

# NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT

## BIOGRAPHICAL DATA SHEET

**NAME:** Charles Gordon Fullerton

**ORAL HISTORY:** 6 May 2002

**EDUCATIONAL BACKGROUND:**

B.S. in Mechanical Engineering, California Institute of Technology, Pasadena, California, 1957

M.S. in Mechanical Engineering, California Institute of Technology, Pasadena, California, 1958

**PRE-NASA EXPERIENCE:**

Hughes Aircraft Company, Culver City, California

- Mechanical Design Engineer (1958)

United States Air Force (1958-1988)

- Pilot Training (1958-1959)
- F-86L Interceptor Training, Perrin Air Force Base, Denison, Texas (1959-1960)
- B-47 Combat Crew Training, McConnell Air Force Base, Kansas (1960)
- B-47 Bomber Pilot, Strategic Air Command, 303d Bomb Wing, Davis-Monthan Air Force Base, Arizona (1960-1964)
- USAF Aerospace Research Pilot School, Edwards Air Force Base, Edwards, California (1964-1965)
- Test pilot, Bomber Operations Division, Wright Patterson Air Force Base, Ohio (1965-1966)
- Aerospace Research Pilot, Manned Orbiting Laboratory (MOL), Vandenberg Air Force Base, California (1966-1969)
- Retired as Colonel

**NASA INVOLVEMENT:**

NASA Manned Spacecraft Center/ Johnson Space Center, Houston, Texas

- Astronaut, Astronaut Office (1969-1986)

NASA Dryden Flight Research Center, Edwards, California

- Research Pilot, Research Pilot Office (1986-present)

**MISSIONS:**

Shuttle Approach and Landing Test (ALT) (*Enterprise*)

- Crew: Commander Fred W. Haise, Jr., Pilot Charles Gordon Fullerton
- *FIRST CAPTIVE-ACTIVE FLIGHT*  
Launched: 18 June 1977 at 08:00 A.M. PST from Edwards AFB  
Duration: 55 minutes, 46 seconds
- *THIRD CAPTIVE-ACTIVE FLIGHT*

Launched: 26 July 1977 from Edwards AFB

Duration: 59 minutes, 53 seconds

- *FIRST FREE-FLIGHT*

Launched: 12 August 1977 at 08:48 A.M. PST from Edwards AFB

Duration: 5 minutes, 21 seconds

- *THIRD FREE-FLIGHT*

Launched: 23 September 1977 from Edwards AFB

Duration: 5 minutes, 34 seconds

- *FIFTH FREE-FLIGHT*

Launched: 26 October 1977 from Edwards AFB

Duration: 2 minutes, 01 seconds

- Mission Highlights: To aerodynamically clear the Space Shuttle for space flight.

### STS-3 (*Columbia*)

- Crew: Commander Jack R. Lousma, Pilot C. Gordon Fullerton
- Backup crew: Commander Thomas K. Mattingly, Pilot Henry W. Hartsfield
- Launched: 22 March 1982 at 11:00:00 A.M. EST from Cape Canaveral
- Duration: 8 days, 0 hours, 4 minutes, 46 seconds
- Landed: 30 March 1982 at 09:04:46 A.M. MST, White Sands, New Mexico
- Mission Highlights: Demonstrate safe re-launch and safe return of orbiter and crew. Verify the performance of entire shuttle vehicle: orbiter, external tank, and solid rocket boosters. Continue testing of RMS arm and carry out extensive thermal testing of shuttle by exposing its tail, nose and top to the sun for varying periods of time. All objectives were achieved and the mission was extended one extra day.

### STS 51-F (*Challenger*)

- Crew: Commander C. Gordon Fullerton, Pilot Roy D. Bridges, Jr., Mission Specialist 1 F. Story Musgrave, Mission Specialist 2 Anthony W. England, Mission Specialist 3 Karl G. Henize, Payload Specialist 1 Loren W. Acton, Payload Specialist 2 John-David F. Bartoe
- Launched: 29 July 1985 at 17:00:00 P.M. EST from Cape Canaveral
- Duration: 7 Days, 2 hours, 45 minutes, 26 seconds
- Landed: 6 August 1985 at 12:45:26 P.M. PDT, Runway 23, Edwards AFB, California
- Mission Highlights: Verify the performance of the Spacelab systems with the orbiter as well as to measure the environment created by the vehicle in space. The Spacelab-2 payload consisted of an igloo and three pallets in the payload bay, containing scientific instruments dedicated to life sciences, plasma physics, astronomy, high-energy astrophysics, solar physics, atmospheric physics and technology research.

**PROFESSIONAL & HONORARY SOCIETIES:**

- Member, International Space Hall of Fame, Inducted in 1982
- Fellow, Society of Experimental Test Pilots
- Member, Tau Beta Pi
- Honorary Member, National World War II Glider Pilot Association
- Fellow, American Astronautical Society

**AWARDS & CITATIONS:**

- Department of Defense Distinguished Service Medal
- Department of Defense Superior Service Medal
- Air Force Distinguished Flying Cross
- Air Force Commendation Medal
- Air Force Meritorious Service Medal
- MSC Group Achievement Award, 1971
- JSC Group Achievement Award, 1974
- JSC Group Achievement Award, 1977
- American Astronautical Society Flight Achievement Award, 1977
- Soaring Society of America's Certificate of Achievement Award, 1978
- JSC Special Achievement Award, 1978
- NASA Exceptional Service Medal, 1978
- General Thomas D. White Space Trophy, 1978
- SETP (Society of Experimental Test Pilots) Iven C. Kincheloe Award, 1978
- Air Force Association's David C. Schilling Award, 1978
- American Astronautical Society Flight Achievement Award, 1978
- American Institute of Aeronautics and Astronautics Haley Space Flight Award, 1980
- American Astronautical Society Flight Achievement Award, 1981
- NASA Distinguished Service Medal, 1982
- JSC Special Achievement Award, 1982
- NASA Space Flight Medal, 1983
- NASA Space Flight Medal, 1985
- American Astronautical Society Flight Achievement Award, 1985
- Ray E. Temhoff Award, SETP, 1992
- Ray E. Temhoff Award, SETP, 1993
- 40 Year Federal Service Award, 1998
- NASA Group Achievement Award, 1999

**SELECT PUBLICATIONS:**

Kempel, Robert W., Paul W. Philips, C. Gordon Fullerton, and John J. Bresina. "AFTI/F-111 airplane mission adaptive wing operational flight evaluation technique using uplinked pilot command cues." In Society of Flight Test Engineers, Annual Symposium, 20<sup>th</sup>, Reno, Nevada, September 18-27, 1989, Proceedings. (Lancaster, California: Society of Flight Test Engineers, 1989): 3.6-1- 3.6-19.

Burcham, Frank W., Jr., C. Gordon Fullerton, Glenn B. Gilyard, Thomas D. Wolf, and James F. Stewart. "A preliminary investigation of the use of throttles for emergency flight control." NASA Technical Report. NASA-TM-4320. Edwards, California: NASA Hugh L. Dryden Flight Research Facility, 1991.

Burcham, Frank W., Jr., and C. Gordon Fullerton. "Controlling crippled aircraft-with throttles." NASA Technical Report. NASA-TM-104238. Edwards, California: NASA Hugh L. Dryden Flight Research Facility, 1991.

Hancock, Regis, and C. Gordon Fullerton. "X-29 vortex flow control tests." In 1992 report to the aerospace profession; SETP Symposium, 36<sup>th</sup>, Beverly Hills, California, September 24-26, 1992, Proceedings. (Beverly Hills, California: Society of Experimental Test Pilots, 1992): 209-219.

Fullerton, C. Gordon. "Propulsion controlled aircraft research." In Report to the aerospace profession; SETP Symposium, 37<sup>th</sup>, Beverly Hills, California, September 1993. (Beverly Hills, California: Society of Experimental Test Pilots, 1992): 78-88.

Burcham, Frank W., Jr., Trindel A. Maine, C. Gordon Fullerton, and Edward A. Wells. "Preliminary flight results of a fly-by-throttle emergency flight control system on an F-15 airplane." NASA Technical Report. NASA-TM-4503. Edwards, California: NASA Hugh L. Dryden Flight Research Facility, 1993.

Burcham, Frank W., Jr., Trindel A. Maine, C. Gordon Fullerton, and Lannie Dean Webb. "Development and Flight Evaluation of an Emergency Digital Flight Control System Using Only Engine Thrust on an F-15 Airplane." NASA Technical Report NASA-TP-3627. Edwards, California: NASA Hugh L. Dryden Flight Research Facility, 1996.

Burcham, Frank W., Jr., John J. Burken, Trindel A. Maine, and C. Gordon Fullerton. "Development and Flight Test of an Emergency Flight Control System Using Only Engine Thrust on an MD-11 Transport Airplane." NASA Technical Report. NASA/TP-1997-206217. Edwards, California: NASA Hugh L. Dryden Flight Research Facility, 1997.

Rivers, Robert A., Bruce E. Jackson, C. Gordon Fullerton, Timothy H. Cox and Norman H. Princen. "A Qualitative Piloted Evaluation of the Tupolev Tu-144 Supersonic Transport." NASA Technical Report. NASA/TM-2000-209850. Edwards, California: NASA Hugh L. Dryden Flight Research Facility, 2000

**SOURCES:**

Michael Cassutt, Who's Who in Space: International Space Year Edition, (New York: Maxwell and Macmillan International, 1993).

[NASA CASI Technical Report Server], [Online]. (12 March 1999 - Last Updated), Available: <http://www.sti.nasa.gov/casitrs.html/> [5 June 2000 - Accessed].

[NASA Dryden Flight Research Center Homepage], [Online]. (12 June 2000 - Last Updated), Available: <http://www.dfrc.nasa.gov/dryden.html/> [6 July 2000 - Accessed].

Shuttle Chronological Files, History Collection, Scientific and Technical Information Center, NASA Lyndon B. Johnson Space Center, Houston, TX.

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