

Apache Point Observatory

Apache Point Observatory is privately owned and supported by the Astrophysical Research Consortium (ARC), whose mission is to further astronomical research by the scientists and students from its member institutions. The night sky observatory supports the versatile ARC 3.5-m telescope which studies a variety of astronomical objects using synoptic programs requiring many short observations over long periods, as well as responding quickly to targets of opportunity; and, the Sloan Foundation 2.5-m telescope which continues its internationally-recognized survey programs by exploring dark energy, the dynamics and evolution of the Milky Way Galaxy, and the architecture of planetary systems.

For additional information:

APO - www.apo.nmsu.edu

Sloan Digital Sky Surveys - www.sdss.org

SDSS Data Releases - <http://cas.sdss.org/dr9/en/>

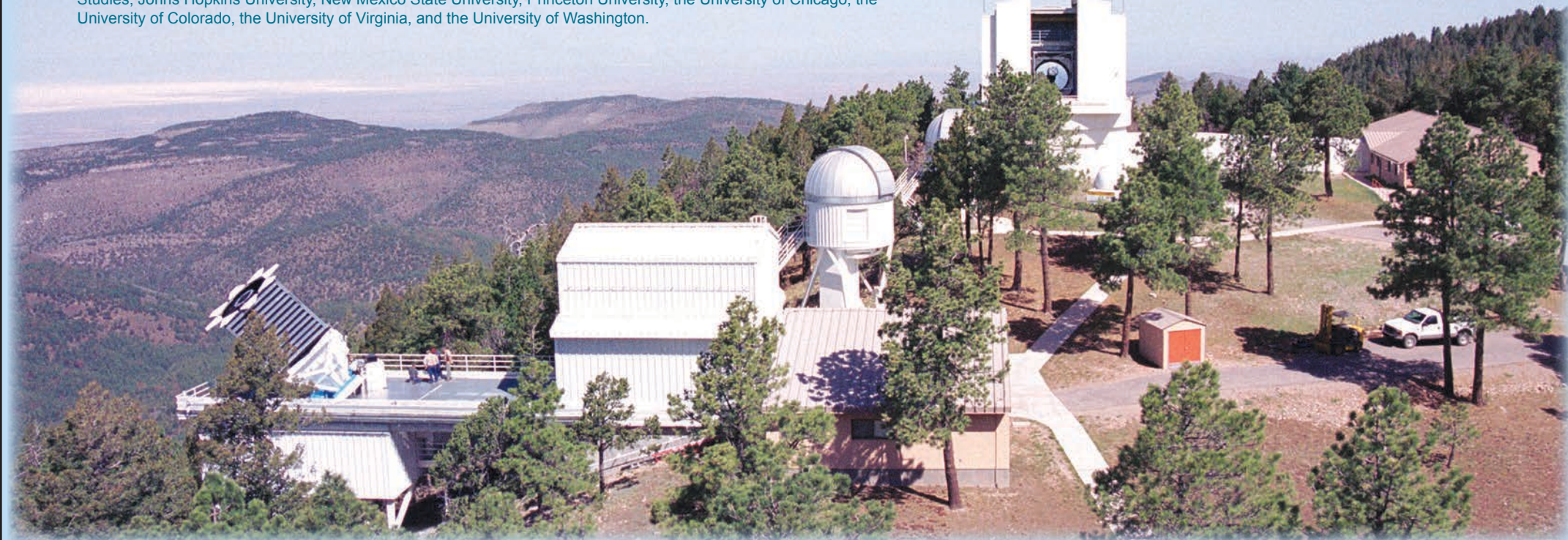
Photo: Our Milky Way Galaxy - a spiral galaxy - viewed from Apache Point in New Mexico; Jack Dembicky/APO

Astrophysical Research Consortium
to design, construct, and operate the Apache Point Observatory



The observatory is located in the Sacramento Mountains of south-central New Mexico. Four telescopes are currently operated: The Sloan Foundation 2.5-m Telescope, the ARC Small Aperture 0.5-m Telescope, the New Mexico State University 1.0-m Telescope, and the ARC 3.5-m Telescope. State-of-the-art optical and mechanical designs optimize each telescope for their specific purpose. This includes wide-field imaging and spectroscopy, high-precision tracking and pointing, and wide wavelength coverage. A large suite of instruments are available to support the varied science requirements of the ARC and SDSS scientists and their collaborators. ARC members are the Institute for Advanced Studies, Johns Hopkins University, New Mexico State University, Princeton University, the University of Chicago, the University of Colorado, the University of Virginia, and the University of Washington.

Airflow over the site is relatively smooth and turbulence-free. Very low dust, aerosol content, and water vapor, as well as low scattered light from natural and artificial sources, minimizes blurring of images and provides "good seeing."



Operating since 1996, the Sloan Foundation 2.5-m Telescope conducts astronomical surveys using instruments to accurately measure distances and composition of celestial objects. A 2.5° imaging field or a 3° spectroscopic field is usable; light from these objects 'drifts' across the instrument as the Earth rotates. The telescope and instrument are exposed for observations at night when its enclosure building wheels away.



Originally used for photometric calibrations on SDSS surveys, the ARC Small Aperture 0.5-m Telescope is now used as an all-around general telescope for observing and public outreach programs. It can be configured for wide or narrow field of view.



Utilizing many of the successful design innovations of the ARC 3.5-m telescope, the New Mexico State University's 1.0-m Telescope is remotely operated and is optimized for instruction and research in astronomy.



Beginning in 1991, the ARC 3.5-m Telescope's innovative software, mechanical, and optical designs provided users with high quality data and user-friendly operations. Light is collected by the 11.4-ft. spin-cast, glass, primary mirror and fed to any one of the multiple instruments mounted on the telescope. Observing programs are remotely conducted from locations around the globe by astronomers using the Internet and a unique software program.