

NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT

BIOGRAPHICAL DATA SHEET

NAME: Mary Louise Cleave

ORAL HISTORY: 5 March 2002

EDUCATIONAL BACKGROUND:

B.S. in Biological Sciences, Colorado State University, Ft. Collins, Colorado, 1969

M.S. in Microbial Ecology, Utah State University, Logan, Utah, 1975

Ph.D. in Civil and Environmental Engineering, Utah State University, Logan, Utah, 1979

PRE-NASA EXPERIENCE:

Utah State University, Logan, Utah (1971-1980)

- Graduate Research Assistant, Research Phycologist, Research Engineer, Ecology Center
- Graduate Research Assistant, Research Phycologist, Research Engineer, Utah Water Research Laboratory

NASA INVOLVEMENT:

NASA Johnson Space Center, Houston, Texas

- Astronaut, Astronaut Office (1980-1990)
- Special Assistant for Advanced Projects, Crew and Thermal Systems Division (1991)

NASA Goddard Space Flight Center, Greenbelt, Maryland

- Deputy Program Manager, Sea-viewing Wide Field-of-view Sensor (SeaWiFS) (1991-1995)
- Program Manager, SeaWiFS (1995-Date Unknown)

NASA Headquarters, Washington, DC

- Earth Science Representative to NASA's Chief Scientist (Dates Unknown)
- Deputy Associate Administrator for Earth Science (2000-present)

MISSIONS:

STS 61-B (*Atlantis*)

- Crew: Commander Brewster H. Shaw, Jr., Pilot Bryan D. O'Connor, Mission Specialist Mary L. Cleave, Mission Specialist Sherwood C. Spring, Mission Specialist Jerry L. Ross, Payload Specialist Rodolfo Neri Vela, Payload Specialist Charles D. Walker
- Launched: 26 November 1985 at 07:29:00 P.M. EST from Cape Canaveral, Florida
- Duration: 6 days, 21 hours, 4 minutes, 49 seconds
- Landed: 3 December 1985 at 01:33:49 A.M. PST at Edwards Air Force Base, California

- Mission Highlights: This was the second night launch in the history of the Space Shuttle Program. One of the mission's prime objectives was to identify procedures to improve erecting structures in space. The crew also deployed three communications satellites: Morelos-B, Aussat, and RCA Satcom K-2.

STS-30 (*Atlantis*)

- Crew: Commander David M. Walker, Pilot Ronald J. Grabe, Mission Specialist Norman E. Thagard, Mission Specialist Mary L. Cleave, Mission Specialist Mark C. Lee
- Launched: 4 May 1989 at 02:48:59 P.M. EDT from Cape Canaveral, Florida
- Duration: 4 days, 0 hours, 56 minutes, 28 seconds
- Landed: 8 May 1989 at 12:43:27 P.M. PDT at Edwards Air Force Base, California
- Mission Highlights: This was the first U.S. planetary mission in twelve years and the first ever on the Space Shuttle. On the first day of the mission the crew released the Magellan Venus Radar Mapper. The spacecraft, deployed successfully by the crew, ultimately mapped 98% of the surface of the planet Venus. Later in the mission, one of the general purpose computers aboard the orbiter failed and for the first time, a computer had to be switched in orbit.

PROFESSIONAL & HONORARY SOCIETIES:

- Member, Texas Society of Professional Engineers
- Member, Water Pollution Control Federation
- Member, Tri-Beta (Biological Honor Society)
- Member, Sigma Xi (International Honor Society for Scientific and Engineering Research)
- Member, Tau Beta Pi (Engineering Honor Society)
- Associate Member, American Society of Civil Engineers
- Member, Association of Space Explorers

AWARDS & CITATIONS:

- NASA Space Flight Medal, 1985
- Utah State University Distinguished Alumna Award, 1986
- Utah State University Centennial Recognition Award, 1988
- NASA Exceptional Service Medal, 1988
- American Astronautical Society Flight Achievement Award, 1989
- NASA Space Flight Medal, 1989
- NASA Exceptional Service Medal, 1990
- Colorado State University Honor Alumna, 1990
- NASA Exceptional Achievement Medal, 1994
- Friend of Mongolia, 1995
- NASA Engineer of the Year, 1998

SELECT PUBLICATIONS AND PATENTS:

Cleave, Mary Louise, V. Dean Adams, and D.B. Porcella. Effects of Oil Shale Leachate on Phytoplankton Productivity. Logan, Utah: Utah Water Research Laboratory, 1979.

Cleave, Mary Louise, V. Dean Adams, and E.J. Middlebrooks. "Analysis of Indian Creek Reservoir Sediments." Water Research 17, no. 11 (1983): 1709-1712.

Heard, W.L., Jr., J.J. Watson, J.L. Ross, S.C. Spring, and M.L. Cleave. "Results of the CCESS Space Construction Shuttle Flight Experiment." In Space Systems Technology Conference, San Diego, CA, June 9-12, 1986, Technical Papers, by the American Institute of Aeronautics and Astronautics, 118-125. New York: American Institute of Aeronautics and Astronautics, 1986.

SOURCES:

Johnson Space Center Telephone Directories (1981-1991), Organization Files, Center Series, History Collection, Scientific and Technical Information Center, Lyndon B. Johnson Space Center, Houston, TX.

Mary L. Cleave NASA Biographical Data Sheet (March 1990), Mary L. Cleave Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

"Mary L. Cleave NASA Biographical Data Sheet," Goddard Space Flight Center Homepage, Online, <http://www.gsfc.nasa.gov/gsfcc/earth/enviro/carbon/cleavebio.txt> (Last Updated 17 November 2001; Accessed 21 November 2001).

"Dr. Mary Cleave, Deputy Associate Administrator (Advanced Planning)," Destination Earth Homepage, Online, http://www.earth.nasa.gov/who/daa_ap.html (Last Updated 25 October 2001; Accessed 21 November 2001).

BIOGRAPHICAL DATA SHEET CREATED: 9 JANUARY 2002