

Window to the Stars

Kitt Peak National Observatory, the world's largest collection of telescopes, is located high above the Sonoran Desert on the Tohono O'odham Reservation, 55 miles southwest of Tucson, AZ. Home to 22 optical and two radio telescopes, the observatory represents dozens of astronomical research institutions and is operated by the National Optical Astronomy Observatory (NOAO). The attraction is ideal for student group travelers interested in science and astronomy.

In 1958 Kitt Peak was selected as the site for the national observatory and was built through a grant by the National Science Foundation (NSF). The land was leased on a perpetual agreement from the Tohono O'odham tribe. The observatory with 23 telescopes is the largest, most diverse gathering of astronomical instruments in the world. The most famous telescope at Kitt Peak is the McMath-Pierce Solar Telescope, the largest solar telescope in the world. Kitt Peak is also famous for having the first telescope, an old 91 cm reflector, which was originally used to search for near-Earth asteroids.

The Kitt Peak National Observatory Visitor Center is open daily to visitors from 9 a.m. to 3:45 p.m., except Thanksgiving, Christmas, and New Year's Day. Guided tours are offered daily at 10 a.m., 11:30 a.m., and 1:30 p.m. and group tours are available by appointment.

The center offers three, one-hour guided tours that begin in the visitor center with a brief introductory orientation:

- The first tour begins at 10 a.m. and visits the McMath-Pierce Solar Telescope.
- The second tour begins at 11:30 a.m. and visits the 2.1-m Telescope, one of the early workhorses of Kitt Peak. Built in 1964, the telescope is still in high demand each night.
- The third tour begins at 1:30 p.m. and visits the Mayall 4-m Telescope, a Tucson landmark since 1973. Visible from many points in Tucson, the 4-m is the largest optical telescope on Kitt Peak, and receives four times more requests for use than there are clear nights each year. From the Visitor Gallery in the telescope, students have a 360-degree view of Kitt Peak and the surrounding landscape.

Students who participate in the Nightly Observing Program have the opportunity to view some of the finest night skies on earth. This 3-hour program is available from July through mid-October and begins at approximately 9 p.m. Students arrive prior to sunset so they can observe the sun setting over the Tohono O'odham Reservation. Their evening begins with a tour of the exhibits, interactive displays, and a light meal. Then, the observatory staff review recent advances in the field of astronomy to provide an understandable perspective of the earth's place in the universe.

Following the orientation, students then take a visual journey through the cosmos with the aid of the observatory's three telescopes. Gathering in one of the Visitor Center's domes, students observe the heavens through a reflecting telescope. Observers see highlights of the particular time of year, such as planets, multiple star systems, planetary nebulae, and galaxies.

Observers also become acquainted with the Summer Triangle, which involves three special stars, each located in a separate celestial constellation. Taken together, these three stars, Altair, Deneb, and Vega, form a large triangle, easily discernable in the Tucson sky with the naked eye,

The observatory's Weather Program was created to allow visitors access to the site, even when conditions are not conducive to watching the skies. The program includes many portions of the regular Nightly Observing Program such as a light meal, followed by an introduction to the National Observatory and a look at the hands-on display of telescopes.

The program also teaches students how to use star charts and allows them to participate in activities using binoculars and scaled models. It concludes, if the weather permits, with a view of the universe through a telescope.

About the Author

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