

Dark Sky Sanctuaries in Arizona



Arizona is the astrotourism capital of the United States.

Its diverse landscape—from the Grand Canyon and ponderosa forests in the north to the Sonoran Desert and "sky islands" in the south—is home to more certified Dark Sky Places than any other U.S. state. In fact, no *country* outside the U.S. can rival Arizona's 16 dark-sky communities and parks.

Arizona helped birth the dark-sky preservation movement when, in 2001, the <u>International Dark Sky Association (IDA)</u> designated Flagstaff as the world's very first Dark Sky Place for the city's commitment to protecting its stargazingfriendly night skies. Since then, six other Arizona communities—Sedona, Big Park, Camp Verde, Thunder Mountain Pootseev Nightsky and Fountain Hills—have earned Dark Sky status from the IDA.

Arizona also boasts nine Dark Sky Parks, defined by the IDA as lands with "exceptional quality of starry nights and a nocturnal environment that is specifically protected for its scientific, natural, educational, cultural heritage, and/or public enjoyment." The most famous of these is Grand Canyon National Park, where remarkably beautiful night skies lend draw-dropping credence to the Park Service's reminder that "half the park is after dark

Of the 16 Certified IDA International Dark Sky Communities in the US, 6 are in Arizona. These include:

- Big Park/Village of Oak Creek, Arizona
- Camp Verde, Arizona
- Flagstaff, Arizona
- Fountain Hills, Arizona
- Sedona, Arizona
- Thunder Mountain Pootsee Nightsky- Kaibab Paiute Reservation, Arizona



Arizona is also home to 10 Certified IDA Dark Sky Parks, including:

Northern Arizona:



Sunset Crater Volcano National Monument

Offering multiple hiking trails around this former volcanic cinder cone, visitors can join rangers on tours to learn about geology, wildlife, and lava flows. The Visitor Center includes a bookstore, picnic tables, and interactive exhibits about volcanoes and the powerful forces behind them. Periodically, the Monument offers summer night sky events to take advantage of the beautiful dark skies in the area. Take the look road and visit Wupatki National Monument as well.

Location: 6082 Forest Service 545 Rd Flagstaff, AZ 86004 Tel: (928) 526-0502

Wupatki National Monument

Rock walls of 800-year-old pueblos dot a desert landscape once home to thousands of people. Visitor center exhibits explain how they survived by farming, hunting, and gathering, and trading. Short trails lead to Wupatki, Lomaki, and other pueblos. Located on a loop road including Sunset Crater, the scenic drive climbs rapidly from desert to mountain landscapes.

> Location: 25137 Loop Rd Flagstaff, AZ 86004 Tel: (928) 679-2365





Walnut Canyon National Monument

Walk among the cliff dwellings and pueblos where people lived 800 years ago. Experience the dramatic geology, varied vegetation and abundant wildlife that made their lives possible. The strenuous one-mile Island Trail descends into Walnut Canyon while the shorter Rim Trail offers overlooks and a pithouse display. The Island Trail is one mile round-trip, plan about one hour as the trail descends 185 vertical feet into the canyon. Location: 3 Walnut Canyon Rd Flagstaff, AZ 86004 Tel: (928) 526-3367



Grand Canyon National Park

As one of the seven natural wonders of the world, the Grand Canyon is on most people's bucket list and there is plenty to do. Visitors can walk along the rim, hike down into the canyon or take a Grand Canyon Field Institute Course, such as



cultural classes, backpacking classes, or yoga. There are also helicopter rides, plane rides, an IMAX Grand Canyon movie, skydiving, jeep tours, and more. The yearly star party in June extends for eight days and includes slide shows, constellation tours, and telescope viewing, allowing visitors to explore the wonders of the night sky.

> Location: South Rim Visitor Center: 6 S. Entrance Rd. Grand Canyon Village, AZ 86023 Location: North Rim Visitor Center: AZ-67 North Rim, AZ 86023 Tel: (928) 638-7888

Grand Canyon-Parashant National Monument

This rugged and wild land features scenic views, desert cactus, sheer canyon walls, soaring raptors, tall ponderosa pines,

isolated cattle corrals and line shacks, lone cowboys, rugged rock formations, and endless blue skies. Visitors to the Monument can explore the Nampaweap rock-art site which tells the history of native tribes told through thousands of petroglyphs. Other notable locations in the park are Tassi Rand and Waring Ranch, which are historic homesteads. Hells Hole, a naturally eroded amphitheater, offers an incredible view of unique topography. As one of the most remote areas in the contiguous United States, it offers night sky views that have won it a Gold-tier status from the IDA.

> Location: Littlefield, AZ Tel: (435) 688-3200





Petrified Forest National Park

Within an area of colorful and strangely eroded badlands is a paleontological wonderland of trees that have turned to stone and fossilized animal bones from 225 million years ago. At the northern end of the park is the Painted Desert, a vast area of purple, red and orange sediments which form colorful badlands. Facilities include the Rainbow Forest Museum, two picnic areas, curio shops and a restaurant.

Tel: (928) 524-6228 1 Park Rd. Petrified Forest National Park, AZ 86028



Tonto National Monument

Located less than a mile away from State Route 188 and along Theodore Roosevelt Lake, the Tonto National monument was established in 1907 by President Theodore Roosevelt. This majestic place has both Upper and Lower Cliff Dwellings. Explore the ruins of the Salado Indians from about 1300 AD, adventure in the ruins of the two cliff dwellings left behind, while soaking in the surrounding nature. At night, pack your tent and camp in the nearby campground, taking in the beautiful dark sky above.

> Location: 26260 AZ-188 Roosevelt, AZ 85545 Tel: (928) 467-2241



Southern Arizona:

Kartchner Caverns State Park

Experience a world-class limestone cave by day and a stunning dark sky by night. The "live" cave is host to a wide variety



of unique minerals and formations. Choose from three different cave tours, explore the exhibits at the Discovery Center, watch a video presentation in the theater, eat at the Bat Cave Café, and enjoy hiking trails, a garden, and the campground. Location: 2980 S Hwy 90

Benson, AZ 85602 Tel: (520) 586-4100

Oracle State Park

This 4,000-acre wildlife refuge in the northern foothills of the Catalina Mountains near Tucson offers picnic areas and more than 15 miles of trails for use by hikers, mountain bikers and equestrians. A section of the Arizona Trail crosses through the park. The Park provides environmental education programming for all ages. Visitors can also take self-guided tours of the historic Kannally Ranch House, a four-level home featuring Mediterranean and Moorish architecture.

> Location: 3820 Wildlife Dr. Oracle, AZ 85623 Tel: (520) 896-2425





Tumacácori National Historical Park

This 150-hectare area preserves what is left of the three Spanish mission communities: Mission San José de Tumacácori, Mission Los Santos Ángeles de Guevavi, and Mission San Cayetano de Calabazas. Visitors can enjoy evening programs that draw attention to the night sky as a cultural resource of what came before. This site serves as a place for visitors to blast to the past and see what night skies looked like hundreds of years ago.

> Location: 1891 E. Frontage Rd. Tumacacori, AZ 85640 Tel: (520) 377-5060



Arizona is also home to several Observatories and Planetariums:

Northern Arizona:



Lowell Observatory

Founded in 1894, Lowell Observatory is an astronomical research facility that also features visitor programs. During the day explore the Observatory's history and current research by joining guided tours. In the evening, view through a variety of telescopes and experience interactive live presentations in the mini-planetarium. Also featured at the facility are multi-media programs, an exhibit hall and gift shop.

Location: 1400 W Mars Hill Rd Flagstaff, AZ 86001 Tel: (928) 774-3358

Apache-Sitgreaves Observatory

Among its equipment, the Apache-Sitgreaves Observatory boasts the largest dedicated public telescope in the Southwest U.S.—a 36-inch telescope aperture. It is dedicated to educational outreach and public observing of the Universe. The Observatory, located at 7,000 feet elevation, is open on select days for night sky and solar viewing, and offers 1.5-3 hour programs.

Location: Overgaard, AZ (See the map available at http://www.apachesitgreaves.org/Map.html)





Winslow Homolovi Observatory



Winslow Homolovi Observatory is located in the Homolovi State Park, known for housing more than 340 archaeological sites. The Observatory was completed in January 2018 and was a joint effort of the City of Winslow, the Hopi Tribe, and other residents. Among its equipment is a 14-inch Celetron CGO Pro 1400 telescope. The Observatory hosts a monthly star party, which generally takes place the 1st Saturday of the month.

Location: Homolovi State Park Entrance Rd Winslow, AZ 86047 Tel: (928) 289-4106

Central Arizona:

Gilbert Rotary Centennial Observatory

Built for the Town of Gilbert by the Gilbert Rotary Club in 2005 to mark the 100th anniversary of Rotary International, the observatory has now hosted more than 90,000 visitors. It is open year-round on Friday and Saturday evenings. At the Public Star Party on the second Friday of each month, there are additional telescopes as well as an astronomy-related lecture in the adjoining library.

Location: 2757 E Guadalupe Rd. Gilbert, AZ



Arizona Science Center

A family destination providing exploration, education, and entertainment for all ages. Explore more than 300 hands-on



exhibits in five themed galleries. The 120,000-square-foot building has a maze of ramps, hallways, galleries, and terraces that creates an environment of discovery and investigation. Also included in the center is the largest planetarium in the state, an IMAX Movie Theater, City Bakery café, and a gift shop.

> Location: 600 E Washington St. Phoenix, AZ 85004 Tel: (602) 716-2000



Southern Arizona:

Fred Lawrence Whipple Observatory

The Fred Lawrence Whipple Observatory is the largest field installation of the Smithsonian Astrophysical

Observatory outside Cambridge, MA. The Visitors Center, located at the base of Mt. Hopkins in the Santa Rita Mountains, features displays and exhibits on astronomy and astrophysics, natural science, and cultural history. The Observatory generally conducts all-day guided tours for the general public on Mondays, Wednesdays, and Fridays from mid-March through November. Reservations are required in advance. Persons with health issues affected by high altitude should consult their physician before touring.

> Location: 670 Mt Hopkins Rd. Amado, AZ 85645 Tel: (520) 879-4407





Photo: skycenter.arizona.edu

Mt. Lemmon Sky Center Observatory

SkyNights Observatory is a popular after-dark program that takes advantage of the unique capabilities of the SkyCenter for experiencing the heavens. The SkyNights experience is offered most nights throughout the year. Learn the constellations, observe interesting atmospheric phenomena, and view the wonders of the cosmos from a high-quality astronomical site using an outstanding new 32-inch Schulman Telescope, one of Arizona's largest dedicated public viewing telescope! Most of humanity has not seen the Universe as clearly as is possible by using the large telescope atop Mount Lemmon. Persons with health issues affected by high altitude should consult their physician before touring.

Location: Mt Lemmon, AZ 85619 Tel: (520) 626-8122

Mount Graham International Observatory

The Discovery Park Campus of Eastern Arizona College offers all-day tours of Mt. Graham International Observatory



many weekends from May to October. The tour features a 40-mile trip up scenic Mount Graham, focusing on the mountain's rich geology, history, and diversity of life; a lunch near the summit of the mountain; and a guided tour of the observatories—the Submillimeter Telescope, the Vatican Advanced Technology Telescope, and the Large Binocular Telescope! Reservations must be made in advance. Due to the altitude of 10,400ft (3,200m), persons with health issues affected by high altitude should consult their physician before touring.

Location: 1651 W Discovery Park Blvd. Safford, AZ 85546 Tel: (928) 428-6260



Patterson Observatory

The Patterson Observatory is open to the public once a month on the Thursday nearest to the first quarter moon.



Weather permitting, you will be able to view the heavens with the 20-inch Patterson Telescope and other instruments. Among possible sights are craters of the crescent moon, gas giant planets Uranus and Neptune, double stars, various star clusters, nebula, planetary nebula, and distant galaxies. Location: 1140 N Colombo Ave Sierra Vista, AZ 85635 Tel: (520) 458-8278 ext. 2214

Kitt Peak National Observatory

Housing one of the largest collections of optical and radio telescopes in the world and located nearly 7,000 feet above

the Sonoran Desert under some of the finest "dark skies" in the world, the 24 optical and two radio telescopes at "Kitt Peak" represent dozens of astronomical research institutions. Visitors can watch scientists operate the world's largest solar telescope, embark on a guided tour, or participate in an overnight stargazing program. Daytime and nighttime programs are available by pre registering through the Kitt Peak Visitor Center. Located 56 miles or 90 kilometers southwest of downtown Tucson.

> Location: State Route 86 (Ajo Way)/Junction 386 Tucson, AZ 85726 Tel: (520) 318-8726



The Steward Observatory Mirror Laboratory

Through 90-minute tours guests have a unique opportunity to learn how innovative engineering and optical technology



meld with manufacturing techniques to produce the largest (8.4 meters / 27 ft) and most advanced telescope mirrors in the world. Visitors will see the unparalleled technology and revolutionary processes involved in making the next generation of telescopes that will explore deep into outer space and produce cutting-edge scientific research. The University of Arizona College of Science is ranked #1 among observational, theoretical, and space astronomy programs in the U.S.

Location: 527 National Championship Dr. Tucson, AZ 85719 Tel: (520) 626-8792





The University of Arizona Flandrau Science Center & Planetarium

Blending science and learning for all ages through interactive exhibits, astronomy, and laserlight shows in the planetarium, the center also displays one of the top-five gem and mineral collections in the country.

Location: 1601 E University Blvd. Tucson, AZ 85721 Tel: (520) 621-7827 or (520) 621-4516

Other places for space fans that offer astronomy programming:

Northern Arizona:

Alamo Lake State Park

Nestled in the Bill Williams River Valley, Alamo Lake State Park offers outdoor fun, premier bass fishing, rest, and relaxation. The crystal-clear lake is surrounded by mountainous terrain speckled with brush, wildflowers, and cacti. For nature lovers, spring rains bring an abundance of wild flowers and the lake environment attracts a variety of wildlife



year round, including waterfowl, foxes, coyotes, mule deer and wild burros. You may even spot a bald or golden eagle. Stargazers are sure to enjoy the amazing views of the night sky and the annual star party, with the nearest city lights some 40 miles away.

> Location: Wenden, AZ 85357 Tel: (928) 669-2088

Homolovi State Park

"Homolovi" is Hopi for "Place of the Little Hills." Homolovi State Park includes Hopi archaeological sites from AD 620-

1400, a visitor's center and museum, various trails, and a campground. Numerous species of wildlife can be seen in the Park, including: raptors, hawks, golden eagles, roadrunners, elk, coyotes, prairie dogs, porcupines, badgers, jackrabbits, cougars, and numerous other species. For astronomy fans, the park offers monthly star parties and the Winslow Homolovi Observatory.

Location: Homolovi State Park Entrance Rd. Winslow, AZ 886047 Tel: (928) 289-4106





Meteor Crater

Meteor Crater is the best-preserved impact site on earth. Nearly a mile across and 570 ft. deep, this giant crater was created 49,000 years ago by a nickel-iron meteor denser than any material found on earth. The Meteor Crater



Interactive Discovery Center, allows visitors to explore exciting displays and exhibits and relive the intensity of the meteor impact.

Location: Meteor Crater Enterprises, Interstate 40, Exit 233 Winslow, AZ 86047 Tel: (800) 289-5898

Southern Arizona:

Catalina State Park

Siting at the base of the majestic Santa Catalina Mountains, the park is a haven for desert plants and wildlife and nearly 5,000 saguaros. The 5,500 acres of foothills, canyons and streams invites camping, picnicking and bird watching — more than 150 species of birds call the park home. The park provides miles of equestrian, birding, hiking, and biking trails which wind through the park and into the Coronado National Forest at elevations near 3,000 feet. The park offers periodic night sky events.

> Location: 11570 N Oracle Rd. Tucson, AZ 85737 Tel: (877) 697-2757



Saguaro National Park

Those in search of a trek through the classic, towering Saguaro cacti for which the Sonoran Desert is famous can set out on the many trails in Saguaro National Park in the Tucson Mountains just west of the city. One of the Park's attractions is



the Signal Hill Petroglyphs – ancient rock art created by the extinct Hohokam tribe. The park is made up of two districts separated by Tucson's 1 million residents. It offers two visitor centers and many events and programs, including periodic star parties.

Location: Rincon Mountain Visitor Center, 3693 S Old Spanish Trail Tucson, AZ 85730 Tel: (520) 733-5153

Arizona Office of Tourism—Dark Skies Facebook: @arizonatravel Instagram: @visit_arizona Twitter: @ArizonaTourism #VisitArizona





Chiricahua National Monument

Visitors may explore a 12,000-acre "Wonderland of Rocks," complete with towering spires and unique rock formations. These are the remnants of a volcanic eruption one thousand times greater than the 1980 eruption of Mount St. Helens. The Monument also houses the historic Faraway Ranch, a pioneer homestead and later a working cattle and guest ranch that is often open for tours. The monument is a great destination for hikers and birders. Chiricahua also offers periodic nighttime programming, including night sky exploration events and full moon hikes.

Location: 12856 E Rhyolite Creek Rd. Willcox, AZ 85643 Tel: (520) 824-3560