



THE STAR DIAGONAL

THE JOURNAL OF THE OGDEN ASTRONOMICAL SOCIETY



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Meeting Announcement

Our monthly meeting of the Ogden Astronomical Society will be held on January 8, 2014 at 7:30pm at the Ott Planetarium.

President's Message

2015 looks like a great year for astronomy and space exploration. Comet Lovejoy is visible now with binoculars and should brighten; maybe even to naked eye. Currently you can find it just below Orion in Lepus and moving higher in the sky each night; it will be near Triangulum by the end of the month.

New Horizons spacecraft is now awake and functioning ready for its closest approach to Pluto in July.

The Dawn space probe spent 14 months at Vesta and is now closing in on Ceres, it should make orbit around Ceres in March where it will remain forever.

It should continue to send back data until early 2016.

Rosetta is still at comet 67P/Churyumov-Gerasimenko and will continue to send data as the comet and probe go around the sun together.

We have our usual assortment of activities this next year; I just hope we can do a little better with the weather. Our meeting on January 8th will be a Show and Tell so bring your new equipment or projects and share them. You can also share any astronomy related pictures or videos from YouTube or other internet sites that interest you.

We hope to see you at the meeting.
Lee Priest

OAS Minutes – December 2014

OAS minutes 11 Dec 2014 7:30 PM
Doug has wall calendars for sale \$10.00
Stan Martin is collecting old calendars to use the pictures

Guest speakers Lisa Largent and Stacy Palen talking about the new science building
Lisa Largent started with:
Faraday Lectures on Dec 15, 16 at 7:00 PM room 125, 126 of the planetarium building
Speakers dress in period costumes and do chemistry demonstrations
Free to the public

The new science building will be called Tracy Hall Science Center

Opening fall of 2016

Planetarium building stays, science building to the south will be torn down

Dr. H Tracy Hall Bio
Born 1919 in Ogden, Ogden High School, U of U
1942 with B.S. in Chemistry
PhD in 1948
Worked for GE labs in New York, developed process for making processed diamonds
Chemistry professor at BYU.

His son David Hall CEO/ President of NovaTech and nephew Alan Hall pledged seed money for science building.

Science building will be 170,000 sq ft. on four floors have 7 departments: Botany, Chemistry, Geoscience, Math, Physics, and more.

Open floor design, LEED silver certified but going for gold.

Stacy Palen talked about the observatory on roof of science building

On the west end of the third floor roof will be a public viewing area approximately 30ft. by 60ft. for telescopes to be set up, it will have some vibration dampening good enough for visual but not photography.

Observatory dome for research will be on concrete pier to ground

Research equipment being considered: 16 inch scope on paramount mount, CCD camera possibly

SBIG, European spectrograph, remote control, future access from planetarium.
Stacy talked about a spectrum app for phones from SpectralWorkBench.com and a citizen science project.
Lisa Largent talked about fundraising, the building is a state funded project but most of the furnishings and equipment will need to be paid for with donations. Naming the public observing pad would be on the order of \$25,000.00 if we are interested.

There was some discussion about the club making a donation and Stacy said there were several small items they would need like color filter wheels and a ladder we could help with later.

Lee continued the meeting with club business with a discussion about next year's events as they are listed:

St George Feb 19, 20, 21
Curlew Mar 20, 21 and Apr 17, 18 and Oct 9, 10
Club BBQ Jun 11
Monte Cristo Jul 17, 18 and Aug 14, 15
Great Basin Sept 10, 11, 12
Antelope Island star parties are tentative Apr 25, May 16 Jun 20, Aug 8 Sep 19 Oct 17

Summit Group has invited us to do several star parties between now and March but we will decline those. If we are to continue doing star parties for them we will need better participation from the club.

Meeting was adjourned to Village Inn at 8:50 PM

Minutes taken by David Rady

Proposed Star Parties

Public

- 4/25 – Antelope Island
- 5/16 – Antelope Island
- 6/20 – Antelope Island
- 8/8 – Antelope Island
- 9/10–9/13 – Great Basin Astronomy Festival
- 9/19 – Antelope Island
- 10/17 – Antelope Island

Requested

Private

- 2/19-2/22 – St. George
- 3/20-3/22 – Messier Marathon (Curlew)
- 4/17-4/19 – Curlew
- 6/11 – Annual BBQ at Doug's
- 7/17-7/19 – Monte Cristo (many arrive by Weds or Thurs)
- 8/14-8/16 – Monte Cristo
- 10/9-10/11 – Messier Marathon (Curlew)

Keeping an Eye on Storms and More

By Kieran Mulvaney

In late July 2013, Tropical Storm Flossie barreled furiously toward Hawaii. The question was not if it would strike, but when and where it might do so.

During the afternoon hours of July 29, forecasts predicted landfall later that week on the state's Big Island; however, by the time residents of the 50th state awoke the following morning things had changed. NOAA's Central Pacific Hurricane Center warned that the islands of Oahu, Molokai and Maui were now at a greater risk.

This overnight recalculation was thanks to the Day/Night Band viewing capabilities of the Visible Infrared Imaging Radiometer Suite, or VIIRS, on board the Suomi National Polar-Orbiting Partnership (Suomi NPP) satellite. VIIRS is able to collect visible imagery at night, according to Mitch Goldberg, program scientist for NOAA's Joint Polar Satellite System (JPSS), of which Suomi NPP is a part. That means it was able to spot some high-level circulation further north than expected during the nighttime hours. This was an important observation which impacted the whole forecast. Without this forecast, said the Hurricane Center's Tom Evans, "we would have basically been guessing on Tropical Storm Flossie's center."

Polar-orbiting satellites, like Suomi NPP and the future JPSS-1 and JPSS-2 (scheduled for launch in 2017 and 2021, respectively), sweep in a longitudinal path over Earth as the planet rotates beneath them—scanning the globe twice a day. VIIRS, the imager that will be aboard all the JPSS satellites, images 3,000 km-wide swaths on each orbit, with each swath overlapping the next by 200 km to ensure uninterrupted global coverage. This high-resolution, rapidly updating coverage allows researchers to see weather patterns change in near real-time.

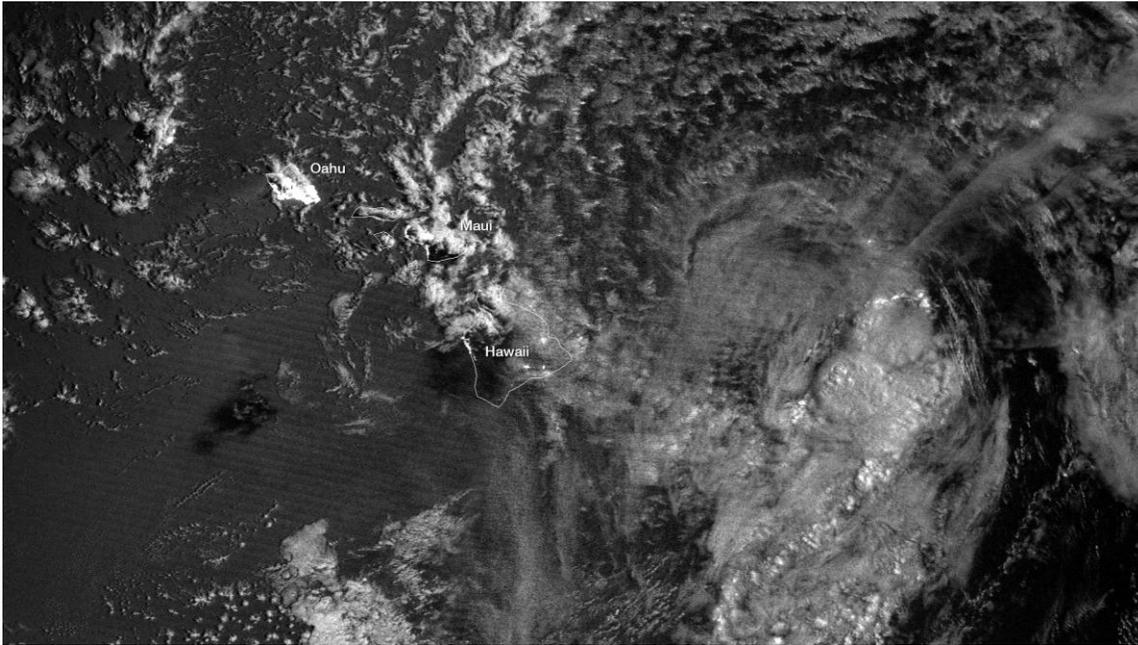
Instruments on Suomi NPP allow scientists to study such long-term changes too—things like, "the patterns of sea surface temperature, or coral bleaching," says Goldberg. They are even used by the World Bank to determine how much energy is burned off and wasted from natural gas flares on oil drilling platforms.

While scientists are excited by the JPSS series' wide range of capabilities, the ability to address pressing immediate concerns is, for many, the most tangible value. That was certainly the case in July 2013, when thanks to Suomi NPP, authorities had ample time to close ports and facilities, open shelters, activate emergency procedures, and issue flash flood warnings. Despite heavy rains, high surf, and widespread power outages, accidents and injuries were few. By the time the storm passed, Hawaii was soaked.

But it was largely unharmed.

Learn more about JPSS here: <http://www.jpss.noaa.gov>.

Kids can learn all about how hurricanes form at NASA's Space Place: <http://spaceplace.nasa.gov/hurricanes>



S-NPP captured this image of Tropical Storm Flossie heading toward Hawaii using its VIIRS Combined Day-Night Band sensor. Credit: NOAA.

Editors download picture here: <http://www.jpss.noaa.gov/images/Flossie-CombinedDNB-0729.png>