



Program: Mission to "Asteroid Psyche" - Greg Cermak	Volume 27, No.12 April 2022
Greg Smith – editor.	Meeting: April 20, 2022 Zoom meeting 7 Pm

Snow in April?

What is going on? With February temperatures but springtime later evenings. Chilly evenings do not make for comfortable sky watching. The constant clouds don't make for any viewing either. I would love to be able to see the morning planets, but no such luck.

Any way we are not the only planet seeing odd weather. Neptune seems to be having some odd changes in its weather too.

Neptune is heading to its summer, but it is cooling down. Read the main article for more detailed information.

We have **Earth Day** coming up on **Saturday April 30th**. We will need volunteers. The event at the lake will start at **10am** till **2 PM**. We should set up starting by **9am**. They are providing a 10X10 portable tent, a table and two chairs. If we need more than that we can bring our own stuff. Let get signed up this Wednesday.

Lets hope for some nice weather by then.

The battle of air masses continued through Easter Weekend. After cool rainy days and nights we had some clear weather on Good Friday evening with a near full moon. Which was so bright it flooded out all but the brightest stars. Clear weather returned for Easter Sunday. This is normal for this time of year as the warming air in the south tries to push through to the north and the sun higher angle is warming the northern regions as well This brings turbulence and unpredictability. As April and May progress the warmer weather will win out. As you may well remember last June saw record hot temperatures. I hope that does not repeat but it will get normally warmer in the weeks ahead. So will the clear nights increase in number.

So much for my ramblings. I'd better end this while I can still make some sense in my writing,

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



SUMMER ON NEPTUNE IS SURPRISINGLY CHILLY

BY: [COLIN STUART](#) APRIL 13, 2022

Even though Neptune is entering its version of summer, it's actually cooling down — except for its poles, which are mysteriously warming up.

Astronomers were surprised to learn that Neptune is getting colder, despite currently experiencing early summer.

A team led by space scientists at the University of Leicester, UK, combined all available thermal infrared data on the eighth planet from half a dozen different observatories stretching back almost 20 years. The dataset includes images from some of the biggest telescopes in the world, including the European Southern Observatory's Very Large Telescope and the W.M. Keck Observatory. They also used spectral data from NASA's Spitzer Space Telescope.

The team concluded in the *Planetary Science Journal* that the globally averaged temperature in Neptune's stratosphere — the region above the planet's active weather layer — has plummeted by 8°C (14°F) since 2003.

“Our data cover less than half of a Neptune season, so no one was expecting to see large and rapid changes,” says team member Glenn Orton (NASA's JPL). While the seasons change every three months on Earth, Neptune takes 165 years to orbit the Sun and so each season lasts more than four decades.

There was another surprise in store. One region of Neptune is bucking the overall cooling trend. Recent observations with the Gemini North and Subaru observatories, both on Mauna Kea in Hawai'i, revealed that the stratosphere over the south Neptunian pole warmed by 11°C (20°F) between 2019 and 2020. It's the first time astronomers have observed polar warming on Neptune.

Atmospheric physicist Karen Aplin (University of Bristol, UK), who was not involved in the research, thinks the findings stack up. "Their approach seems rigorous and, importantly, different results obtained in different ways from different telescopes lead to roughly consistent conclusions," she says.

The challenge now is understanding what's causing these unexpected changes. "[They] may be related to seasonal changes in Neptune's atmospheric chemistry, which can alter how effectively the atmosphere cools," says team member Michael Roman (University of Leicester, UK). "Random variability in weather patterns or even a response to the 11-year solar activity cycle may also have an effect," he adds.

The team found a tentative correlation between solar activity, stratospheric temperatures, and the number of bright clouds seen on Neptune.

We won't have to wait too long for a deeper view, thanks to the recently launched James Webb Space Telescope. It's scheduled to look at Neptune later this year, observations that are being led by team member Leigh Fletcher (also University of Leicester).

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"The exquisite sensitivity of the space telescope's mid-infrared instrument, MIRI, will provide unprecedented new maps of the chemistry and temperatures in Neptune's atmosphere, helping to better identify the nature of these recent changes," Fletcher says.

Yet even Webb's observations are no replacement for studying a planet up close. "In the longer term, a mission to the ice giants would provide enormous insight into the atmospheric processes causing this sort of variability," says Aplin. After all, we've only been to Neptune once, and that was a fleeting flyby with Voyager 2 back in August 1989.

Getting to grips with the atmospheric physics of frigid worlds like Neptune becomes particularly relevant when put into a wider context. "Understanding the origin, evolution and behavior of ice giants in the solar system has become more important as exoplanet ice giants have been discovered," Aplin says.

Clearly, there's still a lot to learn about the solar system's outermost planet.

☞ **April 2022 Meeting** ☞

DATE: **Wednesday April 20, 2022**

TIME **7 pm**

PLACE: **Zoom** , at your own home

PROGRAM **Asteroid Psyche** - Howard Knytych

Moon Phases

1st Qtr.: Sun May 8, **Full: , Sun May 15** **3rd Qtr.: Sat, Apr. 23,** **New: Sat Apr. 30,**

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

Minutes of the February FOG Meeting

In person attending were Mark Thorson, Tom Meek, Mary Meek, Gali Gonzalez, Ed Mitchel Hakkayya Suttlin, Allen Severson, Mike Fiest, On **Zoom** : Howard Knytych, Ted Gruber, Steve Powell, Bruce Picket, Chuck Ring, and Becky Kent.

Howard Knytych gave a presentation called ” a little Lunacy.” This was on how the moon varies what is visible to the earth as it wobbles in it orbit around the earth.

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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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Longview, WA

