

# THE STAR DIAGONAL

THE JOURNAL OF THE OGDEN ASTRONOMICAL SOCIETY



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## Meeting Announcement

The monthly meeting of the Ogden Astronomical Society will be held on February 11<sup>th</sup> at 7:30 in the Ott Planetarium at Weber State University.

Our meeting this month will be Thursday February 11th at 7:30 in the Ott Planetarium. The program will be a video about Gamma Ray bursts, what they are and where they come from.

## President's Message

There are a few things going on in the night sky if you don't mind going out in the cold, Comet C/2013 US10 Catalina is now in Camelopardalis and fading but still visible with small telescopes. If you are up before dawn you can see five planets lined up across the sky.

Thanks,  
Lee Priest

## OAS Minutes

The meeting began on January 14, 2016 at 7:30 with Lee Priest conducting

Lee announced that the meeting topic would be a Show and Tell.

Other announcements,

If you are anxious to get out of the cold and do a little observing you can join us in St George March 4th and 5<sup>th</sup>. Several of us have reservations at a few different Motels. The rates are around \$60.00 a night and up depending on what kind of a room you want. We will get together Friday and Saturday nights for observing at a location to be determined. If you are planning to go let us know so we can keep in touch with you.

- Lee has the 2016 Year in Space Desk calendars. They are \$11.95 each.
- The only star party planned so far is to St. George March 3-5 2016. We will be getting together early in January to plan the other events

- Craig and Lee are on the Committee for North Fork Park. We will have a star party on 10/1 for their annual event.
- Dr. Palen has an Astronomy class at WSU in April.
- Lee to arrange a time to look at the WSU loaner telescopes.
- Antelope Island approved our star party schedule. The May 14<sup>th</sup> will be a Sun and Star party.

Ron brought his sky charts and showed the advantages of each.

Dale showed a video in remembrance of the Challenger Disaster.

With no farther business the meeting was adjourned. Several members went to Village Inn for farther discussion.

Lee Priest

## Dues are due

Dues are due. If you haven't already renewed for this year, please pay them this month. We are going to clean up the membership list and print cards before the March meeting.

## Astronomy Class

There is a Lifelong Learning class that Dr. Palen will be teaching on Wednesdays in April, from 6-8 pm:

<http://continue.weber.edu/communityed/classesspring2016/astronomy.aspx>

Registration is open now!

## Star Parties

### Public

- 4/9 – Antelope Island
- 5/14 – Antelope Island (Astronomy Day)
- 6/4 – Antelope Island
- 8/6 – Antelope Island
- 9/24 – Antelope Island
- 10/1 – North Fork Park
- 10/22 – Antelope Island

### Requested

### Private

- 3/4-3/5 – St. George
- 5/6-5/7 – Curlew
- 7/27-30 – Monte Cristo
- 8/31-9/5 – Monte Cristo
- 9/30-10/1 – North Fork Park
- 10/28-29 - Curlew

### External

- 5/1-8 - <http://texasstarparty.org/get-started/>
- 6/1-4 – Bryce Canyon Astronomy Festival
- 6/4-11 – Grand Canyon Star Party
- 8/2-7 – [www.oregonstarparty.org](http://www.oregonstarparty.org)
- 9/29-10/1 – Great Basin Astronomy Festival
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## Year in Space calendars

Lee still has 2 Year in Space calendars. They are \$11.95 each, if you want one but won't be to the meeting you can contact me at [levae@aol.com](mailto:levae@aol.com)

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## **The Loneliest Galaxy In The Universe**

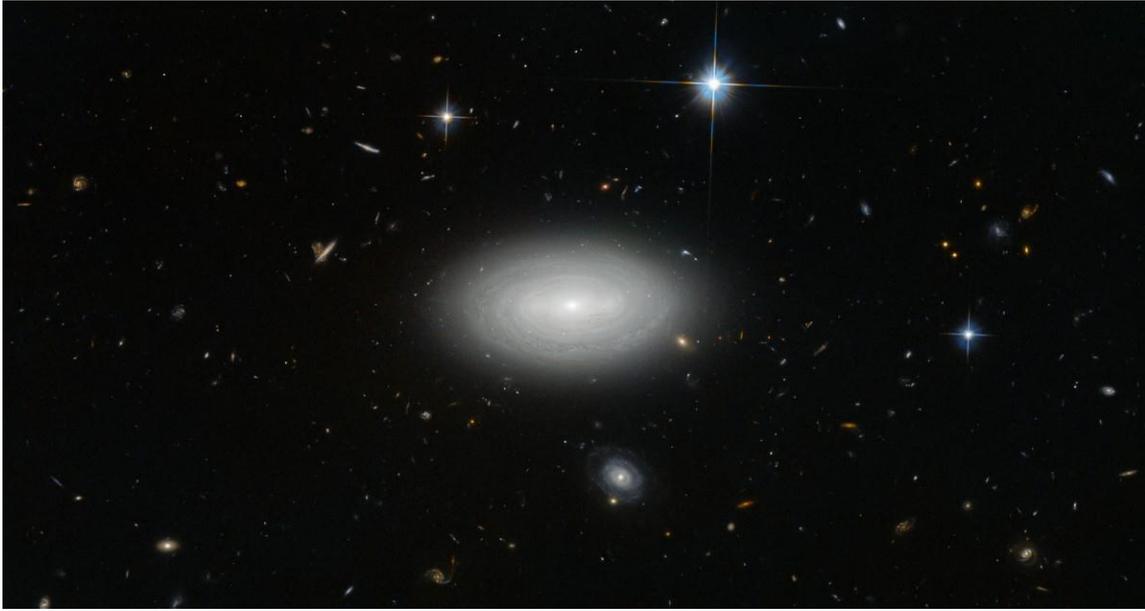
By Ethan Siegel

Our greatest, largest-scale surveys of the universe have given us an unprecedented view of cosmic structure extending for tens of billions of light years. With the combined effects of normal matter, dark matter, dark energy, neutrinos and radiation all affecting how matter clumps, collapses and separates over time, the great cosmic web we see is in tremendous agreement with our best theories: the Big Bang and General Relativity. Yet this understanding was only possible because of the pioneering work of Edwin Hubble, who identified a large number of galaxies outside of our own, correctly measured their distance (following the work of Vesto Slipher's work measuring their redshifts), and discovered the expanding universe.

But what if the Milky Way weren't located in one of the "strands" of the great cosmic web, where galaxies are plentiful and ubiquitous in many different directions? What if, instead, we were located in one of the great "voids" separating the vast majority of galaxies? It would've taken telescopes and imaging technology far more advanced than Hubble had at his disposal to even detect a single galaxy beyond our own, much less dozens, hundreds or millions, like we have today. While the nearest galaxies to us are only a few million light years distant, there are voids so large that a galaxy located at the center of one might not see another for a hundred times that distance.

While we've readily learned about our place in the universe from observing what's around us, not everyone is as fortunate. In particular, the galaxy MCG+01-02-015 has not a single known galaxy around it for a hundred million light years in all directions. Were you to draw a sphere around the Milky Way with a radius of 100 million light years, we'd find hundreds of thousands of galaxies. But not MCG+01-02-015; it's the loneliest galaxy ever discovered. Our Milky Way, like most galaxies, has been built up by mergers and accretions of many other galaxies over billions of years, having acquired stars and gas from a slew of our former neighbors. But an isolated galaxy like this one has only the matter it was born with to call its own.

Edwin Hubble made his universe-changing discovery using telescope technology from 1917, yet he would have found absolutely zero other galaxies at all were we situated at MCG+01-02-015's location. The first visible galaxy wouldn't have shown up until we had 1960s-level technology, and who knows if we'd have continued looking? If we were such a lonely galaxy, would we have given up the search, and concluded that our galaxy encompassed all of existence? Or would we have continued peering deeper into the void, eventually discovering our unusual location in a vast, expanding universe? For the inhabitants of the loneliest galaxy, we can only hope that they didn't give up the search, and discovered the entire universe.



*Image credit: ESA/Hubble & NASA and N. Gorin (STScI); Acknowledgement: Judy Schmidt, of the loneliest void galaxy in the known: MCG+01-02-015.*