

**APPLICATION FOR
MEMBERSHIP IN THE
COCONINO ASTRONOMICAL SOCIETY**

Name(s) _____

Address _____

City _____ State _____

Zip _____ Phone No. _____

E-mail _____

I hereby submit my application for:

_____ Regular Membership(s) @ \$20/year

_____ Household membership(s) @ \$30/year
(Two Adults)

_____ Junior Membership(s) @ \$10/year
(under 18 or college student)

_____ Sponsoring Membership(s) @ \$80/year

Enclosed is a check for the total of \$ _____
made out to:

Coconino Astronomical Society

c/o Anne Wittke, Treasurer
1616 N. Owl Road
Flagstaff, AZ 86004

_____ Sky & Telescope Magazine (Club Rate)
Subscription(s) @ \$32.95/year
Indicate NEW [] or RENEWAL []

Please enclose a separate check made out to:
Sky Publishing Corporation

Signature _____

You can also join CAS from our website via PayPal
Just click on the CAS "Join Us" icon – Top right

**Coconino
Astronomical
Society - Mission**

The CAS's purpose is to increase the appreciation and knowledge of the science of Astronomy of its membership and within the community. It does this through presentations at meetings, and by hosting star parties, astrophotography workshops, and outreach activities that promote astronomical education.

The club encourages mentoring, and fosters relationships within the Society. CAS also maintains strong relationships with Lowell Observatory, and other Flagstaff area scientific and educational organizations. CAS is a not-for-profit 501(c)3 corporation consisting of dedicated amateur and professional astronomers committed to preserving the night sky, and promoting astronomy to the entire community, regardless of age.



**CAS Dark Sky Site
North of Williams**



- Private 2 acre fenced in property
- Pads are available for portable telescopes
- Cabins / Warm Rooms for Observer comfort
- C-14 telescope available for viewing with operator
- Access is free to CAS members and invited guests



**Coconino
Astronomical
Society**

**Amateur Astronomers and Astronomy
Enthusiasts in Northern Arizona**



August 21, 2017 Total Solar Eclipse
Taken from western Nebraska
By CAS member Barry D. Malpas

**2018
CAS Brochure and
Meeting Schedule**



CONTACT INFORMATION
www.coconinoastro.org
info@coconinoastro.org

Get there with your Smart Phone



Also look for us on Facebook

2018 Meeting & Program Schedule

CAS Monthly Meetings and Programs are held the Saturday closest to the Full Moon at the Lowell Observatory, Hendricks Center for Planetary Studies Auditorium at Mars Hill (6:45 pm - 8:00 pm., unless otherwise noted) followed by refreshments, and informal discussion. Meetings are free to the public.

January 27 **Dr. Jennifer Hanley, Lowell Observatory** “Liquid Stability Across the Solar System”

When identifying potential life elsewhere in the Solar System, liquids are a key ingredient. Water is proposed to be present on Mars and the subsurface of Europa, while Titan has seas of hydrocarbons. Dr. Hanley will discuss the recent identification of hydrated salts in Recurring Slope Lineae, indicating flowing liquid water on the surface of Mars today, and present results from laboratory experiments and how they relate to observations from current and past missions to Mars, Europa and Titan.

February 24 **Dr. Tyler Robinson, NAU** “Weird Worlds and the Hunt for Life Beyond Earth”

Astronomers now know of thousands of worlds orbiting other stars in our Galaxy. These so-called “exoplanets” are surprisingly diverse, spanning giant planets with super-heated atmospheres to small rocky worlds with rock vapor in their air. These findings are leading up to the discovery we all wait for – another planet like our own!

March 31 **Dr. Diedra Hunter, Lowell Observatory** “Extended Stellar Disks of Dwarf Irregular Galaxies”

Outer disks of dwarf irregular galaxies are extreme environments at the lowest observable limit for star formation. Yet the stars that are present often have near perfect exponential profiles, suggesting an ability to organize into a standard disk which no current models can explain. Dr. Hunter will discuss ultra-deep imaging of the outer disks of dwarf irregular galaxies and what it reveals about the nature and mysteries of the extreme outer parts of tiny galaxies.

April 28 **Dr. Cristina Thomas, NAU** “The Exciting Future of Asteroid Science”

Future new observations will add to our understanding of the small rocky bodies in our Solar System. The OSIRIS-REX spacecraft will visit near-Earth asteroid Bennu in mid-2018 to study its surface before returning a sample to Earth. The James Webb Space Telescope will launch in 2019 with a suite of instruments that will further our understanding of the compositions of asteroids. With the recent discovery of the first interstellar object, we look forward to what can be learned about planetary systems other than our own.

May 26 **Dr. Dale Gary, NJ Institute of Technology** “Multi-Frequency Radio Imaging of the Sun”

A new radio facility, the Expanded Owens Valley Solar Array (EOVSA) began operating in early 2017, providing a panoramic view of the radio Sun over a wide range of radio frequencies. Highlights of these images, including sunspot regions, solar flares, and the science behind them will be discussed. A radio movie of the solar eclipse obtained with EOVSA, will show the covering of sunspot regions as the Moon transits the Sun. Other eclipse observations compare the VLA with those of EOVSA, creating a 3-D solar view.

June 9 **Dave & Kris Frisk’s Observatory, Williams** Annual CAS Picnic and Observing Meeting

Open to CAS membership and invited friends – Time: 6:00 pm

July 28 **Dr. Klaus Brasch, CAS** “Life in the Cosmos: when, where and how?”

The origin of life is a major unanswered issue in science. The question is as old as humanity, and explanations have ranged from special creation, to bio-chemistry, to propagation across the Universe by natural forces and even deliberate transmission by technologically advanced civilizations. The discovery of potentially habitable exoplanets and the possibility of life elsewhere in the solar system has renewed the focus on this question. We review some of the key issues involved and the notion that the viable transfer of organisms between planets and beyond may have played a role.

August 25 **Dr. Julie Webster, Director: Cassini Mission** “The Cassini Mission at Saturn”

The Cassini spacecraft, the largest outer planetary vehicle built by NASA, was launched Oct. 15, 1997. To reach Saturn, it needed almost seven years and four gravity assists from Venus, Earth and Jupiter. The first spacecraft to orbit Saturn, Cassini mapped Saturn’s magnetosphere, discovered previously unknown moons, found at least two moons that might be habitable for life, and studied Saturn’s atmosphere and rings. It made its Grand Finale on Sept. 15, 2017, plunging into Saturn’s atmosphere. Dr. Webster will describe the 20 year mission, and the science that will be analyzed for generations.

September 22 **Dr. Chadwick A. Trujillo, NAU** “The Search for an Undiscovered Giant Planet in our Solar System”

In the last few years, evidence has increased that there may be an undiscovered giant planet lurking in the outer reaches of our solar system. This planet could explain some of the unusual orbits we see in the most distant Kuiper Belt Objects. I’ll discuss why we think the planet may be visible in the autumn night sky and how we are using the most powerful survey telescopes in the world to search for it.

October 20 **Tom Polakis, Con. Ed. Astronomy Mag.** “CCD Photometry from Inside the Light Dome”

Tom Polakis has pursued photometry with his CCD imaging equipment in Tempe for several years. He has determined rotation periods of asteroids, measured the brightness and colors of eclipsing binary and pulsating variable stars, and measured light curves of exoplanets and an active quasar. Mr. Polakis will describe the fundamentals of photometry, his equipment, data acquisition, and data reduction, and will show examples illustrating how measuring variations in star light gives us our understanding of the stars.

November 17 CAS Member Activity Presentations

Each year CAS members are active in the pursuit of their avocation of Astronomy. At this meeting 4-6 members will present 10-15 minute overviews of the activities and achievements they were involved in during the preceding year.

December 1 **Time and Location TBA**

Annual CAS Holiday Party

Open to CAS membership and invited friends

Club Observing Nights: Are scheduled monthly on Saturday evenings nearest New Moon.
Location: CAS Dark Sky Site in Williams – See our website for details - www.coconinoastro.org

CAS Programs & Speakers

Located in Flagstaff, AZ, the CAS draws expert program speakers from many sources, including Lowell Observatory, the U.S. Geological Survey, the Naval Observatory, Northern Arizona University, Coconino Community College, as well as from other Arizona based organizations, our own knowledgeable membership, and occasionally from other astronomical groups. CAS also helps schools near the Navajo reservation, as well as the Hopi with their astronomical programs.

Williams Public Observing

On the Friday evening closest to First Quarter Moon, April through October, CAS hosts its monthly community outreach program to educate and promote interest in Astronomy to the general public. CAS members set up their telescopes at Glassburn Park in Williams, and invite the public free of charge to observe the Moon and other visible objects in the night sky



CAS Membership

WE WELCOME ANYONE
INTERESTED IN ASTRONOMY

Membership in CAS is open to all interested in learning more about astronomy and telescopic observing. Membership entitles you to attend, and be involved with, the monthly general meetings, as well as special club events, observing sessions, and star parties, at our Dark Sky Observing Site. Annual and monthly events postcards with CAS happenings are mailed to all Members.

Besides “Regular Membership,” CAS has “Household Memberships” for two adults at the same address, “Junior Memberships” for students, and “Sponsoring Memberships” for those wishing to help support the Society.

If you are interested in becoming a member use the brochure application form, or the one on our website. For questions you can email us at: info@coconinoastro.org, or contact Anne Wittke, CAS Treasurer, at (928) 606-2064.