



Guide to the
Robert W. Jackson Collection, 1964-1999
PP03.02

NASA Ames History Office
NASA Ames Research Center

Contact Information:
NASA Ames Research Center
NASA Ames History Office
Mail-Stop 207-1
Moffett Field, CA 94035-1000
Phone: (650) 604-1032
Email: ARC-DL-history@mail.nasa.gov
URL: <http://history.arc.nasa.gov/>

Collection processed by:
Leilani Marshall, March 2004

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Descriptive Summary

Title:

Robert W. Jackson Collection, 1964-1999

Collection Number:

PP03.02

Creator:

Robert W. Jackson

Dates:

Inclusive: 1964-1999

Bulk: 1967-1988

Extent:

Volume: 1.67 linear feet

Repository:

NASA Ames History Office

Moffett Field, California 94035

Administrative Information

Access:

Collection is open for research.

Publication Rights:

Copyright does not apply to United States government records. For non-governmental material, researcher must contact the original creator.

Preferred Citation:

[Identification of item], Robert W. Jackson Collection, [Container number]: [Folder number], NASA Ames History Office, NASA Ames Research Center

Acquisition Information:

Donated by Robert W. Jackson in January 2004.

Biographical Note

Robert W. Jackson

Robert William Jackson was born March 31, 1937 in Yonkers, New York. He earned a BS in Aeronautical Engineering from the Massachusetts Institute of Technology in 1959. After working for the Boeing Company, he received an MS in Aeronautics and Astronautics from Stanford University in 1963. He joined the NASA Ames Research Center in 1963.

At NASA Ames, Jackson provided Mission Analysis and Study Management for numerous scientific space project studies including: Earth Orbiting and Reentry Satellites; Free Flying and Space Station attached telescopes; Earth Escape Missions; Planetary Orbiters for Venus, Moon, and Mars; and Entry Probe and Lander Missions to Venus, Mars, Jupiter, and Saturn.

In the late 1960s, Jackson performed recovery planning for the Earth Orbiting Biosatellite flights and served as Recovery Controller during the flights of the spacecraft. During the 1980s, he served as Flight Director for the Pioneer Venus Orbiter spacecraft, including the periods when the spacecraft was used as a remote observatory for Comets while simultaneously serving as Flight Director for the six older Interplanetary Pioneer spacecraft.

Jackson was responsible for operations planning for the Space Station-based Biological Research Project and managed preparations for the first item of hardware to be operated in the Station, a Passive Dosimeter system.

He has received numerous NASA awards including an Exceptional Service Medal for Pioneer Venus operations.

Jackson served as Chief of the Spacecraft Operations Branch in 1992 until his retirement from NASA in August 2001.

Scope and Content

The Robert W. Jackson Collection (1.67 linear feet) is composed of journal articles, photographs, monographs and other publications, and reports that cover four NASA space missions: Biosatellite, Magellan, Pioneer, and Voyager. The collection is divided into four series based on these space missions.

The first series, **Biosatellite**, contains clippings and publications about the Biosatellite Project. The three Biosatellites were earth-orbiting biological satellites that were designed to return their experiments to the ground for analysis at the conclusion of their flights. The first Biosatellites were launched in 1966 and 1967, and Biosatellite III was launched in 1967. The mission of Biosatellite III was to evaluate the effects of weightlessness with a monkey on board. The return of this spacecraft signaled the end of the Biosatellite project.

The second series, **Magellan**, contains primarily journal articles about the Magellan Mission. Magellan was launched in 1989, arrived at Venus in and went into orbit around the planet in 1990, gathering radar images of its surface, data on its gravity field, and gathering data on its geologic structure. The mission was terminated in October 1994 when the Magellan spacecraft was sent into the atmosphere of Venus where it was destroyed, marking the first time an operating planetary spacecraft was intentionally crashed.

The third series, **Pioneer**, represents the majority of the collection. It contains clippings, images, journal issues, publications and reports on the Pioneer Missions 6-13. The Pioneer Missions were designed to study the sun's environment and the planets in the solar system, performing first of their kind explorations of the sun, Jupiter, Saturn and Venus.

The most significant of these spacecraft were Pioneer 10 and 11, the first spacecraft to explore Jupiter and Saturn, and the first spacecraft to exit the solar system. Pioneer 10's mission ended in 1997 and the spacecraft has continued to explore the solar system when its last contact with Earth was made in 2003. Pioneer 11's mission ended in 1995 when its instruments had no power to make scientific observations. Both Pioneer 10 and Pioneer 11 carry a gold anodized plaque bolted to the spacecraft's main frame that contains a graphic message of Earth and its human inhabitants, in the event that the spacecraft are intercepted by other intelligence.

The fourth and final series in the collection, **Voyager**, contains images and a publication about the Voyager Mission. The Voyager Interstellar Mission was a two-spacecraft mission to the outer planets of Jupiter, Saturn, Uranus and Neptune that was launched in 1977. Voyager 2's mission is now known as Voyager Interstellar Mission as it heads out of the solar system at a rate of about 290 million miles a year.

Series Description

Series I: Biosatellite, 1965-1996. 7 folders.

This series is arranged in three subseries based on the Biosatellite projects: Biosatellite Project, Biosatellite II, and Biosatellite III. The first subseries, Biosatellite Project, contains two publications that introduce the project and report on the Biosatellite project in its entirety. The second subseries, Biosatellite II, contains a NASA publication on the experiments of the Biosatellite II. The third and final subseries, Biosatellite III, is composed of magazine and journal articles on the Biosatellite III project.

Series II: Magellan, 1993-1999. 3 folders.

This series primarily contains journal articles related to the Magellan Mission to Venus. It also includes a copy of the Jet Propulsion Laboratory newsletter "V-Gram: Magellan Bulletin about Venus and the Radar Mapping Mission."

Series III: Pioneer, 1964-1997. 77 folders (3 boxes)

This series represents the bulk of the collection. It is arranged in five subseries: Clippings, Images, Journal Issues, Publications, and Reports. The first subseries, Clippings, contains journal and newspaper articles as well as NASA news press kits, press releases, newsletters and bulletins from NASA Ames Research Center and Jet Propulsion Laboratory (JPL), and NASA News Special Reports. The Images subseries is further arranged in four sub-subseries by topic: Comets, Planets, Space Probes, and Related. Many images in this subseries are official NASA lithographs that include written descriptions in the back of the photos with the statement "This lithograph is a Government publication ..." and others are JPL photographs. The Journal Issues subseries includes entire issues of journals that are devoted to the Pioneer Project and missions, such as the journal *Science*. The Publications subseries is further arranged in three sub-subseries by publisher: NASA Ames Research Center Publications, NASA Publications and Other Publications. The material in these sub-subseries includes monographs, magazines, and other informational publications. The NASA Special Publications monographs have been removed from the collection and placed with the NASA Ames History Office Reference Collection (separation sheets note this new location). The final subseries of Pioneer is Reports, which contains published and unpublished reports about the Pioneer Project and missions.

Series IV: Voyager, 1977-1980. 2 folders.

This series is arranged in two subseries: Images and Publications. The subseries Images contains images of official NASA images of Saturn, and the second subseries, Publications, contains NASA SP-420 on the Voyager mission to Jupiter and Saturn.

Indexing Terms

The following terms may be used to index this collection.

Corporate Name

Ames Research Center

Geographic Name

Moffett Field (Calif.)

Personal Name

Jackson, Robert W.

Topical Term

Magellan Spacecraft

Pioneer Project

Pioneer (Space Probes)

Space Biology

Voyager

Separated Material

All NASA Special Publications (NASA SP) have been removed from the collection and placed with the Ames History Office Reference Collection.

Container List

SERIES I: BIOSATELLITE

Box	Folder	Folder Title
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Biosatellite Project

1	1	<i>NASA Facts</i> . Vol. II, No. 10. 1965(?)
	2	<i>Biosatellite Project: Historical Summary Report</i> . December 1969.

Biosatellite II

	3	Saunders, Joseph F. <i>The Experiments of Biosatellite II</i> . Washington, DC: Scientific and Technical Information Office, National Aeronautics and Space Administration, 1972. NASA SP-204.
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Biosatellite III

	4	Clippings, 1969
	5	Clippings, 1971. "Biosatellite III Results." Reprinted from <i>Aerospace Medicine</i> , Volume 42, Number 3, March 1971.
	6	Clippings, 1996
	7	Clippings, undated

SERIES II: MAGELLAN

	8	Clippings, 1993
	9	Clippings, 1994
	10	Clippings, 1999

SERIES III: PIONEER

Clippings

	11	1964
	12	1965
	13	1966
	14	1969

	15	1971
	16	1972
	17	1972
	18	1973
	19	1974
	20	1975
	21	1976
	22	1977
	23	1978
	24	1978
2	25	1979
	26	1980
	27	1981
	28	1982
	29	1983
	30	1984
	31	1985
	32	1986
	33	1987
	34	1988
	35	1989
	36	1990
	37	1991
	38	1992
	39	1993
	40	1995
	41	1997
	42	undated

Images

Comets

43	Comet Halley
44	Comet Wilson

Planets

45	Jupiter
46	Saturn
47	Venus

Space Probes

48	Pioneer Space Probes and Orbiters
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Related

49	Related
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Journal Issues

- 1974
3 50 *Science*. 25 January 1974. Vol. 183, No. 4122.
- 1975
51 *Science*. 2 May 1975. Vol. 188, No. 4187.
- 1979
52 *Science*. 23 February 1979. Vol. 203, No. 4382.
Science. 6 July 1979. Vol. 205, No. 4401.
- 1980
53 *Science*. 25 January 1980. Vol. 207, No. 4429.
- 1984
54 *JBIS: Journal of the British Interplanetary Society*. October 1984. Volume 37, No. 10.
- 1988
55 *Mercury: The Journal of the Astronomical Society of the Pacific*. Vol. XVII, Number 2. March/April 1988.
Mercury: The Journal of the Astronomical Society of the Pacific. Vol. XVII, Number 3. May/June 1988.
- 1993
56 *Geophysical Research Letters*. December 14, 1993. Volume 20, Number 23. Selected papers on Pioneer Venus Orbiter: Entry Phase.

Publications

NASA Ames Research Center Publications

- 57 *Pioneer Saturn Encounter*. Moffett Field, CA: Ames Research Center, 1979.
- 58 *Pioneer F & G: Mission to Jupiter*. Moffett Field, CA: Ames Research Center, [n.d.].
- 59 *Telemetry Coding Experiment for Pioneer Program*. Moffett Field, CA: NASA Ames Research Center, [n.d.].

NASA Publications

- 60 *The Pioneer Mission to Jupiter*. Prepared for the Office of Space Science and Applications. Washington, DC: National Aeronautics and Space Administration, 1971. NASA SP-268.
- 61 Corliss, William R. *The Interplanetary Pioneers. Volume I: Summary*. Washington, DC: National Aeronautics and Space Administration, 1972. NASA SP-278.

- 62 Fimmel, Richard O., William Swindell, and Eric Burgess. *Pioneer Odyssey: Encounter With a Giant*. Prepared at Ames Research Center. Washington, DC: National Aeronautics and Space Administration, 1974. NASA SP-349.
- 63 Fimmel, Richard O., William Swindell, and Eric Burgess. *Pioneer Odyssey*. Prepared at Ames Research Center. Washington, DC: National Aeronautics and Space Administration, 1977. NASA SP-396.
- 64 Fimmel, Richard O., Lawrence Colin, and Eric Burgess. *Pioneer Venus*. Prepared at Ames Research Center. Washington, DC: National Aeronautics and Space Administration, 1983. NASA SP-461.
- 65 Nicks, Oran W. *Far Travelers: The Exploring Machines*. Washington, DC: National Aeronautics and Space Administration, 1985. NASA SP-480.
- 66 Fimmel, Richard O., Lawrence Colin, and Eric Burgess. *Pioneering Venus: A Planet Unveiled*. Prepared at NASA Ames Research Center. Washington, DC: National Aeronautics and Space Administration, 1995. NASA SP-518.
- 67 *Space Pioneers and Where They Are Now*. Washington, DC: Educational Division, National Aeronautics and Space Administration, 1987. NASA EP-264.
- 68 *NASA Activities*. January 1979. Vol. 10, No. 1.

Other Publications

- 69 *Pioneer to Jupiter: Second Exploration*. Palo Alto, CA: Bendix Field Engineering Corporation, November 1974.
- 70 *Pioneer Venus Encounter – 1978*. Moffett Field, CA: Bendix Field Engineering Corporation, 1978.
- 71 *Pioneer Venus Mission Profiles – 1978*. Sunnyvale, CA: Bendix Field Engineering Corporation, 1978.
- 72 *A Diamond to Venus*. Amsterdam, The Netherlands: D. Drukker & Zn. N.V, [n.d.].
- 73 *Pioneer Venus Exploration*. [El Segundo, CA]: Hughes Aircraft Co., [n.d.].

Reports

- 74 “Proposal for the design and development of the Pioneer Venus Spacecraft System. Summary.” [El Segundo, CA]: Hughes Aircraft Company, August 1973.
- 75 “Pioneer Program: Pioneer Venus Project Plan.” Pioneer Document PC-400. Moffett Field, CA: NASA Ames Research Center, 1974.

- 4 76 “Analysis of Spacecraft Anomalies.” By Charles E. Bloomquist and Winifred C. Graham. March 1976. PRC R-1833. Prepared under Contract No. NAS 2-9041 for Ames Research Center, National Aeronautics and Space Administration.
- 77 “Pioneer Venus: Final Project Report.” December 1978. Contract No. NAS 2-8300. El Segundo, CA: Hughes Aircraft Company, 1978.
- 78 “Pioneer Venus Extended Mission II: Presentation to NASA HQ.” April 30, 1981.
- 79 “Pioneer Venus Orbiter Mission Phases II and III.” NASA Ames Research Center. Revised, March 1982.
- 80 “Pioneer 10 and 11: Heliospheric Mission.” Presentation. April 9, 1982.
- 81 “Thermal Structure of the Atmosphere of Venus From Pioneer Venus Radio Occultations.” Arvydas J. Kliore and Indu R. Patel, Jet Propulsion Laboratory. Revised August 30, 1982.
- 82 “Post Launch Mission Operation Report: Pioneer Venus Orbiter & Multiprobe Mission Success Assessment.” Report No. S-825-78-01/02. December 8, 1982.
- 83 “Pioneer to Venus: The Multiprobe and Orbiter Missions.” Roger A. Craig, Lawrence Colin and Richard O. Fimmel. NASA Ames Research Center. December 23, 1983.
- 84 “Pioneer Venus Orbiter Mission: Post-Halley.” July 1985.
- 85 “Pioneer Venus Orbiter: Ten Years of Discovery.” A Report of the Pioneer Venus Science Steering Group. Edited by Lawrence Colin. August 1989.
- 86 “Pioneer Venus 12.5 km Anomaly Workshop Report (Volume I)”. Proceedings of a workshop held at Moffett Field, California September 28-29, 1993. NASA Conference Publication 3303.
- 87 “Pioneer Venus Orbiter Post-Entry Summary Report.” Document No. P-1002. Ames Research Center, Moffett Field, California. May 20, 1994.
- 88 “Interplanetary Pioneer Success Story.” A paper prepared for Wincon 70, IEEE. By Thomas M. Lough, John Mulkern and Bernard Roseman, [n.d.].

SERIES IV: VOYAGER

Images

89 Saturn

Publications

90 *Voyager to Jupiter and Saturn*. Washington, DC: National Aeronautics and Space Administration, 1977. NASA SP-420.

End of the Robert W. Jackson Collection Guide