



JANUARY 2022

NIGHTFALL

A PUBLICATION OF THE HUACHUCA ASTRONOMY CLUB

JAN 2022 - NOTES FROM YOUR PRESIDENT

My Christmas present this year was to discover that I was the new President of HAC. We will miss having Dave Roemer at the helm that he has graced for so many years. I will do my best to follow in his great leadership, however I cannot promise the same humor and style. At the same time, the chapter's long time Secretary Bert Kelher also chose to let others become more involved. Dave and Bert will still be supporting the Chapter as members. We thank them for their years of selfless service.

During the subsequent days, the board and I queried the membership for volunteers to step into the vacancies. I am excited that Karen Madtes and Marion Goode accepted the challenge. Both of these women bring enthusiasm and "let's make it happen" attitudes which will be needed in 2022.

After the initial surprise, I am getting excited at the opportunities 2022 will bring us as an organization. I know that so much of our lives have been thrown into flux with the new surge in Covid and its variants. We will have to be flexible to find the "opportunities" instead of the potholes. I anticipate that we will have both in-person and virtual membership meetings over the next few months. I know this will be challenging but I hope you will also find it engaging, too.

To start 2022, HAC received a generous donation of telescopes and astronomy related equipment from Wendell Perry. Thank you. However, this has left us bursting with scopes in the Patterson. One way to relieve this pressure would be to have an Astronomy Swap Meet. I would love for several members to volunteer to put this together. Please let me know if you are willing to support this activity ASAP.

I am excited about the Astronomy possibilities for 2022 including getting first images from James Webb Space Telescope, the conjunction of Mars, Saturn and Venus in March, a partial Lunar eclipse in May, and alignment of Mercury, Venus, Mars, Jupiter and Saturn in June to name just a few. I hope to meet and greet you in my new role at our Jan Meeting where Ted Forte will talk about Artemis 1 and NASA's Moon to Mars Initiative.

HAC PRESIDENT BIO – PENNY BRONDUM

Penny Brondum came to Astronomy in a roundabout way. As a teen, she snuck in to her brother's room to read his collection of science fiction books. She thought he was reading racy novels, but found herself captured by far-off places and ideas. This led to her lifelong fascination of space, other worlds, and cultures. In 1980, after receiving an MBA from Pepperdine, Penny switched from retailing to aerospace, working in Resource Management at Rocketdyne in Southern Calif. In her spare time, Penny wrote the material for, and taught, a Certified Professional Manager Training course. Her future husband Thomas (a 'space' engineer) was one of her students. In 1999, they left aerospace and retired to Bend, Oregon where Thomas began volunteering at the Oregon Observatory in Sunriver. To share time with Thomas and his hobby, Penny also began volunteering and soon was jokingly known as the "also came". As Life Long learners they spent many years taking classes in astronomy related topics to learn more about their hobby which led to running an observing post during the August 2017 Solar Eclipse for the Oregon Observatory. In 2017, when looking for warmer climes that offered observing, Penny discovered Sierra Vista while viewing the dark sky map. After several visits, and with the help of HAC members, they found a place here to call home. They became HAC members before they even arrived and spent their first night in Sierra Vista at a HAC meeting in Aug 2018. Since then, Penny and Thomas have both become active volunteers in both member and community outreach. Her enthusiasm led Penny to be elected to the HAC board in 2021.

CHANGES ON THE HAC BOARD

HAC President David Roemer and HAC Secretary Bert Kelher have decided to resign their positions. They both have served for many years. David has been the longest serving president in the club's history and I think we would all agree that he has done a remarkable job at it. David and Bert both wish to remain active members and we will continue to see David's articles highlighted here in Nightfall for some time to come. Ken Duncan, who plans to leave the area soon, was not a candidate for reelection in November and was replaced with Mark Orvek. With former VP, Dwight Hoxie moving into our Past President unelected position displacing Bill Howard. We thank David, Bert, Ken and Bill for their service to our club.

With David's resignation, our newly elected VP, Penny Brondum assumes the president's position. That left two openings on the board. Between elections, it is the duty of the remaining board to appoint members to fill vacancies. Therefore, we wish to welcome Karen Madtes who will serve as Vice President and Marion Goode who will fill the Secretary spot. We wish to express our gratitude to both of them for their willingness to step up and serve!

Our new slate of officers for 2022 is therefore:

Penny Brondum, President, Karen Madtes, Vice President, Marion Goode, Secretary and Ted Forte, Treasurer.

The members at large on the board are Howard Day, Gary Grue, Ken Kirchner and Mark Orvek

Since David has declined to fill the "Past President" slot on the board, that spot will be filled by our previous Vice President, Dwight Hoxie.

Four new members on the board should do much to bring a new perspective to HAC's future. Please thank them for serving and wish them luck in their new roles when next you see them.

MEMBERSHIP DUES FOR 2022

At this writing, 38 HAC memberships expired on Dec 31 and another 17 expire before next December. If you are currently in arrears, you should have received a dues reminder in your email, but if you are uncertain of your membership status you can always contact the treasurer, Ted Forte [tedforte511@gmail.com] to check on it.

Dues amounts:

- \$35 for a family membership (active-duty military pays \$25)
- \$25 for a regular (individual) membership (active-duty military pays \$20)
- \$10 for a student membership (valid student ID required)

HAC dues payment options:

1. You can pay your dues in person by cash or check made out to Huachuca Astronomy Club. See the treasurer, Ted Forte, at a meeting or event.
2. You can mail your dues check to the Huachuca Astronomy Club PO Box 922, Sierra Vista AZ 85636
3. You can pay online by visiting www.hacastronomy.org and pulling down the membership menu. You'll be directed to Pay Pal where you can use your Pay Pal account OR your credit card.
4. If you have a Pay Pal account, you can use PayPal Direct to send your payment to paypal@hacastronomy.org
5. If you have a Zelle account with your bank, you can make a dues payment by transferring funds to twforte@powerc.net

JANUARY MEETING

The next meeting of the Huachuca Astronomy Club is scheduled for 7 pm on Friday January 14. As of this writing, the meeting is in-person in the library commons at Cochise College Library 901 N Colombo Avenue, Sierra Vista.

Should the circumstances require, the meeting could be moved to Zoom. The new leadership is assessing the situation. A possible hybrid event is also under consideration.

The program will feature Solar System Ambassador, Ted Forte. His talk will be on Artemis 1 and NASA's Moon to Mars Initiative.

NEW DONATIONS

Long time HAC member Wendell Perry is leaving the area and in order to downsize his equipment inventory, has generously donated a large amount of gear. Six telescopes, three equatorial mounts and a number of accessories were included in his gift. They currently reside at the Patterson Observatory.

Other recent donations include telescopes from Fred Chitwood and David Pressler.

Added to what was already there, the club now has a considerable cache of equipment to put to good use. We hope to schedule a telescope swap meet soon.

Thank you to all the members that have donated equipment for the benefit of the club. Remember that HAC is a 501c3 and donations to the club may be reportable as charitable donations on your federal income tax return.

UPCOMING SCHEDULE FOR 2022

BY TED FORTE

We have confirmed reservations for our general meetings in the community room, Student Union Building, Cochise College, 901 N Colombo Avenue, Sierra Vista through June. Confirmation for the second half of the year will come later. They are scheduled for 7pm on the Friday closest to full moon so as not to interfere with observing opportunities. Dates may be shifted due to site availability or holidays. Meetings may have to be moved to Zoom if the situation dictates. It seems our February meeting will be virtual, as our speaker does not drive. Watch the group and the newsletter for updates and instructions.

You can access the calendar here:

<https://groups.io/g/HACAstro/calendar>

2022 Meeting dates:

- January 14
- February 18
- March 18
- April 15
- May 6
- June 17
- July 1
- August 12
- September 9
- October 7
- November 4
- December 9

We have two confirmed Kartchner Star Party dates for 2022: April 2, and October 22. These public star parties are comprised of three parts: solar observing starting about noon, a guest speaker talk around 5 or 5:30 and stargazing after dark (until 9pm). Astronomers bringing scopes are entitled to free park admission. The talk is rain or shine, the evening portion is weather dependent. The afternoon session usually proceeds regardless of clouds as long as it is not actually raining.

Patterson Public Nights are generally scheduled for the Thursday night closest to first quarter moon. They are advertised as starting a half hour after sunset but guests often arrive early. We schedule the event near first quarter so that we have a daylight/twilight target to enjoy. We now require guests to register in advance so that we can limit attendance. HAC members and Foundation board members are always welcome and do not need to register.

Non-members register at

www.universitysouthfoundation.com/patterson-observatory

Admission is free. Public Nights are not scheduled for July or August.

The scheduled dates are as follows:

- January 6
- February 3
- March 10
- April 7
- May 5
- June 9
- September 1
- September 29
- October 27
- December 1
- December 29

Member star parties may be held on the weekend of new moon subject to the availability of a host.

HAPPY NEW YEAR EVERYONE IT'S 2022!

BY DAVID ROEMER

Well, 2021 is history. We got a Christmas Comet, in binoculars anyway, and the James Webb Space Telescope finally got the vacuum it deserved. A few people went nearly up into space, and far too many satellites went into orbit. The world is still reeling from an unseen menace, and humans aren't doing much better than Martians in H. G. Wells' story, *War of The Worlds*. And in my opinion, we aren't doing much better than the Earthlings in the story either.

Comet 2021 A1/Leonard showing braiding in tail closed out the year



Source: Jay LeBlanc, shot from 20 December 2021

Also going out with 2021, I've stepped down as your president. It has been a pleasure and an honor, but it is time to let others chart the club's course. So, this will be my first column as not-your-President, but I'll continue to write a column from time to time, at least for a while. I left the post with money in the club's bank account (not my own) and an unprecedented number of club members. Penny Brondum has been gracious enough to step in as our new club president. Cheers Penny! So, with my new year's positive

attitude, I wish each and every one of you a happy, healthy, and astronomically fulfilling new year. Welcome to 2022.

New Year's is also a great time for resolutions and a little housecleaning. Allow yourself to get reacquainted with your old astronomy gear and new gear for that matter. Get the dust and cobwebs that have gathered since you last made time to observe. While you're digging around in your stuff ask yourself, "When was the last time I used this?" Let's say you're looking at your eyepieces. Ask the question and if the answer comes back as "not in a long time," then ask "why?" Was the power it provided in your scope too high to hold focus on objects, or too low so that it presented a view like looking through a fisheye lens at the end of a tunnel? Is it a near duplicate for another of your eyepieces or too scratched after years of hard use? If the eyepiece isn't too bad off maybe it should go in a pile to be used during outreach. Maybe that eyepiece only works well in the long-throw refractor you used to have, and not so well in the fast Newtonian you tend to use now. Perhaps put it in a sell pile.

These short Q and A sessions can focus you on your needs, wants, and desirable simplification for your new observing year. Do this for all your astronomy stuff. Scopes, eyepieces, cameras, mounts, tools, hardware, and software.

As far as software, have you checked that all your programs (apps) are current version? Check those drivers! Can you simplify the number of programs you use (i.e., do you have functionality needlessly duplicated across programs)? How about your clothing? Did it get a bit too cold for you to go out observing last night? I cannot express enough the importance of being comfortable while observing. Comfort at the eyepiece can win you an extra magnitude of light to your brain. If you don't believe me, just try making a detailed observation while shivering. Oh, and yes, I do count clothing as a soft wear category.

Is your scope getting so heavy you are finding it an excuse for not going out? Is it time to get a wheelie bar for your scope and tripod? Would you go out and observe more often if you could start viewing in five minutes without having to lug out box after box of stuff? Maybe it is time to think about an observatory. I don't have answers for you on any of these questions, but I ask them of myself all the time. My warm room is a mess filled with various projects; however, my observatory is usually clean and functioning.

Speaking of resolutions, what about yours? Do you have any special astronomy related projects coming up this year? Do you want to build an observatory? Are you going after an Astronomy League Pin? Want to put up an all-sky camera to track meteors? Do you want to start doing a little data collection or just finally get a good image of the Andromeda galaxy? Or do you want to just want to learn how to use the telescope you have? That's the beauty of this club, we are all enablers, so there's probably someone in it that you can ask for ideas, information, and help. Also, let me know if

there is a specific aspect of the hobby you would like me to write about. I'll happily oblige if I know it. If I am ignorant on the subject (a good possibility), I'll research it first.

Just so I've said something about observing this month, the constellation of Orion is perfectly placed in the cold January evenings. You can spend the whole month just looking at the objects in Orion, including the wonderful Messier 42. But if you feel a need to wander a bit, look due north of Orion. There are three big bright and beautiful open clusters in Gemini and Auriga. Messier 35 is in Gemini and Auriga holds Messier 36 and 37. You can also look south to Lepus where you will find a bright globular star cluster, Messier 79.

Anyway, I'm going back to work on some of my new 2022 projects (read into this, leftover projects from 2020-2021) and cleaning up some of the mess in my warm room. Next month we'll look at some of the possible astronomical highlights for 2022. So, until next time, let's make this a better new year, and make some time to get out there and stare.



NASA NIGHT SKY NOTES JANUARY 2022

This article is distributed by NASA Night Sky Network

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.org to find local clubs, events, and more!

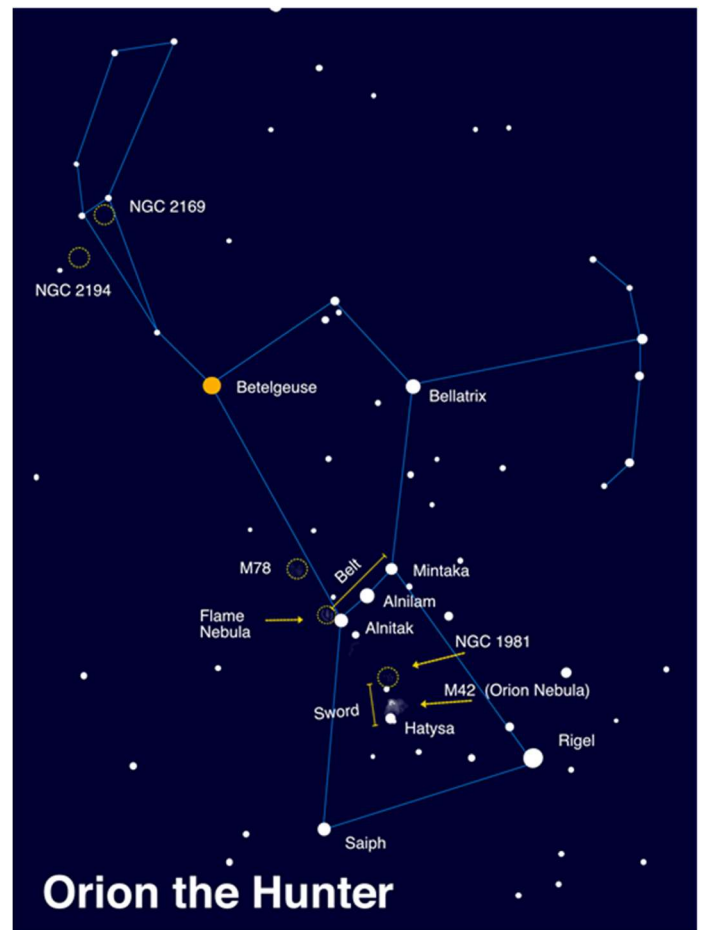
HUNTING THE HUNTER: OBSERVING ORION

If you are outside on a clear January night, it's hard not to notice one distinctive star pattern above all: **Orion!** While we've covered Orion in earlier articles, we've never discussed observing the constellation as a whole. Perhaps you've received a new telescope, camera, or binoculars, and are eager to test it out. Orion, being large, prominent, and full of interesting, bright objects, is a perfect constellation to test out your new equipment and practice your observing skills - for beginners and seasoned stargazers alike.

In Greek mythology, Orion is a strong hunter, with numerous legends about his adventures. Being such a striking group of stars, cultures from all around the world have many myths about this star pattern. There are so many that we can't list them all here, but you can find a wonderful interactive chart detailing many cultures' legends on the Figures in the Sky website at figuresinthesky.visualcinnamon.com.

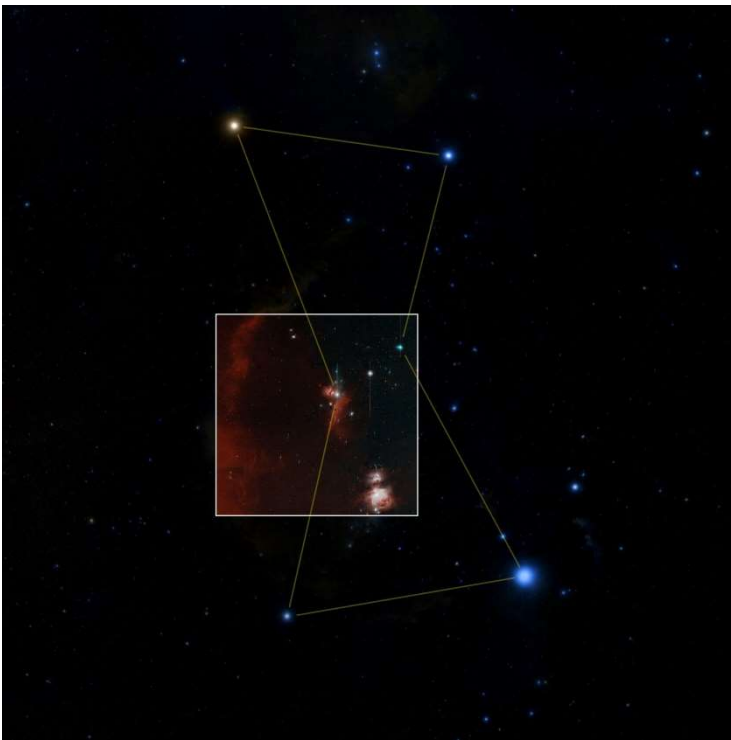
What sights can you see in Orion? Look above the variable orange-red supergiant "shoulder star" Betelgeuse to find the stars making up Orion's "club," then move across from Betelgeuse towards the bright star Bellatrix (Orion's other "shoulder") and the stars of his bow and arrow - both essential tools for the Hunter. Many interesting sights lie near Orion's "belt" and "sword." Orion's belt is made up of three bright giant stars forming an evenly spaced line: Alnitak, Alnilam, and Mintaka. Move from the belt stars towards the stars Rigel and Saiph (Orion's "feet" or "knees") to arrive at Orion's distinctive Sword, parts of which may appear fuzzy to your unaided eyes. Binoculars reveal that fuzz to be the famed Orion Nebula (M42), perched right next to the star Hatysa! Diving in deeper with a telescope will show star clusters and more cloud detail around the Nebula, and additional magnification brings out further detail inside the nebula itself, including the "baby stars" of the Trapezium and the next-door neighbor nebula M43. Want to dive deeper? Dark skies and a telescope will help to bring out the reflection nebula M78, the Flame Nebula (NGC 2024), along with many star clusters and traces of dark nebula throughout the constellation. Very careful observers under dark clear skies may be able to spot the dark nebula known as the Horsehead, tracing an equine outline below both the Belt and the Flame Nebula. Warning: the Horsehead can be a difficult challenge for many stargazers, but very rewarding.

This is just a taste of the riches found within Orion's star fields and dust clouds; you can study Orion for a lifetime and never feel done with your observations. To be fair, that applies for the sky as a whole, but Orion has a special place for many. New telescopes often focus on one of Orion's treasures for their first test images. You can discover more of NASA's research into Orion's stars - as well as the rest of the cosmos - online at [nasa.gov](https://www.nasa.gov).



Northern Hemisphere observers can find Orion during January evenings in the east/southeast skies. Can you spot the Orion nebula with your naked eye, in Orion's sword? How does it look via binoculars or a telescope? What other details can you discern? Please note that some deep sky objects aren't listed here for clarity's sake. For example, M43, a nebula located directly above M42 and separated by a dark dust lane, is not shown. Orion's Belt and Sword are crowded, since they star-forming regions! You can read more in our November 2019 article Orion: Window Into a Stellar Nursery, at bit.ly/orionlight.

Image created with assistance from Stellarium.



The inset image is the “first light” photo from the Zwicky Transient Facility, a large survey telescope designed to detect changes in the entire night sky by detecting “transient objects” like comets, supernovae, gamma ray bursts, and asteroids. For many astronomers, amateur and pro alike, Orion is often the “first light” constellation of choice for new equipment!

Image Credit: Caltech Optical Observatories

PICTURES BY HAC MEMBERS

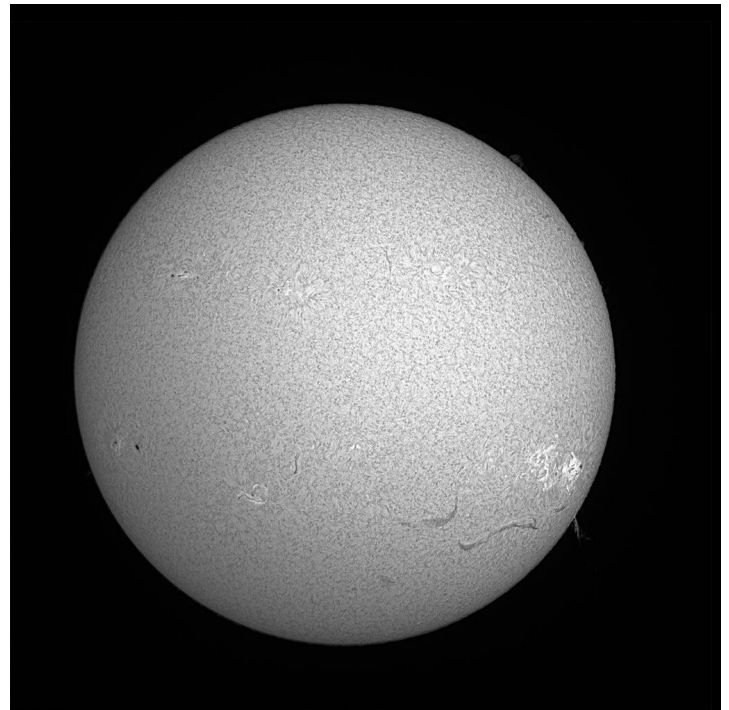
COMET C/2021 A1 (LEONARD) BY JAY LEBLANC

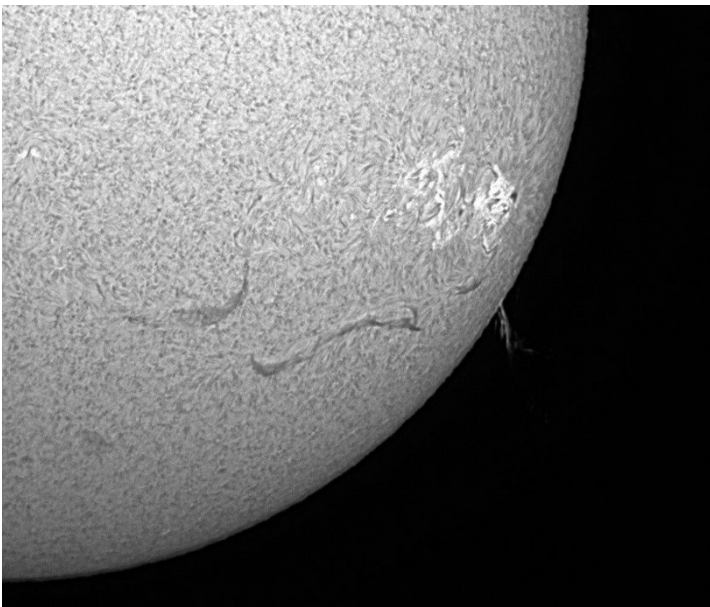


COMET C/2021 A1 (LEONARD) BY RICHARD LIGHTHILL

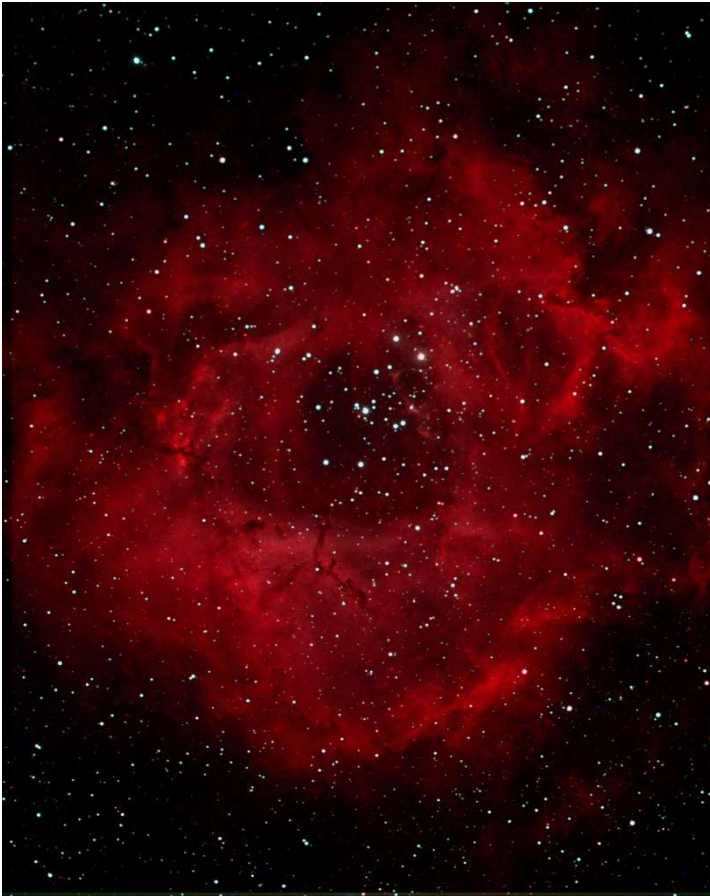


SUNSPOTS BY DAVID ROEMER





ROSETTA NEBULA BY DAVID ROEMER



M42 ORION NEBULA BY ALEX WORONOW



FOR SALE

Mark Orvek is selling his Celestron AVX Mount. He bought the mount in 2015. The mount is ~\$999 new. He has the original shipping box and all of the original components including the NexStar+ hand controller, counterweight, power cable and instructions. He purchased an ACM dovetail, polar alignment scope and Celestron lithium battery pack separately which he will include in the sale. He'd be happy to deliver the mount to anyone in the general area (Sierra Vista, Bisbee, Benson, etc).



Takahashi

Mewlon 250 (10") About 9 yrs old. Seldom used. Dealer (Anacortes) installed field-flattener and upgraded manual focuser with an electric (computer-controllable) focuser. Asking just \$4,700. (new price ~\$ 8,000). Contact Alex Woronow at Alex@FaintLightPhotography.com (Alex lives in Silver City NM (SW Corner) but would meet a buyer halfway to deliver the scope).

FREE to good home! Anyone want a permanent pier. I used it with a 5-inch refractor and it is nice and solid. Its designed to fit on a concrete slab or floor. You can anchor it with expansion bolts by drilling holes with an impact drill. To pick up contact Bob Kepple at: astrocards@aol.com or 520-732-4841

I own a Celestron NexStar 8 SE Schmidt-Cassegrain Computerized Telescope. A Celestron Power Tank. Eye pieces, and various other accessories. They are in excellent shape and am trying to sell the items. If anyone in your

astronomy club is interested in purchasing please contact me at the email address below. I will provide photos to anyone interested. Contact Craig Riley Email: criley1974@yahoo.com

Patricia Houser has two telescopes to sell. Her husband was the astronomer, and can no longer pursue the hobby. She did not mention what the scopes are but would be open to potential buyers coming out to see them (Whetstone). That's all the information we have, so if you have questions please contact Ms. Houser directly at iamtennis@peoplepc.com

Celestron 6SE. (Schmidt Cassegrain) Includes two scope buggies for it. Also includes an equatorial tripod for the 2nd buggy. See pictures below
Contact JD Maddy at 602-672-2032 Will deliver



CLUB OFFICERS AND CONTACTS

President: Penny Brondum **Vice President:** Karen Madtes
Secretary: Marion Goode **Treasurer:** Ted Forte
Past President: Dwight Hoxie

Board Members-at-Large

Howard Day Mark Orvek Gary Grue Ken Kirchner

Nightfall Editor: Cynthia Shomonta cindy.jean.lund@gmail.com
Webmaster: Ken Kirchner
Facebook Editors: Bert Kelher

Website: <http://www.hacastronomy.org>
Facebook: <http://www.facebook.com/HuachucaAstronomyClub>
Email: info@hacastronomy.org

PLEASE SUPPORT OUR SPONSORS

Our sponsors have been keeping us supplied in door prizes for some years. If you have not contacted them lately, please consider this. They have a lot of great astronomical products that we all need.

For more information on products and contact information, their websites are:

Farpoint Astronomy <http://www.farpointastro.com/>
Starizona <http://starizona.com/>

HAC Jan- Feb 2022 Calendar of Events

SU	MO	TU	WE	TH	FR	SA
Jan 2  11:33 AM	3	4 Quadrantid Meteors	5 Quadrantid Meteors	6 PAT Public Night 6PM	7 Mercury E Elong	8
9  11:13 AM	10	11	12	13	14 HAC Meeting Student Union	15
16	17  4:48 PM MARTIN LUTHER KING Jr. DAY	18	19	20	21	22
23	24	25  6:41AM	26	27	28	29
30	31  10:46 PM	1 Feb	2 Groundhog Day	3 PAT Public Night 6:30PM	4	5
6	7	8  6:50 AM	9	10	11	12
13		15	16  9:57AM Venus W. Elongation	17	18 HAC Meeting	19
20		22	23  3:32PM	24	25	

All times local MST

Join [HacAstro](#) to keep up to date with all of the Huachuca Astronomy Club events

Send an email to: HACAstro+subscribe@groups.io

Watch the group for notice when in person events and meetings will resume