



IO - August 2023

Eugene Astronomical Society, PO Box 591, Lowell, OR 97452

www.eugeneastro.org

Annual Club Dues \$25

President: Andrew Edelen 618-457-3331

Secretary: Randy Beiderwell 541-342-4686

Additional Board members:

Dan Beacham, Ken Martin, Robert Asumendi.

EAS is a proud member of The Astronomical League



Next Meeting Thursday, August 17th, 7:00 p.m.

Planetary Imaging

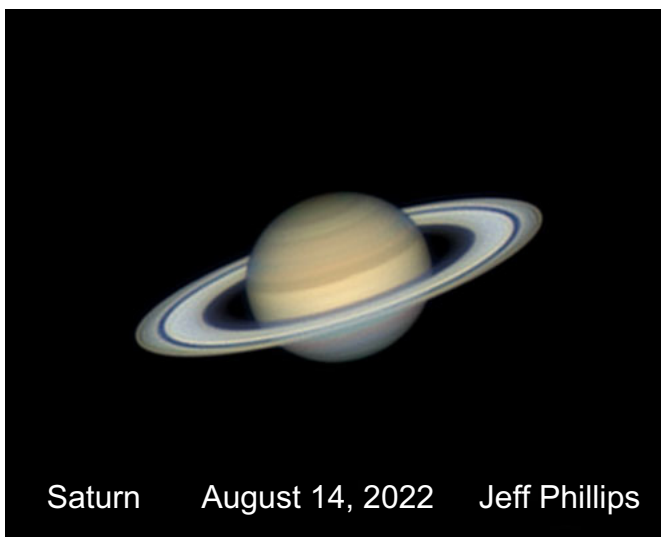
by Jeff Phillips

For our August meeting, Robert Asumendi will give our “What’s Up” presentation, and Jeff Phillips will give a talk about imaging.

Robert practically reinvented the slide show medium with his previous January talk on open clusters, so expect to enjoy his “What’s Up” as well. Will “Eyey” return to indicate the relative attractiveness of the objects visible in late summer? Only Robert knows.

Jeff’s presentations are always exciting and informative, too. About this talk, Jeff writes: “I’ve always enjoyed looking at the planets. Mars and Jupiter in particular can change from one night to the next. Watching Mars’s polar caps shrink or watching dust storms swell gives the impression of looking at a living world. Being able to photograph these worlds has taught me how to get the best views out of my telescope. I want to share some of my pictures, and also share some ideas that I’ve learned about how to get the best views from your own telescope.”

Jeff’s photos have been published in *Sky & Telescope* magazine and compare favorably with those of Christopher Go and Damian Peach, the most well-respected planetary photographers of our time. Come learn how Jeff does it, and see some of his fabulous photos.



Welcome New Members

We have several new members this month: Colleen Emmenegger, Karen Fruhbauer, Enzo Carlos, Chris White, and our two telescope winners from our Dexter star party, Madelyn Landes (winner of the 6" Dobsonian) and Harrison Garcia (winner of the 4.5" Starblast). Welcome to the club! We hope to see you all at our star parties and meetings and on our email discussion list.

July Meeting Report

Open Discussion

We did round up a speaker for our July meeting — Dan Beacham was scheduled to give a talk on go-to telescopes — but Dan fell ill the day of the meeting so we wound up having a free-for-all discussion instead. Amy Baker reports:

“It went really well! Probably a dozen people showed up, and Tim Lanz had thrown together a What’s Up right before the meeting, so we actually had something on the screen! Andy went more in depth for each of the questions people had, which everyone loved. We met a few new members, who seem like they really want to be involved and active in the group. And even though I’m not really a doll person, I got to clue one of the new members in to the existence of Astrophysicist Barbie, which he immediately bought for his daughter before the meeting was even over (I already have one).”

After the meeting, a few club members went up to our Amphitheater site on Eagle’s Rest Road and had a grand night out under the stars. It was definitely a good night. And Dan is back on his feet and doing fine.



Next First Quarter Friday: August 25th

Our July 28th star party was a great success. We had plenty of scopes and plenty of guests, a welcome relief after last month’s crickets. There were no skaters on the reservoir this time, so things were pretty much back to normal. The Moon was waxing gibbous (82% lit) and pretty much dominated the sky, but Venus, Mercury, and Regulus put on a good show for people willing to trek down to the north end of the reservoir where they could be seen low in the west. Venus was way down on the horizon but showed a distinct crescent shape in binoculars or a telescope. Mercury was higher up and only $1/4^\circ$ from Regulus, so they made a nice pair when they peeked out through gaps in the long, wispy strands of cloud and smoke in the west. The temperature was shirtsleeve warm all night, the bugs left us alone, and our guests were full of appreciation and interesting questions. You couldn’t ask for a better star party.

Our next First Quarter Friday star party will be August 25th. First Quarter Fridays are laid-back opportunities to do some observing and promote astronomy at the same time. Mark your calendar and bring your scope to the College Hill Reservoir (24th and Lawrence in Eugene) and share the view with whoever shows up. Here’s the schedule for the remainder of 2023. Star parties start at dusk or 6:00, whichever is later. (8:15 on 8/25)

August 25 (Moon 68% lit)
November 17 (Moon 24% lit)

September 22 (Moon 53% lit)
December 22 (Moon 84% lit)

October 20 (Moon 38% lit)



Photo © by Jerry Olton

Dexter Dark Sky Star Party Report

Our July 15th dark sky star party at Dexter State Park was one of our best ever. We had a couple of dozen telescopes and probably ten times that many guests. The weather forecast was pretty iffy and we were all sweating the hours before dark, but the predicted clouds never materialized and we had great sky all night long. A thin crescent Venus proved to be the early crowd pleaser, followed by all the usual summer suspects as the sky grew darker. Most of us stayed until 12:30ish, with a few die-hards hanging on well after that.

Lights from Dexter weren't much of a problem this year due to the growth of trees, but headlights from arriving and departing vehicles were a nuisance. A note for next year: It might be a good idea to put up some signage at the entrance to the parking lots or have a big poster at the welcome table asking people to aim their headlights away from the observing field when leaving.



Some of the telescopes and guests early on before it got dark. Photo © by Jerry Olton.

The club's flagship "Hippie Dob" made it to the star party this year. Kathy Oltion, who ran the scope most of the night, reports: "The Hippie Dob made quite an impression! Everyone loved the bright, happy colors. Some of the targets we hit were, of course, Venus and Mars, then Mizar and Alcor, M5, M13, M11 (the Wild Duck cluster), the Ring Nebula, Saturn, and just for fun, a random spot of the Milky Way somewhere in Cygnus. At one point, early in the viewing, we had a little boy, maybe 4 or 5, look through the scope and exclaim 'I can see the stars! They're so bright!' and immediately reach out and hug the tube. His mother was aghast and scolded, 'I told you not to touch the telescope!' to which he replied, 'But I love it!' I assured her and the little boy that I could easily find the target again, and that his reaction is the kind that we love to see."

The telescope give-away went well, with a large crowd of kids eagerly anticipating the announcement of the winners. The 4.5" Orion Starblast went to Harrison Garcia, while the 6" Orion Skyquest Dobsonian went to Madelyn Landes. Both winners



First sighting of Venus by the Hippie Dob contingent.
Photo © by Sylvia Collazo.



4.5" Starblast winner Harrison Garcia (rear) and friends Lucas Mason-McGinnis and Teo Mason-McGinnis.



6" Orion Skyquest Dobsonian winner Madelyn Landes and family.

seemed quite pleased, as you can see from the photos.

Andy Nowlen and Mike McAdams brought their astrophotography equipment and gave live demonstrations of “EAA” (Electronically Assisted Astronomy). They attached cameras to their telescopes and fed the images to laptop computers that stacked individual frames to build up better and better images over time. The results were stunning to say the least. This is a new and very welcome addition to the party.

Many thanks to all our volunteers who helped out with the welcome table, with the telescope giveaway, and with all the other logistics of putting on a star party. Many thanks also to everyone who brought a telescope, and to everyone who just came to enjoy the view. You all helped make this a night to remember.

It was a great star party. Let’s do it again next year!



An example of Mike McAdams’s EAA imaging. M101 with the supernova in the lower left arm. This is a 9-minute stack.
Photo © by Mike McAdams.



Andy Nowlen’s EAA image of NGC 6992, the Eastern Veil Nebula. Photo © by Andy Nowlen.

Oregon Star Party Report

Several EAS members made it to the Oregon Star Party this year. We got three great reports back:

Sylvia Collazo (My experience as a first-time attendee):

Thursday evening, I pitched my tent near the back with no nearby neighbors which proved helpful as the area remained pretty quiet all night and allowed me grace when my phone accidentally shone faint white light (generally a big no-no, but I got no complaints). I had my 4.5" Starblast and the 6" Dobsonian club scope, but I spent a good while just taking in the multitude of stars and very visible Milky Way dancing across the sky. I visited Robert who invited me to tag along and check out Mel's 30" telescope (where we saw an incredible view of the Ring Nebula) and his neighbor, Howard, who also had a 30"

telescope with night vision (allowing us to see an amazing view of the Pillars of Creation and the Seahorse Nebula). Before leaving, Jerry had encouraged me to attempt the OSP Beginner's List so when I returned to my spot, I took on the challenge. I cannot begin to express the joy I felt finding my first galaxy, M31, at 1 o'clock in the morning with my baby scope. (Prior to this, I had only seen it in others' scopes.) I felt I had leveled up as an amateur



The crescent Moon above the OSP observing field as twilight deepens. Photo © by Sylvia Collazo.

astronomer, and after letting that wonderful feeling sink in, I proceeded to explore Andromeda further as well as Cassiopeia and Ursa Major, and closed the night by spotting Jupiter with its four visible moons. I tallied six shooting stars, including one so bright it momentarily illuminated the dark desert.

The bright and very hot sun ensured an early wake-up the following morning. I was grateful for the midday and afternoon winds that helped cool the air, but after an initial exploration of the grounds, I spent time in my tent reading and studying the summer sky map. Having had the opportunity to



Howard Banich shows off his 30" scope (using a mirror made by our own Mel Bartels) at the telescope walkabout.

Photo © by Sylvia Collazo.

intentionally and intensively observe the night before helped me connect to what I had seen with others in earlier months during our star parties and outings to the amphitheater. (There were a lot of “aha’s” and “that’s where that is” happening in my head.) I also joined Mel’s walkabout where we had an opportunity to check out some really cool telescopes. When night came, I continued my exploration and excitedly found objects on (and off) my list: M22, M24, M25, M20 (Trifid Nebula), M21, M13 (Hercules Globular Cluster), M92, NGC 7538 (Lagoon Nebula or Bubble Nebula), NGC 6530, NGC 457 (Owl Cluster), and NGC 7789 (Caroline’s Rose). I decided to give my one eye a break and trekked over to Robert’s binoculars, Magic and Heart, where we viewed more fun objects including the Veil Nebula as well as the Heart and Soul Nebulae. (I also saw six more shooting stars.)

Saturday brought clouds near the horizon which made their way across the sky. A threat to many at OSP, we saw a number of people leave the grounds that day. Perhaps it is my naivety, but I thought the clouds were lovely, even if they did present challenges to our night viewing. That evening, I spotted M81 (Bode’s Galaxy) and M82 (Cigar Galaxy), M3, and M101 (Pinwheel Galaxy) before my tiny red flashlight gave out. After an exhaustive and unsuccessful search for my backup (which later appeared deeply buried in my fancy-schmancy, space-themed fanny pack), I decided to forgo the challenge and simply enjoy the sky for what it was — simply gorgeous. I later joined a fellow attendee — another first-timer at OSP — who had a new Celestron Nexstar and was playing with its viewing features, and then moved on to Robert’s awesome space binoculars.

After four days in the desert staring into the heavens, I found myself desperate to re-live the experience after returning home on Sunday, driving out into the darkness of nearby roads late at night just to get a glimpse of the stars again. I can absolutely see how this hobby can be addicting because, despite a lifetime of looking at the day and evening skies, I remain in awe each time I look up. I am so glad to have attended OSP and look forward to returning in the future.

Robert Asumendi (who went as a vendor with his “Magic” and “Heart” binoculars):

I got to OSP Thursday afternoon and stayed through Sunday morning. My daughter Jade came with. Thursday and Friday night had stretches of excellent sky I’m guessing in the 21.6+ SQM range. Also had some haze, smoke, cloud, etc. issues to work around. Saturday was pretty cloudy and hazy, could barely see the star in the Western Veil Nebula to give you some idea.

It was very hot. People were not leaving their tents or RVs much and many left Friday or Saturday instead of staying until Sunday. The shower truck was missed, but the number \$24,000 was passing around camp as the cost of the shower truck so that puts it in some perspective. There were still estimated to be 450 people.

Mel’s telescope walkabout was still well-attended. I didn’t get a chance to see everything because Jade was heat swooned halfway through but I thought the coolest scope was the ballscope with the turn-buckle secondary cage adjustment. 5-gallon bucket for a base was funny.

One vendor — Cloudbreak Optics up in Seattle — had their booth completely demolished by a gust of wind, including both their personal astrophotography rigs. If you’re looking to buy anything they sell in the next couple months (they’re photography focused but have visual equipment too), I’m sure every little bit will help them recoup their losses:

<https://cloudbreakoptics.com/>

The vendor next to my booth was this really amazing 4-volume guide to the NGC objects that shows a photo of each one clearly with its angular dimensions, magnitude, location, and other designations. Spiral bound on 11x17 paper so you can see and use it in the dark. Really nice Portland-area guy named Bhavesh.

<https://pdxastronomy.com/>

The Daystar solar people had a booth. Their rep actually lives in Alsea. The views through their 60mm were really fantastic. I thought a little about how to stick two together. She was excited about the idea of being able to have a different solar wavelength in each eye, which I also think is a pretty neat idea. Very

nice unit the 60mm, if I were buying a solar scope I'd definitely get that:

<https://daystarfilters.com/>

It was tricky to get anyone out to my booth because of the heat but anyone who came by was enthusiastic and everyone who came back at night seemed pretty positive as well. Working hard toward a Sept. 1 launch for Magic.

Being a vendor is being stuck at your booth meeting a lot of great people but unable to participate in activities and wander around the camp much during the day or night. One highlight was getting to peek through Mel Bartels and Howard Banich's new 30 inch telescopes and share views through my binoculars. It was great fun seeing the eye candy of M57 and M16 with both exit pupil and magnification, but also hunting an elusive newly-discovered OIII object outside M24. Can't say I had a positive visual confirmation of the object myself but still so fun to be seeking out brand new astrophotography discoveries using the cutting edge in visual instruments.

Great time! The environmental conditions were challenging for all, but the feeling of being around so many stargazers, the conversations, the cool breeze and the beautiful skies more than made up for it. It was wonderful to see a few EAS members there. As a vendor it's always very hazy and impressionistic experience for me of balancing my needs as an organism, keeping track of my kid, and doing sales pitch and trying to remember any details whatsoever about all the people I met. Kind of a whirlwind. But still great. Will do next year!

Mel Bartels:

Chuck and Judy Detholoff's weather station said 101F on Thurs, 98F on Fri. I struggled to avoid heat exhaustion on Thurs. I left Sat morning after hearing a cloudy/smoky forecast and the prospect of another hot afternoon.

It was an eerie star party. Attendance was like OSP had never stopped for the intervening three years. Yet no Dave Powell story and laser show, no big guest speakers, no showers, no midnight coffee/hot chocolates. I felt bad for Robert in the vendor area. Hardly any foot traffic this year. His binos deserve major attention.

Particularly strange was taking a break at 1am to walk the field. The sound of silence!? Normally roving bands of amateurs would be out visiting scopes for views. Just nothing. Where was everyone? Was there a rapture I missed out on? I have always suspected that a rapture would start at a star party.

I saw our RV neighbor twice briefly. Once he got out during the day to adjust some cabling. I struck up a conversation about his camera. He said it was five years old, a dinosaur that needed replacing (didn't ask how many dollar signs that will be), and then also when he packed up and left on Sat morning, as did many attendees.

He did what many others did: stay up into the darkening sky to make sure equipment worked, then hit the sack. Stayed in his air conditioned RV all day processing the previous night's images. Never stepped outside. Definitely a new way to "amateur astronomer."

I loved the dark skies, better than at my home. My 30 inch was amazing to look through, even competitive with Howard's 30 inch equipped with Night Vision on M16. I even took a break to sit in my chair to enjoy the Milky Way. And that is my main memory: the wonderful views through the scopes in the warm and dark night air.

For automatic delivery of this newsletter every month, and for ongoing discussion of astronomical topics and impromptu planning of telescope outings, join the EAS mail list at www.eugeneastro.org

(Click on the Mailing List link.)

Note that joining the email list does not grant you membership privileges. You must fill out an application and pay dues in order to be a club member.

Constellation of the Month: Scutum

by Andy Edelen

Occupying one of the densest regions of the summer Milky Way, trapped between the gaudier and more-famous constellations of Aquila the Eagle and Sagittarius the Archer, is the small, barely-visible constellation Scutum, the Shield. Ranking 84th out of the 88 constellations in size, and with its brightest star shining only at magnitude 3.8, Scutum makes up in density of impressive deep-sky objects what it lacks in identifiability, and its naked-eye appearance from a dark, rural observing site makes up for its otherwise mundane, subtle star pattern.

Throughout antiquity, Scutum was held to be part of its flashy neighbor to the north, Aquila. Although it had been detached from Aquila by several other cultures — and individual astronomers — it was not until the great Polish astronomer Johannes Hevelius broke off the four brighter stars of the constellation to form *Scutum Sobiescianum*, Sobieski's Shield, that the constellation found footing as a separate entity. The full name refers to King John Sobieski of Poland, who led European troops to victory over the Ottoman Empire at the Battle of Vienna in 1683. (The fact that King John paid to have Hevelius's observatory rebuilt after the Ottomans burned it to the ground may have had something to do with the constellation's name.)

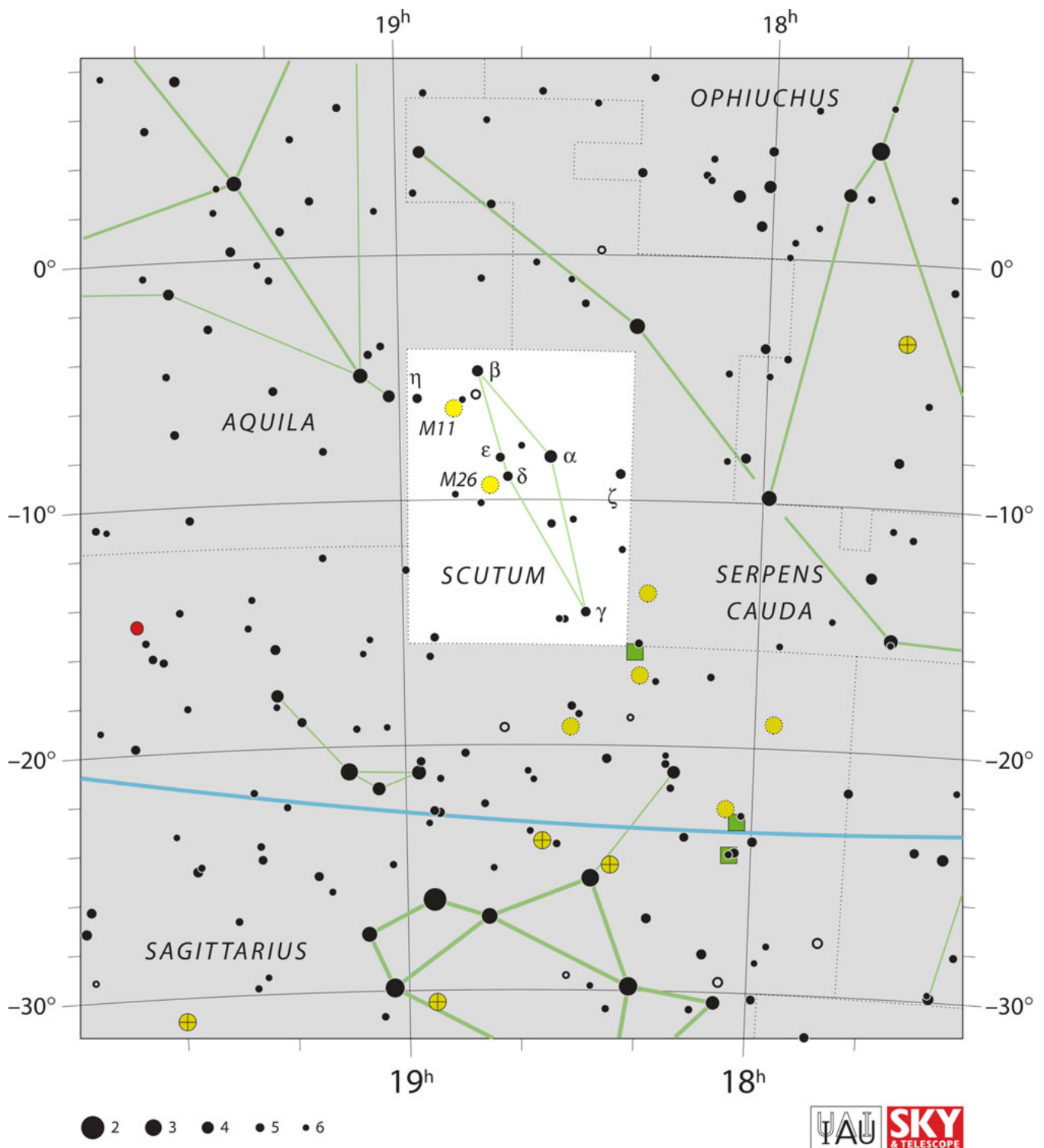
But Scutum wasn't to be established easily; successive astronomers of influence (most of them British) refused to include it in their atlases and catalogues. It was not until the American astronomer Benjamin Gould got around to assigning Greek letter designations to the constellation's brightest stars, in 1879, that the opposition gave up and Scutum took its place as an official constellation.

Scutum's four brightest stars (Alpha, Beta, Gamma, and Delta; just as according to Bayer's intentions) form a narrow diamond pattern about $11^\circ \times 2^\circ$ in size; it takes a dark sky to extract this diamond from the rest of the Milky Way. The constellation's most-noteworthy feature, however, is the great Scutum Star Cloud, a glowing mist of Milky Way some $5^\circ \times 4^\circ$ in extent, a dense region of stars and dispersed gas that appears as a discrete object because it's "framed" by numerous dark nebulae, clouds of silicate dust and organic matter that thread their way through the galaxy's disk. This star cloud — one of several large Milky Way features from Cygnus to Sagittarius — is our naked-eye object for August; it's usually the first portion of the Milky Way that becomes visible as twilight fades from the Northern Hemisphere summer sky.

In binoculars or a telescope, the Scutum Star Cloud is still a remarkable object, spattered with dark nebulosity and small open clusters. If these are your preferred form of stargazing, try to trace out the tendrils of dark nebulosity as they weave through the Cloud; in a telescope eyepiece, the edges of the Cloud are sharply delineated, and it's possible to have half the field of view filled with stars and the other largely devoid of them (especially on the eastern side). But the view of the whole object requires the eyes alone.

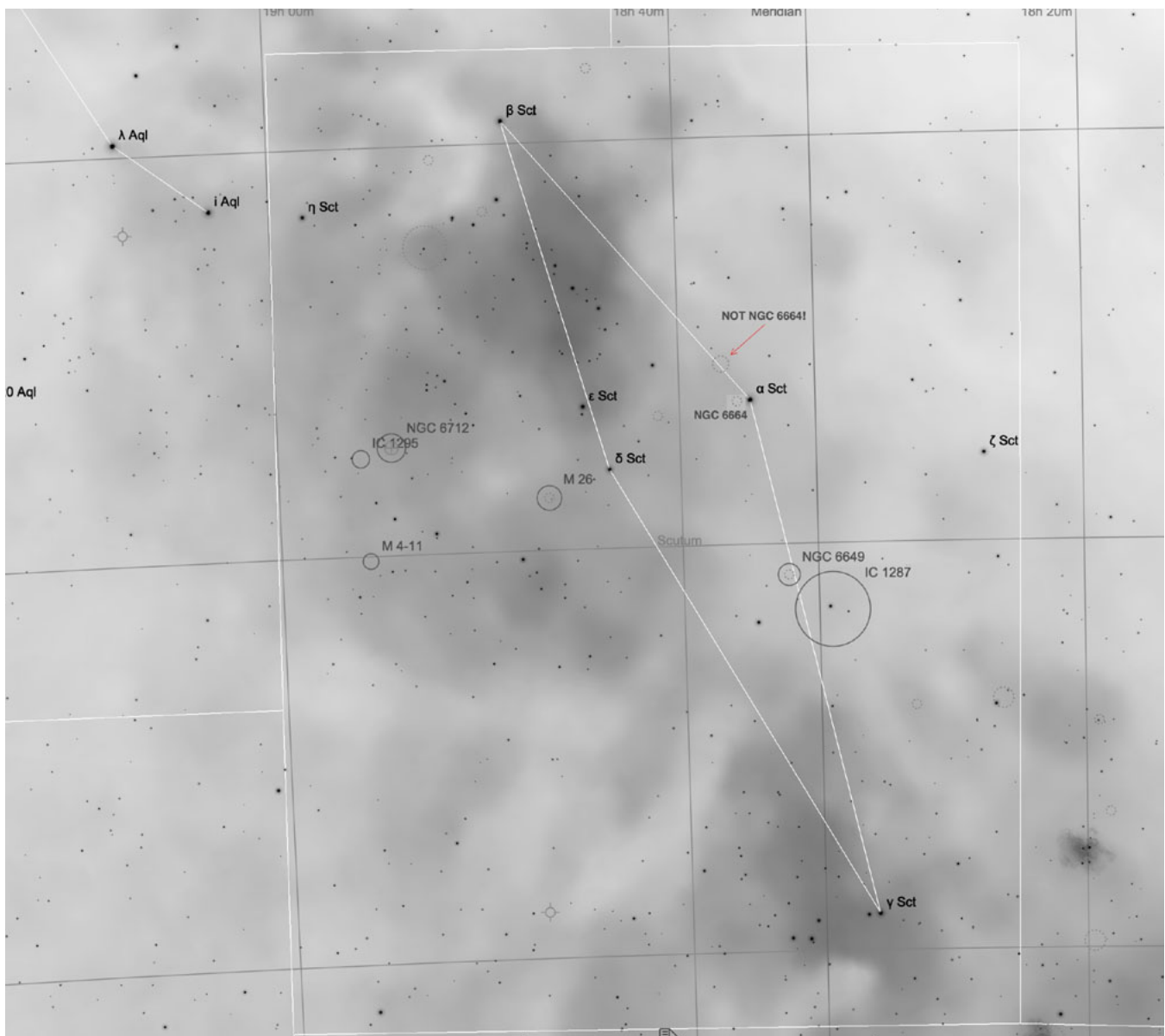
Our actual binocular target for the month is one of the constellation's two Messier objects — Scutum may have the highest Messiers-per-square-degree ratio of any constellation, although I haven't calculated it. It's not the obvious choice, either (M11, the very famous and spectacular Wild Duck Cluster, which every amateur astronomer ought to know and be able to find), because I don't like going the obvious route. No, our binocular target for August is **Messier 26**, the constellation's "other" Messier cluster, which lies $3/4^\circ$ east-southeast of Delta Sct. (Draw a line from Alpha Sct through Delta and extend it another 50% of that distance to find M26.)

M26 isn't breathtaking like M11, but it's a fine object nonetheless, a relatively-forgotten cluster that deserves more scrutiny. Its forty stars, of tenth magnitude and fainter, shine at a combined 8th magnitude and span a quarter of a degree, appearing in binoculars as a tiny, misty haze just south of the much larger Scutum Star Cloud. In my 12.5-inch telescope, I note that the cluster's brightest stars also form a diamond, with a long bar of fainter stars extending to the north. Binoculars may reveal a few stellar points brighter than the background sky, but the actual number of individual stars you see will vary by optics, sky quality, and visual acuity.



Scutum, as seen on modern star charts. Courtesy Sky & Telescope and IAU.

Open clusters are the predominant *bright* class of deep-sky object in Scutum (dark nebulae being the most numerous overall, but generally more difficult to see), and our target for 2-inch scopes this month is a fine example of the class. **NGC 6664** is a “partially resolved cloud” in a 2.4-inch refractor, according to Skiff & Luginbuhl’s *Observing Handbook & Catalogue of Deep-Sky Objects*; the cluster’s listed size of 16' makes it roughly equal in size to M26. Its member stars are all fainter than 10th magnitude, so it’ll take a somewhat-larger telescope to bring the stars into view beyond the cloudy appearance. Overall, there are some sixty stars in NGC 6664, with many of the brighter ones concentrated along the N and E sides of the cluster.



This month's highlighted challenge objects, depicted at 11 PM on August 15th. Note that NGC 6664 is mis-plotted in Sky Safari (from which this image was generated); the correct position is indicated here. The label of IC 1295 overlaps the symbol for NGC 6712. Chart adapted from *Sky Safari 5 Pro*.

A word of caution when looking for NGC 6664: Sky Safari and several other apps and atlases have the cluster's location plotted in the wrong place. Its actual location is 20' east of Alpha Scuti, rather than northeast of Alpha (the chart in this article has it correct).

Amid all of the open clusters in Scutum, there is one globular cluster, and it's not only our target for 4-inch scopes, it's our leaping-off point for a few other targets for this month. **NGC 6712** is in that range of objects that I call the "how did Messier miss it?" class: big and bright enough that Messier should have swept it up, had he been more methodical. As it is, it fell to the redoubtable William Herschel to discover this globular in June 1784.

NGC 6712 is called "The Weird Globular" in the *interstellarum Deep-Sky Atlas*, but I've not been able to find any reason or origin for this nickname, and most of the sites that mention it are German (like the *iDSA* itself); I suppose the nickname itself originated in Europe somewhere. There's not anything really odd about the cluster beyond its shape — it's distinctly non-round, but that hardly seems reason enough to point out its strangeness. The cluster can be found in scopes of the 2-inch class, but it requires larger optics

to really offer a good view; a 4-inch will reveal its globular nature without resolving any of its stars. High power may reveal traces of granularity (coarse texture, as if stars are just beyond resolution) in the cluster's 2.5' halo. The brightest stars in NGC 6712 are 13.3 magnitude, so will require a 6-inch telescope for definite resolution.

NGC 6712 can be tricky to find without a finderscope. It lies a little over a third of the way from Lambda (λ) Aquilae to Gamma (γ) Scuti, but is bright enough that you'll recognize it immediately for what it is.

Within the same field of view as NGC 6712 is our target for 8-inch telescopes, but you may need a filter to *find* it. **IC 1295** is a large planetary nebula, over 1' in diameter and slightly elongated E-W; in anything less than a 10-inch telescope it may require the use of a narrowband nebula or O-III filter to make the nebula's low-contrast annulus visible. (Planetary nebulae that appear donut- or ring-shaped are referred to as *annular*.) The nebula lies 23' east-southeast of NGC 6712, which will dim dramatically with a filter in place to see the nebula. However, once you've seen the nebula with the filter, try observing it without — you may find it much easier once you've used the filter to locate its position. A keen-eyed observer will note two stars superimposed on the nebula's SW edge; users of large telescopes (16"+) may be able to spot the nebula's faint central star.

Those with 10-inch or larger telescopes should drop down 1.25° south-southwest of IC 1295 for an even-more challenging planetary nebula. **Minkowski 4-11**, as its name might indicate, is an obscure little object with a distinct 0.3' disk, making it a better target than many of the dozens of other small planetaries in this region of the sky. With my 12.5-inch scope (Bob the Dob, of course), I noticed the nebula right away after searching for it with my narrowband filter in the eyepiece, and it remained visible even with the filter removed — again, once you've used a filter to find something, see if the object is visible with no filter at all. Several faint stars in the nebula's immediate vicinity may trick the eye into thinking there's more (or less) to the nebula than at first it seems, a strange effect that observers of deep-sky objects quickly become familiar with. Use high power to help darken the sky background and to “move” the offending faint stars away from the nebula for a better view. This little planetary deserves more eyes on it!

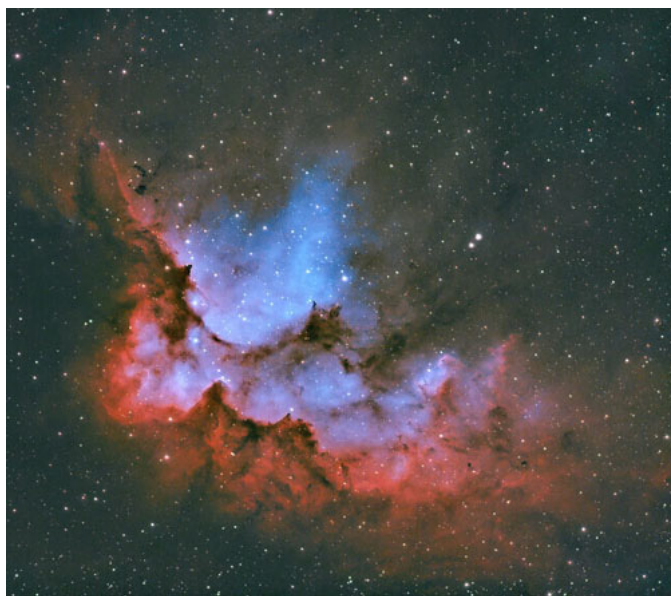
Our remaining targets in Scutum this month lie on the constellation's western side. **NGC 6649** is a lesser-known open cluster in the western-most edge of Scutum's diamond pattern; it lies a third of the way from Alpha Sct to Gamma. The cluster is a fine target for a 6-inch telescope, a 5' diameter pentagon of twenty or so 12th-magnitude and fainter stars that strongly resembles the state of Alaska in the eyepiece; two chains of stars trailing toward the east and west from the pentagon's southern edge correlate to the Aleutian Islands and the Alexander Archipelago respectively. The cluster stands out from the background sky particularly well, due to the presence of many dark nebulae in the region blocking out the fainter Milky Way fields behind it.

2/3° southwest of NGC 6649 is a double star known as Struve 2325, HD 170740, or HR 6946, with 5.8- and 9.3-magnitude components; this double star is easily visible in finderscopes, and is visible to the naked eye under dark sky conditions. It's also the illuminating star for the reflection nebula **IC 1287**, our target for 12-inch and larger telescopes this August. According to Steve Gottlieb, one of the most-accomplished amateur astronomers since Herschel, the nebula is difficult but measures some 15-20' in size (such nebulae are difficult to measure at the eyepiece because they fade out indeterminately). Regular nebula filters (narrowband or O-III) don't usually work on reflection nebulae, because light from these objects is simply bounced off of the grains of silicate dust surrounding the star; there's no gas fluorescence occurring to be enhanced by the filter. The brightest portion of IC 1287 seems to be the portion south of the double star, although fainter sections of the nebula can also be seen extending toward an 8th-magnitude star 14' to the west-southwest of Struve 2325.

Although best known for one of the sky's most spectacular open clusters, there's a lot more to Scutum than at first might meet the eye. From the densest of star clouds to the smallest of planetary nebulae, there's something here for observers of all stripes; this article doesn't even scratch the surface. So the next time you're stuck in Sagittarius looking at objects you've seen before, sweep your optics up north to visit some of the subtle jewels bedecking the celestial Shield. ★

Gallery

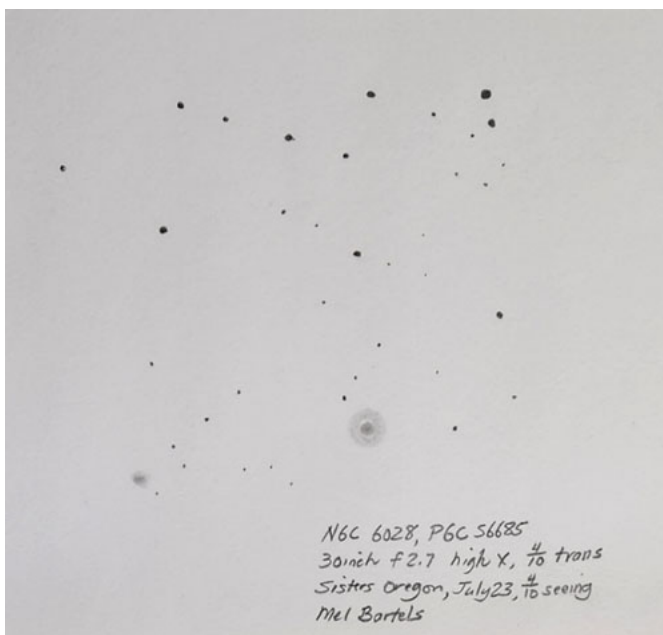
July was another great month for astrophotos. Once again we had so many photos shared on our email list that I couldn't fit them all in here and keep the Io to a reasonable size, so this is just a sample of what was posted there. Make sure you're on our email list to see all the beautiful images that EAS members share with the group. And feel free to zoom in a bit on the ones reproduced here; they'll still be pixel-sharp at 200%.



NGC 7380, the Wizard Nebula, taken through the club's 127mm refractor. Photo © by Andy Nowlen



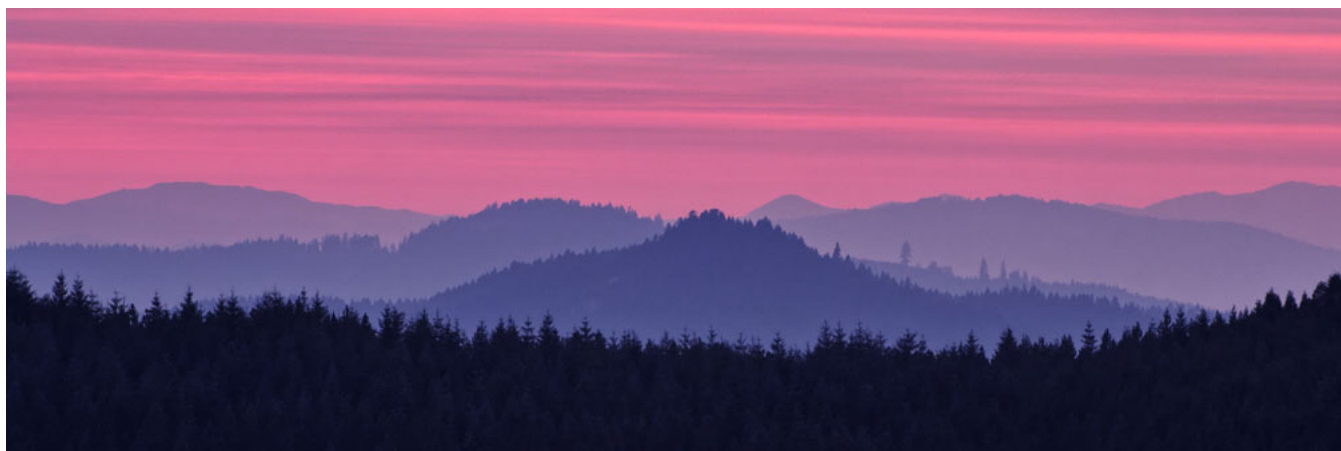
Andy Nowlen got this shot of M27, the Dumbbell Nebula, on the night before he packed up for the Oregon Star Party. Photo © by Andy Nowlen.



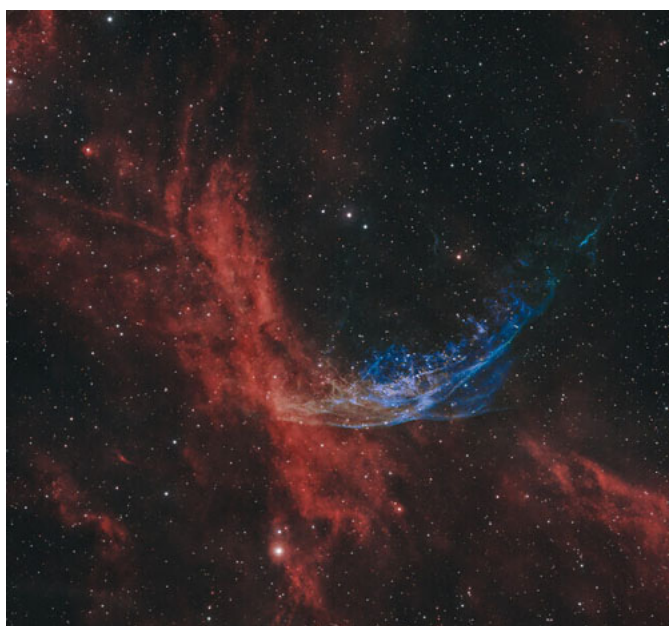
Last month's focus on Hoag's Object got Mel Bartels interested in ring galaxies. Here's his sketch of NGC 6028. Sketch © by Mel Bartels.



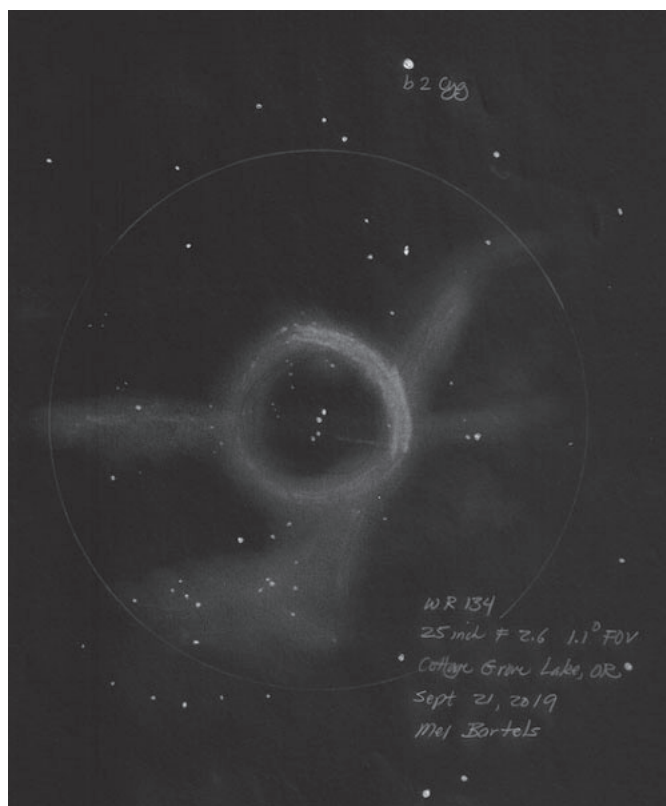
The old Moon in the new Moon's arms on July 13th. Photo © by Alan Gillespie.



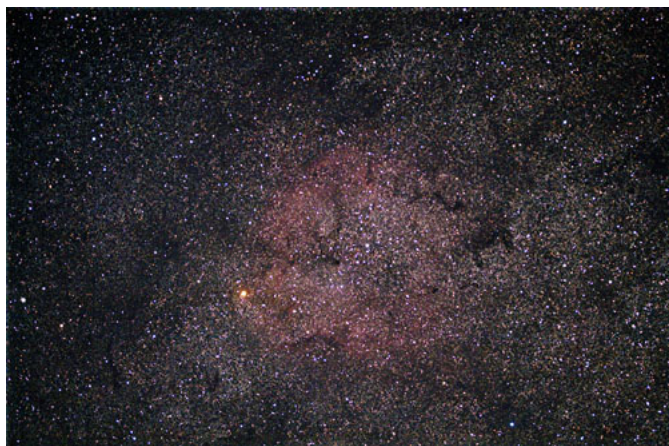
On July 19th, smoke rolled in from the east. Alan Gillespie and Frank Szczepanski tried observing from the Amphitheater site and got smoked out, but not before Alan took this beautiful shot of the western sky. Frank said, "The bizarre sunset looked like one of those Chinese paintings with multiple mountains fading into the distance." Photo © by Alan Gillespie



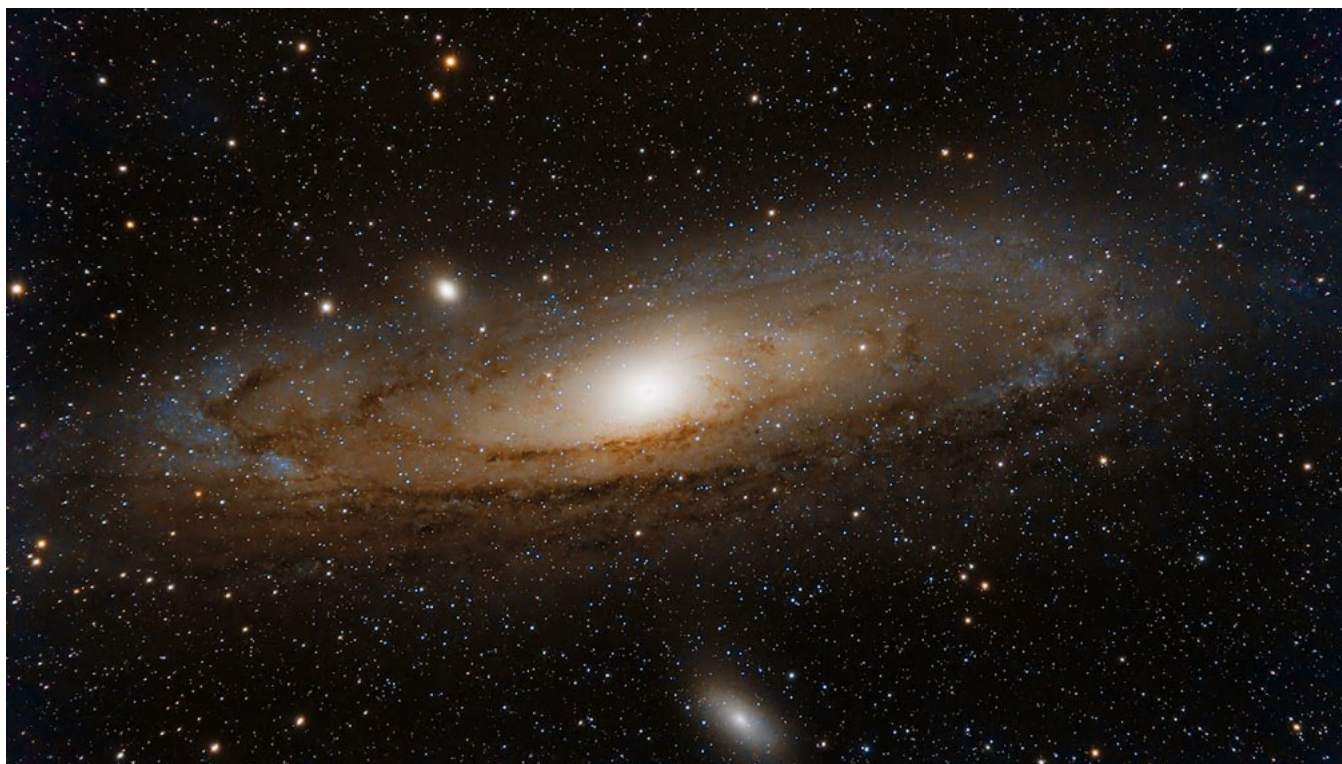
Wolf-Rayet 134, imaged from the Oregon Star Party.
Photo © by Andy Nowlen.



When Mel Bartels saw Andy's image of WR134 at upper left, he wrote "Finally you all imaged an object that I drew!" This is Mel's sketch from September of 2019, using his 25-inch scope. Sketch © by Mel Bartels.



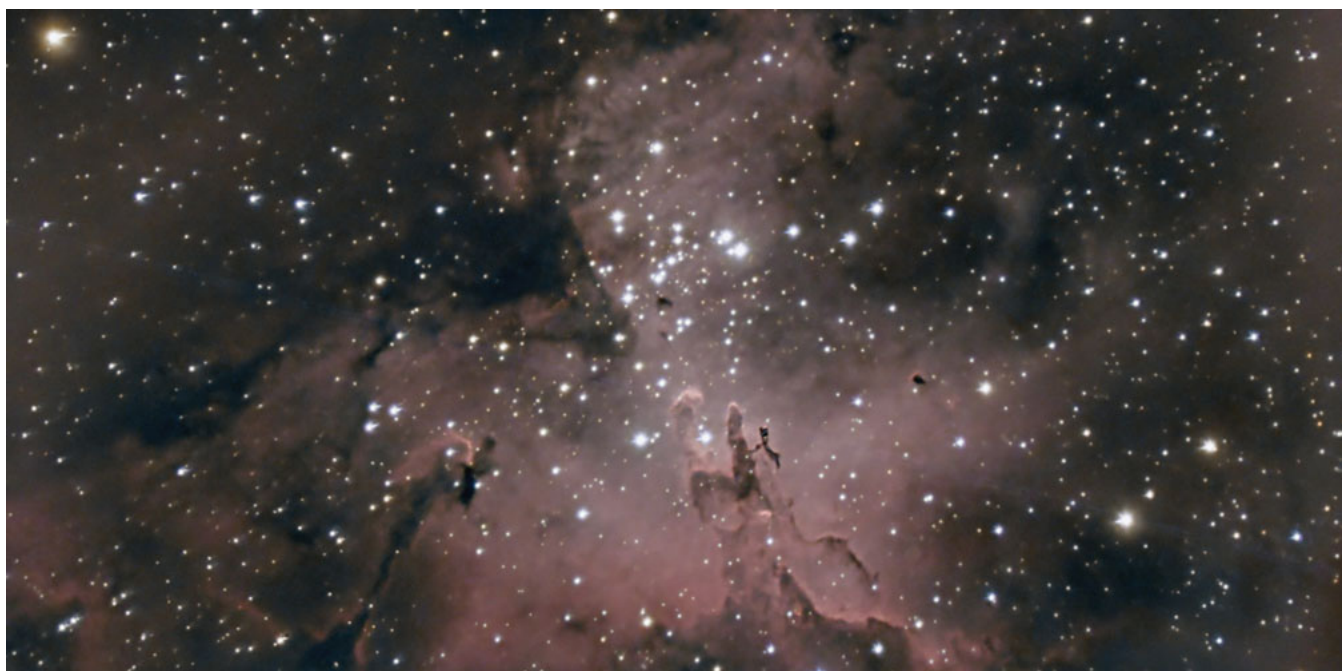
IC 1396, the Elephant Trunk Nebula in Cepheus, with Herschel's Garnet Star to the lower left.
Photo © by Karmin Peterson.



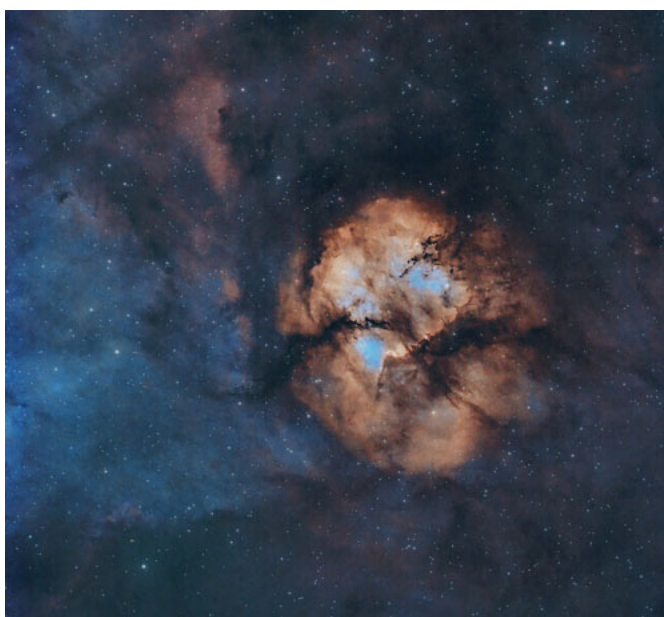
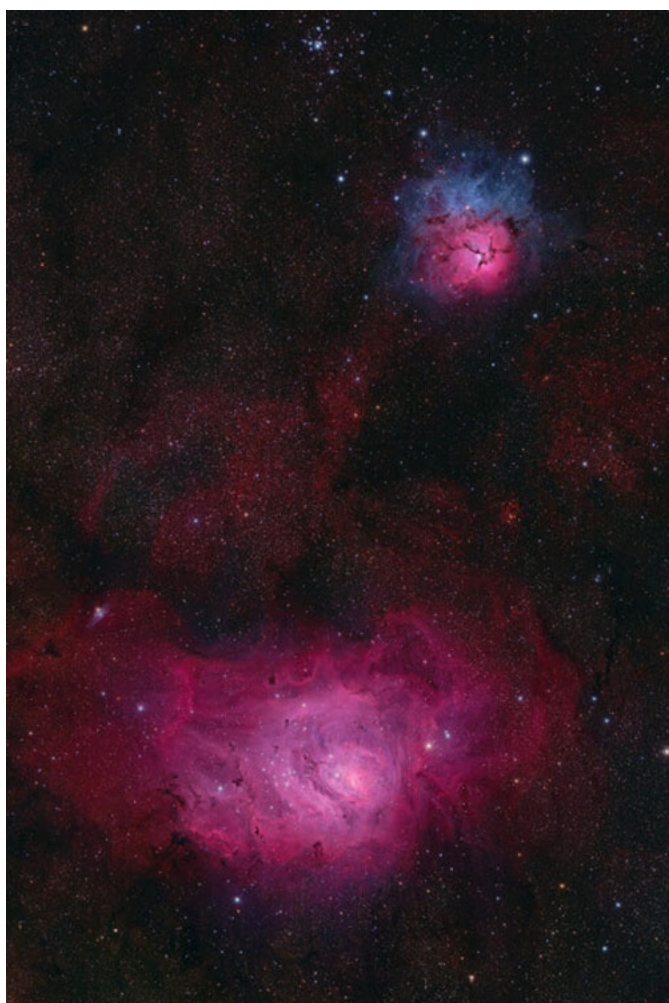
M31, the Andromeda Galaxy, with companion galaxies M32 and M110. Of this and the photo below, Wes Magyar writes, “It’s probably the last Hurrah for my ASI585MC. I Ordered an ASI533MC Pro and should be receiving it soon.” If this is what the old camera can do, we await the results of the new one with bated breath. Photo © by Wesley Magyar.



NGC 6888, the Crescent Nebula, embedded in the Milky Way. Photo © by Wesley Magyar.



M16, the Eagle Nebula, showing the “Pillars of Creation” made famous by the Hubble Space Telescope’s iconic image.
Photo © by Wesley Magyar.



Sharpless 2-124 in Cygnus . Andy Nowlen writes “Some observers call it ‘dim’ while others list it as a ‘bright’ nebula. One imager called this the ‘Almost Nothing Nebula.’ It is rarely imaged, and very seldom written about.”
Photo © by Andy Nowlen.

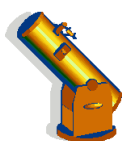
M8, The Lagoon Nebula, and M20, the Trifid Nebula. Mark Wetzel took this wide-field shot on Jly 17th at the Oregon Star Party. Photo © by Mark Wetzel



NGC 7023, the Iris Nebula. Photo © by Mike McAdams.



Van den Berg 152, the Wolf's Cave Nebula (also known as the Star Trek "Doomsday Machine" Nebula) in Cepheus.
Photo © by Mark Wetzel.



Observing in August 2023

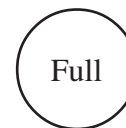


Last Q



New

1st Q



Full

Aug 8, 3:28 AM	Aug 16, 2:38 AM	Aug 24, 2:57 AM	Aug 30, 6:36 PM
Mercury Set: 9:23 PM	Mercury Set: 8:58 PM	Mercury Set: 8:24 PM	Mercury lost in Sun
Venus lost in Sun	Venus lost in Sun	Venus Rise: 5:23 AM	Venus Rise: 4:49 AM
Mars Set: 9:45 PM	Mars Set: 9:24 PM	Mars Set: 9:03 PM	Mars Set: 8:48 PM
Jupiter Rise: 11:48 PM	Jupiter Rise: 11:19 PM	Jupiter Rise: 10:48 PM	Jupiter Rise: 10:25 PM
Saturn Rise: 9:14 PM	Saturn Rise: 8:42 PM	Saturn Rise: 8:09 PM	Saturn Set: 6:20 AM
Uranus Rise: 00:11 AM	Uranus Rise: 11:36 PM	Uranus Rise: 11:05 PM	Uranus Rise: 10:41 PM
Neptune Rise: 10:00 PM	Neptune Rise: 9:28 PM	Neptune Rise: 8:57 PM	Neptune Rise: 8:33 PM
Pluto Set: 4:38 AM	Pluto Set: 4:05 AM	Pluto Set: 3:33 AM	Pluto Set: 3:09 AM

All times Pacific Daylight Time (March 12 – Nov 4, 2023 = UT -7 hours) or Pacific Standard Time (November 5, 2023 – March 9, 2024 = UT -8 hours)

Date	Moon Rise	Moon Set	Twilight Begin	Sun Rise	Sun Set	Twilight End
8/1/2023	21:15	05:27	03:59	06:00	20:36	22:38
8/2/2023	21:46	06:54	04:00	06:02	20:35	22:36
8/3/2023	22:12	08:19	04:02	06:03	20:34	22:33
8/4/2023	22:34	09:40	04:04	06:04	20:33	22:31
8/5/2023	22:55	10:58	04:06	06:05	20:31	22:29
8/6/2023	23:16	12:14	04:08	06:06	20:30	22:27
8/7/2023	23:40	13:28	04:10	06:07	20:29	22:25
8/8/2023		14:41	04:11	06:08	20:27	22:23
8/9/2023	00:08	15:53	04:13	06:09	20:26	22:21
8/10/2023	00:41	16:59	04:15	06:10	20:24	22:19
8/11/2023	01:22	17:59	04:17	06:12	20:23	22:17
8/12/2023	02:11	18:50	04:19	06:13	20:21	22:15
8/13/2023	03:08	19:31	04:20	06:14	20:20	22:13
8/14/2023	04:10	20:04	04:22	06:15	20:18	22:10
8/15/2023	05:15	20:30	04:24	06:16	20:17	22:08
8/16/2023	06:20	20:52	04:26	06:17	20:15	22:06
8/17/2023	07:24	21:11	04:27	06:18	20:14	22:04
8/18/2023	08:27	21:28	04:29	06:20	20:12	22:02
8/19/2023	09:30	21:45	04:31	06:21	20:11	22:00
8/20/2023	10:33	22:02	04:33	06:22	20:09	21:58
8/21/2023	11:38	22:21	04:34	06:23	20:07	21:55
8/22/2023	12:46	22:44	04:36	06:24	20:06	21:53
8/23/2023	13:57	23:12	04:38	06:25	20:04	21:51
8/24/2023	15:10	23:48	04:39	06:26	20:02	21:49
8/25/2023	16:22		04:41	06:28	20:01	21:47
8/26/2023	17:28	00:37	04:43	06:29	19:59	21:44
8/27/2023	18:24	01:40	04:44	06:30	19:57	21:42
8/28/2023	19:08	02:56	04:46	06:31	19:55	21:40
8/29/2023	19:43	04:20	04:47	06:32	19:54	21:38
8/30/2023	20:10	05:46	04:49	06:33	19:52	21:36
8/31/2023	20:34	07:10	04:51	06:34	19:50	21:34

All times are for Eugene, Oregon Latitude 44° 3' Longitude 123° 06'

Items of Interest This Month

- 8/3 Io shadow transit 1:45–3:54 AM.
- 8/7 Tethys shadow transit on Saturn 1:40 AM.
- 8/7 Red Spot transits 00:36 AM on 8th.
- 8/9 Mercury at greatest eastern elongation.
- 8/11 Io shadow transit 10:06 PM–00:16 AM.
- 8/12 Peak of Perseid meteor shower.
- 8/13 Venus at inferior conjunction with Sun.
- 8/13 Europa shadow transit 12:23–2:14 AM. on 14th
- 8/14 Red Spot transits 1:23 AM on 15th.
- 8/18 Very thin crescent Moon within 1° of Mars, visible (maybe) just after sunset.
- 8/19 Io shadow transit midnight–2:10 AM (on the 20th). Red Spot transits 00:31 on 20th.
- 8/24 Moon occults Antares 6:32 PM (in daylight). Reappearance 7:32, still in daylight. It might be possible to spot Antares in a medium-large scope, though. The Moon should be easy enough to find.
- 8/25 First Quarter Friday star party.**
- 8/27 Saturn at opposition (visible all night).
- 8/31 Ganymede transits near Jupiter's S. pole 12:26 AM – 1:27 AM.

