

BIOGRAPHICAL SUMMARIES

NASA HEADQUARTERS

JAMES E. WEBB — Administrator of National Aeronautics and Space Administration since 1961. Former Director of Bureau of the Budget and former Under Secretary of State. Was Vice President of Sperry Gyroscope Co., Chairman of Board of Republic Supply Co., Director of Kerr-McGee Oil Industries, Inc., and Director of McDonnell Aircraft Co. Born Oct. 7, 1906, in Granville County, N.C. Received education degree from University of North Carolina in 1928 and studied law at George Washington University.



DR. GEORGE E. MUELLER—Associate Administrator in NASA Office of Manned Space Flight. Assumed direction of manned space program in September, 1963. Born July 16, 1918, in St. Louis, Mo. Graduated from Missouri School of Mines in 1939. Holds master's in electrical engineering from Purdue University. Worked at Bell Telephone Laboratories until 1946 when he joined the faculty at Ohio State. Earned Ph.D. in physics in 1951.



SAMUEL C. PHILLIPS—Lt. General on assignment to NASA from the Air Force. Was appointed Director of the Apollo lunar landing program in 1964. Born Feb. 19, 1921, in Springerville, Arizona. Graduated from the University of Wyoming in 1943, holds master's in electrical engineering from University of Michigan. Has an extensive background in ballistic missile systems, including service as Director of Minuteman program.



NASA MANNED SPACECRAFT CENTER

DR. ROBERT R. GILRUTH—Director of the Manned Spacecraft Center since its creation in 1961. Born Oct. 8, 1913, in Nashauk, Minn. Graduated in 1935 from University of Minnesota. Started at NACA Langley Research Center in 1937 in Flight Research Division. Selected by NACA in 1945 to establish organization and facilities for conducting free-flight experiments with rocket-powered models at supersonic speeds. Named assistant director of Langley Laboratories in 1952. In 1958 was named director of NASA's Space Task Group, which later was reorganized as Manned Spacecraft Center.



GEORGE M. LOW—Manager of Apollo Spacecraft Program since April 1967. Formerly Deputy Director of Manned Spacecraft Center, Deputy Associate Administrator for Manned Space Flight at NASA Headquarters. Chairman of committee which performed original studies leading to manned lunar program. Joined NACA (NASA predecessor) at Lewis Research Center in 1949. Born June 10, 1926, in Vienna, Austria. Graduate of Rensselaer Polytechnic Institute and has master's from RPI. Holds NASA's Outstanding Leadership Medal.



CHRISTOPHER C. KRAFT, JR.—Director of Flight Operations. Formerly Chief of Flight Operations Division. Joined NACA at Langley Research Center in 1945. Born Feb. 28, 1924, in Phoebus, Va. Graduated from Virginia Polytechnic Institute. Holds NASA Distinguished Service Medal, Arthur S. Fleming Award.



KENNETH S. KLEINKNECHT—Manager for Command and Service Modules, Apollo Spacecraft Program. Formerly Deputy Manager of Gemini program and Manager of Mercury Project Office. Joined NACA at Lewis Research Center in 1942, also served at Flight Research Center at Edwards Air Force Base. Born July 24, 1919, in Washington, D.C. Graduated from Purdue University.



NASA MARSHALL SPACE FLIGHT CENTER

DR. WERNHER VON BRAUN—Director of George C. Marshall Space Flight Center, Huntsville, Ala., since its formation in 1960. Director of Army missile development agencies in Redstone Arsenal at Huntsville since 1950. Began his work in rocket field in 1930 (at 18) while at Berlin Institute of Technology. Began full-time research of rocketry in 1934 under sponsorship of German government and from 1937 to 1945 was technical director of Army portion of Peenemuende rocket center where V-2 and antiaircraft guided missiles were developed. Came to United States in 1945 and became U.S. citizen in 1955. Born March 23, 1912, in Wirsitz, Germany. Graduated 1932 from Berlin Institute of Technology and received Ph.D. in 1934.



EDMUND F. O'CONNOR—Director, Industrial Operations, at Marshall Space Flight Center. Brigadier General on special duty to NASA from the Air Force. Technical and administrative manager of Saturn launch vehicle programs and of MSFC's Michoud Assembly Facility at New Orleans and the Mississippi Test Facility. Previously Deputy Director of Air Force's Ballistic Systems Division. Born March 31, 1922, in Fitchburg, Mass. Graduated from the U.S. Military Academy.



NASA KENNEDY SPACE CENTER

DR. KURT H. DEBUS—Director of Kennedy Space Center. Came to United States in 1945 as part of Dr. Von Braun's original group at Fort Bliss, Texas. Supervised development and construction of launch facilities at Cape Kennedy for Redstone, Jupiter, Juno, and Pershing Missiles beginning in 1952. Directed design, development, and construction of NASA's Apollo/Saturn launch facilities. He launched first U.S. ballistic missile (Redstone) and directed launch operations of first U.S. satellite (Explorer I). Born Nov. 29, 1908, in Frankfurt, Germany. Received initial and advanced degrees from Darmstadt University, and honorary Doctor of Laws degree from Rollins College.



MILES ROSS—Deputy Director for Operations at Kennedy Space Center. Responsible for engineering and technical operations at KSC. Joined NASA in September 1967. Previously was project manager for Air Force Thor and Minuteman missile systems for TRW, Inc. Born in New Brunswick, N.J. Holds degrees in mechanical engineering and engineering administration from MIT.



ROCCO A. PETRONE—Director of Launch Operations at Kennedy Space Center. Previously Apollo Program Manager at KSC. Lieutenant Colonel in Army; joined NASA in 1960 from Army General Staff. While with Army participated in development of Redstone missile at Huntsville. Graduated from U.S. Military Academy and has master's degree from MIT. Born March 31, 1926, in Amsterdam, N.Y.



R.O. MIDDLETON—Apollo Program Manager at Kennedy Space Center. Rear Admiral on assignment to NASA from Navy. Formerly Deputy Director for Mission Operations in Office of Manned Space Flight and a mission director in Apollo/Saturn program. Before joining NASA was commanding officer of USS Little Rock and USS Observation Island, chief of staff of Carrier Division 14, and commander of Destroyer Division 142. Born Jan. 23, 1919, in Pomona, Fla. Graduated from U.S. Naval Academy and has master's degree from Harvard. Promoted to Rear Admiral in July, 1967.



NORTH AMERICAN ROCKWELL

J.L. ATWOOD—President and Chief Executive Officer of North American Rockwell Corp. Was Chairman of Board of North American Aviation from 1962 until its merger with Rockwell-Standard Corp. in 1967 and President of NAA since 1948. Joined NAA in 1934 as Chief Engineer and Vice President, became Assistant General Manager in 1938 and First Vice President in 1941. Born Oct. 26, 1904. Graduated from Hardin-Simmons University in 1926 and the University of Texas in 1928. Holds honorary doctor's degree and is recipient of many industry and government awards.



WILLARD F. ROCKWELL, JR.—Chairman of the board of North American Rockwell Corp. Was president of Rockwell-Standard Corporation before its merger with North American Aviation, Inc. Previously President of Rockwell Manufacturing Company. Was on Rockwell-Standard board since 1940. Born March 3, 1914. Holds engineering degree from Pennsylvania State University.



JOHN R. MOORE—President of Aerospace and Systems Group of North American Rockwell Corp. Also Vice President of corporation and member of board. Was Executive Vice President of North American Aviation and, earlier, President of company's Autonetics Division. Born July 5, 1916, in St. Louis. Received engineering degree from Washington University (St. Louis). Holds many awards, including U.S. Navy's Meritorious Public Service Citation and Thurlow Navigation Award as "navigation's man of the year" in 1961.



WILLIAM B. BERGEN—President of North American Rockwell's Space Division since April 1967 and Vice President of corporation. Formerly Vice President of corporation's Space and Propulsion Group. Formerly President of Martin Co., which he joined in 1937. Born March 29, 1915, in Floral Park, N.Y. Graduated from Massachusetts Institute of Technology in 1937. Holds many awards, including Lawrence Sperry Award of Institute of Aeronautical Sciences for aircraft work during World War II and NASA's Public Service Award for contributions to Gemini program.



DALE D. MYERS—Vice President of Space Division since 1960 and Apollo Program Manager. Formerly Program Manager for Hound Dog missile. Background includes aerodynamic and thermodynamic work with missile studies. Born Jan. 8, 1922. Graduated from the University of Washington in 1943.



ROBERT E. GREER—Vice president of Space Division and Saturn S-II (second stage) Program Manager. Joined Space Division in 1965 as Assistant to President and became S-II Program Manager later that year. Formerly Major General in Air Force; among his posts were Director of Special Projects, Deputy Commander for Satellite Programs, and Chief of Staff for Guided Missiles. Born Aug. 7, 1915, in Orange, Calif. Graduated from U.S. Military Academy and later taught electrical engineering at Academy. Also served on faculty at Air War College.



BASTIAN (BUZ) HELLO—Vice President of Space Division for Launch Operations since May 1967. Formerly Director of Maneuverable Spacecraft Programs for Martin Marietta Corp. and Program Director for Air Force Gemini-Titan II launch vehicle. Born Aug. 29, 1923, in Philadelphia. Graduated from University of Maryland in 1947. Received NASA's Public Service Award in 1966 for contributions to Gemini program.



ASTRONAUTS

APOLLO 7 PRIME CREW

WALTER M. SCHIRRA, JR. (Commander)—One of the original seven astronauts. Flew 6-orbit, 9-hour mission in Sigma 7 Mercury spacecraft and was command pilot of Gemini VI mission, which achieved space "first" in rendezvous with orbiting Gemini VII. In both missions was brought aboard recovery ship with his spacecraft. Graduated from U.S. Naval Academy in 1945. Captain in Navy. Flew 90 combat missions in Korea on exchange status with Air Force. Received 2 Distinguished Flying Crosses and 2 Air Medals for Korean service. Born March 12, 1923, in Hackensack, N.J.



DONN F. EISELE (CM Pilot)—Named in third group of astronauts in October 1963. Major in Air Force. Project engineer and experimental test pilot at Kirtland Air Force Base, N.M., flying jets in support of special weapons development. Born June 23, 1930, in Columbus, Ohio. Graduated from the U.S. Naval Academy in 1952 and has master's from U.S. Air Force Institute of Technology.



WALTER CUNNINGHAM (LM Pilot)—Named in third group of astronauts in October 1963. Was research scientist with Rand Corp. working on classified defense studies and problems of earth's magnetosphere. At UCLA, where he received bachelor's and master's degrees, he developed a magnetometer which was flown aboard NASA's first Orbiting Geophysical Observatory satellite. Flew as Marine pilot and was Marine reservist with rank of Major until 1965. Born March 16, 1932, in Creston, Iowa.



APOLLO 7 BACKUP CREW

THOMAS P. STAFFORD (Commander)—Selected in second group of astronauts in 1962, he flew in Gemini 6 flight and participated in first space rendezvous. Served as command pilot of Gemini 9 three-day flight in which spacecraft performed 3 different types of rendezvous with target vehicle. Has logged nearly 100 hours in space in 2 flights. Born Sept. 17, 1930, in Weatherford, Okla. Graduated from U.S. Naval Academy and entered Air Force; is Lieutenant Colonel. Instructor and chief of Performance Branch of Air Force Aerospace Research Pilot School and author of textbooks on performance flight testing.



JOHN W. YOUNG (CM Pilot)—Selected in second group of astronauts in 1962. Pilot of first manned Gemini flight and command pilot of Gemini X, in which Gemini rendezvoused and docked with Agena target, changed orbit, and rendezvoused with another Agena. Born Sept. 24, 1930, in San Francisco. Graduated from Georgia Institute of Technology in 1952. Commander in Navy. Formerly test pilot at Naval Air Test Center and set world time-to-climb records.



EUGENE A. CERNAN (LM Pilot)—Selected in third group of astronauts in 1963 and served as pilot in Gemini flight with Stafford. Born March 14, 1934, in Chicago. Graduated from Purdue University and has master's from U.S. Naval Postgraduate School. Commander in Navy. Served in attack squadrons in Navy.



APOLLO 7 SUPPORT CREW

JOHN L. SWIGERT, JR.—Selected as astronaut in 1966, formerly engineering test pilot for North American Aviation and research engineering test pilot for Pratt and Whitney. Received Octave Chanute Award from AIAA for work on space vehicle landing system. Born Aug. 30, 1931, in Denver. Graduated from University of Colorado in 1953 and has masters from Rensselaer Polytechnic Institute and from University of Hartford. Served as fighter pilot in Air Force.



RONALD E. EVANS—Selected as astronaut in 1966. Lieutenant Commander in Navy, served as pilot on aircraft carrier in Vietnam combat operations. Born Nov. 10, 1933, in St. Francis, Kan. Graduated from University of Kansas in 1956 and has master's from U.S. Naval Postgraduate School. Holds 8 Air Medals, Vietnam Service Medal, and Navy Commendation Medal.



WILLIAM R. POGUE—Selected as astronaut in 1966. Air Force Major. Formerly instructor at Air Force Aerospace Research Pilot School at Edwards Air Force Base and math instructor at Air Force Academy. Test pilot for British Ministry of Aviation in exchange program. Flew 43 combat missions in Korean War. Born Jan. 23, 1930, in Okemah, Okla. Graduated from Oklahoma Baptist University and has master's from Oklahoma State University. Holds several Air Force decorations.



2ND APOLLO PRIME CREW

FRANK BORMAN (Commander)—Selected in second group of astronauts, in September 1962, and was command pilot of Gemini VII, the longest manned space flight (330 hours and 35 minutes) and during which the first space rendezvous occurred, between Gemini VII and Gemini VI. Colonel in the Air Force. Was instructor at USAF Aerospace Research Pilots School. Born Gary, Ind., March 14, 1928. Graduate of U.S. Military Academy and has Master of Science degree in aeronautical engineering from Caltech.



JAMES A. LOVELL, JR. (CM Pilot)—Selected in second group of astronauts, in September 1962. Flew Gemini VII mission with Frank Borman, which was longest space mission (330 hours and 35 minutes) and during which there was the first space rendezvous, between Gemini VII and Gemini VI. Was command pilot on Gemini 12 mission. Captain in Navy. Was test pilot at Naval Air Test Center, Patuxent River, Md. Born in Cleveland, Ohio, March 25, 1928. Graduate of United States Naval Academy.



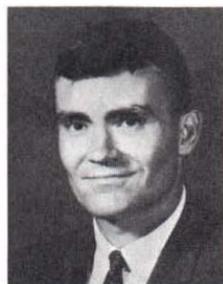
EDWIN E. ALDRIN, JR. (CM Pilot)—Selected in third group of astronauts, in October, 1963. Has Doctor of Science degree in astronautics from Massachusetts Institute of Technology. Was pilot of Gemini XII mission and conducted EVA. Lieutenant Colonel in Air Force. Worked in Gemini Target Office of the Air Force Space Systems Division, Los Angeles, Calif., and at the USAF Field Office at the Manned Spacecraft Center. Flew 66 combat missions in Korea and received Distinguished Flying Cross. Born in Montclair, N.J., Jan. 20, 1930. Graduate of the U.S. Military Academy (third in his class).



WILLIAM A. ANDERS (LM Pilot)—Chosen in third group of astronauts, in October 1963. Born in Hong Kong, October 17, 1933. Was nuclear engineer and instructor pilot at Air Force Weapons Laboratory at Kirtland Air Force Base, N.M. Graduate of U.S. Naval Academy and has Masters Degree in nuclear engineering from Air Force Institute of Technology. Major in Air Force.



FRED W. HAISE, JR. (LM Pilot)—Selected for astronaut training in April 1966. Research pilot at the NASA Flight Research Center at Edwards, California. Now a civilian, he was military pilot in Marine Corps, Air Force, and Oklahoma Air National Guard. Born in Biloxi, Miss., Nov. 14, 1933. Was graduated from University of Oklahoma.



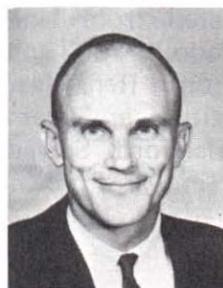
2ND APOLLO BACKUP CREW

NEIL A. ARMSTRONG (Commander)—Named in second group of astronauts, in September, 1962, and was first civilian to fly in space. Was command pilot of Gemini VIII, which saw the first docking of spacecraft. Was naval aviator and flew 78 combat missions in Korea. Was aeronautical research pilot at NASA High Speed Flight Station, Edwards Air Force Base, Calif., and flew the X-15 at altitude greater than 200,000 feet and speed of about 4000 mph. Born Wapakoneta, Ohio, Aug. 5, 1930. Graduate of Purdue University. Received 1962 Institute of Aerospace Sciences Octave Chanute Award.



2ND APOLLO SUPPORT CREW

THOMAS K. MATTINGLY II—Selected for astronaut training in April 1966. Born in Chicago, March 17, 1936. Graduate of Auburn University. Lieutenant Commander in Navy. Is unmarried. Was student at Air Force Aerospace Research Pilots School. Flew carrier aircraft before that.



GERALD P. CARR—Selected for astronaut training in April 1966. Born in Denver, Aug. 22, 1932. Graduate of the University of Southern California, and has Master of Science degree in aeronautical engineering from Princeton University. Major in Marine Corps. Was with Marine air control squadron.



DAVID R. SCOTT (CM Pilot)—One of third group of astronauts named in October, 1963. Was pilot in Gemini VIII, which achieved first space docking. Lieutenant Colonel in Air Force. Served as research and test pilot in Air Force. Born June 6, 1932, in San Antonio, Texas. Graduated from U.S. Military Academy and has master's and engineering degrees from Massachusetts Institute of Technology.



VANCE D. BRAND—Selected for astronaut training in April 1966. Born in Longmont, Colo., May 9, 1931. Holds degrees in business and aeronautical engineering from University of Colorado and a Master of Science degree in business administration from UCLA. Served as a jet pilot in Marine Corps and later as flight test engineer and experimental test pilot for Lockheed Aircraft Corp. Graduated from U.S. Naval Test Pilot School at Patuxent River, Md.



RUSSELL L. SCHWEICKART (LM Pilot)—One of the third group of astronauts named in October, 1963. Served in Air Force and Air National Guard from 1956 to 1963. Research scientist at Experimental Astronomy Laboratory at MIT, working on upper atmosphere physics, applied astronomy, star tracking, and stabilization of star images. Born Oct. 25, 1935, in Neptune, New Jersey. Holds Bachelor and Master of Science degrees from MIT.



3RD APOLLO PRIME CREW

JAMES A. McDIVITT (Commander)—Named in second group of astronauts in September 1962. Was command pilot for Gemini IV, the 66-orbit, four-day mission from June 3-7, 1965, on which Edward H. White II made first "walk in space." Lieutenant Colonel in Air Force. Flew 145 combat missions during Korean War and received 4 Distinguished Flying Crosses, 5 Air Medals, and a South Korean medal. Later served as experimental test pilot at Edwards Air Force Base in California. Born June 10, 1929, in Chicago. Graduated from University of Michigan.



3RD APOLLO BACKUP CREW

CHARLES CONRAD, JR. (Commander)—Selected in second group of astronauts, in September 1962. Flew, with Gordon Cooper, in Gemini V the first extended manned space flight (127 orbits, 190.9 hours, August, 1965). Was command pilot for the 3-day Gemini XI mission and executed rendezvous and docking in less than one orbit. Commander in the Navy. Was project test pilot at Navy Test Pilot School, Patuxent River, Maryland, and also flight instructor and performance engineer at the school. Born in Philadelphia, Pa., June 2, 1930. Was graduated from Princeton University.



RICHARD F. GORDON, JR. (CM Pilot)—Named in third group of astronauts, in October, 1963. Was pilot for Gemini XI mission and conducted extravehicular activity. Commander in Navy. Was project test pilot for F4H Phantom II and test pilot for other naval aircraft. Born in Seattle, Wash., Oct. 5, 1929. Graduate of University of Washington.



EDGAR D. MITCHELL—Selected for astronaut training in April, 1966. Has Doctor of Science degree in aeronautics/astronautics from Massachusetts Institute of Technology. Commander in Navy. Was graduated first in his class from Air Force Aerospace Research Pilot School. Was Chief, Project Management Division, of the Navy Field Office for Manned Orbiting Laboratory. Born in Hereford, Tex., Sept. 17, 1930. Was graduated from Carnegie Institute of Technology and U.S. Naval Postgraduate school.



ALAN L. BEAN (LM Pilot)—Named in third group of astronauts, October 1963. Lieutenant Commander in Navy. Attended Navy Test Pilot School, Patuxent River, Maryland. Born in Wheeler, Tex., March 15, 1932. Was graduated from University of Texas.



JACK R. LOUSMA—Selected with 18 others for astronaut training in April 1966. Born in Grand Rapids, Mich., Feb. 29, 1936. Graduate of University of Michigan and of U.S. Naval Postgraduate School, with degrees in aeronautical engineering. Served as Marine Corps pilot from 1959 until his assignment to astronaut program.



3RD APOLLO SUPPORT CREW

ALFRED M. WORDEN—One of 19 astronauts selected in April 1966. Major in Air Force. Was instructor at Aerospace Research Pilots School, and is a graduate of the Empire Test Pilots School, in Farnborough, England. Born in Jackson, Mich., Feb. 7, 1932. Graduate of U.S. Military Academy and has Master of Science degree in aeronautical and aeronautical engineering and instrumentation engineering from the University of Michigan.

