

# NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT

## BIOGRAPHICAL DATA SHEET

**NAME:** Burton G. Cour-Palais

**ORAL HISTORY:** 1 March 2004

**EDUCATIONAL BACKGROUND:**

B.S. in Math, Physics and Chemistry, St. Xavier's College, Calcutta, India, 1945  
Attended La Martiniere College, Calcutta, India (1941-1942)

**PRE-NASA EXPERIENCE:**

Vickers-Armstrongs Ltd., Weybridge, England  
Graduate Analyst (1947-1948)  
Aircraft Structures Analyst (1948-1953)  
Bristol Aircraft Ltd., London, England  
Aircraft Structures Engineer (1953-1957)  
Avro Aircraft Ltd., Malton, Ontario, Canada  
Aircraft Structures Engineer (1957-1960)

**NASA INVOLVEMENT:**

NASA Space Task Group, Langley Research Center, Hampton, Virginia  
Senior Structures Engineer, Flight Systems (1960-1961)  
NASA Manned Spacecraft Center/ Johnson Space Center, Houston, Texas  
Aerospace Technologist, Spacecraft Research Division (1961-1963)  
Aerospace Technologist, Space Environment Division (1963-1964)  
Assistant Chief, Meteoroid Environment Section (1964-1965)  
Manager, Apollo Subsystem Meteoroid Protection (1965-1967)  
Chief, Meteoroid Sciences Branch, Space Physics Division (1967-1971)  
Scientific Specialist, Meteoroid Sciences and Hypervelocity Impact Physics (1971-1974)  
Space Scientist, Troposphere Project, Environmental Effects Office (1974-1978)  
Aerospace Technologist, Technical Planning Office (1978-1983)  
Senior Scientist, Space Science Branch, Solar System Exploration Division (1983-1986)  
Space Scientist, Planetary Studies Branch, Solar System Exploration Division (1986-1989)

**POST-NASA EXPERIENCE:**

McDonnell Douglas Space Systems Company, Houston, Texas  
Space Division (1989-1993)  
McDonnell Douglas Space Systems Company, Dayton, Ohio  
Space Division (1993-1994)

Southwest Research Institute, San Antonio, TX  
Consultant (1994-current)

**PROFESSIONAL & HONORARY SOCIETIES:**

- Graduate Member, Royal Aeronautical Society, College of Aeronautical Engineering, London, England
- Associate Fellow, Royal Aeronautical Society, England
- Chartered Engineer, England

**AWARDS & CITATIONS:**

- MSC Quality Salary Increase, 1966
- MSC Superior Achievement Award, 1969
- JSC Outstanding Performance Rating, 1975
- JSC Superior Performance Award, 1976
- JSC Superior Performance Award, 1980
- 25 Year Service Award, 1985

**SELECT PUBLICATIONS AND PATENTS:**

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Burbank, P. B., Burton G. Cour-Palais, and W. E. McAllum. "A meteoroid environment for near-earth, cislunar, and near-lunar operations." NASA Technical Report NASA-TM-X-65053 (CASI 19700076046). Houston: NASA Lyndon B. Johnson Space Center, 1964.

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- Cour-Palais, Burton G., R. E. Flaherty, and H. A. Zook. "Meteoroid activity on the lunar surface from the Surveyor 3 sample examination." NASA Technical Paper NASA-TM-X-58079 (CASI 19720007178). Seattle, Washington: COSPAR, 14<sup>th</sup> Plenary Meeting, June 1971.
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- Cour-Palais, Burton G., M. L. Brown, and D. S. McKay. "Apollo window meteoroid experiment." Apollo 16 Preliminary Scientific Report (1 January 1972): 10.
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- Igensbergs, E. B., Burton G. Cour-Palais, E. Fisher, and O. Stehle. "Plasma flow and fast particles in a hypervelocity accelerator - A color presentation." Applied Optics Vol. 14 (October 1975): 2542-2548.
- Cour-Palais, Burton G. "Proceedings of the Space Shuttle Environmental Assessment Workshop on Tropospheric Effects." NASA-TM-X-58199 (CASI 19770016684). Houston: NASA Lyndon B. Johnson Space Center, 1977.
- Kessler, D. J., and Burton G. Cour-Palais. "Collision frequency of artificial satellites - The creation of a debris belt." Journal of Geophysical Research Vol. 83 (June 1978): 2637-2646.

Cour-Palais, Burton G. "Results of the Skylab/ Apollo windows for micrometeoroid impacts." Lunar and Planetary Science Conference, 10<sup>th</sup>, Houston, Texas Vol. 2 (January 1979): 1665-1672.

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Cour-Palais, Burton G. and Sherman L. Avans. "Shielding against debris." Aerospace America Vol. 26 (June 1988): 24-25.

Cour-Palais, Burton G. and Jeanne L. Crews. "Hypervelocity impacts and upper-stage breakups." Orbital debris from upper-stage breakup. (January 1989): 25-38.

Tullos, R. J., W. M. Gray, S. A. Mullin, and Burton G. Cour-Palais. "A hypervelocity launcher for simulated large fragment space debris impacts at 10 km/s." AIAA Paper 89-1345 (CASI 19890043449). Houston: Lyndon B. Johnson Space Center, 1989.

Cour-Palais, Burton G. "The long-term effects of the micrometeoroid and orbital debris environments on materials used in space." NASA, Langley Research Center, NASA/SDIO Space Environment Effects on Materials Workshop, Part 1. (May 1989): 257-280.

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U.S. Patent 5,067,388: "Hypervelocity impact shield." 26 November 1991.

**SOURCES:**

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Burton G. Cour-Palais, interview by Christopher Gainor, 8 November 1995. Transcript on loan from Interviewer.

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