



AUGUST 2018

NIGHTFALL

A PUBLICATION OF THE HUACHUCA ASTRONOMY CLUB

PRESIDENT'S NOTES

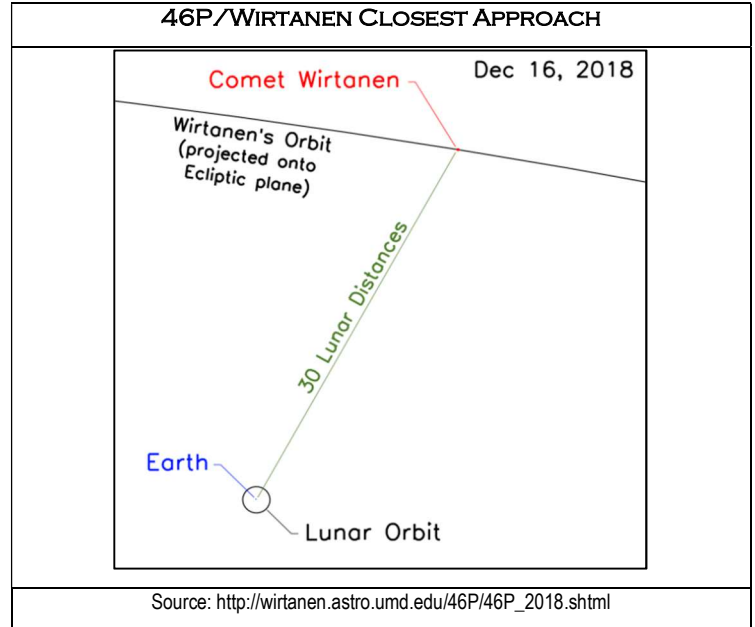
METEORS, PLANETS, AND YES A COMET

It is August for goodness sake. Do not leave your telescope out unattended; we are still in the monsoon season. Do, however, continue getting your equipment ready when clear night skies return. I'm working on cabling at my observatory. I'm always trying something different -- cameras or telescope configurations -- so the observatory is usually a rat's nest of wire. Power cables, old style serial and USB, run everywhere, so down time is a chance to prune back and simplify. It's a good thing we get the monsoons every year. However, in case there is a good break in the clouds around August 11 to 13, do go out in the late evening to dawn for the Perseid meteor shower. There will be a slim moon, but in a dark spot you should still get a good tally of shooting stars for your late-night efforts.

Planets Mars, Saturn, and Jupiter are ready for your attention every night. Catch Jupiter first before it sinks too low in the west. While you're over there look for Venus as well. From August 13 through to the 22nd, Venus reaches its greatest elongation from the Sun as seen from Earth for this apparition. It will be low in the west after sunset, but telescopes will show Venus' disk as half-illuminated, a great time to view the planet. Try color filters to see if any pattern can be seen in the cloud tops.

Mars is on its way back away from us but still very close and very big. If you want to remember your best view of Mars in a particular telescope, bring it out now and focus it on Mars. My latest reports still have a dust storm covering the planet. However, I have glimpsed the ice at the pole from time to time.

If you have a gathering of friends and neighbors, do view Saturn and change them into astronomy nuts. Saturn is usually the object that people remember and consider as the one thing that drew them into the hobby of astronomy.



Lastly: a comet is coming! I know that phrase sends chills of possible disappointment down your spine, mine too, but this one isn't getting the comet of a lifetime treatment. It will probably be quite dim (maybe naked eye bright) but get very close to Earth allowing the pros to get looks at the nucleus and inner coma. So, it's going to be a science-focused comet that may also be bright enough for we amateurs to contribute. The comet, named 46P/Wirtanen, is the third and last comet in the 4*P Coma Morphology Campaign we heard about early this year. Bad weather and dim comets didn't allow me to contribute to the cause with the last two comets, but I'll try again with Wirtanen. This will be a winter visitor but it is not too early to begin planning. Here's a website about the comet and campaign with links to get you everywhere you need to go. http://wirtanen.astro.umd.edu/46P/46P_2018.shtml

Now get out there, stare, and share.

WELCOME OUR NEW MEMBERS

Juan Rhinehart of Sierra Vista joined the club at the July meeting. Welcome to the club, we are glad you joined.

AT THE AUGUST MEETING

The August meeting of the Huachuca Astronomy Club will be held in the Student Union Building at Cochise College 901 N. Colombo Avenue, Sierra Vista at 7 pm on Friday August 10, 2018. There will be three short presentations. David Roemer will discuss the imaging equipment used by HAC members. Ted Forte will deliver an update on the OSIRIS REx asteroid sample return mission and after the break, Glen Minuth will continue his series of mini presentations and describe the mechanics of the Hohmann transfer orbit.

PATTERSON OBSERVATORY EXTENSION UPDATE

The construction of the Patterson Observatory addition is progressing on schedule and should be complete in mid-September. At this writing, the building is framed and ready for electrical and plumbing installation. B-R Constructors of Huachuca City submitted their first monthly progress report on 30 July and was at that time approximately 37% complete. The addition, that will add restrooms, a kitchenette and a storage closet to the facility is made possible by a bequeath from the David Patterson estate.

The observatory is closed for the monsoon months. The next open house public observing session will be Thursday, September 13, 2018 at 7 pm.

SCHOOL FIELD TRIPS TO THE PATTERSON OBSERVATORY

The University South Foundation provides funding to encourage local schools to schedule field trips to the University of Arizona, Sierra Vista campus. These three-hour weekday events include visits to both the Patterson Observatory and the Discovery Gardens. All schools, public, private and home school groups, are eligible for mini grants designed to pay the cost of bus transportation and provide a lunch or snack. Educators can apply for the grant on line: <https://www.universitysouthfoundation.com/grant-application>

Volunteer HAC members are needed to host the Patterson portion of the events. We need solar scope operators (bring your own or operate one of the observatory's telescopes), tour guides, safety monitors, and speakers. Everyone is welcome and your help is greatly appreciated. Please get involved if you can. Even if you can just be there to help corral the kids and help keep everyone safe your assistance will be of great value. The fall schedule has already started filling up and we anticipate a great deal of interest in the program. We need all the help we can get. Please contact Ted Forte if you have questions or to volunteer.

COMING IN NOVEMBER: DR. SETH SHOSTAK

The Huachuca Astronomy Club is teaming with the University South Foundation to sponsor a talk by Dr. Seth Shostak of the SETI Institute. This special public talk will be held in the Student Union at Cochise College on Monday November 5, 2018 at 7 pm. The event is free and open to the public and we hope to see HAC members well represented, so please plan on attending. Dr Shostak is a

world- famous astronomer, lecturer, and researcher whose name is synonymous with the search for extraterrestrial intelligence.

Seth claims to have developed an interest in extraterrestrial life at the tender age of ten, when he first picked up a book about the Solar System. This innocent beginning eventually led to a degree in radio astronomy, and now, as Senior Astronomer, Seth is an enthusiastic participant in the Institute's SETI observing programs.

In addition, Seth is keen on outreach activities: interesting the public – and especially young people – in science in general, and astrobiology in particular. He's co-authored a college textbook on astrobiology, and has written three trade books on SETI. In addition, he's published more than 400 popular articles on science including regular contributions to NBC News MACH, gives many dozens of talks annually, and is the host of the SETI Institute's weekly science radio show, "Big Picture Science."

DINE UNDER THE STARS FUNDRAISER

Mark your calendar for the Dine Under the Stars fundraiser on Saturday October 20. Dine Under the Stars is the major fundraiser of the University South Foundation, the owner of the Patterson Observatory. The event is a fun night of stargazing and entertainment that features a catered dinner by Texas Roadhouse with appetizers provided by Café Roka and dessert provided by La Casita. It is held adjacent to the Patterson Observatory under a circus tent. Master of ceremonies Sherriff Mark Daniels will be orchestrating the evening's activities which includes live music by Desert Fever, a dance exhibition by Alma Dolores Dance Studio, a talent demo by Miss Sierra Vista and more. There will be a silent auction, a 50-50 raffle and door prizes. Come celebrate the Foundation's 30th anniversary and help support the Patterson Observatory and the University of Arizona, South.

Use of the Patterson Observatory is one of the great benefits of being a HAC member. The club and the Foundation have a long history of mutually beneficial cooperation to operate the observatory as a community service. HAC member Ted Forte serves as the club's representative on the Foundation's board of directors and as the volunteer director of the observatory.

Your purchase of a Dine Under the Stars ticket (\$50 per adult) will not only help the Foundation provide scholarships to UA South students but also helps Ted fulfil his obligation to sell his quota of tickets. He will be selling tickets at an upcoming meeting, please consider purchasing one.

We also need HAC volunteers to operate the observatory and set up scopes during the event. While your ticket purchase is greatly appreciated, you don't have to have a ticket to participate at the observing event, so come on out and enjoy the festive night.

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SPACE PLACE ARTICLE AUGUST 2018

THE BEST METEOR SHOWER OF THE YEAR

BY JANE HOUSTON JONES AND JESSICA STOLLER-CONRAD

If you're a fan of meteor showers, August is going to be an exciting month! The Perseid meteor shower is the best of the year, and in 2018, the peak viewing time for the shower is on a dark, moonless night—perfect for spotting meteors.

The best time to look for meteors during this year's Perseid shower is at the peak, from 4 p.m. EDT on Aug. 12 until 4 a.m. EDT on the Aug. 13. Because the new Moon falls on the peak night, the days before and after the peak will also provide very dark skies for viewing meteors. On the days surrounding the peak, the best time to view the showers is from a few hours after twilight until dawn.

Meteors come from leftover comet particles and bits from broken asteroids. When comets come around the Sun, they leave a dusty trail behind them. Every year Earth passes through these debris trails, which allows the bits to collide with our atmosphere and disintegrate to create fiery and colorful streaks in the sky—called meteors.

The comet that creates the Perseid meteor shower—a comet called Swift-Tuttle—has a very wide trail of cometary dust. It's so wide that it takes Earth more than three weeks to plow all the way through. Because of this wide trail, the Perseids have a longer peak viewing window than many other meteor showers throughout the year.

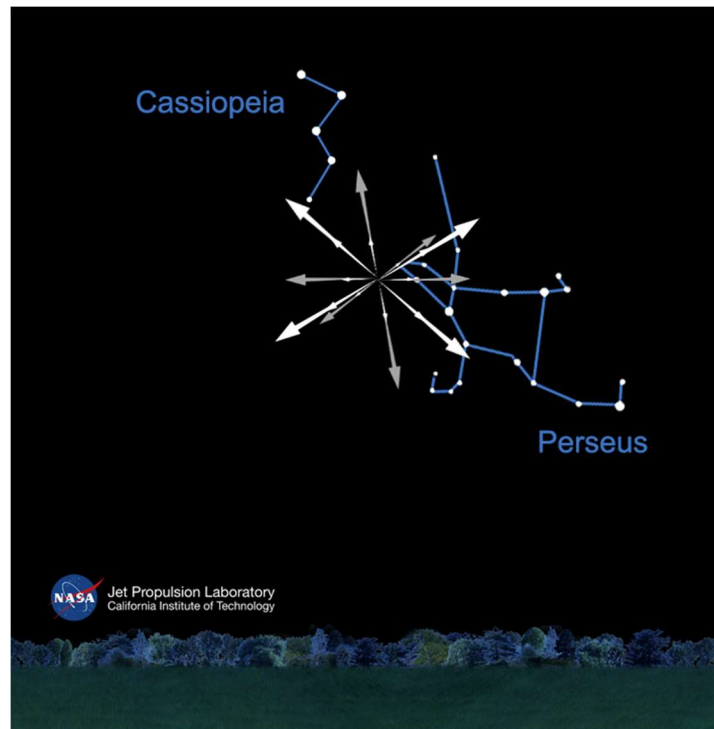
In fact, this year you should be able to see some meteors from July 17 to Aug. 24. The rates of meteors will increase during the weeks before Aug. 12 and decrease after Aug. 13. Observers should be able to see between 60 and 70 meteors per hour at the shower's peak.

The Perseids appear to radiate from the constellation Perseus, which is where we get the name for this shower. Perseus is visible in the northern sky soon after sunset this time of year. Observers in mid-northern latitudes will have the best views.

However, you don't have to look directly at the constellation Perseus to see meteors. You can look anywhere you want to; 90 degrees left or right of Perseus, or even directly overhead, are all good choices.

While you're watching the sky for meteors this month, you'll also see a parade of the planets Venus, Mars, Jupiter and Saturn—and the Milky Way also continues to grace the evening sky. In next month's article, we'll take a late summer stroll through the Milky Way. No telescope or binoculars required!

Catch up on all of NASA's current—and future—missions at www.nasa.gov



Caption: The Perseid meteor showers appear to radiate from the constellation Perseus. Perseus is visible in the northern sky soon after sunset this time of year. Credit: NASA/JPL-Caltech

PICTURES FROM HAC MEMBERS

VDB 126 AND MANY LYND'S DARK NEBULAE

BY GLEN SANNER





Will also sell pieces individually

Contact Rhonda and Terry Taylor at (520) 366-2378 or by email at twrl2@yahoo.com. Or See Craigslist at <http://sierravista.craigslist.org/bar/4523742100.html>

For Sale: 127mm, f7.5 ED Triplet Explore Scientific refractor (like new) tube assembly

Asking \$1400.00.

Or will sell complete system with Celestron CGEM equatorial mount with autoguider and all equipment ready for astrophotography for \$3,100.00.

Contact Bob Kepple at 520-366-0490.

WANT ADS

For Sale: Meade 10" 2120 OTA with HTMC

I bought it on Cloudy Nights from a guy in Wickenburg, had the secondary professionally cleaned at Starizona in Tucson. The OTA comes with either a Celestron 1.25 visual back or a 2" rotating visual back, an adjustable focus finder as shown in the picture, and a Vixen style dovetail bracket. Of course, there is also a front cover.

Asking \$500

Contact Carl Swanson at (480) 600-7353 or cswanson@gotssky.com

For Sale: Meade 10" LX200 classic telescope

In very good condition, with tripod, 120v AC and 12v DC power converters with 25' power cords, dew shield, 8x50 finder scope, electric focuser, piggy back bracket, and soft sided carrying case. Also includes a set of Meade CCD color filters, Meade CCD 3.3 focal reducer and CCD variable T-adaptor. Plus some other equipment.

Asking \$ 1,800.

Contact Bob Stroxtile at strox@ssvecnet.com or call 520-249-0875.

For Sale: Pier Tech electric telescoping pier with Lati-wedge made for the latitude of Sierra Vista

All the hardware, bolts, nuts, washers and plates are with the pier. Pier Tech can make new legs for it to make it correct for anywhere in the world. The pier and wedge have never been used and the only time the pier was out of the box was to take the photos. New today, the pier and wedge are \$3,400. Asking \$2,800.

Contact Bob Stroxtile at strox@ssvecnet.com or call 520-249-0875.

For Sale: Meade Starfinder 8" Reflector Telescope

Will sell at a very reasonable price. Included are a Telrad Finder, Filters, and additional Lenses.

Contact Mr. Jim Moses at (520) 803-0913 or by email jjmoses2@gmail.com

For Sale: Celestron Celestar 8 inch S/C Deluxe - \$1200.

CLUB OFFICERS AND CONTACTS

President: David Roemer **Vice President:** Bill Howard
Secretary: Bert Kelher **Treasurer:** Ted Forte
Past President: Bob Gent

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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 Aug - Sep Calendar of Events

| SU | MO | TU | WE | TH | FR | SA |
|--|---|--|----|--------------------------------------|---|---|
| 5 Aug | 6 | 7 | 8 | 9 | 10 Hac Meeting Student Union | 11  2:58AM Perseid meteors |
| 12 Perseid meteors | 13 Perseid meteors peak | 14 Perseid meteors | 15 | 16 | 17 Venus eastern elongation | 18  12:49AM |
| 19 | 20 | 21 Saturn 2° south of moon | 22 | 23 | 24 | 25 |
| 26  4:56AM Mercury western elongation | 27 | 28 Mars Stationary | 29 | 30 | 31 | 1 Sep |
| 2  7:37 PM | 3  LABOR DAY | 4 | 5 | 6 | 7 St. David H.S. at Patterson 9am- Noon | 8 Member Star Party |
| 9  11:01 AM | 10 | 11 | 12 | 13 Patterson Public Night 7 pm | 14 HAC Meeting Student Union | 15 |
| 16  4:15 PM Mars perihelion at | 17 Saturn 2 ° S of moon | 18 Gather Homeschool Grp at Patterson 9 am to noon | 19 | 20 | 21 Venus greatest brilliancy | 22 Autumnal Equinox 6:54 PM |
| 23 | 24  7:52 PM | 25 | 26 | 27 | 28 | 29 |
| 30 | 1 Oct | 2  7:37 PM | 3 | 4 | 5 |  |

All event times MST. Join Haclist to keep up to date with all of the Huachuca Astronomy Club events
Send an email to: haclist-subscribe@yahoo.com

SAVE THE DATE:

[Kartchner star Party October 13](#)

[Dine Under the Stars October 20](#)

[Seth Shostak Talk November 5](#)