

# NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT

## BIOGRAPHICAL DATA SHEET

**NAME:** Robert Clifford Ried, Jr.

**ORAL HISTORY:** 7 February 2002

### **EDUCATIONAL BACKGROUND:**

B.S. in Mechanical Engineering, Massachusetts Institute of Technology (MIT), Cambridge, MA, 1961

Ph.D. in Mechanical Engineering, Rice University, Houston, TX, 1967

### **PRE-NASA EXPERIENCE:**

Grumman Aircraft Engineering Corporation, Bethpage, Long Island, NY (1958-1960)

- Apprentice Engineer

### **NASA EXPERIENCE:**

NASA Space Task Group, Langley Research Center, Hampton, VA (1961)

- Aerospace Technologist, Aerodynamics Section, Flight Dynamics Branch, Flight Systems Division

NASA Manned Spacecraft Center/Johnson Space Center, Houston, TX (1961-1995)

- Aerospace Technologist, Aerothermodynamics Section, Structures Branch, Spacecraft Technology Division, Engineering and Development Directorate (E&D) (1961-1968)
- Head, Aerothermodynamics Section, Thermal Technology Branch, Structures and Mechanics Division, E&D (1968-1969, 1970-1983)
- Special Assistant to Director, E&D (1983-1985)
- Manager, Advanced Programs Office, E&D (1985-1990)
- Chief, Lunar/Mars Exploration, E&D (1990-1993)
- Chief Engineer, Research and Development (1993-1995)

### **POST-NASA EXPERIENCE:**

Science and Technology Agency, National Aerospace Laboratory, Tokyo, Japan (1969)

- Researcher and Professor

### **AWARDS & CITATIONS:**

- MIT De Flores Design Engineering Award, 1961
- Japanese Science and Technology Award for Foreign Specialist, 1969
- NASA Performance and Group Achievement Awards
- NASA Exceptional Service Award, 1986

**SELECT PUBLICATIONS & PATENTS:**

- Ried, R. C. "The Flow of a Dissociating Gas Through a Hypersonic Nozzle." S. B. Thesis. MIT, 1961.
- Weston, K. C., P. W. Higgins, and R. C. Ried. "Some Calculations of the Reentry Environment of the Apollo Command Module." NASA Apollo Working Paper No 1046, 5 June 1962.
- Ried, R. C., and E. E. Mayo. "Equations for the Newtonian Static and Dynamic Aerodynamic Coefficients for a Body of Revolution with an Off-set Center-of-Gravity Location." NASA TN-D-1085, June 1963.
- Lee, D. B., J. J. Bertin, R. C. Ried. "Apollo Reentry Heating." NASA MSC Apollo Working Paper, September 1963.
- Ried, R. C., and H. G. Clauss. "Principles and Application of Shock Tubes and Shock Tunnels." NASA General Working Paper No. 10014, October 1963. (also NASA TMX-69941, April 1974).
- Ried, R. C. "Thermal Radiation Transfer in a Gas: Fundamental Relations." NASA MSC Internal Note, 64-ET-74, September 1964.
- Ried, R. C., D. B. Lee, and N. C. Willis. "Stagnation Point Radiative Heating Estimates for Blunt Reentry Vehicles." NASA MSC Internal Note, 64-ET-64.
- Silveira, M. A., R. C. Kennedy, R. C. Ried, and G. Strouhal. "Entry Velocity Capability of the Apollo configuration." Presented at the Review of Hypervelocity Reentry Research and Technology Conference. NASA Ames Research Center, May 1967.
- Ried, R. C. "Equations of Change of a Photon Gas and Their Correspondence with Maxwell's Equation." Ph.D. Thesis, Rice University, 1967.
- Lee, D. B., R. C. Ried, B. B. Harmel, and K. C. Weston. "Advances in Apollo Aerothermodynamics." Presented at the AIAA Entry Vehicle Systems and Technology Meeting. Williamsburg, Virginia, December 1968.
- Ried, R. C. "The Development of the Apollo Entry Thermal Protection System." Proceedings of the Nineteenth Japan National Congress for Applied Mechanics, Tokyo, Japan, October 1969.
- Downs, W. R., R. C. Ried, and Panel 7 Committee. "Reaction Processes in High Pressure Fluid Systems." NASA/MSC Apollo 13 Investigation Team, Panel 7 Report, May 1970.
- Gamble, Joe, Kenneth R. Kroll, Kornel Nagy, Robert C. Ried, Barney B. Roberts, and Carl D. Scott, "Aerobraking Orbital Transfer Vehicle," 4 April 1989, Patent No. 4,817,895.

Cerimele, Christopher J., Wayne L. Peterson, Robert C. Ried, Brian P. Ross, Michael J. Stagnaro, and George A. Zupp, "Assured Crew Return Vehicle," 12 November 1991, Patent No. 5,064,151.

**REFERENCES:**

Robert C. Ried NASA Biographical Data Sheet (March 1995), Robert C. Ried Biographical File, Public Affairs Office, Lyndon B. Johnson Space Center, Houston, TX.

Robert C. Ried, Jr. Service Record Card, Personnel File, Human Resources Office, Lyndon B. Johnson Space Center, Houston, TX.

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Manned Spacecraft Center Telephone Directory (January 1963), Organizational Series, Center Collection, History Collection, Scientific and Technical Information Center, Lyndon B. Johnson Space Center, Houston, TX.

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