



APRIL 2022

NIGHTFALL

A PUBLICATION OF THE HUACHUCA ASTRONOMY CLUB

APRIL PRESIDENT'S NOTES

As you can see from this month's Nightfall newsletter big things are happening for HAC.

In March, we had our first in-person meeting in nearly two years. It was great to see so many members, to catch-up on their latest news, to hear about Solar plasma from our speaker Emily Lichko and to preview a new club meeting venue at Cochise College.

In April, besides our usual monthly meeting and public night HAC will host the long-awaited HAC Swap Meet. You will see throughout this newsletter info about the event on April 23rd. I trust you have taken the opportunity to scour nooks and crannies for unused/duplicate equipment to sell. Plus determined what great equipment you need to supplement/expand your astronomy adventure in 2022. HAC will use funds from the Swap Meet to donate additional telescopes to the local library and to support the University South Foundation Scholarships.

We encourage members to participate in solar observing on Earth Day, Apr. 21, at Veterans Memorial Park, SV and Astronomy Day May 7 at the Sierra Vista Library. It is a great way to interact with other members and their equipment as well as help the public enjoy the sun. Everybody benefits, no matter your level of expertise, from the interaction. The requests for more HAC supported public and school events continue to increase so consider participating. See the Calendar for dates and locations plus watch the HAC Forum.

The beginning telescope class finished this week. If you are interested in a repeat or if there are other astronomy related classes you would like to offer or would like to have offered thru HAC please let VP Programs, Karen Madtes, know.

I hope to see you at our HAC sponsored events over the next month. I encourage you to enjoy the clearing skies and warmer temperatures to get out and look up.

WELCOME OUR NEW MEMBER

Zane Landers of Tucson joined in March. Zane is our newest student member. He is an experienced amateur telescope maker and owns a number of large aperture telescopes, some of which he built himself.

NEW VENUE FOR HAC MEETINGS

Room A102 in the Cochise College Downtown Campus, 2600 Wilcox Drive, Sierra Vista is HAC's new meeting venue. We anticipate having all of our meetings at that location for the foreseeable future.

AT THE APRIL MEETING

Mark Trueblood, Director of the Winer Observatory in Sonoita will be our guest speaker for the April Meeting. Mark has operated the Winer Observatory, since 1983.



The observatory is named after physics professor Irvin M. Winer who was Mark's friend and mentor.

Winer observatory is the site of a number of significant small telescopes and famous robotic telescopes. It has been the site of the lowa Robotic Observatory. The facility also hosted Michael Schwartz's telescope, active in supernova patrols, until Tenagra Observatories opened a facility in the area. Is the site of the Kilodegree Extremely Little Telescope.

Mark's talk will be on Near Earth Objects (NEO's)

EARTH DAY AT VETERANS MEMORIAL PARK

HAC will participate in this year's event on Thursday April 21 from 10am to 2pm. As in the past we will be one of several exhibitors at this expanded version of the weekly Farmer's Market event at the park and will offer solar viewing. We invite all HAC members to participate in the event and help promote the club. The set-up location and access points will be different this year. Watch your email and the HACAstro group for details as they become available.

ASTRONOMY DAY AT THE LIBRARY

National Astronomy Day is Saturday May 7. HAC will set up displays and solar scopes on the sidewalk outside of the Sierra Vista Library from 10am to 3pm. Astronomy Day is always great fun and an excellent opportunity to promote astronomy and the club. Please plan to attend. Even if you can't bring a telescope and participate in this outreach, we hope you'll at least stop by during the event.

MAY MEETING CHANGE

The date of the May meeting has been changed from May 6 to May 13. May 13 is the formula date (Friday closest to full moon) for the May meeting. The May 6 date was selected only because neither the community room nor library was available. However, since Room A102 is available, we have shifted back.

Our originally scheduled speaker for May had to pull out due to an unscheduled trip abroad. HAC member Vince Sempronio will be the speaker. Vince is an accomplished observer who is active with IOTA. He will speak about asteroid occultations.

ASTRONOMY SWAP MEET

The Huachuca Astronomy Club is hosting a swap meet at the Patterson Observatory on April 23 from 10:00 to 2:00. Set up begins at 9:00 and everything must be removed from the observatory by 3:00. Sellers are requested to donate a portion of their sale to HAC for making the Swap meet possible.

SWAP MEET RULES:

- 1) HAC owned Items will only be sold during the advertised hours of the **Swap Meet of 10 a.m. – 2.p.m. April 23rd**. We would encourage all sellers, who have items listed in the Nightfall newsletter, in the Forum, etc., to do the same to make things fair for all buyers.
- 2) At the swap meet it is a **“first come, first served”** situation. In the case of dueling buyers, bidding will be allowed.

- 3) **All HAC items are in an “as-is” condition** and priced accordingly. If you want to pre-view a HAC item you can make arrangements to visit the observatory (contact Ted Forte) or attend the HAC public night Apr 7. For pre-views of other items contact the listing member.
- 4) There are a few items that HAC will offer as a kit so we are not left with disembodied accessories. i.e., The C-11 includes the focal reducer, HyperStar and StarSense Auto align.
- 5) **All Sales are cash or check.** We do not have the capability for credit card transactions.

SWAP MEET ITEMS FOR SALE

HAC ITEMS

- Telescopes and Mounts:
 - Celestron 8-inch SCT optical tube with ADM dovetail rails, Stellavue M2 Alt-Azimuth telescope mount
 - Celestron 8-inch SCT optical tube with ADM dovetail rails.
 - Starhopper 6-inch Dob
 - Tasco Galaxsee 90mm on GEM
 - Bausch & Lomb 130mm Newton GEM
 - Celestron C102 Refractor on GEM with 4 adapted parfocal eyepieces
 - Celestron AstroMaster 76 on GEM
 - NexStar 8 with Tripod
 - Celestron First Scope 80 EQ on GEM tripod
 - Celestron NexStar 4SE on single fork mount,
 - Celestron C11 Edge HD SCT telescope on Celestron EQ Mount with tripod, power supply and hand controller + accessories (Celestron 11” Solar Filter, Celestron 11” Edge HD.7x reducer, Celestron Star Sense Auto Align, HyperStar for C11)
 - Orion 8-inch f/4.9 Newtonian telescope on Celestron AVX EQ Mount with tripod (hand controller is defective)
 - Orion 8-inch Maksutov Newtonian telescope
 - Celestron C6R refractor telescope on Orion Atlas EQ Mount with tripod
 - Orion 120mm refractor telescope
 - Orion Short Tube 80 refractor telescope optical tube assembly
 - Orion 8-inch Intelliscope Dobsonian (defective object locator)
 - Towa 60 mm refractor with tripod and GEM head
 - Brand new Orion Skyquest 4.5" Dob OTA (no base, but otherwise a complete kit)
 - Tasco 4.5" OTA (incomplete focuser)

- Eyepieces:
 - Various
- Other Equipment:
 - Celestron 9x50 Finder #51611 w/mount
 - Celestron NexImage 5 Solar System Imager
 - Celestron f/6.3 Reducer corrector 94175
 - Celestron 50mm Finder 51611
 - Celestron 6 x30 Finder
 - Image Source DMK 21Au618 Astronomy Camera
 - Meade Deep Sky Imager w/Auto Star Suite
 - Pentax K1000 camera
 - Minolta SR T 201 Camera
 - 2-inch focuser assembly
 - Coulter Secondary
 - GEM equatorial head
 - ADM dual saddle blocks (FOUR)
 - Orion Easy Finder II Red Dot Finder
 - 15" four vane spider assembly
 - 22" four vane spider assembly
 - 24" four vane spider assembly
 - 4.5" diameter diagonal housing for 4.5" x 6" diagonal
 - Diagonal mirror with post: 3.5" x 2.5"
 - 3" diameter diagonal housing with 4"x 3" mirror
 - 3.5" diameter diagonal housing with 4.5" x 3" mirror
 - 6.5" diameter flat secondary with post
 - 7" diameter flat secondary with post
 - 6.5" diagonal holder w/o mirror (Ball socket mount)

DOUG SNYDER ESTATE ITEMS

Books, Mounts, and Astro Stuff for Sale at the HAC Swap Meet: Here are just some of the books that will be offered at the HAC Swap Meet from the estate of Doug Snyder, once President of HAC and longtime member. We will also be selling many other astronomical wonders from Doug's estate, such as eyepiece filters, focal reducers, star trackers and mounts for cameras, GPS modules and astronomical video cameras. There are all kinds of astronomical "plumbing" as well those little tubes and connectors that many times stop us from connecting this to that when we need to connect that to this. Proceeds will be sent to his widow.

- Books:
 - Lunar Prospector
 - The Origin and Evolution of Planetary Nebulae
 - Spherical Astronomy
 - Planetary Nebula by Hynes
 - Touching the Universe (signed)
 - Visual Observations of Planetary Nebulae
 - More Things in Heaven and Earth (signed)
 - The Moon and the Planets
 - Cosmic Butterflies (signed)
 - The Dobsonian Telescope

- Starlight Nights (signed)
- Astronomical Algorithms
- Guide to Observing and Discovering Comets (signed)
- Uranometria 2000.0
- Making Friends with the Stars (signed)
- Sky Catalogue 2000.0 Vol 1 and 2
- Splendors of the Universe (signed)

TOMMY MASTROCINQUE ITEMS

- Sky-Watcher EQ6R – Pro Mount with Tripod
- ZWO ASI178MM camera
- TS Optics Photoline 1.0X Field Flatteners
- Astronomic 2" CLS imaging filter
- Hutech 2" IDAS LPS-D1
- Optolong 2" UV/IR Cut filter
- ZWO 1.25" Duo Band imaging filter (NIB)
- ZWO 1.25" IR-Cut filter (NIB)
- Miscellaneous accessories

HOWARD DAY ITEMS

- Coronado PST (personal solar telescope) Refractor; 400mm focal length f/10 focal ratio; 40mm with integrated 1.0 Angstrom bandpass hydrogen-alpha solar filter; 30mm internal Etalon primary blocking filter and incorporated focuser and fine adjustment control; built-in Sol Ranger Sun Finder. Includes: EQS Equatorial Mount with RA (right ascension) drive and controller; custom stainless steel case; Plossl 18mm 1.25 and CEMAX Barlow X2 eyepieces; camera attachment for laptop.
- Newtonian 10" - F4.7 with equatorial mount & clock drive
- Dobsonian 15" - F5 with dobsonian mount
- Newtonian 8" - F5 with equatorial mount & clock drive that may some need work [photo available at swap meet]
- Orion 4.7 - F5 Rich-field Refractor with equatorial mount, clock drive and solar filter [photo available at swap meet]
- Orion short-tube 90mm - F6 Refractor, without mount

MARK ORVEK ITEMS

- Celestron Star Pointer (Model #516300)
- Meade f/3.3 CCD focal reducer (like new, in the original box). It is meant to be used with an SCT and an imager (not for visual use). T-Adapter is missing.
- SkyFi Telescope Controller (used but in excellent condition and includes original accessories)

SWAP MEET WISH LISTS

KAREN MADTES

- 8" solar filter (for Orion scope)
- Cord for vintage C5 motor drive

JR

- Celestron NexStar 8" telescope with auto tracking, 3 star alignment and memory storage for basic data, ie GPS location, date, time, etc.

MARION GOODE

- 17x50 binoculars (or possibly 25x100)/parallelogram mount
- Sturdy tripod capable of supporting 29lbs bowling ball mount/scope
- 12" dob with go-to, visual set up only – not doing imaging; or 11" or 12" SCT with go-to, not set up for imaging



NASA NIGHT SKY NOTES 2022

MARCH

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!

SPRINGTIME CATSPOTTING: LYNX AND LEO MINOR

BY DAVID PROSPER

Many constellations are bright, big, and fairly easy to spot. Others can be surprisingly small and faint, but with practice even these challenging star patterns become easier to discern. A couple of fun fainter constellations can be found in between the brighter stars of Ursa Major, Leo, and Gemini: Lynx and Leo Minor, two wild cats hunting among the menagerie of animal-themed northern star patterns!

Lynx, named for the species of wild cat, is seen as a faint zigzag pattern found between Ursa Major, Gemini, and Auriga. Grab a telescope and try to spot the remote starry orb of globular cluster NGC 2419. As it is so distant compared to other globular clusters - 300,000 light years from both our solar system and the center of the Milky Way - it was thought that this cluster may be the remnants of a dwarf galaxy

consumed by our own. Additional studies have muddied the waters concerning its possible origins, revealing two distinct populations of stars residing in NGC 2419, which is unusual for normally-homogenous globular clusters and marks it as a fascinating object for further research.

Leo Minor is a faint and diminutive set of stars. Its "triangle" is most noticeable, tucked in between Leo and Ursa Major. Leo Minor is the cub of Leo the Lion, similar to Ursa Minor being the cub to the Great Bear of Ursa Major. While home to some interesting galaxies that can be observed from large amateur scopes under dark skies, perhaps the most intriguing object found within Leo Minor's borders is Hanny's Voorwerp. This unusual deep-space object is thought to be a possible "light echo" of a quasar in neighboring galaxy IC 2497 that has recently "switched off." It was found by Hanny van Arkel, a Dutch schoolteacher, via her participation in the Galaxy Zoo citizen science project. Since then, a few more intriguing objects similar to Hanny's discovery have been found, called "Voorwerpjes."

Lynx and Leo Minor are relatively "new" constellations, as they were both created by the legendarily sharp-eyed European astronomer Johannes Hevelius in the late 1600s. A few other constellations originated by Hevelius are still in official use: Canes Venatici, Lacerta, Scutum, Sextans, and Vulpecula. What if your eyes aren't quite as sharp as Johannes Hevelius – or if your weather and light pollution make searching for fainter stars more difficult than enjoyable? See if you can spot the next Voorwerp by participating in one of the many citizen science programs offered by NASA at science.nasa.gov/citizenscience! And of course, you can find the latest updates and observations of even more dim and distant objects at nasa.gov.



Map of the sky around Lynx and Leo Minor. Notice the prevalence of animal-themed constellations in this area, making it a sort of celestial menagerie. If you are having difficulty locating the fainter stars of Leo Minor and Lynx,

don't fret; they are indeed a challenge. Hevelius even named the constellation as reference to the quality of eyesight one needs in order to discern these faint stars, since supposedly one would need eyes as sharp as a Lynx to see it! Darker skies will indeed make your search easier; light pollution, even a relatively bright Moon, will overwhelm the faint stars for both of these celestial wildcats. While you will be able to see NGC 2419 with a backyard telescope, Hanny's Voorwerp is far too faint, but its location is still marked. A few fainter constellation labels and diagrams in this region have been omitted for clarity.

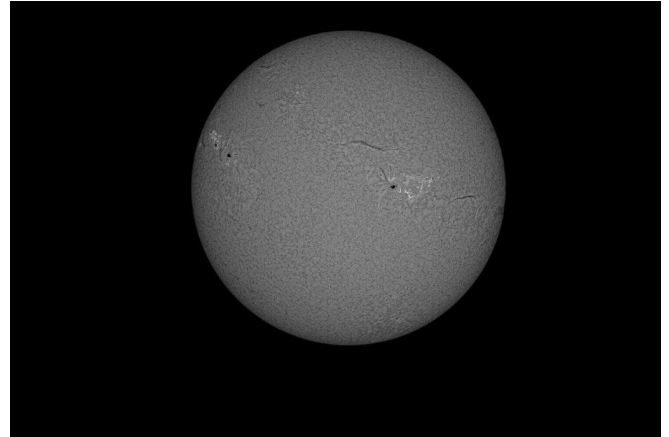
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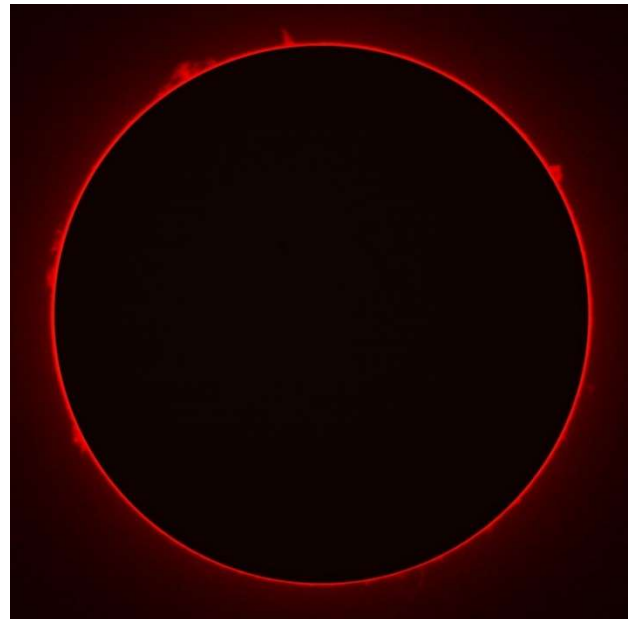
Hanny's Voorwerp and the neighboring galaxy IC 2497, as imaged by Hubble. Credits: NASA, ESA, W. Keel (University of Alabama), and the Galaxy Zoo Team Source: hubblesite.org/content/news-releases/2011/news-2011-01.html

PICTURES BY HAC MEMBERS

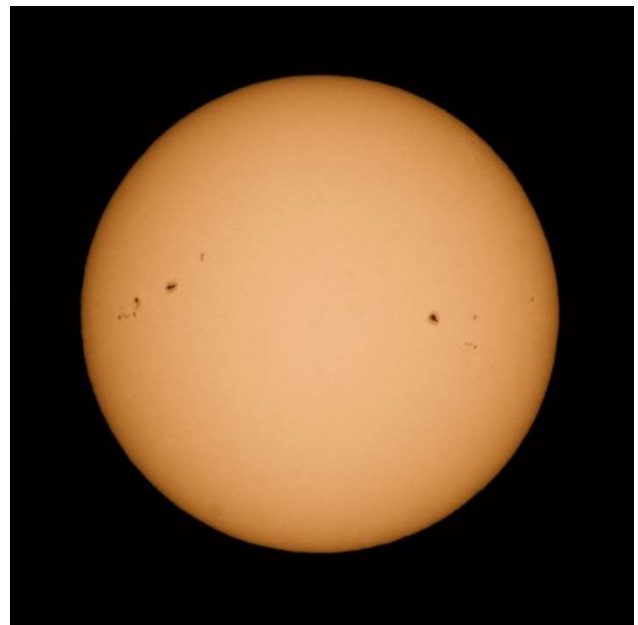
SUN IN H-ALPHA BY DAVID ROEMER



SOLAR PROMINENCES BY JD MADDY



SUNSPOTS BY JD MADDY





HAC AT KARCHNER CAVERNS APR 2 BY KAREN MADTES



HAC AT KARCHNER CAVERNS APR 2 BY TED FORTE



CLUB OFFICERS AND CONTACTS

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

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

Starizona <http://starizona.com/>

HAC Apr-May 2022 Calendar of Events

SU	MO	TU	WE	TH	FR	SA
3 Apr	4 Saturn-Mars 0.4 degrees	5	6	7 Patterson Public Night 7:30PM	8	9  12:48PM
10	11	12	13	14	15 HAC Meeting 7PM Room A102	16
17  12:55AM 	18	19	20 Youth Group at Patterson, 7pm start.	21 Earth Day Vet Park 10A-2P	22 Earth Day Lyrid Meteors	23  4:56 AM Swap Meet Patterson 10a-2p Lyrid Meteors
24	25	26	27	28	29	30  1:28 PM Jupiter Venus Conjunction
May 1	2	3	4	5 Patterson Public Night 7:30PM Eta Aquariid Meteors	6 Eta Aquariid Meteors	7 Astronomy Day Sierra Vista Library 10a-3p Eta Aquariid Meteors
8  5:21 PM 	9	10	11	12	13 HAC Meeting 7PM Room A102	14
15  9:14 PM	16	17	18	19	20	21 
22  11:43 AM	23	24 Mars, Jupiter, and Moon	25	26	27	

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