



Smithsonian Institution Archives

Twenty-Fifth Anniversary of Mariner  
2 Videohistory Collection, 1987

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## Collection Overview

<b>Repository:</b>	Smithsonian Institution Archives, Washington, D.C., <a href="mailto:osiaref@si.edu">osiaref@si.edu</a>
<b>Title:</b>	Twenty-Fifth Anniversary of Mariner 2 Videohistory Collection
<b>Identifier:</b>	Record Unit 9535
<b>Date:</b>	1987
<b>Extent:</b>	2 videotapes (Reference copies). 8 digital .wmv files and .rm files (Reference copies).
<b>Creator::</b>	
<b>Language:</b>	English

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## Administrative Information

### Preferred Citation

Smithsonian Institution Archives, Record Unit 9535, Twenty-Fifth Anniversary of Mariner 2 Videohistory Collection

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## Historical Note

The Mariner 2, launched to Venus on August 27, 1962, was built at the Jet Propulsion Laboratory (JPL) of the University of California. On December 14, 1962, the spacecraft passed within 41,000 kilometers of Venus, returning important data on the conditions of Venus and its atmosphere. This was the first successful encounter of a spacecraft with another planet. Mariner 2 also returned extremely important data on the electromagnetic and energetic particle environment of interplanetary space.

The interview group consisted of Jack Albert, Albert R. Hibbs, Lewis D. Kaplan, Jack N. James, and Oran W. Nicks. Jack Albert was born in 1923 in Dansville, New York. He attended Cornell University until 1943, prior to enlistment in the U.S. Army Air Corps. He later entered West Point and graduated in 1949 with a commission as a second lieutenant in the U.S. Air Force. In 1950 he began his career in guided missiles at Holloman Air Force Base as project officer for the X-7 Ram Jet test vehicle. He also received an M.S. degree from the University of Michigan in aeronautical engineering and eventually joined the ATLAS team at the Air Force Ballistic Missile Division in Inglewood, California. In November 1960, he directed the NASA/Agena B division which supplied the upper stage for the Mariner 2 mission.

Albert R. Hibbs was born in 1924 in Akron, Ohio. He completed a tour as an active duty ensign in the U. S. Navy before receiving a B.S. in physics from the California Institute of Technology (Cal. Tech.) in 1945. He then received an M.S. in mathematics in 1948 from the University of Chicago, and a Ph.D from Cal. Tech. in 1955. He began work at JPL in 1950 and was eventually appointed chief of the JPL Research Section.

Lewis D. Kaplan was born in Brooklyn, New York, in 1917 and received a B.S. in 1939 and a Ph.D. in meteorology in 1951 from the University of Chicago. He worked for the United States Weather Bureau and then joined the Institute for Advance Study in 1953. He remained there until 1956. He received

short appointments at Imperial College of the University of London and the Massachusetts Institute of Technology (MIT), and then accepted a joint appointment at JPL and the University of Nevada in 1961. While at JPL he was actively involved with the development of the Mariner 2 infrared radiometer. In 1970 he began teaching at the University of Chicago, where he was appointed Professor Emeritus of Meteorology.

Jack N. James was born in Dallas, Texas, in 1920 and received a B.S. in electrical engineering from Southern Methodist University. He served with the United States Navy during World War II, attended Bowdoin College and MIT, and was a naval radar instructor at Princeton University. From 1945 through 1950 he worked for General Electric and RCA, and received an M.S. degree in electrical engineering from Union College. He started with JPL in 1950 and developed ground and flight radar equipment for the Corporal missile system. In 1961 he became project manager for the Mariner Venus Project. By 1967 he was appointed assistant laboratory director for Technical Divisions.

Oran W. Nicks was born in 1925 in Eldorado, Texas. He received a B.S. in mechanical engineering at the University of Oklahoma. From 1948 through 1958 he worked at North American Aviation and progressed from junior aeronautical engineer to supervisor of aerodynamics of the Navaho project to Technical Services project leader. In 1958 he was appointed project engineer at Vought Astronautics Division of Chance-Vought Aircraft, Inc. He began at NASA in 1960 as head of Lunar Flight Systems in the Office of Lunar and Planetary Programs, and became director of the Office of Lunar and Planetary Programs in 1962. He was responsible for Ranger, Surveyor, Lunar Orbiter, Mariner, and Pioneer programs.

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## Introduction

The Smithsonian Videohistory Program, funded by the Alfred P. Sloan Foundation from 1986 until 1992, used video in historical research. Additional collections have been added since the grant project ended. Videohistory uses the video camera as a historical research tool to record moving visual information. Video works best in historical research when recording people at work in environments, explaining artifacts, demonstrating process, or in group discussion. The experimental program recorded projects that reflected the Institution's concern with the conduct of contemporary science and technology.

Smithsonian historians participated in the program to document visual aspects of their on-going historical research. Projects covered topics in the physical and biological sciences as well as in technological design and manufacture. To capture site, process, and interaction most effectively, projects were taped in offices, factories, quarries, laboratories, observatories, and museums. Resulting footage was duplicated, transcribed, and deposited in the Smithsonian Institution Archives for scholarship, education, and exhibition. The collection is open to qualified researchers.

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## Descriptive Entry

This videohistory session brought together a group of engineers, scientists, and administrators associated with Mariner to discuss the construction, launch, and operation of the country's first successful planetary probe. The interview was conducted in cooperation with the Smithsonian's National Air and Space Museum (NASM) and with the National Aeronautics and Space Administration (NASA) as part of a week-long series of events to commemorate the 25th anniversary of the Mariner 2.

Allan A. Needell, curator at NASM, moderated the session on December 11, 1987 at the International Conference and Reception Suite, S. Dillon Ripley Center, Quadrangle Building, Smithsonian Institution. He sought to document how well the group operated as a team, specifically the process by which they

-- as scientists, managers, and engineers -- worked together, even when the sense of mission and procedure differed.

This collection consists of one interview session, totalling approximately 2:40 hours of recording, and 61 pages of transcript.

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## Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

- Astronomy
- Astrophysics
- Interviews
- Oral history
- Science -- History
- Technology -- History

Types of Materials:

- Transcripts
- Videotapes

Names:

- Albert, Jack
- Hibbs, Albert R.
- James, Jack N. (Jack Norval), 1920-2001
- Jet Propulsion Laboratory (U.S.)
- Kaplan, Lewis D.
- Mariner 2 (Spacecraft)
- Needell, Allan A., interviewer
- Nicks, Oran W.
- Project Mariner (U.S.)
- United States. National Aeronautics and Space Administration

## Container Listing

### Interview

Interview

#### **Session 1: December 11, 1987**

Interview

At the S. Dillon Ripley Center, Smithsonian Institution, Needell interviewed Albert, Hibbs, James, Kaplan, and Nicks, c. 1920-1988, about: construction, launch, and operation of Mariner 2; personal involvement with the Mariner program; importance of Soviet Venus shots in 1962 as an example of the "space race" mentality vs. scientific exploration; STL Venus alternative "Atlas-Agena-Able," Discoverer, and general discussion of launch vehicles Centaur and Agena; examination of the mission itself; civilian vs. military pressures, and compartmentalized duties; possible contamination problems; role in operations and the development of spaceflight operations as a professional activity; connection with community of astrophysicists and astronomers. Visual documentation included: group interaction between members of the Mariner 2 team; photographs; models of the spacecraft.

Interview

Transcript, pages 1-61, of video tape recording, 3 hours.

Interview

Recording of Interview: Total Recording Time: 3 hours

Note:

- Original Masters: 8 Beta videotapes
- Preservation Masters: 8 Motion jpeg 2000 and 8 mpeg digital files
- Dubbing Masters: 3 U-Matic videotapes
- Reference Copies: 2 VHS videotapes, 8 Windows Media Video and 8 Real Media digital files