



THE STAR DIAGONAL

THE JOURNAL OF THE OGDEN ASTRONOMICAL SOCIETY

OAS Executive Committee

Pres - Ron Vanderhule
(801) 726-8554
Vice Pres- Craig Browne
(801) 388-6556
Secretary- David Dunn
(801) 544-7705
Treasurer- Doug Say
(801) 731-7324

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Meeting Announcement

This month's speaker will be Deseret News columnist Joe Bauman. He will discuss varying aspects of astrophotography.

THE PREZ SEZ

Greetings Earthlings,

Over the holidays I sent a post thru the Utah-Astronomy list concerning astro club enrollment trends and opinions as to what can facilitate interest in joining such clubs.

In my survey request I asked for info concerning memberships for the last ten years which would correspond with our peak membership of 63 in 2000-01 to our current enrollment in the mid 30s I believe.

Patrick Wiggins, from SLAS, replied back that their membership has stayed at 200, plus or minus 10 or 20, on any given year since '01. They currently are at 225. Since their inception there has been almost 1800 members total. This makes an average retention rate of 10%.

Brent Watson sent a post in which he postulated that 80% of people who join an organization do so to fulfill a need to socialize and have fun. So a clubs growth/retention rate would be predicated on how well the socialization factor was implemented.

Deloy Pierce, former OAS'er, added credence to Brents' input. He recalled his days at Cathedral Gorge with the Las Vegas Astronomy Society and their annual club star party. The club had activities for the youths of all ages, and for the people who came there with an astronomer but were not astronomers (mostly wives). There were observing

programs, pot lucks, raffles....My wife and I attended several of these with Deloy and Karen and can vouch for LVAS well structured star party. On a related note we were there with LVAS in 2010 and it was the same people we first met 14 years ago. This segways into another issue which Deloy called "the Geezer problem" or, to put it more gently, "the graying of the hobby". It would be nice to get some young blood involved in a meaningful way. Young people are more likely to stay connected if some of their peers are also involved. But according to an article in Astronomy last summer, young people are not as attracted to science as they have been in the past. Hmmm.

So what does OAS need to consider in light of this very scetchy analysis?

- 1) Keep in mind that only 10% stick with a new hobby for more than a year.
- 2) 80% of those that join an organization do so for the fellowship more than the discipline of the science involved.
- 3) If your organization is not friendly and enjoyable, that 80% will move on.
- 4) As hobbies go, Astronomy in particular attracts a rarer form of our species i.e. a smaller pool of humanity from which to draw.

So my unsolicited recommendation for OAS would be to relax, we have a good club. We have a long succesful history. We have good support from WSU and the community. Lets enjoy each others friendship, have good informative meetings, continue our out reach and have fun and be friendly. I also think it would be in our best interest if we would quit wearing the foil hats to the meetings. But thats just me.

The Prez

OAS Minutes – December 2011

Minutes for Ogden Astronomical Society December 8, 2011 meeting

Meeting was called to order by President Ron Vanderhule at 7:30 PM.

Treasurer Doug Say reported that OAS received a \$200.00 check and letter from SLAS president Roger Fry. The check was our share of the profits from the Bryce Canyon ALCON; The Astronomical League shared profits with Bryce Canyon and SLAS. Roger stated that because OAS helped with the event we should receive a portion.

Craig Browne gave a demonstration on the OAS Facebook page and how to access it.

Doug Say announced that we still have past members that have not paid their dues and he has two calendars for sale. The last two calendars were sold at the meeting.

There was a short discussion about star parties for next year and when they will be scheduled, no dates were set.

Ron gave a presentation on dark matter using several you tube videos with group discussion in between. Some of the videos were, One Minute Physics, Dark matter 3D map, NOVA science now, the dark matter mystery, and multi-dimensional universe.

The meeting adjourned at 9:00PM with several members going to Village Inn.

Lee Priest

May 20 Annular Eclipse

On May 20th, there will be an Annular Eclipse of the Sun that will be visible in southern Utah. An Annular Eclipse is one where the Moon will not be

big enough to completely cover the disk of the sun. We should get to see Bailey's Beads and the Ring of Fire. We are planning to look for a good location during our February, St. George star party. Here are the details as I know them so far.

From near Old Iron Town (west of cedar city), the eclipse will start at 18:22. It will begin the total (second contact) at 19:31. Max eclipse will be at 19:33. Third contact at 19:35 and Fourth contact at 20:37. Sunset is at 20:40. The Altitude will be 12 deg at second contact and 11 deg at third contact.

Our plan will be to get a low western horizon, near or on the center line, somewhere west of Cedar City. We are also planning to do a weekend of observing from somewhere down there (maybe Parawan Gap).

If you are looking to travel further and maybe see if higher in the sky, the center line runs 30km north or Redding, CA and almost right over Klamath and Requa, CA.

Star Party Schedule

Our Public Star Parties are as follows.

Our Requested Star Parties (Schools, etc).

Our Private Star Parties are as follows.

Feb 17-19	St. George
Mar 23-25	Curlew
May 18-21	Cedar City + Eclipse

2012 Star Parties

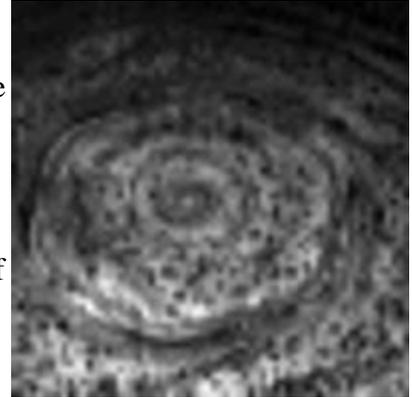
We will be working on our Star Party schedule for next year soon. If you have star parties that you want to have included, let us know. I know that we are planning a couple trips each to Curlew and Monte. We are also planning a trip to St. George in February and a Solar Eclipse trip to the Cedar City or Ely areas in May.

Mission News

Pasadena, Calif. -- An odd, six-sided, honeycomb-shaped feature circling the entire north pole of Saturn has captured the interest of scientists with NASA's Cassini mission.

NASA's Voyager 1 and 2 spacecraft imaged the feature over two decades ago. The fact that it has appeared in Cassini images indicates that it is a long-lived feature. A second hexagon, significantly darker than the brighter historical feature, is also visible in the Cassini pictures. The spacecraft's visual and infrared mapping spectrometer is the first instrument to capture the entire hexagon feature in one image.

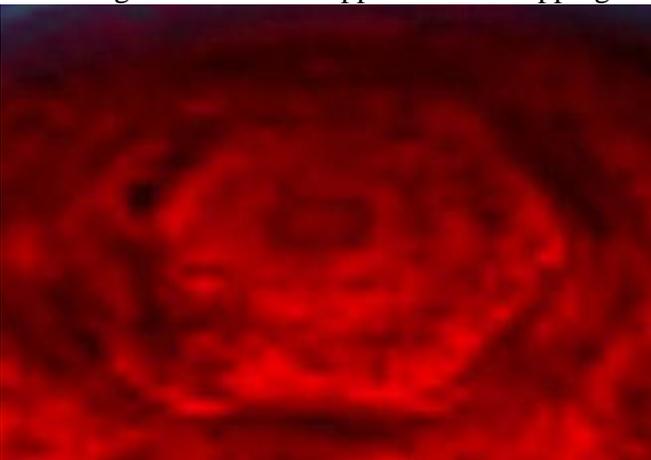
Image right: This nighttime view of Saturn's north pole shows a bizarre six-sided hexagon feature encircling the entire north pole. The red color indicates the amount of 5-micron wavelength radiation, or heat, generated in the warm interior of Saturn that escapes the planet. Image credit: NASA/JPL/University of Arizona



"This is a very strange feature, lying in a precise geometric fashion with six nearly equally straight sides," said Kevin Baines, atmospheric expert and member of Cassini's visual and infrared mapping spectrometer team at NASA's Jet Propulsion Laboratory, Pasadena, Calif. "We've never seen anything like this on any other planet. Indeed, Saturn's thick atmosphere where circularly-shaped waves and convective cells dominate is perhaps the last place you'd expect to see such a six-sided geometric figure, yet there it is."

The hexagon is similar to Earth's polar vortex, which has winds blowing in a circular pattern around the polar region. On Saturn, the vortex has a hexagonal rather than circular shape. The hexagon is nearly 25,000 kilometers (15,000 miles) across. Nearly four Earths could fit inside it.

The new images taken in thermal-infrared light show the hexagon extends much deeper down into the atmosphere than previously expected, some 100 kilometers (60 miles) below the cloud tops. A system of clouds lies within the hexagon. The clouds appear to be whipping around the hexagon like cars on a racetrack.



"It's amazing to see such striking differences on opposite ends of Saturn's poles," said Bob Brown, team leader of the Cassini visual and infrared mapping spectrometer, University of Arizona, Tucson. "At the south pole we have what appears to be a hurricane with a giant eye, and at the north pole of Saturn we have this geometric feature, which is completely different."

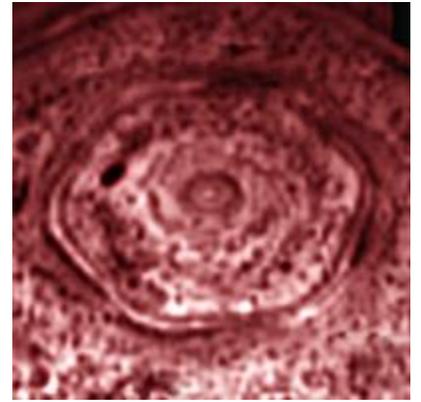
Image left: This nighttime movie of the depths of the north pole of Saturn reveals a dynamic, active planet lurking underneath the ubiquitous cover of upper-level hazes. Image credit: NASA/JPL/University of Arizona

The Saturn north pole hexagon has not been visible to Cassini's visual cameras, because it's winter in that area, so the hexagon is under the cover of the long polar night, which lasts about 15 years. The infrared mapping spectrometer can image Saturn in both daytime and nighttime conditions and see deep inside. It imaged the

feature with thermal wavelengths near 5 microns (seven times the wavelength visible to the human eye) during a 12-day period beginning on Oct. 30, 2006. As winter wanes over the next two years, the feature may become visible to the visual cameras.

Based on the new images and more information on the depth of the feature, scientists think it is not linked to Saturn's radio emissions or to auroral activity, as once contemplated, even though Saturn's northern aurora lies nearly overhead.

Image right: Another view of the bizarre six-sided feature encircling the north pole of Saturn. Image credit: NASA/JPL/University of Arizona



The hexagon appears to have remained fixed with Saturn's rotation rate and axis since first glimpsed by Voyager 26 years ago. The actual rotation rate of Saturn is still uncertain.

"Once we understand its dynamical nature, this long-lived, deep-seated polar hexagon may give us a clue to the true rotation rate of the deep atmosphere and perhaps the interior," added Baines.

The hexagon images and movie, including the north polar auroras are available at: <http://www.nasa.gov/cassini> and <http://saturn.jpl.nasa.gov> and <http://wwwvims.lpl.arizona.edu> .

The Cassini-Huygens mission is a cooperative project of NASA, the European Space Agency and the Italian Space Agency. The Jet Propulsion Laboratory, a division of the California Institute of Technology in Pasadena, manages the Cassini-Huygens mission for NASA's Science Mission Directorate, Washington. The Cassini orbiter was designed, developed and assembled at JPL. The Visual and Infrared Mapping Spectrometer team is based at the University of Arizona.

Media contact: Carolina Martinez 818-354-9382
Jet Propulsion Laboratory, Pasadena, Calif.