

Archiving the Pioneers of Planetary Science

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Abstract

The University of Arizona Special Collections is home to a critical group of manuscript collections that document important pioneers in the field of planetary science. This includes the papers of Gerard Kuiper, considered to be the father of modern planetary science and founder of the Lunar and Planetary Laboratory at the University of Arizona (LPL). This talk will explore the important collaborations and outreach activities between Special Collections and LPL and draw upon details of the recently processed Peter Smith Papers. Smith was the Primary Investigator of the Phoenix Mars Mission and the collection is a great case study in navigating restrictions and working with scientific research materials.

Summary

The University of Arizona Special Collections is the repository for unique materials documenting the men and women who make up the pioneers in Planetary Science at the Lunar and Planetary Laboratory (LPL) at the University of Arizona and the larger field of planetary science. Collections include many notable scientists, researchers, and scholars from University of Arizona who assisted the Nation in furthering our space program and understanding our solar system. This includes the papers of Gerard Kuiper, Peter Smith, Charles Sonett, Michael Drake and Tom Gehrels. Gerard Kuiper, considered by many to be the “Father of Modern Planetary Science” founded the LPL in 1960.

The notable work and research by these individuals include participating in space missions such as Ranger 7, the Apollo Program, the Explorer Program, Pioneer 10 and 11 missions, Pioneer Venus and Saturn, Huygens Probe on CASSINI, the Imager for

Mars Pathfinder experiment, Mars Polar Lander, Sojourner Rover, the HiRISE telescope, Phoenix Scout mission to Mars, the Phoenix Mars Lander and the OSIRIS-Rex asteroid mission.

Special Collections engages in extensive outreach activities including events and exhibits. In April 2016, in conjunction with the Lunar and Planetary Laboratory, a panel discussion was held

titled How Tucson Mapped the Way to the Moon and Planets. Panelists included scientists Peter Smith, Ewen Whitaker, and William Hartmann with moderator Melissa Sevigny, NPR science and technology reporter and author of *Under Desert Skies*, with opening remarks from the University of Arizona Lunar and Planetary Laboratory Director Tim Swindle. A recording of the full session is available online. Link: <https://vimeo.com/165075079>. Special Collections also had a rotating exhibit titled “Mars Madness: Sci-Fi, Popular Culture and Ray Bradbury’s Literary Journey to Outer Space” in spring, 2014 which featured photos of Mars and inspected Bradbury’s work through “the academic lenses of anthropology, literature, science, media, and education”.

The University of Arizona Libraries is also home to the University of Arizona Press, which has published numerous books related to outer space. Most recently, *Under Desert Skies: How Tucson Mapped the Way to the Moon and Planets*, by Melissa L. Sevigny (2016), and *Mars: The Pristine Beauty of the Red Planet*, by McEwen et al. (2017) which features images from the HiRISE camera, the most powerful sent to space.

The presentation will cover the partnerships with LPL, UA Press and notable individuals, the arrangement, description and access to collections in our archives and the extensive outreach efforts carried out over time including exhibitions, lectures, panel discussions and online content. Additionally I will discuss my personal experience processing the professional papers of Peter Smith, Senior Research Scientist and Professor Emeritus, University of Arizona Lunar and Planetary Laboratory. The collection, which is 108 linear feet, predominantly documents the development of scientific instruments and the project management of missions to the planet Mars

including Pathfinder, the Mars Surveyor Program and the Phoenix Mars Mission. Smith was the Primary Investigator of the Phoenix Mission, the first to confirm the existence of water on Mars, and responsible for over \$420 million in funding. The papers include extensive research materials, data, correspondence, publications, grant proposals, workshops and conferences, education and public outreach activities and media coverage.

This section will include tips and techniques to help archivists who do not come from scientific backgrounds deal with complex topics, endless acronyms and other specific project management jargon I have encountered as well as information about problematic media formats, AV materials and content restrictions such as trade secrets, materials stamped for US citizens only and other roadblocks.

Collection descriptions are available on the Special Collections Website: <http://speccoll.library.arizona.edu/collections/history-science>