

# See the night sky

through a variety of telescopes and binoculars, bringing your own or use Club members'.

KNOWLEDGEABLE Prescott Astronomy Club members will have available their personal telescopes, a Club telescope, or binoculars for the public to view interesting objects in the night sky. For most Starry Night events viewing will be preceded by a brief discussion of what you can expect to see on that particular evening. Starry Nights is sponsored by the Prescott Astronomy Club

in cooperation with the Prescott Department of Parks and Recreation and the Prescott Valley Department of Parks and Recreation.

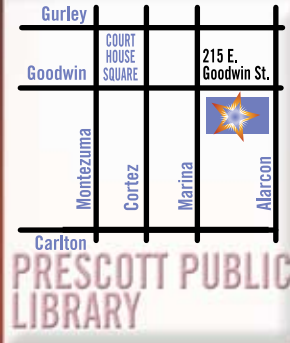
## Starry Nights and Sunny Days in Prescott and Prescott Valley:

- **March 21:** Starry Nights at Pronghorn Park, 7:30 to 9:30 PM; see Jupiter, Pleiades Cluster, Great Orion Nebula, Whirlpool Galaxy
- **April 11:** Starry Nights at Vista Park, 8:00 to 10:00 PM; see Jupiter, Beehive Cluster, Black Eye Galaxy, Crab Nebula
- **May 23:** Starry Nights at Pronghorn Park, 5:30 to 10:00 PM; see the Sun through solar telescopes; the Moon, Keystone Cluster, Jupiter, Whirlpool Galaxy, Venus; Inexpensive beginner telescopes for sale
- **June 20:** Starry Nights at Vista Park, 5:30 to 10:30 PM; see the Sun through solar telescopes; the Moon, Keystone Cluster, Jupiter, Whirlpool Galaxy, Ring Nebula, Saturn, Venus, Inexpensive beginner telescopes for sale
- **June 21:** Summer Solstice at the Prescott Public Library, TBD, check [www.prescottlibrary.info](http://www.prescottlibrary.info); see the Sun through solar telescopes as it reaches its northernmost point of the year.
- **July 5:** International SUN-day: see the only star in our solar system through solar telescopes. See PAC website for location.
- **September 19:** Starry Nights at Pronghorn Park, 7:30 to 9:30 PM; see the Double Cluster, Andromeda Galaxy, Dumbbell Nebula, Ring Nebula, Keystone Cluster, Albireo, Eagle Nebula
- **October 3:** Starry Nights at Vista Park, 7:00 to 9:00 PM; see Andromeda Galaxy, Dumbbell Nebula, Albireo, Ring Nebula, Keystone Cluster, Wild Duck Cluster
- **November 7:** Starry Nights at Pronghorn Park, 6:30 to 8:30 PM; see Andromeda Galaxy, Dumbbell Nebula, Albireo, Ring Nebula, Double Cluster

Vista Park is at 1684 Sarafina Drive in the Prescott Lakes subdivision. GPS coordinates—34°35'39.92"N; 112°26'33.00"W

Pronghorn Park is at 7931 E. Rusty Spur Trail in the Pronghorn Ranch subdivision. GPS coordinates—34°39'8.14"N; 112°19'34.96"W

GALAXY M81



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### PRESCOTT PUBLIC LIBRARY

[www.prescottlibrary.info](http://www.prescottlibrary.info) 928.777.1500

### PRESCOTT ASTRONOMY CLUB

[www.prescottastronomyclub.org](http://www.prescottastronomyclub.org)

WITH THANKS TO OUR SPONSORS:



Photos courtesy of Prescott Astronomy Club President Jeff Stillman.

# STARRY NIGHTS 2015

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PRESCOTT/PRESCOTTVALLEY 2015



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PRESCOTT & PRESCOTT VALLEY

# STARRY NIGHTS 2015

# Highlands Center Programs

The Highlands Center for Natural History and the Prescott Astronomy Club sponsor presentations on astronomy-related topics of interest to the public. Each presentation is followed by a “star party” at which Astronomy Club members have their personal telescopes, a Club telescope, or binoculars for the public to view interesting objects in the night sky.

- **April 4, 6:30 PM** Presenter: Jeff Stillman, President, Prescott Astronomy Club
- **October 24, 6:30 PM** Presenter: Dr. David Viscio, Prescott Astronomy Club

Highlands Center is located at 1375 Walker Road, Prescott, about 2 miles south of Route 69. GPS coordinates—34°30'56.87"N; 112°23'27.16"W

## Third Thursday Star Talks at Prescott Public Library Founders Suite

These presentations on a variety of subjects relevant to astronomy are sponsored by the Prescott Astronomy Club and the Prescott Public Library and are free to the public. Speakers are selected from a variety of regional organizations for their knowledge and outstanding ability to discuss their topic.

**The public is also invited to attend Prescott Astronomy Club's monthly meetings—first Wednesday of the month, 6:30 PM.**

- **January 15, 6:30 to 8 PM**

### ***Outreach and Education Through Webcasting***

**Matt Francis, Director, Prescott Observatory**

Slooh Community Observatory offers the ability to reach hundreds of thousands of people in a single broadcast. Slooh has advanced my outreach goals for Prescott Observatory on a scale I never imagined. I will describe my experience with webcasting, the equipment involved and the techniques used to provide live image and video feeds.

- **February 19, 6:30 to 8 PM**

### ***Pulsar Timing and Other Radio Happenings***

**Dr. Andri Gretarsson, Embry Riddle Aeronautical University**

Pulsars are the rapidly rotating, super-dense remnants of massive stars. They emit directed “light-house-like” beams of radio waves that we detect on earth when the beams sweep across our galactic location. By carefully timing the arrival of these beams we can learn a surprising amount about pulsars and their environment; we can even learn about the nature of the space-time through which the beams sweep. In the talk, I will give an overview of the many interesting applications of pulsar timing. At the end I'll describe the pulsar timing work being started at Embry-Riddle University here in Prescott.

- **March 19, 6:30 to 8 PM**

### ***High Altitude Ballooning, Education from the Edge of Space***

**Jack Crabtree, ANSR founder**

Arizona Near Space Research (ANSR) promotes science, technology, engineering and math using amateur radio and high altitude balloons. Jack will describe the high altitude balloon programs conducted in Arizona that have involved nearly a thousand students.

- **April 16, 6:30 to 8 PM**

### ***The Pluto Vote: One Astronomer's Personal Story***

**Dr. Gerard van Belle, Lowell Observatory**

The 2006 vote on the planetary status of Pluto has had a long-lasting reverberation throughout astronomy. With an outcome that remains controversial both in the public eye and within the professional community, the debate on what to call this world remains a lively one. My own accidental involvement in this question has its own amusing tall tale, which I will recount along the way to re-examining a question: What is a planet, and why do we care?

- **May 21, 6:30 to 8 PM**

### ***Asteroid and Meteorite Connections...Arizona Style!***

**Rik Hill, Sr. Research Specialist, University of Arizona, Lunar & Planetary Laboratory's Catalina Sky Survey; Robert Ward, Iron From the Sky Meteorites; and Dolores Hill, Sr. Research Specialist, University of Arizona, Lunar & Planetary Laboratory and OSIRIS-REx asteroid sample return mission**

We will investigate these rocky bodies on their journey from the sky to the ground to the laboratory, sharing exciting news about asteroid discoveries, recoveries of meteorites and research from an Arizona perspective.

University of Arizona's Catalina Sky Survey observer Rik Hill will describe what happens when a suspected near-Earth object is spotted. Prescott native and meteorite hunter/collector extraordinaire Robert Ward will regale you with tales of his meteorite-hunting adventures, including a rare opportunity to see favorites from his world-class collection. Meteorite specialist Dolores Hill will discuss the importance of fresh meteorite falls as pieces of asteroids, what can be learned from them and why we are sending a spacecraft to retrieve a sample.

Arizona is home to several of the world's largest meteorite falls, an array of telescopes dedicated to the discovery of near-Earth objects, and the central operations for NASA's OSIRIS-REx sample return mission to asteroid Bennu. Today we are still at the forefront of planetary science, leaders in near-Earth object discoveries, meteorite research and innovative NASA missions to asteroids.



- **June 18, 6:30 to 8 PM**

### ***Our Amazing Sun***

**Randy Shivak, Amateur Solar Astronomer**

The Sun, the center of our solar system and our closest star, is amazingly beautiful and complex. For the past 46 years, Randy has studied and photographed the Sun. On October 24, 2014, his photograph of the Sun was featured as NASA's Astronomy Picture of the Day. With proper precautions, viewing the Sun can be an exciting exploration for the skilled amateur and the backyard enthusiast. Come and share Randy's passion and expertise on the Sun.

- **September 17, 6:30 to 8 PM**

### ***Cosmic Collisions Galore!***

**Dr. Lisa Chien, Department of Physics and Astronomy, Northern Arizona University**

The Hubble Space Telescope, has produced some of the most spectacular images of colliding galaxies. Often their beautiful and unique appearance stirs our imaginations and leads to names like the Tadpole, the Humming Bird, the Rose, the Atom of Peace, and the Fountain of Youth. What actually happens during the process can result in some of the biggest and most violent events in the universe. Collisions of galaxies can create enormous bursts of star formation, disrupt entire galaxies, transform their shapes, and even lead to the merger of central black holes, creating a single super-massive black hole. After decades of research astronomers are just now understanding the details of such collisional processes. These interacting galaxies are ubiquitous throughout space time, and are the building blocks of our universe. Dr. Chien will introduce the process and the outcome of galactic collisions, and the importance and insight of studying such objects.

- **October 15, 6:30 to 8 PM**

### ***My Favorite Comets***

**Professor Steven R. Coe (retired)**

Comets may be defined as “a celestial body moving around the sun”, but they are so much more, Steve will present images and observations of the brightest and most interesting comets of the past 35 years. He will include Comets Halley, Hale-Bopp and Holmes and...lots of other comets that do not start with the letter “H”.

- **November 19, 6:30 to 8 PM**

### ***Io—Jupiter's Hyperactive Moon***

**Dr. Laszlo Kestay, Director, Astrogeology Science Center, US Geological Survey**

Diagnosing the processes that keep Io geologically hyperactive lead us from the volcanoes on the surface, through the crust that thrusts up mountains taller than the Himalayas, into a hidden ocean of magma. These same processes operate in other, wetter, moons in our Solar System, potentially providing environments that are favorable for life.