

NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT

BIOGRAPHICAL DATA SHEET

NAME: Eugene Edzards Covert

ORAL HISTORY: 22 June 1999

EDUCATIONAL BACKGROUND:

B.S. in Aeronautical Engineering, University of Minnesota, Minneapolis / St. Paul, Minnesota, 1946

M.S. in Aeronautical Engineering, University of Minnesota, Minneapolis / St. Paul, Minnesota 1948

Sc.D. in Aeronautical Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1958

PRE-NASA CAREER:

United States Navy (1943-1947)

Preliminary Design Aerodynamicist, Naval Air Development Center, Johnsville, Pennsylvania (1948-1952)

Research Engineer to Associate Director, MIT Aerophysics Laboratory, Cambridge, Massachusetts (1952-1963)

Associate Professor of Aeronautics and Astronautics, MIT, Cambridge, Massachusetts (1963-1968)

Professor of Aeronautics and Astronautics, MIT, Cambridge, Massachusetts (1968-1985)

Chief Scientist, United States Air Force (1972-1973)

NASA CAREER:

Advisory Group for Aerospace Research and Development (AGARD), Power and Energetics Panel

Member (1975-1984)

Chairman (1981-1984)

Chairman, Ad Hoc Committee for Review of the Space Shuttle Main Engine Development Program (1978)

Member, National Research Council (NRC) Committee on NASA Program Changes (1981- date unknown)

Member, Office of Science Technology and Policy (OSTP) Aeronautical Policy Review Committee (1983-1988)

Member, NASA Aeronautics Advisory Committee (1985-1989)

Member, Presidential Commission on the Space Shuttle Challenger Accident (1986)

NRC's Aeronautics and Space Engineering Board (ASEB)

Vice Chairman (1988-1990)

Chairman (1990)

POST-NASA CAREER:

Consultant, Various Companies (1963- date unknown)
Technical Director, European Office for Research and Development (1978-1979)
Massachusetts Institute of Technology, Cambridge, Massachusetts
Department Head, Aeronautics and Astronautics (1985-1990)
Director, Gas Turbine and Plasma Dynamics Laboratory (1979-1984)
Director, Wright Brothers Facility (1991- date unknown)
Adjunct Professor, Aeronautics And Astronautics (1991-)
Aerospace America Advisory Committee, AIAA (1984- date unknown)

CURRENT OCCUPATION: Adjunct Professor of Aeronautics and Astronautics, MIT,
Cambridge, Massachusetts

PROFESSIONAL & HONORARY SOCIETIES:

- Member, National Academy of Engineering
- Fellow, American Institute of Aeronautics and Astronautics (AIAA)
- Fellow, Royal Aeronautical Society
- Member, New York Academy of Science
- Fellow, American Association for the Advancement of Science
- Registered Professional Engineer in Massachusetts
- Chartered Engineer in United Kingdom
- Member, Sigma Xi

AWARDS & CITATIONS:

- Exceptional Civilian Service Award, United States Air Force, 1973 and 1976
- University Educator of the Year, Engineering Science Division, American Society of Aerospace Education, National Aeronautic Association, 1980
- NASA Public Service Award, 1981
- MIT Graduate Student Council Outstanding Teacher Award, 1985
- American Institute of Aeronautics and Astronautics Ground Testing Award, 1990
- Advisory Group for Aerospace Research and Development von Karman Medal, 1990
- American Institute of Aeronautics and Astronautics W. F. Durand Lectureship, 1992

SELECT PUBLICATIONS:

Covert, Eugene. "A Particular-Solution of a Nonlinear Differential Equation Which Occurs in the Dynamics of Conservative Systems and Its Application to Undamped Airplane Motion." Journal of Applied Science 22, no. 2 (February 1955).

_____. "An Application of Variation Methods to the Computation of the Deformation of a Cantilever Plate Subject to Nonuniform and Aeroelastically Induced Loads." Journal of Applied Science 22, no. 8 (August 1955).

- _____. "Quasi-Steady Nonlinear Pitching Oscillations in Transonic Flight." Journal of Applied Science, 22, no. 9 (September 1955).
- _____. "Measurements of the Transient Temperature Distribution on a Hemispherical Shell at Supersonic Speeds." Journal of Applied Science, 23, no. 7 (July 1956).
- _____. "On Some Fundamentals in Magneto-Fluid Mechanics." M.I.T. Naval Supersonic Laboratory, TR 247, (March 1958).
- _____. "A Note on an Approximate Calculation of Green's Functions for Built-Up Bodies." Journal of Math and Physics, 37, no. 1 (April 1958).
- _____. "A Review of the Literature of Plasma Physics." M.I.T. Naval Supersonic Laboratory
- _____. "Measurements of Helical Flow of a Strong Electrolyte With and Without a Transverse Magnetic Field." with L. R. Boedeker, Journal of Fluid Mechanics, 10, part 2 (1963).
- _____. "Assumptions Underlying the 'Thin Skin' Heat Transfer Approximation." Journal of Aircraft, 2, No. 3 (May 1965).
- _____. "Wind Tunnel Simulation of Store Jettison with the Aid of Artificial Gravity Generated by Magnetic Fields." Journal of Aircraft, 4, no. 1 (1967): 48.
- _____. "Comments on 'Effects of a Dynamic Gas on Breakdown Potential.'" AIAA Journal, 8, no. 12, (December 1970): 2189-2194.
- _____. "Flow Induced Pressure Oscillations in Shallow Cavities." Journal of Sound and Vibration, 18, no. 4 (1971).
- _____. "A New Measurement of the Reverse Magnus Force on a Magnetically Suspended Ogive Cylinder at Subsonic Speed." AIAA Journal, 16, no. 2 (February 1978).
- _____. "Europe's Aerospace Thrust." Aeronautics and Astronautics, 17, no. 9 (September 1979).
- _____. "Conditions for Safe Separation of External Stores." AIAA Journal, Vol. 18, No. 8, (August 1981):624.
- _____. "A Vortex Model for Magnus Forces at Low Speeds, Spins and Angles." AIAA Journal, 20, no. 2 (February 1982).

_____. "Unsteady Turbulent Boundary Layer in Adverse Pressure Gradients." AIAA Journal, 22, no. 1 (January 1984):22-28.

_____. "Back to Basics; Aerospace Education in the 90's." Aerospace America, Educational Issue, (April 1992).

BIOGRAPHICAL REFERENCES:

American Men & Women of Science, 17th ed. 1989-90, s.v. "Covert Eugene Edzards."

Covert, Eugene E., Curriculum Vita, NASA Headquarters Awards Office, NASA Headquarters, Washington, DC.

Who's Who in America, 46th ed. 1990-91, s.v. "Covert, Eugene Edzards."

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