VILLAGES STAR

Newsletter of The Villages Astronomy Club

Volume 3, Number 7
July 2022

Bill Santos
Former Treasurer of The Villages Astronomy Club
Bill was a telescope enthusiast and frequent presenter to the club, as well as serving as the club's treasurer. Bill's service to our club is remembered and appreciated. Bill is survived by his wife, Pat.

Club Website:
http://vlgastroclub.org/
Facebook:
https://www.facebook.com/groups/vlgastroclub/

Club Officers & Directors

President	Mark Graybill
Vice President	Ken Katta
Secretary/Historian	Burt Salk
Treasurer	Linda Meng
Education Coord.	Randy Gilbert

Newsletter Contact
saundby@gmail.com
(please include TVAstro in subject line)

UPCOMING EVENTS

July 5th: Telescope Workshop
7pm Trueman Recreation Center Pavilion area. Learn how to choose and use a telescope, or share your knowledge with others. Note that this is an informal event, if others are using the pavilion we will still be there, but will set up outside the pavilion area. Cancelled in the event of inclement weather.

July 19th: General Meeting, 6:20pm, Laurel Manor Recreation Center.We will hold an informal round table meeting discussing what it is about astronomy that motivates us. Also other subjects as they come up in conversation..

August 2nd: Telescope Workshop
7pm Truman Recreation Center Pavilion Area.

August 5th: Director's Meeting
11am Fishhawk Recretion Center, Buttonwood Run. Come help us plan future events for the club!

August General Meeting Cancelled.
There will be no general meeting in the month of August.Enjoy the summer sky!

Calendar: https://vlgastroclub.org/calendar/

NEWS

June Meeting

Dr Troy Henderson of the EagleCam Team of the Embry Riddle Aeronautical University's astronomy department came to tell us about their lunar camera project. The camera will travel to the Moon aboard the Nova-C robotic lunar lander to

be launched later this year (likely in November). Once near the lunar surface, the EagleCam will be ejected from the lander, land independently on the surface, then it will take live images of the Nova-C landing on the Moon.

This will be the first live imagery of a lunar landing from the surface of the Moon. It will also be the first use of Wi-Fi on the Moon, as the EagleCam will use Wi-Fi to communicate with the Nova-C, which will act as a communication relay and data storage for the EagleCam.

We also learned about a follow-on project known as LLAMACAM, which will be used on the first private spacewalk on the Polaris-1 mission.

The team told us about how the cameras work, their challenges in developing them on a limited budget and with limited spaceflight experience, and how they have used this as an opportunity to get more commercial equipment approved for use in space and demonstrated in space as a way of cutting program costs.

The club very much enjoyed sharing in the enthusiasm of the young team members and hearing about their hopes for future space projects.

More information is available at the following link, and personal donations to support their efforts may be made here: https://daytonabeach.erau.edu/eaglecam

July and August Meetings

In the past the club has gone into abeyance through July and August. At the request of our members, as voted on in our meetings, we will not only continue to hold meetings during these months, but we will hold them in person (as opposed to via Zoom or other electronic means.)

The meetings will be held in a round table format, there will be no formal presentation. They will provide an opportunity for our members to share their own experiences and interests in astronomy with each other. We will discuss such subjects as what drew us to astronomy, programs or information sources that we enjoy, good places to observe, and our favored equipment and suppliers.

This year we will have a meeting in July, at Laurel Manor Recreation Center, but there was no available site for the August meeting. Next year's meeting rooms have been secured for all 12 months of the year.

Directors' Meetings

The next Directors' Meeting will be held on June 3rd at 11am at the Fishhawk Recreation Center on Buttonwood Way (Village of Buttonwood.) All members are welcome to join us, to assist us with the planning and organization of the club, and in developing our plans for activities to help the club better serve its membership.

IN THE SKY THIS MONTH

The Moon:

1st Quarter, July 7th,
Full Moon, July 13th,
Last Quarter, July 20th,
New Moon, July 28th.

The Planets:

For the past two months the planets have rewarded early risers with a chain of lights across the morning sky. This month we see some of them return to the evening sky.

Mercury passes from the morning sky to evening in mid-month. It moves behind the Sun (superior conjunction) on the 16th, but won't be visible until a few days later. On the 25th it will be at about 10 degrees from the Sun, setting about 40 minutes after sunset. Take care not to catch the Sun in view when viewing Mercury with binoculars or a telescope.

Saturn rises at about 11pm at the start of July and is rising at about 10pm by the 20th. The rings appear quite narrow, and will be at their narrowest in 2025 when Earth crosses their plane, making them virtually disappear. This year, they will be a

bit over 12 degrees of tilt to us. Saturn's moon Titan looks like a bright star near Saturn. It is visible even in small telescopes. Use an online tool at the sites for Astronomy or Sky and Telescope magazines to get its current location for your observing session. Scopes that get high contrast will pick up other satellites of Saturn as well if sky conditions permit it.

Jupiter starts the month in the morning sky, rising at about 1am, but by month's end Jupiter will be up before 11pm. The four large moons of Jupiter are visible in all telescopes and most binoculars. Again, an online tool can help you tell which is which. A bit of experience in viewing them will also allow you to make good educated guesses once you get to know them and their movements.

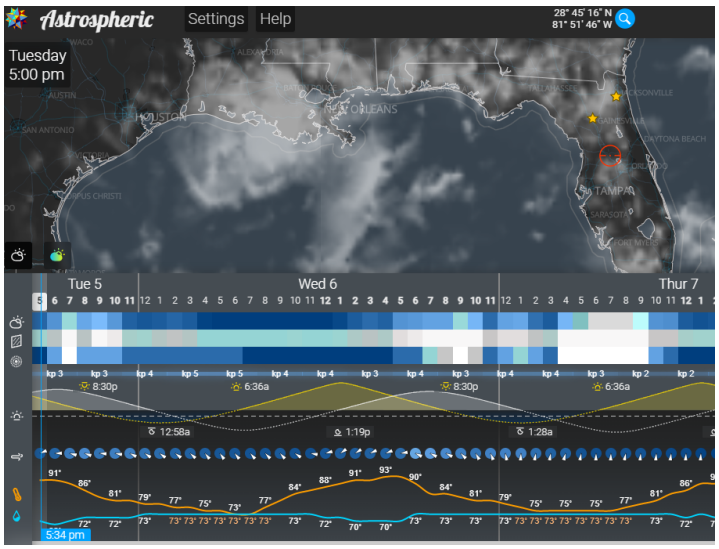
Summer observing can be difficult because of the clouds that are a normal part of summer skies in Florida this time of year. On top of that, humidity can make even clear skies not as transparent as we need to view subtle objects like nebulas and galaxies. A forecast of the sky conditions that affect astronomers can let you know when you are most likely to be able to see the sky well.

The online Astrospheric tool gives predictions hour by hour for the next several days to help you plan your observing times. When will it be worth staying up late or getting up early? When should you haul the scope out and when should you fire up a movie on the TV?

Visit the following site, it will try to identify your location over the internet (you may have to correct it or enable location services), then it will give you a chart showing predicted sky conditions.

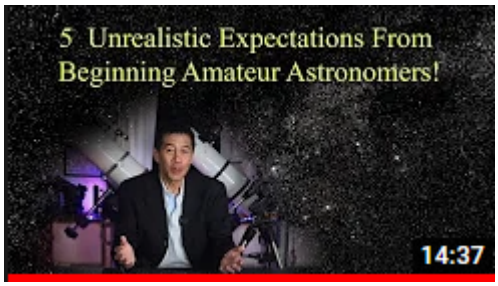
https://www.astrospheric.com/

Blue blocks on the timeline are good, white are bad. Find the times when the blue blocks line up to choose when to plan to have your scope out under the sky:



A similar chart application can be found at the Clear Sky Chart Homepage:
https://www.cleardarksky.com/csk/
A decent latitude/longitude for The Villages is 28.92 N, 82.00 W. "Krause's Observatory" comes up as the nearest site in the database.

VIDEO HIGHLIGHTS:



5 Unrealistic Expectations from Beginners
https://www.youtube.com/watch?v=ieLTvndz4_g

7 Common Beginner Mistakes
https://youtu.be/mqLHz21wGA8