

<p>Program – “Betelgeuse Star to Explode”– Mark Thorson</p>	<p>Volume 28, No.7 November 2022</p>
<p>Greg Smith – editor.</p>	<p>Meeting: Wednesday 7pm November 16, 2022 ZOOM/R. A. Long Rm 130</p>

Sunny Days and Solar Viewing

The last few days, with the Sun, I have taken some time to View the sunspots that are on the surface of the sun. There are not many, but they are distinctive in their configuration. There is a group of about four that could interact with each other and send a powerful flare at the Earth.

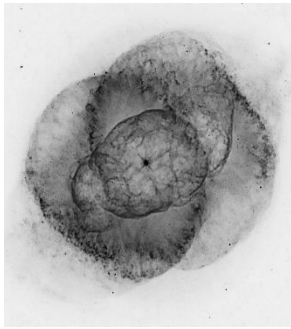
My solar scope does reveal, with my eye adapting to the brightness, the swirls of the solar plasma that have both bright lines and slightly darker lines of the magnetic forces that shape them.

I hope in the next few days to see larger flares and prominences on the horizon edge of the sun. These are the fun things to see. To see a rope of solar plasma cross the face of the and see it arch above the edge of the sun into an arc reaching high above the horizon and crash back down past the horizon. There is at times a 3D effect that can be seen. Hope to see more in the coming days.

So, get your eclipse glasses out and have a look at the spotted sun.

It will be interesting to see if the Artemis Rocket does get off the launch pad on its third try. As the saying goes ‘the third time is the charm’. Rather than ‘three strikes and you’re out’.

Every Night is a Starry Night
Every Day is a Star Filled Day



Talk about
an off Road
Vehicle.



NASA needs a new moon car for off-roading astronauts at the lunar south pole

The contracting for the next moon buggy for Artemis has begun.

By John Loeffler

The search for the next-gen buggy for the upcoming Artemis moon missions has begun.

While the previous lunar vehicles, used during the 1970s Apollo missions, were designed for the relatively balmy climate of the moon's equatorial region (or slightly north of there), NASA's **Artemis missions** are planned for the lunar south pole, where conditions are expected to be much harsher.

NASA has begun the contracting process (opens in new tab) to have private industry build the next moon rover, officially known as the Lunar Terrain Vehicle (LTV), which Artemis astronauts will use to traverse the area around the moon's south pole and beyond. The new draft request for proposals, which is the first step in the lengthy contracting process, has been published for industry partners to review and comment on before providing a formal proposal to build the LTV.

"This draft is one of the first important steps in this exciting project that will allow astronauts to explore farther on the moon than ever before," Lara Kearney, manager of the Extravehicular Activity (EVA) and Human Surface Mobility (HSM) Program at NASA's Johnson Space Center in Houston, said in a NASA statement (opens in new tab). "Gaining industry feedback is crucial as we move forward in issuing a final request for proposal."

The unpressurized rover is expected to traverse hundreds of miles per year to give Artemis astronauts access to a wide variety of locations for prospecting, exploration and scientific research. It will also be capable of remote control if necessary and is expected to be available for commercial uses when not in service of a NASA operation.

In a response to a question about how the new Lunar Terrain Vehicle will be different from the previous vehicle used during the Apollo missions, NASA public affairs officer Rebecca Wickes at Johnson Space Center in Houston told Space.com that "unlike the single-mission-use Apollo Lunar Roving Vehicle (LRV), the Artemis LTV will be developed with modern technology that will allow it to span multiple Artemis missions and perform remotely commanded research in between Artemis crewed missions."

"The new LTV will go farther, last longer, and ultimately accomplish more by orders of magnitude compared to Apollo missions," Wickes continued. "Instead of 'owning' the vehicle, NASA will 'rent' it as a service from industry vendor(s). This strategy will allow NASA to be one of many customers and nurture a healthy space industry for the American economy."

In addition to these lighting conditions, there is also the issue of keeping an electric vehicle operating in the extreme cold of the lunar south pole. This will be the major challenge for industry hoping to win the new NASA contract for the LTV, which NASA plans to contract out as a service from private contractors rather than owning it outright.

☞ **November 2022 Meeting** ☞

DATE: November 16, 2022

TIME: 7:00pm

PLACE: Hybrid in person / Zoom - originating from R. A. Long H. S. Rm 130

PROGRAM "**US Space & Rocket Center in Huntsville, AL**". - Mark Thorson

Moon Phases

New: Nov. 23, Wed **1st Qtr.**: Nov. 30, Wed **Full**: Dec. 7, Wed **3rd Qtr.**: Nov. 16, Wed

End of twilight - when the stars start to come out.

Wed, Nov 16th 6:48pm Thurs. Nov 24 5:05pm Wed. Dec 7th 5:00pm Wed Dec 21 5:03pm

The Star Report is posted on the clubs website: 1. It is listed in the blog portion of the website.

Minutes of the August FOG Meeting

Meet in Rm 130 at R A Long High school. In person: Mark Thorson, Ted Gruber, Steve Powell, Gayle Gonzales. Tom Meek, Stephanie & Stephen Foster Chuck Wallis. Online: Howard K.

Subjects talked about :Solstice Walk – Dec 17th . Need Honey Bucket quote.

Mt St Helens – we are going try to change it up next year with having us only be in charge of the public viewing at night. Also having the ability to cancel 48 hrs. in advance if weather is not going to be clear. Tentative Dates July 18th or Aug. 19th

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Next Month's Newsletter Deadline

The deadline for items in next month's newsletter is:
Wednesday: seven days before next meeting.

Please feel free to send in your thoughts and experiences about your astronomical adventures.

Submit your material by E-mail to: gryth@msn.com

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