



Sedona, Arizona

Keep Sedona Beautiful
Dark-Sky Committee

2017 Annual Report

To the International
Dark-Sky Association



The Keep Sedona Beautiful (KSB) Dark-Sky Committee is pleased to report progress in 2017 toward its goal of bringing more community awareness of light pollution and preserving our magnificent natural resource—our dark night sky. This was accomplished through the Committee's dark-sky outreach program, which included educational events and assisting other communities in pursuing the International Dark-Sky Community designation.

EDUCATIONAL EVENTS

April 10, 2017: Moon Light Hike at Red Rock State Park

J. D. Maddy, President of Astronomers of Verde Valley, and Karen Maddy hosted a moon light hike at Red Rock State Park. The group of attendees enjoyed hiking under the light of the moon.



Dreamstime Photo

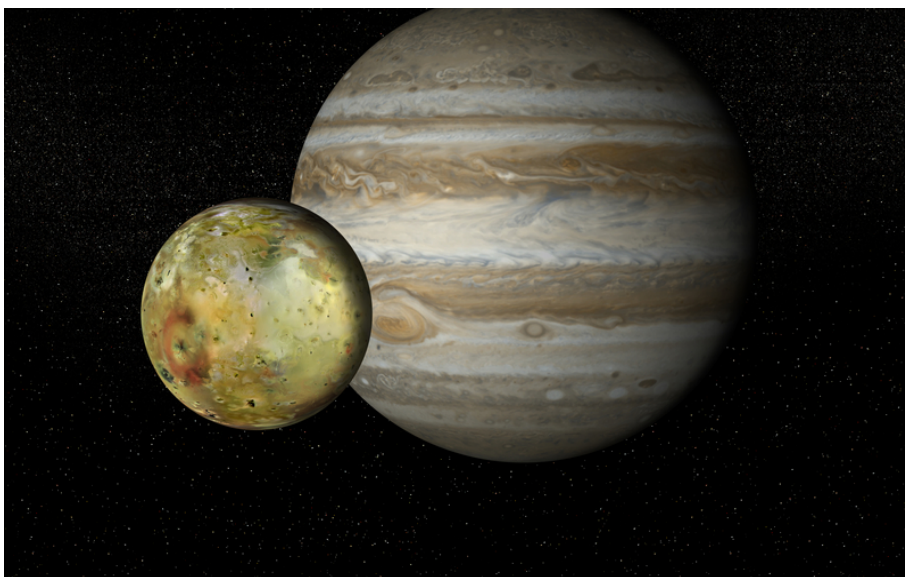
April 28, 2017: Star Party at Hilton Sedona Resort

J.D. Maddy, President of The Astronomers of Verde Valley, and Karen Maddy hosted a star gazing event at the Hilton Sedona Resort on Friday evening at the request of Jay Kriske, Hilton's General Manager. The Keep Sedona Beautiful Dark-Sky Committee participated in this event.

Many of the attendees had never looked through a telescope and most of the attendees live in large cities with light pollution. Everyone commented on the darkness of the night sky and the beauty of the stars.

Early views of the Moon and several bright stars kept the viewers busy as the sky darkened. Jupiter was probably the favorite object of most. Four of Jupiter's moons were easily visible.

The Keep Sedona Beautiful Dark-Sky brochures and other dark-sky material were available for attendees.



Dreamstime Photo

April 29, 2017: Star Party at Red Rock State Park

The Astronomers of Verde Valley presented the celestial happenings of the late April sky at Red Rock State Park. J.D. Maddy, President of Astronomers of Verde Valley, gave an interesting presentation, followed by telescope viewing. A four-day-old Moon located in the constellation of Orion the Hunter did not interfere with the many clusters and galaxies in the skies overhead. The Ghost of Jupiter was due south with the planet Jupiter and its Galilean Moons not far away in the constellation of Virgo. Virgo was also host to galaxy clusters easily seen in the telescopes. Keep Sedona Beautiful Dark-Sky Committee participated in this event with an exhibit of dark-sky literature. Light refreshments were provided.



Dreamstime Photo Constellation Virgo

April 30, 2017: National Astronomy Day

Dennis Young, President of Sirius Lookers Club, celebrated National Astronomy Day with hosting a solar viewing and stargazing event at Bashas parking lot in West Sedona. The solar viewings begin with viewing the closest star, the "Sun". The viewers saw sunspots and explosions coming off the Sun. Highlights of the night sky viewing were the Moon, the Seven Sisters Star Cluster, and Jupiter. Binoculars and giant scopes were there to assist viewers in dark sky viewing.

Sirius Lookers Club, Sedona Library

Weather permitting, a star gazing event follows the monthly meetings of the Sirius Lookers Club. Dennis Young, President of Sirius Lookers Club, has his telescope ready to show the attendees the beauty of the dark night sky.



Dreamstime Photo

May 10, 2017: Keep Sedona Beautiful Speaker Series

Dr. Jeffrey Hall, Director of Lowell Observatory, was Keep Sedona Beautiful's Preserving the Wonder speaker in May. Dr. Hall discussed the main properties of a good, dark-sky preserving light, what types of dark-sky-friendly LEDs are available, and presented some guidelines that communities can use when an LED conversion is being considered. "LEDs don't have to be a bad thing, and by adopting them thoughtfully, we can employ them for outdoor lighting while preserving the beautiful starry skies that enrich all our lives."



June 23, 2017: Discovery Channel Telescope Tour with Dr. Jeffrey Hall

A group of KSB members toured the Discovery Channel Telescope with Dr. Hall. The telescope, which is located in Happy Jack, AZ, is a state-of-the-art 4.3 meter telescope.



Photo by Dave Norton

August 12, 2017: Sedona Public Library, Lecture and Stargazing

Dennis Young, President of Sirius Lookers Club, gave a talk on the total solar eclipse that will happen on August 21. He spoke about the upcoming Total Solar Eclipse and some safety priorities for viewing the eclipse. After the lecture, Dennis offered solar viewing for the attendees.



Dreamstime Photo

With our beautiful preserved dark skies, multiple companies offer private and group star parties to visitors worldwide.

**SUPPORT OF INTERNATIONAL
DARK-SKY COMMUNITY DESIGNATIONS**

The KSB Dark-Sky Committee is assisting Cottonwood, AZ as they pursue the International Dark-Sky Community designation.

DARK-SKY BROCHURES

The Keep Sedona Beautiful Dark-Sky Committee distributes its Dark-Sky Brochures at educational events as well as to residents, business, and visitors.

KEEP SEDONA BEAUTIFUL WEBSITE

The Dark-Sky tab at KSB'S website, www.KeepSedonaBeautiful.org, is kept updated about dark-sky events. The Dark-Sky Tab includes annual community dark-sky awareness events. It links to the International Dark-Sky Association (IDA) Video, "Losing the Dark," as well as to the following:

- IDA Website
- IDA Quick Link to My Neighbor's Lighting

- IDA Quick Links to Light Pollution, Wildlife, Energy Waste, Human Health, and More
- IDA Quick Link to International Dark-Sky Places
- City of Sedona Outdoor Lighting Ordinance 2001

NEW AND REMODELED BUSINESSES IN SEDONA

The following new buildings in Sedona were completed and received their Final Certificates of Occupancy (CofO):

- Marriott Courtyard Hotel
- Nexus Building
- CVS
- Barbara Antonsen Park/Posse Ground Pavilion

Part of the City's inspection process includes a lighting night-time inspection. Issuance of a final CofO is evidence that all inspections, including a lighting inspection, were passed.

The following remodels in Sedona were completed. Please note this is not a comprehensive list but only includes projects that involved new lighting.

- Red Stone Center (Oregano's/Baskin Robbins)

If the remodeling project includes new lighting, part of the inspection process is a night-time lighting inspection. Final sign off on the permit is evidence that all inspections, including a lighting inspection for all new lighting, were passed.

SKY QUALITY MEASUREMENTS

The KSB Dark-Sky Committee takes Sky Quality Measurements to ensure that Sedona continues to protect its dark night skies and to reduce light pollution. The measurements were taken in three locations on March 27, 2017 and July 27, 2017. The readings were taken at the same locations as in previous years. Below are the measurements:

SKY QUALITY READING IN SEDONA CITY LIMITS PERFORMED ON March 27, 2017, NEW MOON									
Time	Location	Percent of Cloud Cover	First Sky Quality Reading	Second Sky Quality Reading	Third Sky Quality Reading	Fourth Sky Quality Reading	Fifth Sky Quality Reading	Sixth Sky Quality Reading	Average Sky Quality Reading
22:06	Saddle Rock Cir and June Bug Cir; about 1.2 miles west from Y (right before Sedona Bar&Grill)	30%	21.01	20.96	20.92	21.02	20.91	20.92	20.96
22:15	Whitetail Rd and Rodeo Ln; 2.1 miles W of Y off Rodeo Road/89A (by Safeway)	30%	21.02	21.01	20.96	20.94	20.97	20.92	20.97
22:23	Keep Sedona Beautiful parking lot, 340 Brewer Road, facing away from KSB office	30%	20.59	20.39	20.33	20.30	20.23	20.30	20.36
SKY QUALITY READING IN SEDONA CITY LIMITS PERFORMED ON JULY 21, 2017, 2 DAYS BEFORE NEW MOON									
Time	Location	Percent of Cloud Cover	First Sky Quality Reading	Second Sky Quality Reading	Third Sky Quality Reading	Fourth Sky Quality Reading	Fifth Sky Quality Reading	Sixth Sky Quality Reading	Average Sky Quality Reading
22:44	Saddle Rock Cir and June Bug Cir; about 1.2 miles west from Y (right before Sedona Bar&Grill)	80%	19.69	19.63	19.34	19.32	19.42	19.34	19.46
22:48	Whitetail Rd and Rodeo Ln; 2.1 miles W of Y off Rodeo Road/89A (by Safeway)	80%	19.70	19.69	19.49	19.50	19.80	19.80	19.66
22:57	Keep Sedona Beautiful parking lot, 340 Brewer Road, facing away from KSB office	80%	19.26	19.25	19.25	19.31	19.32	19.32	19.29

SEDONA DARK-SKY COMMUNITY SIGNS

The Sedona International Dark-Sky Community signs were installed in January 2017. Sedona's beautiful dark night sky is breathtaking. We can see with our own eyes the beauty and wonder of the Milky Way's misty band of light (comprised of 200 billion stars!) arching across the night sky.



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