) a doctorate in the natural sciences, medicine or engineering of the equivalent in experience.
3. Have transcripts of academic records sent directly to Scientist-Astronaut, P. O. Box 2201 Houston, Texas 77058, from all institutions of higher education which he has attended.
4. Have scores in the graduate record examination sent by Educational Testing Service, Princeton, N. J., directly to Scientist-Astronaut at the Houston address above. NOTE: (Examinations will be given January 16, 1965). Completed applications and examination fee must reach Educational Testing Service by December 31, 1964. In the event that an applicant has not taken graduate record examinations and plans to take the January 16 examination will be forwarded to Scientist-Astronaut, Houston, by the Education Testing Service.

Add 2

5. Submit a Standard Form 57, Federal Employment Applicant Form, available at any U.S. Post Office.

6. Submit a Standard Form 89, Report of Medical History, obtainable at U.S. Post Office. Forms should be signed by both the applicant and his physician.

7. Submit Standard Form 78, Certificate of Medical Examination, Part A to be completed by applicant and Part B, questions 1 through 21, to be completed by his physician. This form is also available at local post offices or offices of the Civil Service Commission.

All applicants should address their application postmarked no later than midnight December 31, 1964 to Scientist-Astronaut, P. O. Box 2201, Houston, Texas 77058.

After preliminary screening, certain applicants will be asked to submit additional material including published or unpublished scientific and engineering reports; essays on field experience, research activities, or hobbies related to space mission; and individual thoughts on scientific objectives of manned space missions.

Before final selection of astronauts, applicants will receive a thorough physical examination and will be required to take part in a limited space simulation program. The simulation program will serve to familiarize them with the space environment and determine to a degree their ability to withstand the stresses of launch, spaceflight and reentry.

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Add 3

Selected applicants who are not already qualified pilots will be given individual flight raining necessary to qualify them as pilots of high-performance aircraft and helicopter.

For further information, prespective applicants should write Scientist-Astronauts, P. O. Box 2201, Houston, Texas 77058.

Houston

- Manned Spacecraft Center: Bob Gilruth
- Flight Crew Operations: Deke Slayton
 - Astronaut Office: Alan Sheppard
 - Flight Crew Support
 - Aircraft Operations
- Flight Operations: Chris Kraft
 - Mission Control



The Rotation

- Astronaut Candidate Training
 - Orbital mechanics, Spacecraft systems, Survival, Geology, ...
- CAPCOM, (Apollo) Support Crew
 - Support crew: Spacecraft tests, Logistics, Protocol, ...
- Backup Crew
 - Train to fly the mission (individually or as a crew)
- Prime Crew (3 flights later)
 - Fly the mission

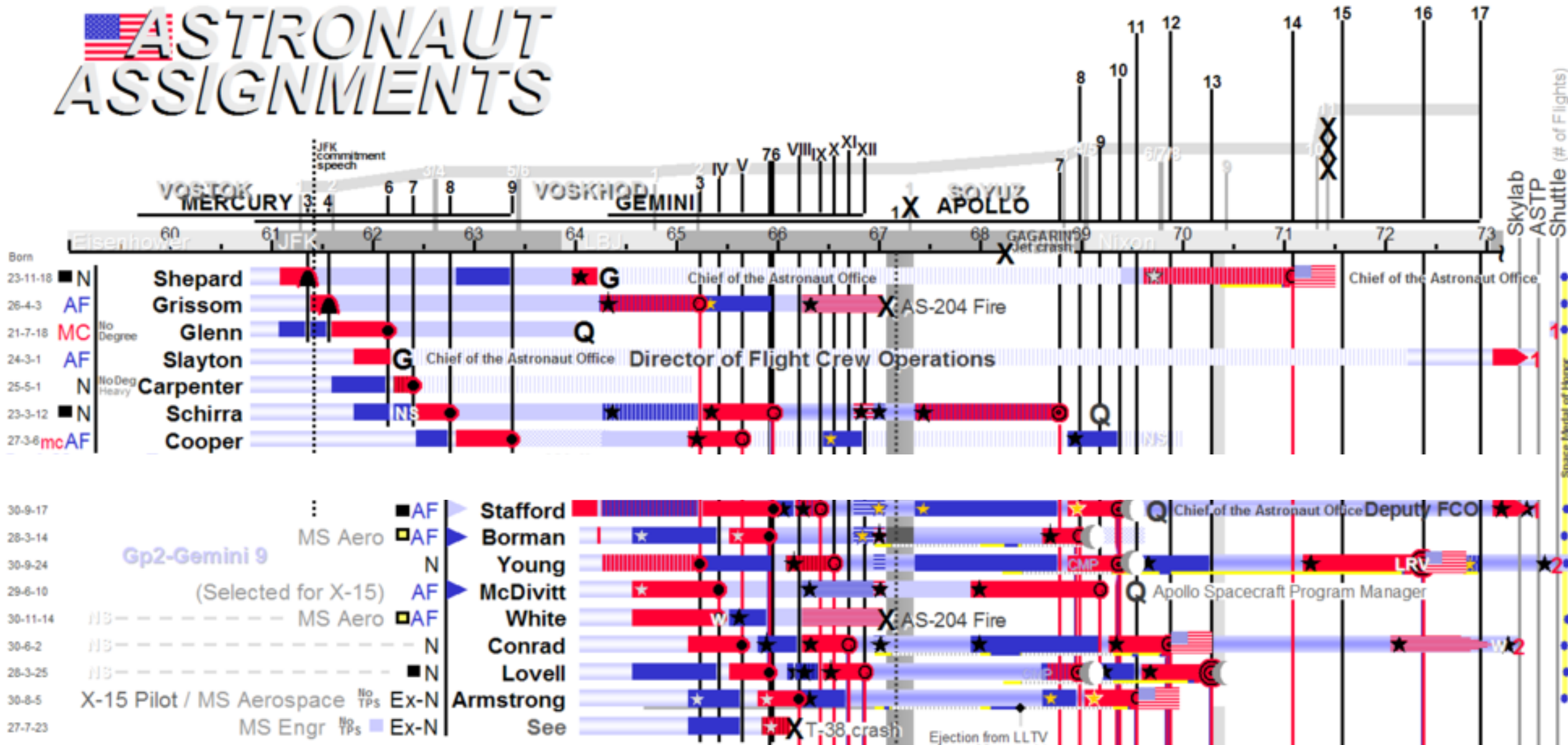
Apollo-Era Astronaut Groups

- 7 in Group 1 (“The Original 7”)
 - 6 flew Mercury, 3 flew Gemini, 2 flew Apollo, 1 flew ASTP, 1 flew Shuttle
- 9 in Group 2 (“The New Nine”)
 - 8 flew Gemini, 8 flew Apollo, 1 flew Skylab, 1 flew ASTP, 1 flew Shuttle
- 14 in Group 3
 - 5 flew Gemini, 10 flew Apollo, 1 flew Skylab

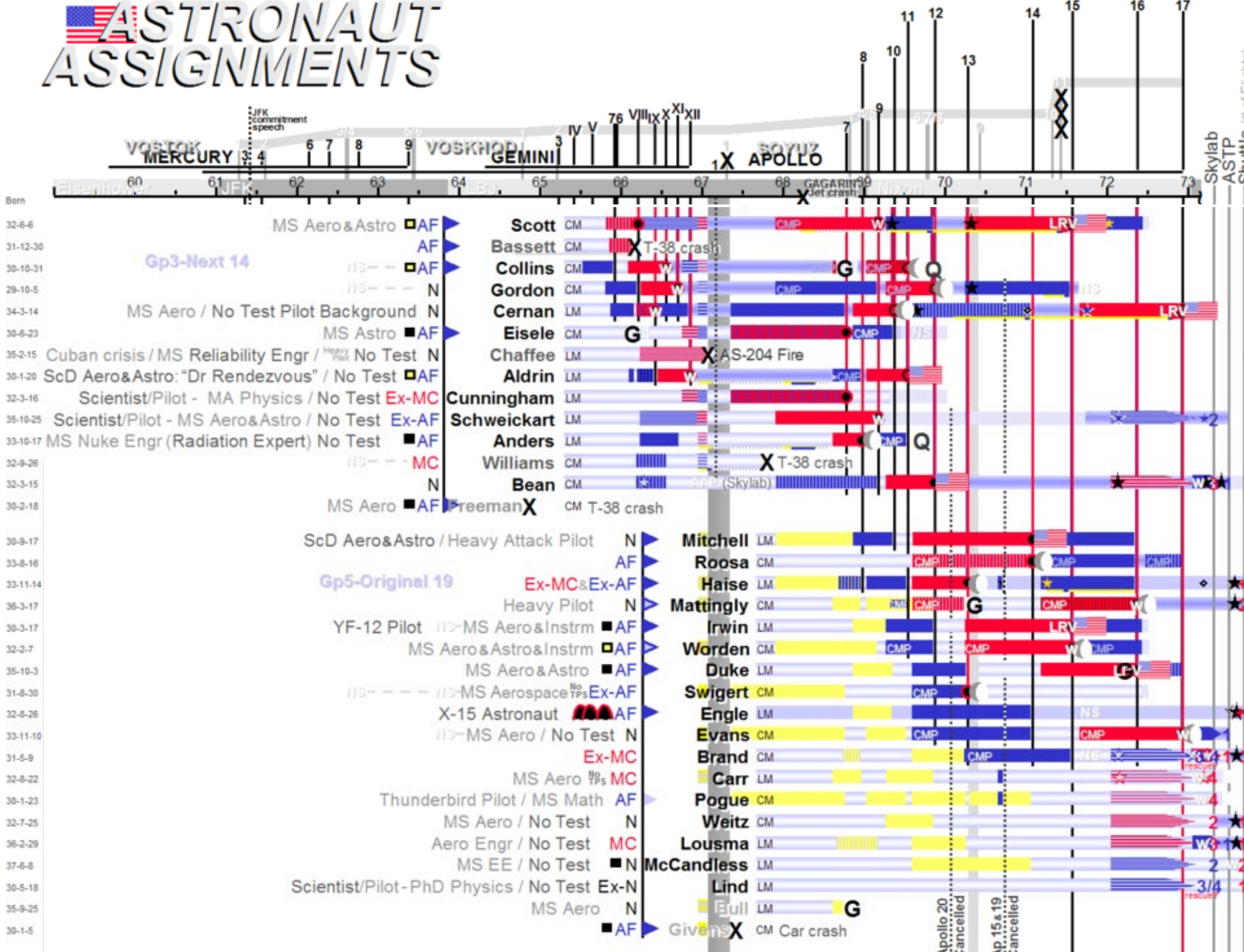
- 6 in Group 4: (Scientist-Astronauts)
 - 1 flew Apollo, 3 flew Skylab, 1 flew Shuttle
- 19 in Group 5 (“The Original Nineteen”)
 - 9 flew Apollo, 4 flew Skylab, 1 flew ASTP, 7 flew Shuttle

- 11 in Group 6 (the “Excess Eleven”)
 - 7 flew Shuttle
- 7 in Group 7 (ex-Manned Orbiting Laboratory)
 - 7 flew Shuttle

ASTRONAUT ASSIGNMENTS

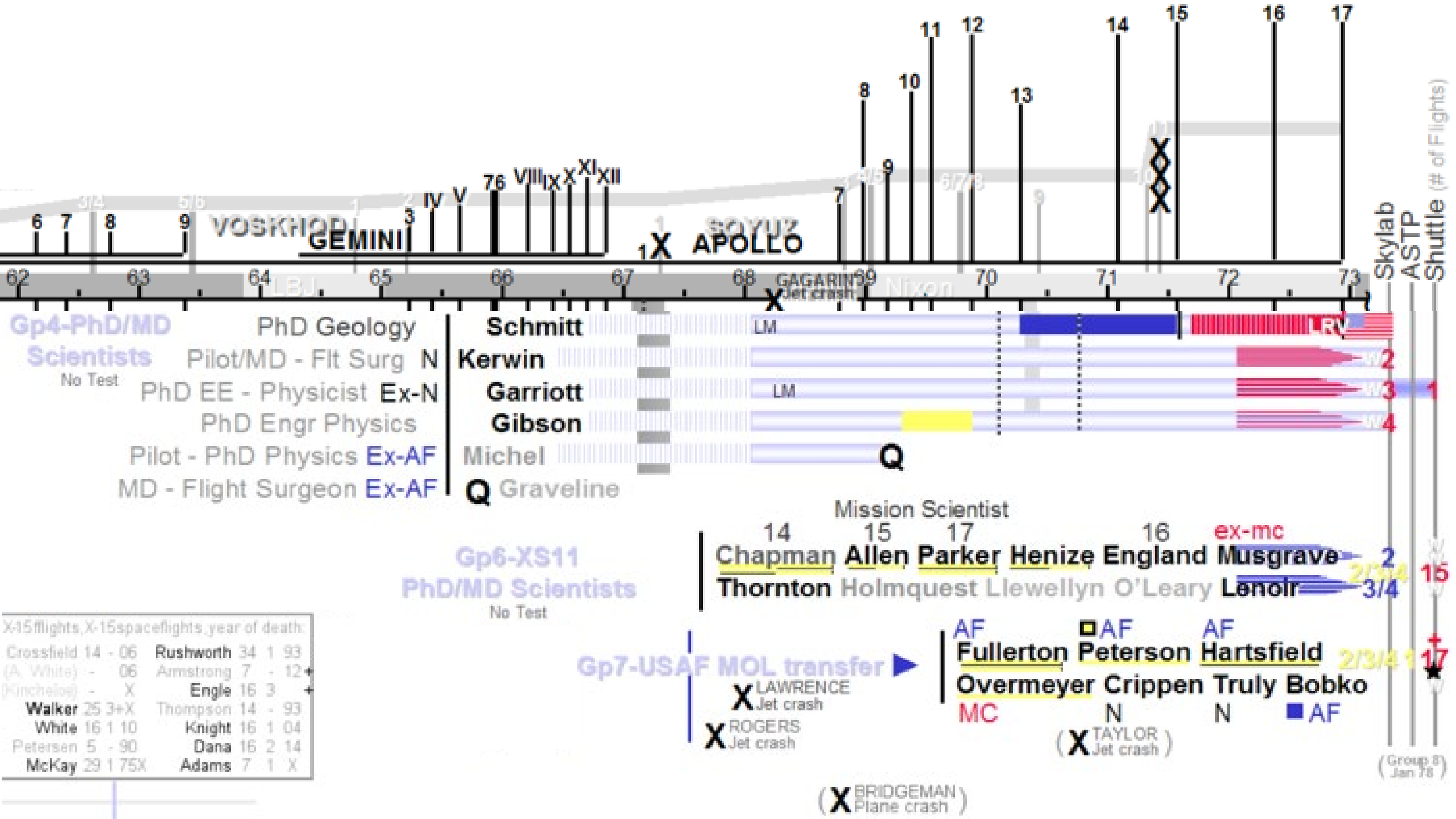


ASTRONAUT ASSIGNMENTS



KEY:


- Prime Crew
- Backup Crew
- Support Crew
- Advanced to Prime
- Moved to Backup
- Filled Support role
- 1st/2nd/3rd Primary
- 1st/2nd/3rd Backup
- Not Assignable
- Available ^{Rookie/ Veteran}
- with Rendezvous Experience
- LLRV/TV prep
- LLRV/TV flight
- LLTV completion
- Moonwalk
- LRV - Lunar Rover
- Lunar Flight
- Spacewalk
- Cmdr / All Rookie/ All Veteran/ No Test
- CMP - Solo With / Without Rendezvous Exp
- Veteran Mission
- Rookie Mission
- Sub-Orbital Msn
- Space Shuttle App/Land Test
- NS - Not Selected
- Near-fatal crash
- Killed
- Quit
- Grounded
- Annapolis grad
- West Point grad
- MM Acad grad
- AF Acad grad
- Edwards AFB
- ARPS Space School



Discussion Groups

- Chaikin Chapter 2 (“The Office”)
 - The culture of the Astronaut Office at Houston
- Slayton Chapter 14 (“Flight Crew Operations”)
 - How the early Gemini astronauts got selected for a flight
- Moonshot video
 - An astronaut-centered documentary (based on Sheppard’s book)

https://apolloinrealtime.org/11



The First Landing on the Moon
Apollo 11
Real-Time Mission Experience
Sat Jul 19 1969 | 11:41:15 PM
Mission Elapsed Time: 086:09:15

Countdown | Earth On the Way to the Moon | In Lunar Orbit | On the Surface | Luna Docked w/ Returning to Earth | Re-entry

In Lunar Orbit | Begin lunar orbit 6/75 | 086:09:15 | Music: Bettye Swann - Angel Of The Morning

In Lunar Orbit 5/75 | Music: Frank Sinatra - It's Nice To Go Trav'ling

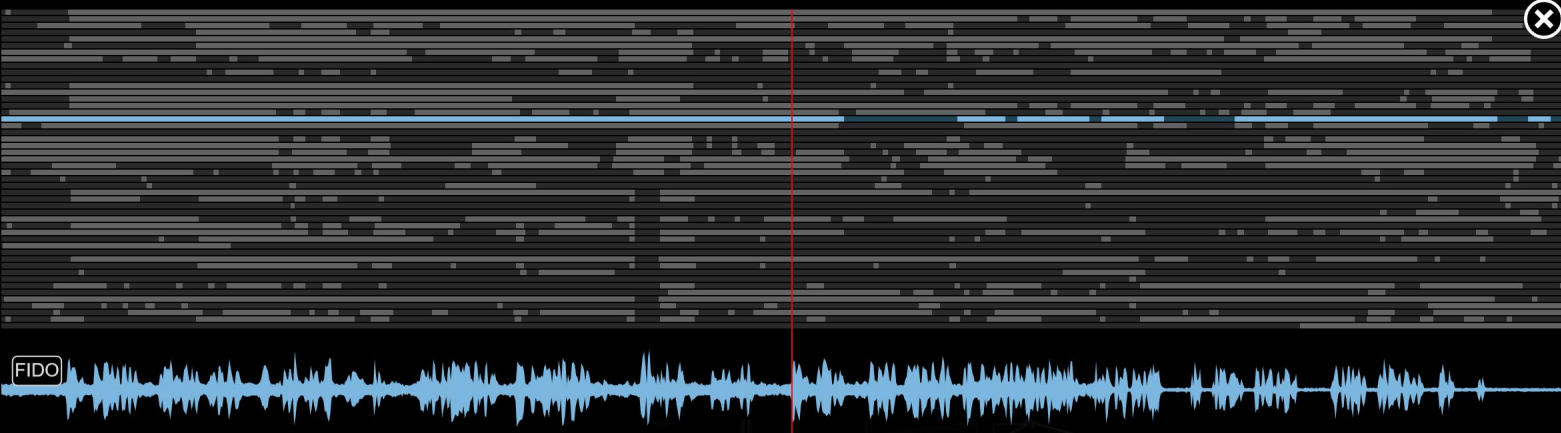
Mission Status

Mission Day: 4/9
Mission Phase:
In lunar orbit
Crew Status:
In Command Module, docked with the Lunar Module
Command Module:
In lunar orbit. Orbit: 6/31
Distance from Earth:
207,559 nautical miles (384,399.2 km) average

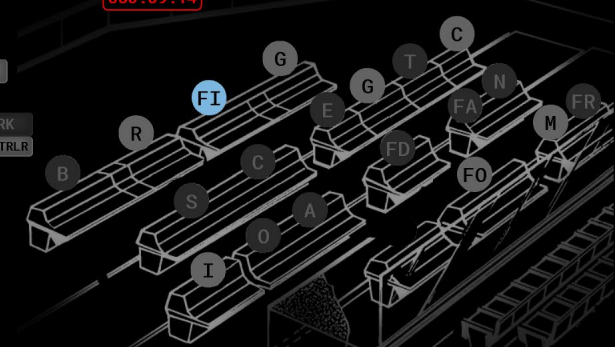
Mission Control Channels

PHOTOGRAPHY | MISSION CONTROL AUDIO | ASTROMATERIAL SAMPLES

FOD
MSN DIR
FLIGHT
FLIGHT-L
FLIGHT-R
CAPCOM
CAPCOM-R
BOOSTER
BOOSTER-C
BOOSTER-R
RETRO
FIDO
GUIDO
GUIDO-R
SURGEON
SURGEON-R
EECOM
GNC
TELCOM
CONTROL
INCO



086:09:14



086:09:15:07

TRANSCRIPT | MISSION MILESTONES | COMMENTARY

Q | PAUSE | REWIND | STOP | PLAY | F1 | F2 | F3

086:08:47 Aldrin Oops! ...
086:12:16 (Music - Bettye Swann - Angel Of The Morning)
086:13:39 Collins What time is it, Neil, 88 hours, something like that?
086:13:42 Armstrong 86:13.
086:15:54 Armstrong Doesn't it look like some of these crater walls had scallops inside like a design in a fan - like feathers.
086:16:05 Aldrin Seashells.
086:16:06 Armstrong Yes.
086:16:07 Aldrin Like seashells - very pretty, very symmetrical.
086:17:37 Armstrong Take along one of those craters.
086:17:57 Aldrin I took overlapping pictures of all that ... as well.
086:18:02 Collins I want to take the - we're going to have to carry a lot

INCO O&P AFD
FLIGHT FAO NETWORK
FOD M DIR
SPACE ENV COMP SUP SPAN EXPMT AO EASEP
TRACK RECOVERY CCATS LOAD CONF LOOP
GOSS 2
EASEP
MOCR DYN
GOSS CONF
GOSS 4
CCATS LD

FIDO: Flight Dynamics Officer - Responsible for the flight path of the space vehicle, both atmospheric and orbital. During lunar missions the FIDO was also responsible for the lunar trajectory. The FIDO monitored vehicle performance during the powered flight phase and assessed abort modes, calculated orbital maneuvers and resulting trajectories, and monitored vehicle flight profile and energy levels during re-entry.