



# Lake Erie Nature & Science Center

## ASTRONOMY CLUB

### And we're back!

I would like to welcome everyone to 2019 and thank all of our Astronomy Club participants for an enjoyable and entertaining 2018. What a great time to be an amateur astronomer as we start the year with a distant Kuiper Belt object, a total Lunar Eclipse and a robotic geologist working away on Mars. Hope to see you all soon!

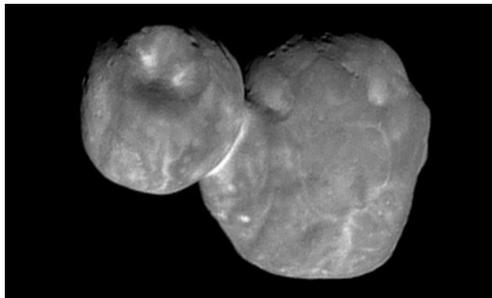
January 2019



- Bill

### News and Current Events – What's going on in the world of space and astronomy

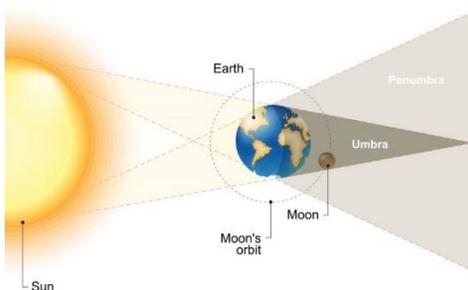
**InSight is in business!** – NASA successfully landed the InSight spacecraft on Mars on Elysium Planitia, a flat dusty area near the Martian equator. The InSight Lander used its robotic arm to place a seismometer on the soil of the Red Planet. For the first time ever, a robot deployed a scientific instrument on the surface of Mars. Using it, the mission aims to map the interior of the planet to gain "insight" on the formation of this rocky planet.



**New images of Ultima Thule** – Scientists estimate this Kuiper Belt Object is about 19 miles long. This image captured by the New Horizons spacecraft was taken over 4 billion miles away from Earth. At this distance, signals take over 6 hours to reach NASA. Ultima Thule is believed to be a relic from the formation of the Solar System 4.6 billion years ago.



### LUNAR ECLIPSE



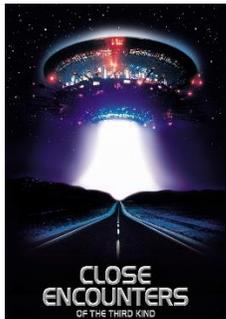
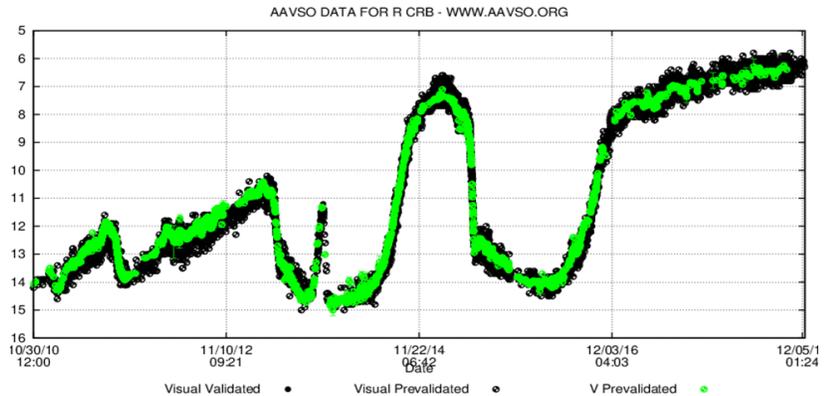
**Total Lunar Eclipse** – On January 20, a full lunar eclipse was visible to North America. If you missed it because of the weather, the next total lunar eclipse will be in May of 2022. Occurring when the Earth is aligned between the Moon and the Sun, the Moon becomes darker and takes on a reddish tinge due to Earth's shadow.

## Member Report – Variable Stars and Observing Them – By Sherrill Shaffer

Many stars change brightness over time, due to a variety of causes. A nova can be a one-time outburst, while other stars can cycle back and forth from brighter to fainter, over periods ranging from a few hours to several years. Even our own Sun fluctuates by about 0.1% over its 11-year cycle, but some stars change much more dramatically. Scientists can use detailed observations of variable stars to learn – not just about those stars – but about the universe more generally, such as distances or rates of expansion. One discovery was even awarded the Nobel Prize in Physics in 2011.

Observing variable stars from your backyard can be fun and can also contribute to science if you report your observations to a central database like [www.aavso.org](http://www.aavso.org). This website provides everything you need to get started in this rewarding hobby. Hint: it's often easier with binoculars than with a telescope.

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### Astro-tainment – Space and Media

This month, we reviewed the 1977 classic movie "Close Encounters of the Third Kind."

An electrician has an encounter with a UFO and ends up leading a group of people in pursuit of the truth about alien intelligence.



### Wrap your brain around this... - Mind blowing facts

**Paper Challenge** – Can you fold a sheet of paper in half 8 times? When folded in half, a sheet doubles in thickness. Fold it again and it doubles again. If you could fold a sheet of paper in half 42 times, its thickness would reach to Moon!



### Become a Member!

Members of Lake Erie Nature & Science Center receive access to Astronomy Club events and resources including:

- Monthly Meetings
- Star Parties (telescope viewing)
- Movie Nights
- Telescope Loan Program

**\$60/year per family**

Additional Membership benefits:

- Early access program registration
- Discounts on select programs and events
- 4 free admission passes to daytime shows at Schuele Planetarium
- Access to Birthday Parties and Room Rentals
- Promotional discounts to Wild Birds Unlimited (*Center location only*)

### Upcoming Events

SkyQuest – Wednesday, February 13 at 7:30 pm

Astronomy Club – Wednesday, February 20 at 6:30 pm

To become a member, please call 440-871-2900 or visit [www.lensc.org/support](http://www.lensc.org/support).