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FLAMING STAR NEBULA
BY JIM POLLOCK

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Next LAS Meeting Thursday February 19 at 6 to 9 pm

Experiences setting up Remote Telescope at Starfront Observatories

by Jim Pollock



Jim will talk about his initial experiences setting up a Celestron 9.25 inch hyperstar telescope at the Starfront Observatories.

Starfront Observatories is located in Rockwood, Texas which is in the hill country of Central Texas. It far from any major city lights and has near Bortle 1 skies. Even so it has fast and reliable internet.

They now have over 600 scopes that have been installed since May 2024.

Location

The meeting will be at 7pm in the First Evangelical Lutheran Church, 803 Third Avenue, Longmont, CO 80501. It will also be available to LAS members on Zoom.

About LAS

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Front Cover: Flaming Star Nebula by Jim Pollock



This little gem lies just NNW of Orion's right shoulder (Bellatrix), and the complex is sometimes referred to as the Strawberry Nebula as well. Because the bright central star, HD 34898, is so powerful (mag 5.8), I took 48 short sub-frames (100 seconds each) to minimize halo effects. That seemed to work, and I was pleased not to have lost too much detail in

the surrounding faint features. The brighter part of the nebula is about 10 l.y. across and 1300 l.y. distant. The red emission elements in this image are known as SH2-263 and are comprised of LBN 866 and 867. The blue reflection elements are labeled solely vdB 38 while the entire complex is Ced 44. Darker elements have several LDN designations.

From DSNM, CDK14 scope, ASI 6200MC color camera, luminance filter, 1.3 hours time on target, FOV about 45 x 30 arc minutes.

Jim

Back Cover: Shrimp Nebula by M. J. Post



The progenitor star of this planetary nebula (PN) in Cassiopeia is plowing through the Interstellar Medium (ISM) in the Perseus Spiral Arm of our galaxy at 480,000 km per hour -133 km per second! As the dead star's expelled gases collide with the ISM along its bottom left boundary they create a bow shock wave that does indeed look like a shrimp. It's 850 light years away.

Stewart Sharpless entered this into his second catalog (dated 1959) as entry #188 because it has a strong H-alpha signature. The Shrimp also has strong OIII and SII signatures, with SII signals being uncommon for PNs. I believe that means that the progenitor star had considerably more mass than our sun, perhaps 6-8 times as much.

The rendition here is using the Hubble palette - SHO - with my SII image appearing as red, H-alpha as green, and OIII as blue. Bob Franke's selective color variations have also been applied. FOV is about 42 x 28 arc minutes. 3 hours exposures for each of the three filters, 11" RASA telescope. ASI 6200MM camera (severely cropped).

M.J. Post

Planets in February

Mercury

Mercury is not visible this month.

Venus

Venus is not visible this month.

Mars

Mars is not visible until this spring.

Jupiter

Jupiter is in constellation Gemini. On the 1st Jupiter is visible from about 5:40 pm until 3:45 am; it is -2.6 magnitude in brightness and the disk is 46 arc sec across. The best time to view is 6:42 pm. On 28th it may be viewed from 6 pm until 2 am; best time is at 2 am. Some good times to view the Great Red Spot are listed in the table below.

Date	Time	Altitude	Date	Time	Altitude
Feb 1	3:13 am	30°	Feb 14	6:50 pm	54°
Feb 1	11:04 pm	72°	Feb 16	12:37 am	47°
Feb 2	6:55 pm	45°	Feb 16	8:38 pm	7°
Feb 4	12:42 am	56°	Feb 18	2:16 am	27°
Feb 4	8:34 pm	64°	Feb 18	10:07 pm	71°
Feb 6	2:21 am	36°	Feb 19	5:58 pm	48°
Feb 6	10:12 pm	74°	Feb 20	11:45 pm	53°
Feb 7	6:03 pm	39°	Feb 21	7:37 pm	67°
Feb 8	11:50 pm	61°	Feb 23	1:24 am	33°
Feb 9	7:42 pm	59°	Feb 23	9:15 pm	73°
Feb 11	1:29 am	42°	Feb 25	10:54 pm	59°
Feb 11	9:20 pm	74°	Feb 26	6:46 pm	62°
Feb 13	3:07 am	21°	Feb 29	12:33 am	39°
Feb 13	10:59 pm	66°	Feb 28	8:24 pm	74°

Saturn

Best time to view Saturn 6 to 7 pm; it is +1.1 magnitude in brightness and the disk is 16 arc sec across.

Uranus

Uranus is visible in the early evening in constellation Taurus. It is +5.7 magnitude in brightness and the disk is 3.6 arc sec across.

Neptune

Neptune is visible in the early evening in constellation Pisces. It is magnitude +7.9 in brightness and the disk is 2.2 arc sec across.

Lunar Phases in February

Feb 1 at 3:10 pm - Full Moon

Feb 9 at 5:44 am - Third Quarter Moon

Feb 17 at 5:02 am - New Moon

Feb 24 at 5:29 am - First Quarter Moon

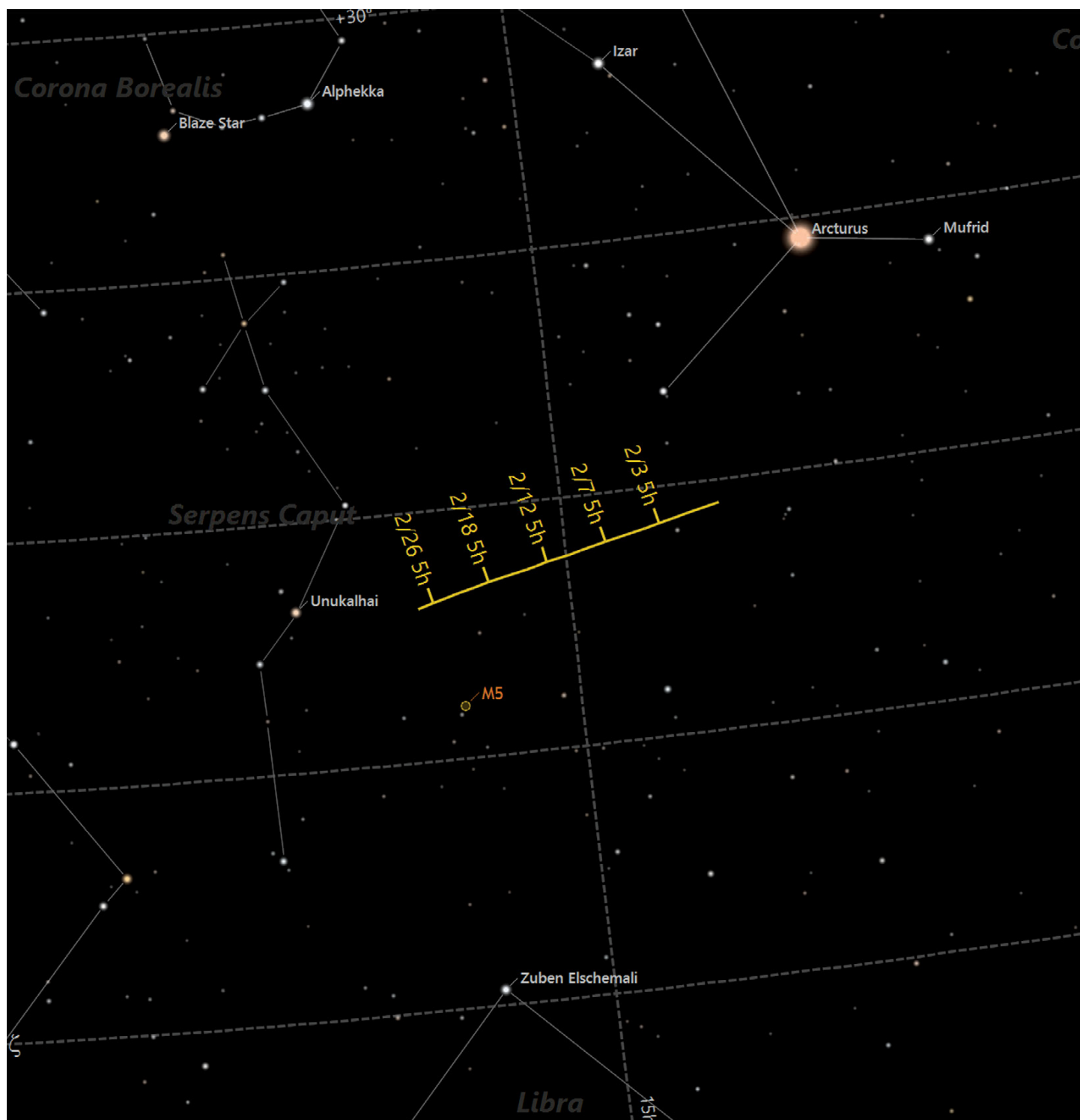
Meteor Showers in February

There are no class 1 meteor showers in February.

Early evening objects for February

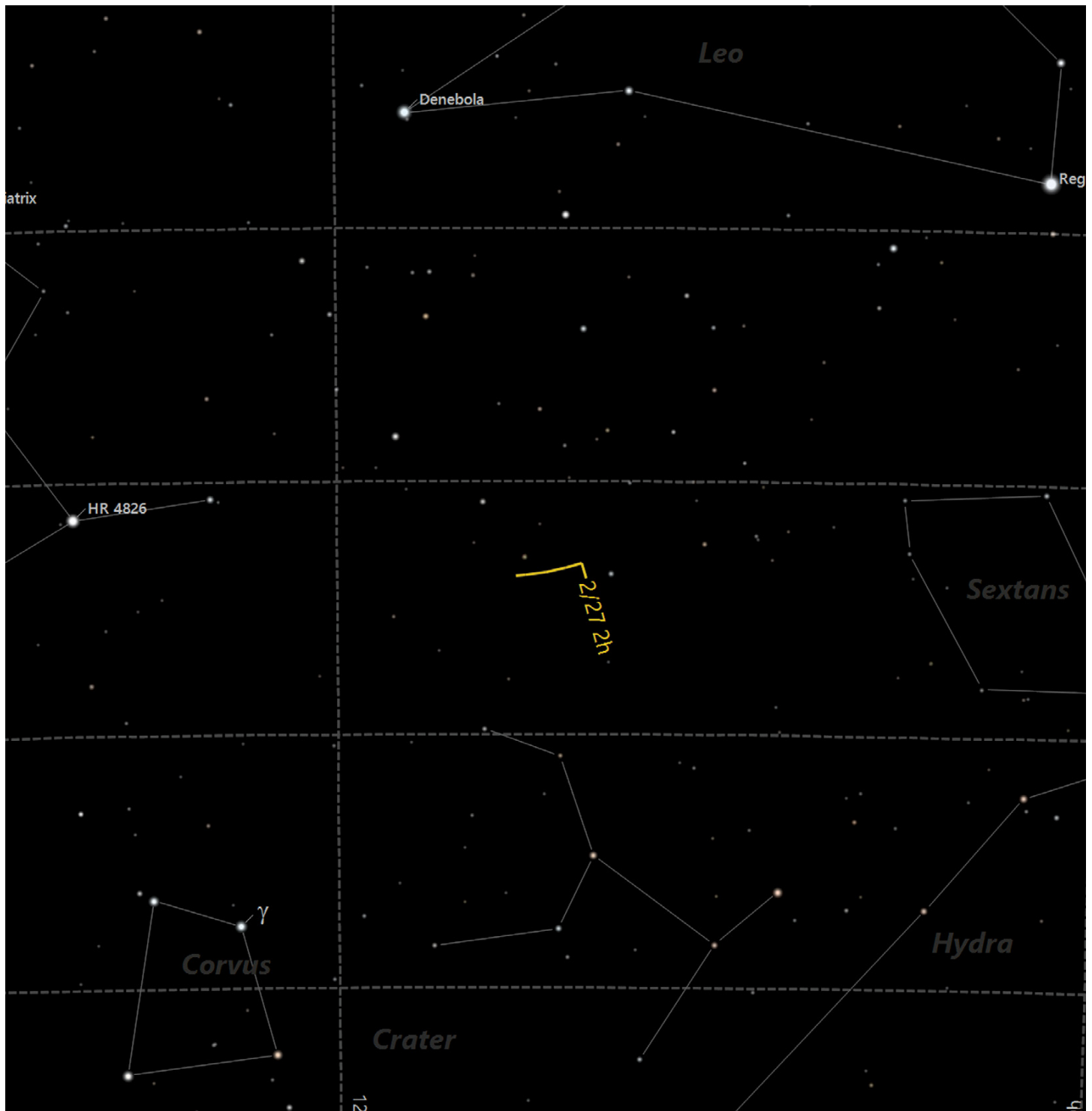
Catalogue	Name	Con- stella- tion	Mag
M 31	Andromeda Galaxy	And	4.3
NGC 7662	Blue Snowball	And	8.6
NGC 40	Bow tie Nebula	Cep	10.7
NGC 1499	California Nebula	Per	5.0
NGC 1535	Cleopatra's Eye	Eri	9.4
M 1	Crab Nebula	Tau	8.4
NGC 2024	Flame Nebula	Ori	unk
Sh 2-190	Heart Nebula	Cas	6.5
NGC 1579	Northern Trifid	Per	unk
NGC 281	Pac Man Nebula	Cas	7.4
NGC 2237	Rosette	Mon	9.0
IC 1848	Soul Nebula	Cas	6.5
IC 418	Spirograph Nebula	Lep	10.7
NGC 1909	Witch's Head Neb	Eri	unk
NGC 784	Barred spiral galaxy	Tri	12.2
NGC 891	Outer Limits Galaxy	And	10.9
NGC 1333	Embryo Nebula	Per	5.6
NGC 1360	Robin's Egg Nebula	For	9.4

Comet 24P / Schaumasse



Date	Optimal time	RA	Dec	Constellation	Magnitude	Size (arc min)
Feb 1	5:37 am	14h43m22.2s	+08°32'06"	Bootes	9.9	5.2
Feb 6	5:24 am	14h54m44.3s	+07°54'53"	Bootes	10.2	5.2
Feb 11	5:12 am	15h04m31.6s	+07°22'29"	Virgo	10.3	5.1
Feb 16	5:07 am	15h12m43.9s	+06°54'37"	Serpens	10.7	5.1
Feb 21	4:58 am	15h19m20.2s	+06°30'48"	Serpens	11.0	5.0
Feb 28	5:11 am	15h25m55.5s	+06°02'50"	Serpens	11.4	5.0

Comet 29P/ Schwassmann-Wachmann



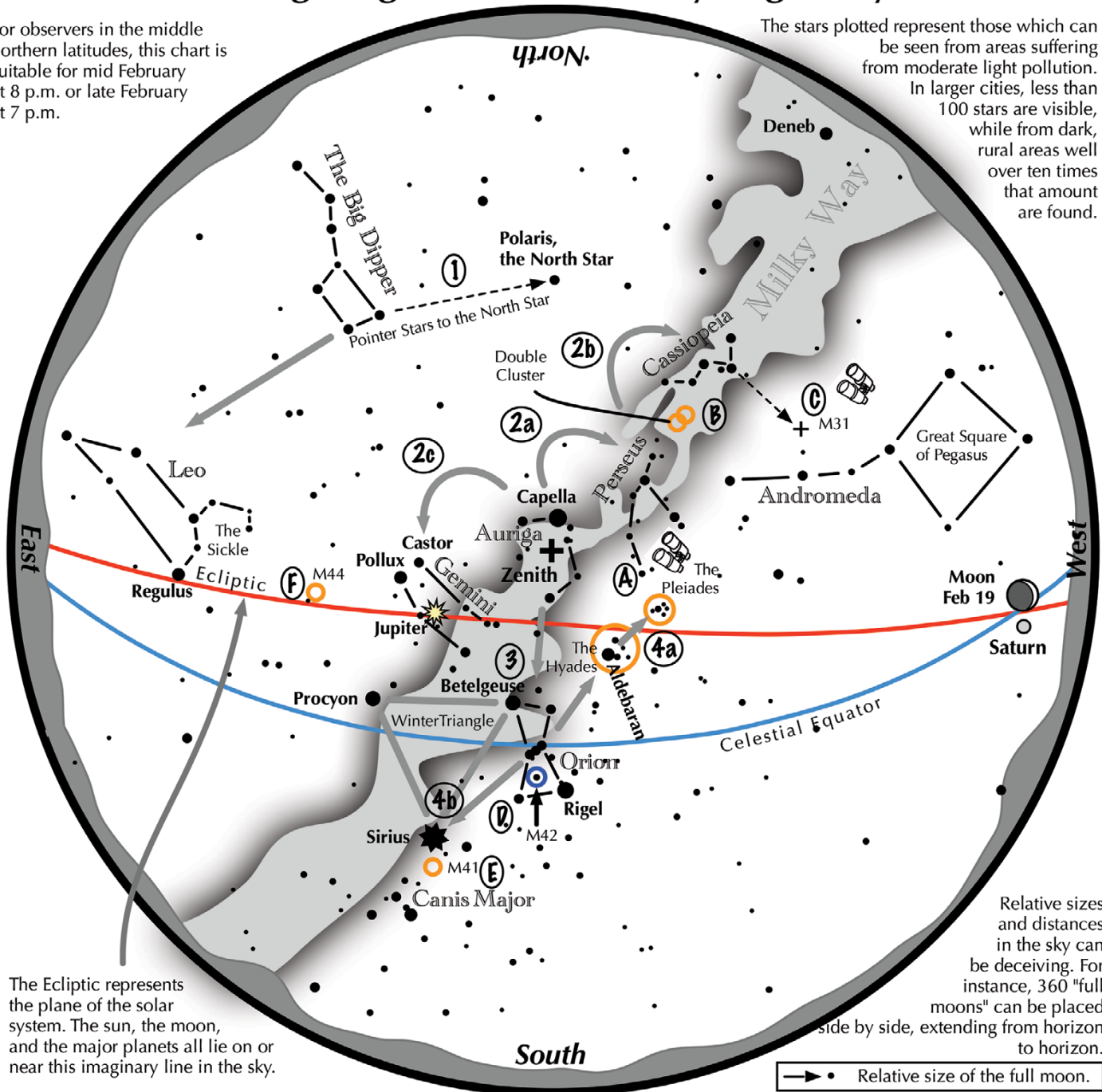
Date	Optimal time	RA	Dec	Constellation	Magnitude	Size (arc min)
Feb 1	4:51 am	11h31m42.3s	-03°51'19"	Leo	12.5	1.8
Feb 6	1:27 am	11h30m16.0s	-03°48'43"	Leo	12.5	1.8
Feb 11	1:59 am	11h28m35.5s	-03°44'27"	Leo	12.5	1.8
Feb 16	1:38 am	11h26m45.9s	-03°38'44"	Leo	12.5	1.8
Feb 21	1:16 am	11h24m48.1s	-03°31'38"	Leo	12.4	1.8
Feb 28	2:06 am	11h21m51.9s	-03°19'37"	Leo	12.4	1.8

Navigating the mid February Night Sky

2026

For observers in the middle northern latitudes, this chart is suitable for mid February at 8 p.m. or late February at 7 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

→ • Relative size of the full moon.

Navigating the February night sky: Simply start with what you know or with what you can easily find.

- 1 Above the northeast horizon rises the Big Dipper. Draw a line from its two end bowl stars upwards to the North Star.
- 2 Face south. Overhead twinkles the bright star Capella in Auriga. Jump northwestward along the Milky Way first to Perseus, then to the "W" of Cassiopeia. Next jump southeastward from Capella to the twin stars of Castor and Pollux in Gemini.
- 3 Directly south of Capella stands the constellation of Orion with its three Belt stars, its bright red star Betelgeuse, and its bright blue-white star Rigel.
- 4 Use Orion's three Belt stars to point northwest to the red star Aldebaran and the Hyades star cluster, then to the Pleiades star cluster. Travel southeast from the Belt stars to the brightest star in the night sky, Sirius, a member of the Winter Triangle.

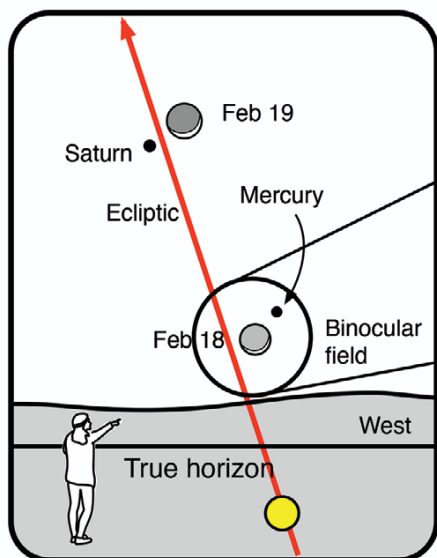
Binocular Highlights

- A: Examine the stars of two naked eye star clusters, the Pleiades and the Hyades.
 B: Between the "W" of Cassiopeia and Perseus lies the Double Cluster.
 C: The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval.
 D: M42 in Orion is a star forming nebula. E: Look south of Sirius for the star cluster M41.
 F: M44, a star cluster barely visible to the naked eye, lies southeast of Pollux.



Astronomical League www.astroleague.org/outreach; duplication is allowed and encouraged for all free distribution.

Mercury and the young moon in the bright evening twilight

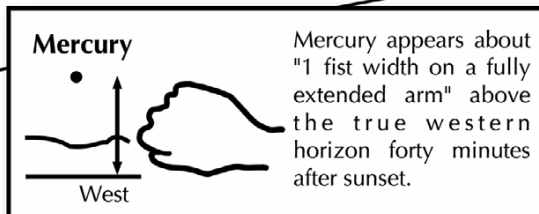
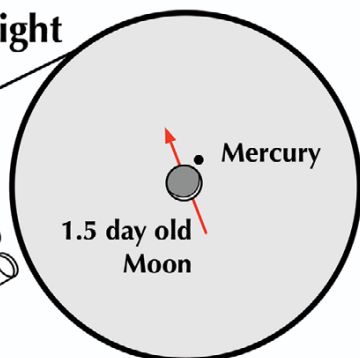


**February 18 and 19, 2026:
Mercury and the young crescent moon
forty minutes after sunset in the west**



- Using binoculars, look on February 18 for the very thin crescent Moon floating either below or left of Mercury. Can you see Earthshine on the Moon's dark side or is the twilight too bright? The Moon may be difficult to spot appearing as a washed-out sliver. Some areas in the extreme southcentral US might see the moon occult the planet before the twilight brightens too much.
- On the next evening, Mercury is in the same place, but the moon has moved higher and next to Saturn.

View through
10x50 binoculars
on February 18



Mercury appears about
"1 fist width on a fully
extended arm" above
the true western
horizon forty minutes
after sunset.

The young moon & Mercury in the evening twilight

Have you ever spotted Mercury? Many stargazers have not. The early evening scene on February 18 presents a good opportunity to catch the elusive little planet. Look low into the western twilight forty minutes after sunset.

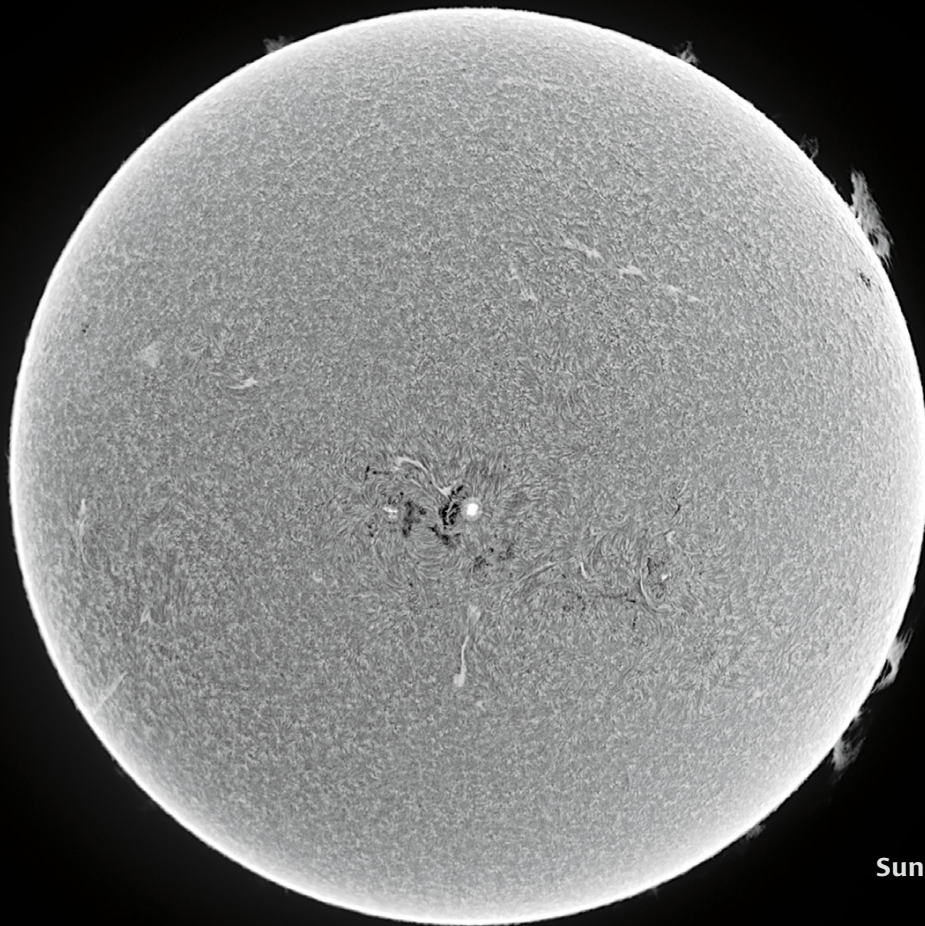


Lunar Crater Schickard by Brian Kimball

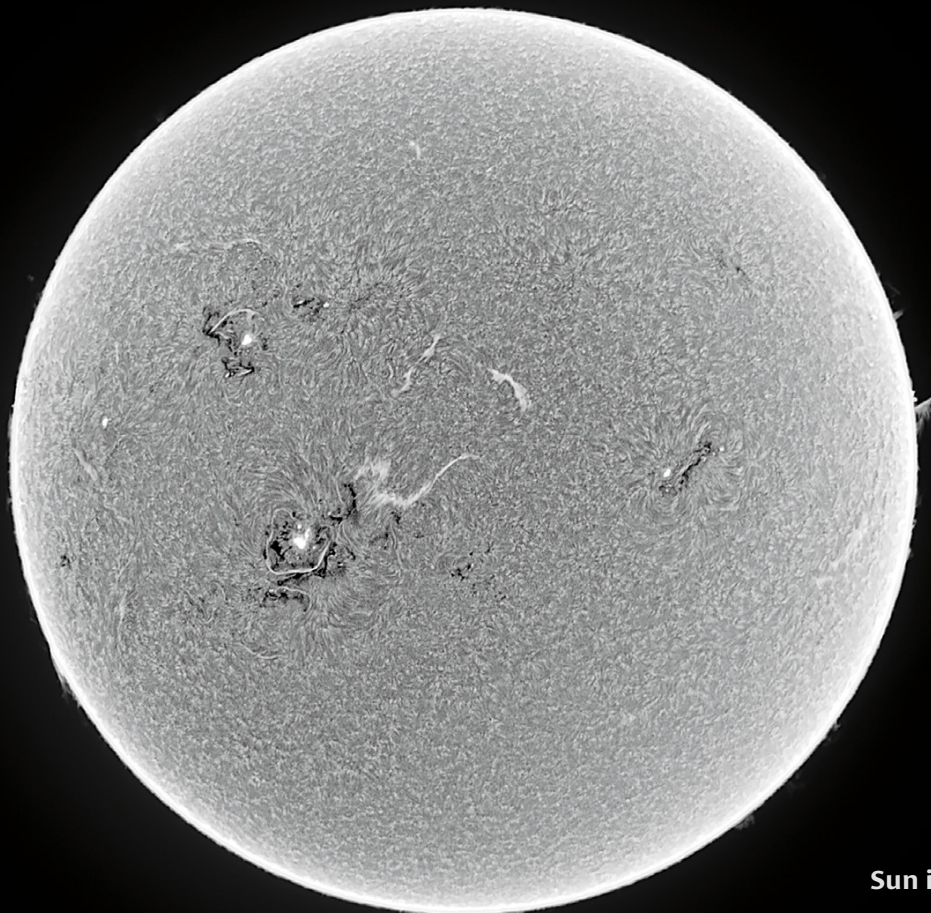
When you look at Schickard you should immediately notice something unusual. Schickard's floor has stripes! It is dark on both the north and south ends, but there is a wide central stripe of lighter material. You are looking at terrain that is made up of two different chemical compositions and is a result of a combination of lighter highland material that was blown in from the formation of the Mare Orientale basin and dark basaltic material (molten lava that welled up from underneath) on the northern and southern portions of Schickard.

Schiller has the appearance of an unusually elongated crater, but there is no process that could create one crater with such an extremely elongated axis; however, there is no indication on the floor of separate impacts. The current belief is that Schiller was created when a flight of three or four projectiles landed at virtually the same moment. The liquefied target zones then blended together to leave no trace of separate impacts.

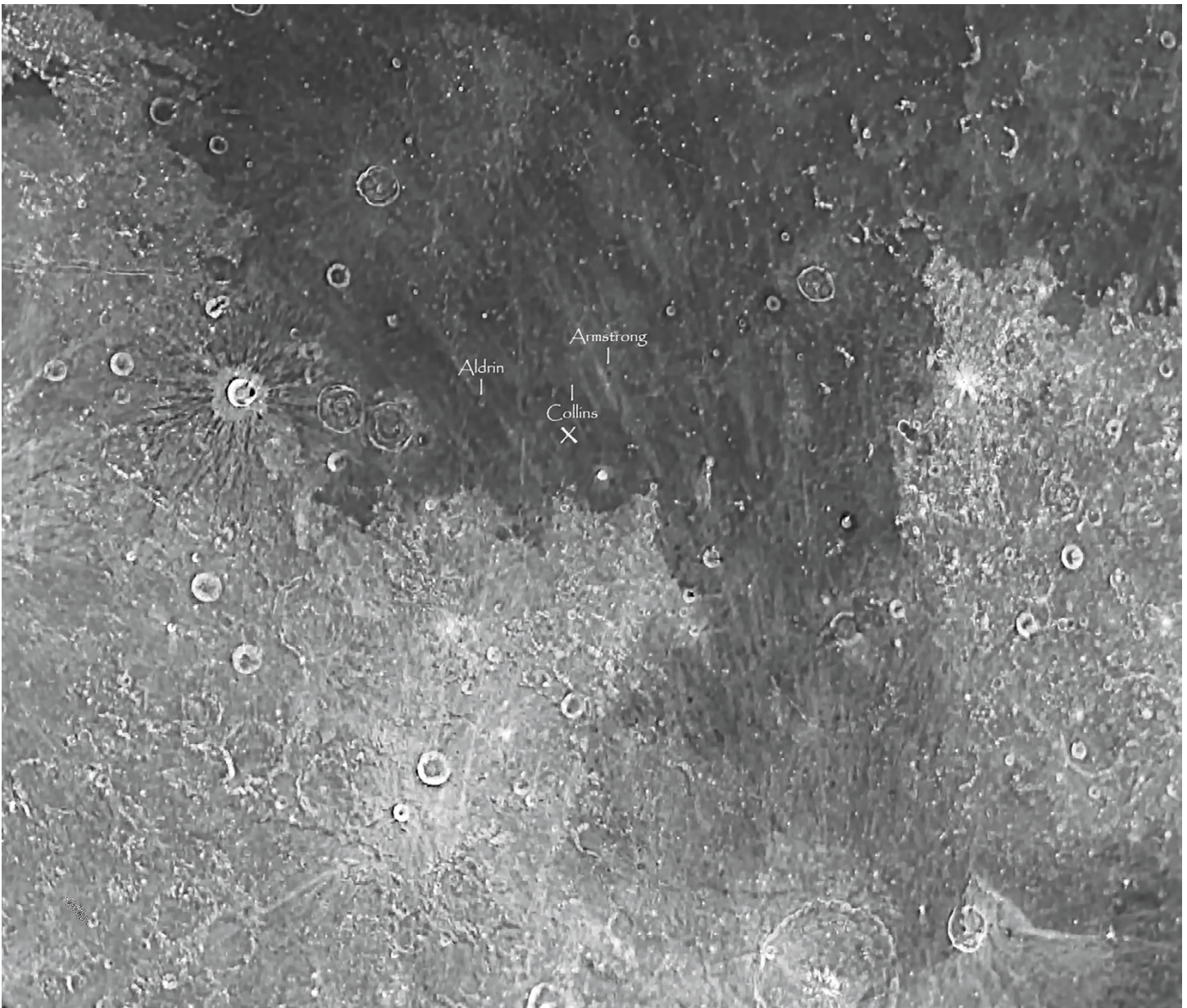
All info was gathered from Andrew Planck's book "What's Hot On The Moon Tonight".



Sun in h-alpha on Jan 10
by Brian Kimball



Sun in h-alpha on Jan 18
by Brian Kimball



"Tranquility Base here, the Eagle has landed" by Brian Kimball

Tranquility Base is the designated landing site of NASA's Apollo 11 mission in the Moon's Mare Tranquillitatis (Sea of Tranquility), where astronauts Neil Armstrong and Buzz Aldrin achieved the first human landing on another celestial body on July 20, 1969.



Image credit: NASA

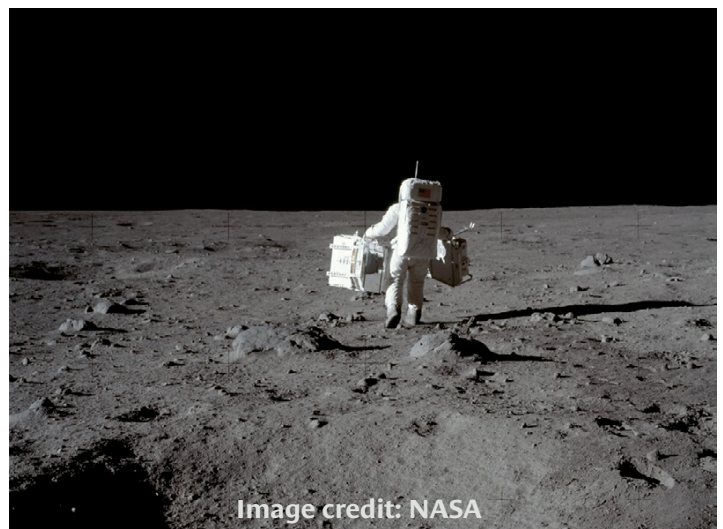


Image credit: NASA



Raspberry Nebula by Martin Butley

I drove down to Starry Meadows on Jan 19th - completely overcast, roads covered with snow until Colorado Springs - but it cleared up further south and the first half of the night was excellent, but intermittent high level clouds after midnight. This is SH 2-263 with 6.5 hours total exposure; marginal for this target, but all I could get in one night. Marty

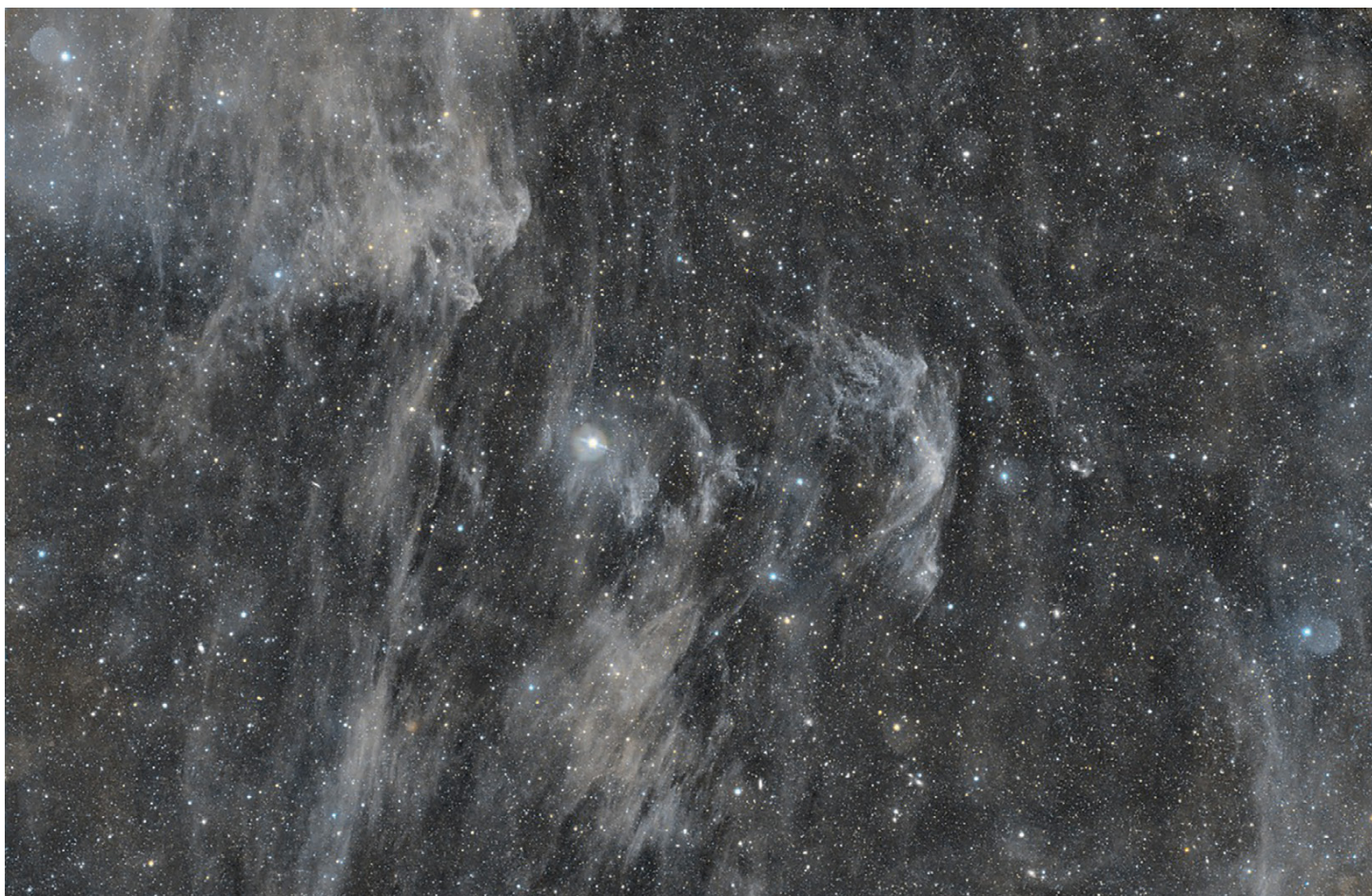
Sharpless 2-263 and VdB 38, "the Raspberry nebula" is located in constellation Orion about 2 degrees northwest of the star Bellatrix. The emission nebula, Sh2-263, appears as reddish h-alpha light. The reflection nebula (VdB 38) appears bluish from scattered star light.

The star HD 34989 ionizes the hydrogen gas which results the reddish h-alpha emission and lights up nearby dust which appears bluish.

There is also a dark nebula, Barnard 223 where the dust is opaque enough to block background stars.



Created with Stellarium



Mandel Wilson 4 Integrated Flux Nebula by David Elmore

Mandel Wilson 4 is an integrated flux nebula (IFN) located far north in Ursa Minor also called the Animal Track Nebula. IFN are clouds of gas and dust at about 10K temperature located above the plane of the galaxy and made visible by reflecting the integrated flux of starlight from the Milky Way as a whole. They are faint, after all they are reflected Milky Way light.

This is 9 hours 40 minutes of 10-minute exposures with a one shot color camera plus a few minutes of 3 second exposures. Star colors are derived from the 3-second exposures. The field of view is more than 10° wide.

William Optics Mini SpaceCat refractor, IDAS NGS1 filter, iOptron GEM70G mount. Recorded January 11/12 and 12/13 from my remote observatory at Dark Sky New Mexico.

David



Created with Stellarium



SH 2-276, 2-278. and 2-279 by David Elmore

Here is a section of Monoceros containing several HII star-forming regions. The cataloged objects are the brightest small features across the bottom, from left to right Sh2-288, Sh2-287, and Sh2-286. The larger regions above them I cannot find cataloged.

Frames were recorded over a couple of nights. The nebulosity is from of Hydrogen-alpha (red), Oxygen III (teal), and Sulfur II (yellow) 6-hours total. Stars are from 150 broadband RGB exposures each of 3 seconds.

Borg107FL F/3.9 refractor, Chroma filters, iOptron GEM70G mount. Taken from my remote observatory at Dark Sky New Mexico.

David



IC 1848 Eastern Half in SHO by Stephen Garretson

This is the eastern section, ~ half the nebula, of the Soul Nebula, presented in SHO. I tried SHO and NBCM, and liked this palette much better. The structures in the Soul are a treat, and getting this little bit closer is rewarding. I have also imaged the western half with equally interesting results.

[12] 600s guided Ha subs

Paramount MX+

[12] 600s guided OIII subs

[12] [600s guided SII subs

From the Beevo Dome

Total integration: 6 hours,

Capture:

TheSkyX, SGP, PHD2

Dual scopes each having the following components:

PixInsight, MacOS Photo, Preview

William Optics FLT 132 APO Triplet, 0.8x reducer/flat-tener, running at f/5.6

...Stephen

ZWO 2600MM Pro

ZWO EFW

Chroma 3nm Ha, OIII, & SII filters

Wanderer Astro Mini V2 Rotator

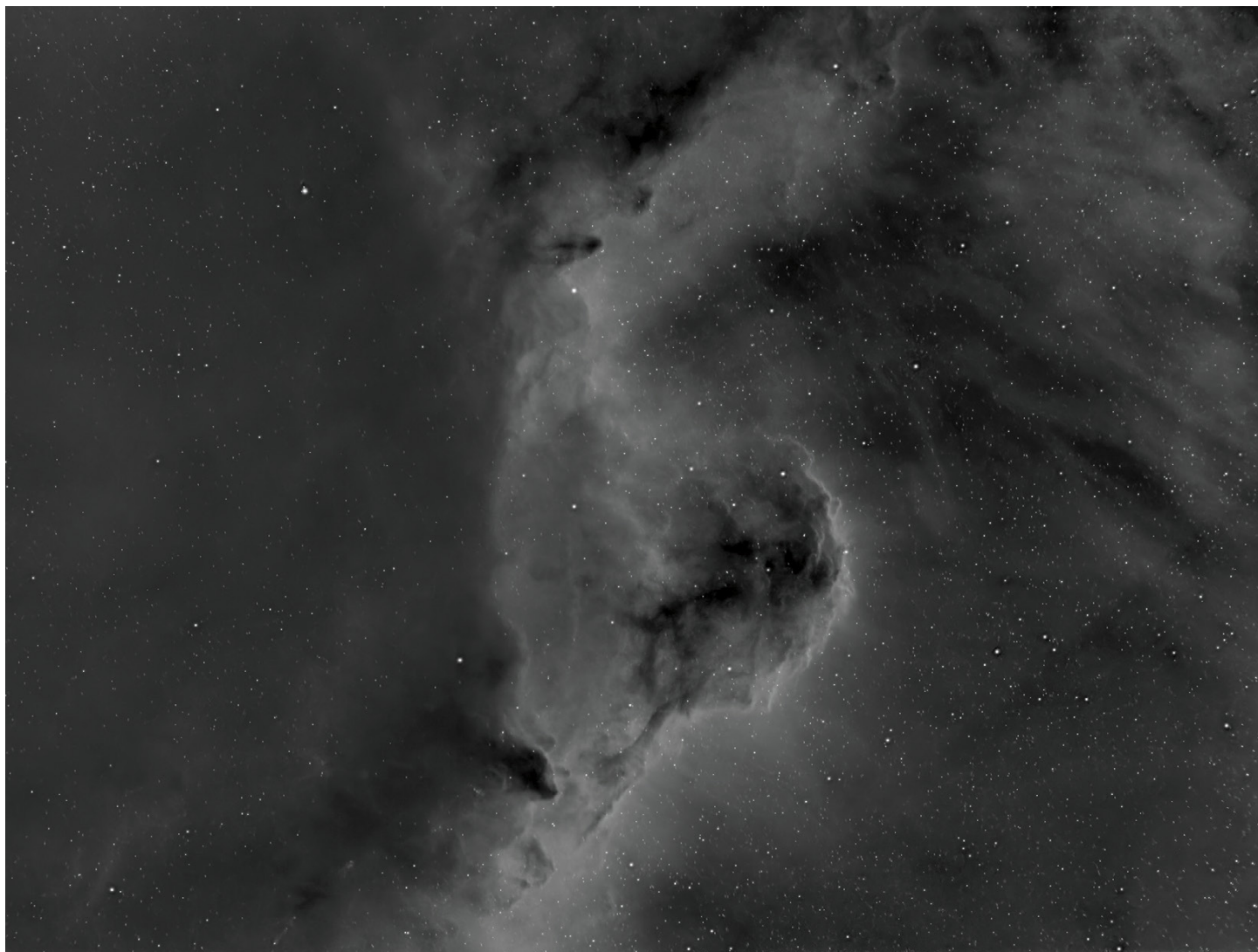
Bahtinov mask modified Wanderer Astro Eclipse

MicroTouch focus motors

Guiding:

William Optics WhiteCat f/4.9 Astrograph

ZWO 220 Mini



Angel fish Nebula by Stephen Garretson

The Angelfish Nebula, AKA the Lambda Orionis Ring, Lambda Orionis Nebula, or Orion's Head Nebula, sits on top of the constellation, and as a fish it appears to be swimming "up" away from Orion, sort of northeast. Primarily Ha, it's pretty large, spanning about 5°, more than filling the FOV of the Borg 55FLs/ASI 2600MM, which captured the larger field [Image97]. Much of it is, to my eye, not terribly interesting, as in not having much intricate structure, this part being an exception. The NE Edge image was captured over a couple nights. The scopes have to get into an odd position, weights pretty far up to start and the OTAs not pointed very high, so there's not the opportunity for a long data gathering session, at least not now in my observatory.

NE Edge image:

[26] 600s guided Ha subs

Total integration: 4 hours, 20 minutes

Capture:

Dual scopes each having the following components:

William Optics FLT 132 APO Triplet, 0.8x reducer/
flattener, running at f/5.6

ZWO 2600MM Pro

ZWO EFW

Chroma 3nm Ha, OIII, & SII filters

Wanderer Astro Mini V2 Rotator, FOV rotated 20°
clockwise

Bahtinov mask modified Wanderer Astro Eclipse

MicroTouch focus motors

Guiding:

William Optics WhiteCat f/4.9 Astrograph

ZWO 220 Mini

Paramount MX+

From the Beevo Dome

TheSkyX, SGP, PHD2

PixInsight, MacOS Photo, Preview

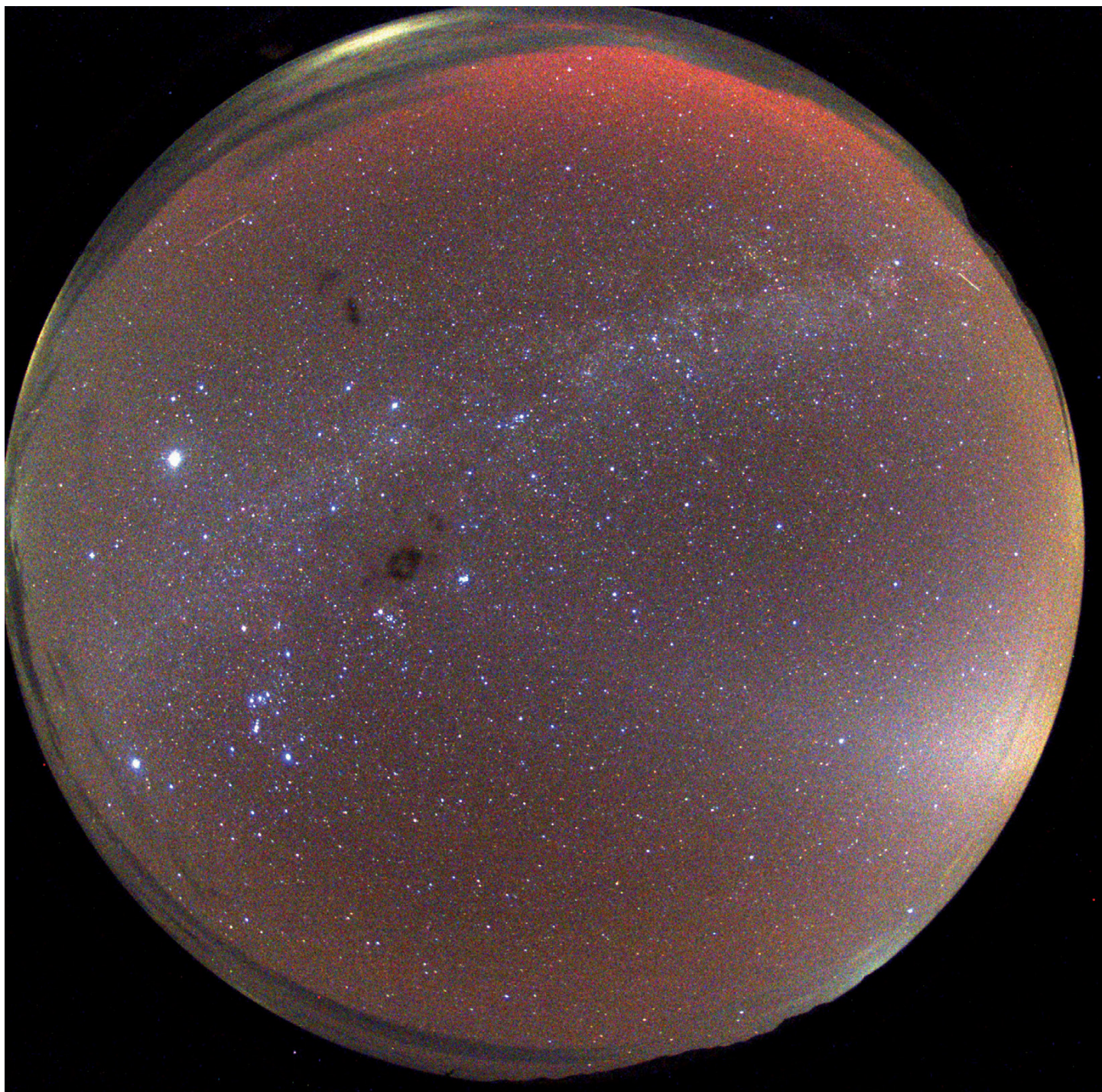
...Stephen



Horse Head Nebula by Tally O'Donnell

I could not help trying an HSS image to see if I could capture all of the structure in the area. This is four hours each of Ha and SIII which makes the colors a bit odd to process.

Tally



Aurora on Jan 19 by Tally O'Donnell

Here is a single snapshot of the aurora from MJ's and my all-sky camera in New Mexico tonight. North is up in case you are wondering and the light to the west (right) is zodiacal light.

Tally



M45 Pleiades by Jim Pollock

Above image is from my 9.25" at Starfront in Texas from last night (Jan 15).

This is the good old Pleiades M45. 45 Frames of 180sec for 2.3 hours of exposure with my 9.25" EdgeHD at f/2 Hyperstar with ZWO 2600mc Duo color camera, no filters. I really like the multitude of colorful stars in the image!! Autumn in the sky!

Jim



M101 Pinwheel Galaxy by Jim Pollock

Another image last night (Jan 15) from my 9.25" at Starfront in Texas is the M101 Pinwheel Galaxy with an unusual spiral (NGC 5474) to the lower right. 66 frames of 180sec for 3.3 hours of exposure with the same setup as above. At $f/2$, the field was much wider as I cropped in for a better look at 101. But, I couldn't get myself to crop closer and lose the lollipop spiral !

See ya,

Jim



Comet 24P/Schaumasse by Jim Pollock

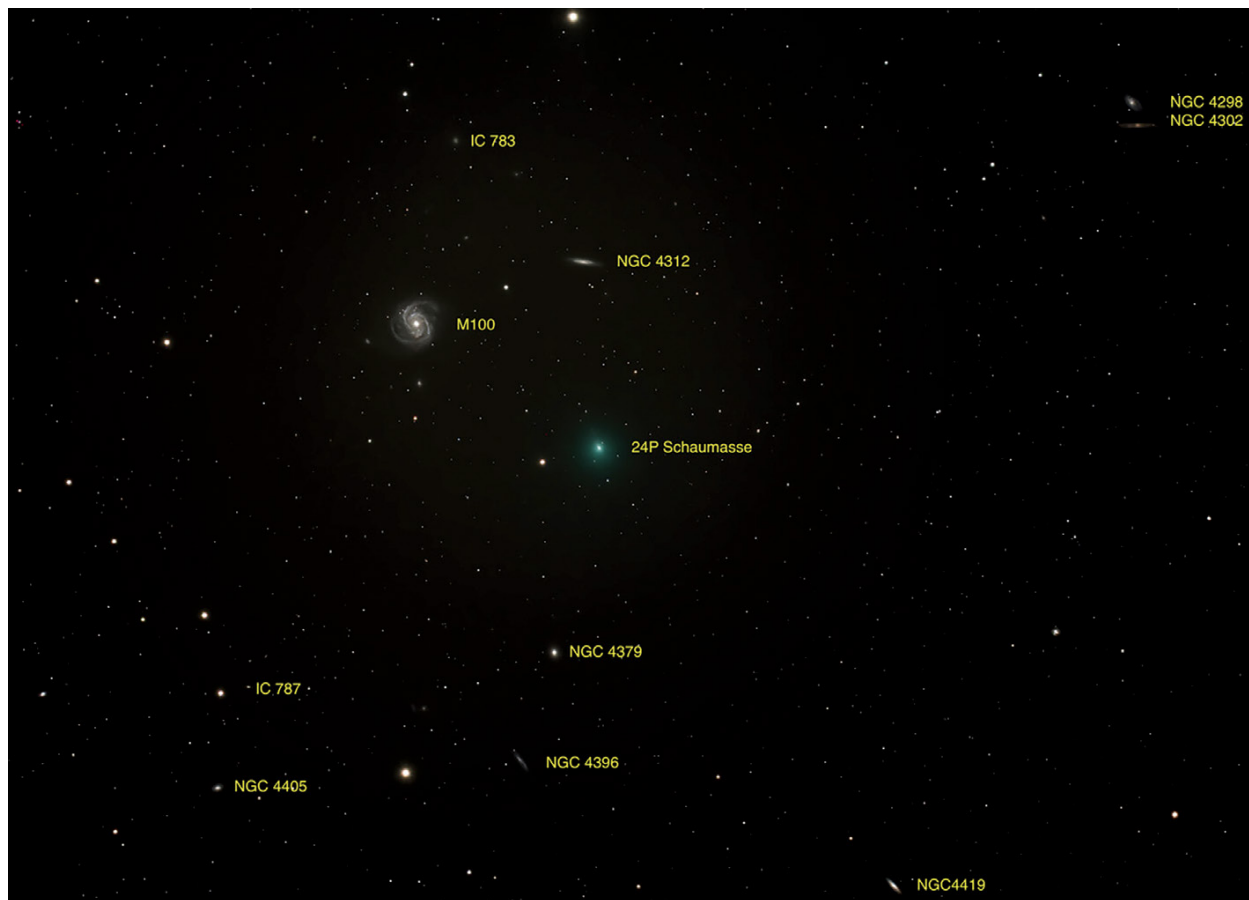
Over the holiday week, I got my first light from my 9.25" Edge newly installed at Starfront Observatories in Central Texas (near Rockwood Texas, 3.6 hours NW of Austin). They have close to Bortle 1 skies and 100 Gbit ethernet. Only in Texas to find that combination in one spot.

This image of Comet 24P Schaumasse was shot with my Hyperstar on Christmas Night 12/25/25. It's a single 120sec image at f/2. And my Hyperstar was in bad collimation (although you wouldn't notice thanks to cheating with BlurXterminator). The guys at Starfront collimated my scope on New Years Eve so I'll have a few more images from this past weekend.

24P is a "Jupiter Family" comet with an 8.2 year orbit around our sun. It is reaching a closest approach to earth on this orbit this week (Jan 7-8). My shot from Christmas Day placed it in Coma Berenices nicely juxtaposed with M100! There are lots of other galaxies nearby which I annotated in the 2nd image. The faint IC 787 is magnitude 15.2 located 400 Million light years away. 24P was the first of 3 comets discovered by French astronomer Alexandre Schaumasse (this one in 1912, two other comets in 1913 and 1917). He also discovered 2 asteroids in 1921 and 1928. The director of the Observatory in Nice gave him the responsibility of Le Chercheur de Comets (the Comet Finder). He primarily used a Grand Equatorial Coudé telescope of which 7 were built. Schaumasse's was installed in 1892, restored in 1940 and is still in use. https://www-n.oca.eu/histoire-nice_en/coude_equatorial.html

My scope in Texas is gonna be fun!!

Jim



Comet 24P/Schaumasse (annotated) by Jim Pollock



Omega Centauri by Jim Pollock



Sh 2-216 Planetary Nebula by M. J. Post

This Sharpless object (#216) is actually an ancient planetary nebula estimated to be 500,000 years old. So it has been expanding that long and is nearly 10 light years in diameter. The only reason we can detect this diffuse old man (or woman) is that he's (or she's) only 400 l.y. away in Perseus. That makes it the closest PN to Earth. Only one other planetary may be larger in angular extent - Hewitt 1. This PN almost spans the full frame of the ASI 6200 MM camera on my 11" RASA scope at DSNM (3.3 x 2.2 degrees).

Just to the east of Sh2-216 lies SH2-221, a supernova remnant. It is fascinating that these close neighbors represent the two ways that stars die, depending on whether they are low-mass stars (less than 8 solar masses for PNs) or high-mass stars (more than 8 solar masses for SNRs). I suspect that SH2-216 was near the upper limit for low mass stars (6-8 solar masses?) because of its strong SII signature that is absent in most other PNs.

And all three narrowband wavelengths (H-alpha, OIII, and SI) display remarkably strong but different internal structures. For this image I combined H and S images for the red channel and used all three wavelengths for the green and blue channels (heavily weighted by OIII). 2.5 hours total exposure time for each filter.

SH2-216 is also known as Simeis 288 and LBN 742. It has the nickname "Living Ghost" nebula.

M.J. Post



Abel 262 Galaxy Cluster in Andromeda by M. J. Post

Last year I posted an image of the Abell 426 galaxy cluster. It contained more than 600 galaxies. Here's another one from Abel's catalog of clusters. Here, however, I counted only 120 (or so) galaxies when I used Russell Croman's StarXterminator routine to eliminate all stars from this image.

3.5 hours exposure time through the CDK14 scope at DSNM, ASI 6200MC camera, luminance filter. FOV is about 0.9 x 0.6 degrees.

M.J. Post



Supernova Remnant behind Taurus Galaxy Cloud by M. J. Post

This large, faint SNR was first found by radio astronomers and is cataloged as G156.2 + 5.7 (galactic coordinates). It lies in Auriga, well behind the Taurus Dust Cloud that is only 300 light years from planet Earth. I found the thin red "shock wave" of H-alpha (red) light that nearly surrounds the remnant to be particularly interesting. Just SW of center is a YSO (Young Star Object) embedded in its nursery - a dark dust cloud. This rendition uses all three narrowband wavelengths, with all three displaying strong signals but not overlapping one another. Here the red channel is a combination of H-alpha and SII images; green channel is OIII and SII (one ratio); and blue channel is OIII and SII (a different ratio).

Five hours integration time for each filter, RASA telescope, ASI 6200MC camera. FOV is about 2 x 2 degrees.

M.J. Post



Weird Galaxy NGC 1691 by M. J. Post

This galaxy has been on my "To-Do" list since 2021. It lies at the base of Orion's bow and is classified as a lenticular. I cannot find much other information about it, but I estimate its distance as 200 M.l.y based on its angular size and my own s.w.a.g. of 80,000 l.y. for its physical breadth. If anyone can pass along more information, I'd appreciate it! I can find any images of it in Astrobin.

The core of this galaxy is unlike any other I've seen, with both a bar and a surrounding ring. It appears to have two spiral arms that are nearly detached from the core, almost forming a ring around the core.

From DSNM, 3 hours time on target, CDK14 scope, ASI 6200MC one-shot-color camera, 24 x 16 arc min FOV.

M.J. Post



Enigmatic Planetary in Leo EGB6 by M. J. Post

This very faint, seldom-imaged nebula was first discovered in 1978, but eventually credited to Ellis, Grayson, and Bond in 1984. Several Hubble Space Telescope studies were conducted on it in the early 2000s, one by a team including Bond. It is now believed that EGB 6 is an unusual planetary, a remnant of a wide binary Mira variable system. The bright star in that original system has devolved through the Asymptotic Giant Branch (AGB) of the H-R diagram to an extremely hot (100,000K) DAOZ white dwarf (WD) with a mass of about 0.6 solar masses. This is clearly visible in this HOO image as a tiny hot blue star.

According to Hubble observations, the lesser companion star of the original Mira binary system is now a Type M star at temperature 1850K, and it orbits the WD at a distance of only 118 Astronomical Units (AU), with an orbital period of several days. EGB 6 is about 16,000 years old and 8 light years in diameter. It lies 2300 light years away in Leo.

From DSNM, 11" RASA scope, 4 hours for each filter (H-alpha and OIII). FOV is about 50 x 34 arc minutes. EGB 6 is 11 x 13 arc minutes in angular extent.

M.J. Post

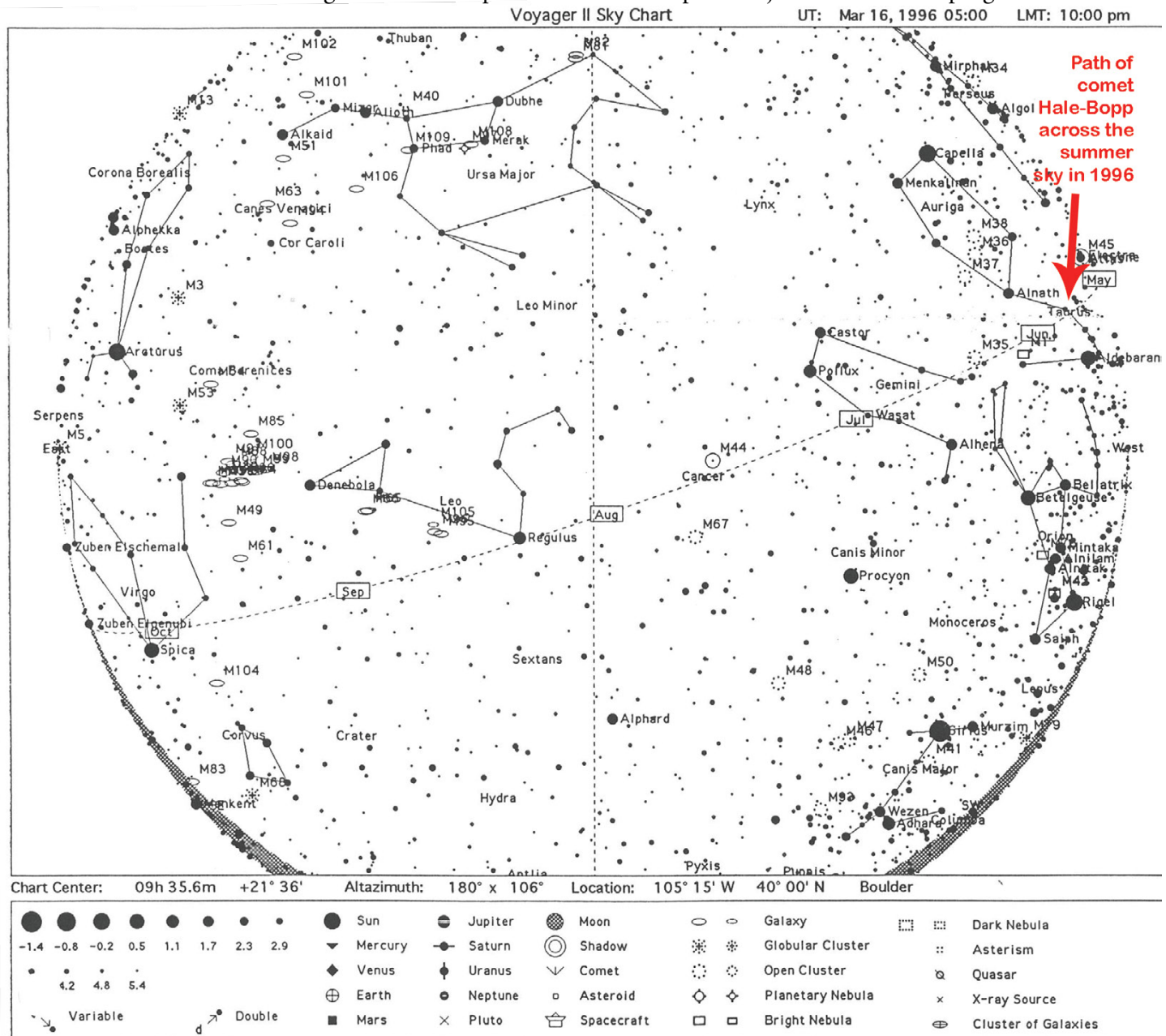
LAS Archives for February by Eileen Hall-McKim

30 Years Ago – 1996

- Next meeting scheduled for February 15. The speaker is Dr. Bob Phillips a veterinarian and Emeritus Professor of Physiology at CSU. He was trained as a Space Shuttle Payload Specialist in the 1980s. He served as Chief Scientist for the Space Station project for 3 years, and will discuss aspects of the International Space Station.
- Star Parties, Upcoming Events – We have a “go” for DSES on Saturday, February 17. Dennis will open the gates before sundown, and Jim will open the building and kick on the heaters a little later.
- Talk is moving forward regarding LAS’s hosting of the FRASC Invitational Star Party this September. The most favored sight is Pawnee grasslands.
- Twin Peaks Mall is being queried for permission to set up a LAS Astronomy Days exhibit on the Saturday a week prior to the Labor Day Weekend.
- News Flash: the Astronomical League reportedly has decided to hold its 50th Anniversary convention at Copper Mountain, Colorado in August 1997.

Bopp around the Clock

NASA has created a small steering committee to provide advice on a possible joint NASA-NSF program to inten-



sively study comet Hale-Bopp. One of the key aspects we have considered is the coordination of different types of observations. While this is purely a US committee, our discussions clearly have implications for observers world-wide.

- This first distribution is going primarily to some very active comet observers for reactions. Copies are also going to some key observatory directors.
- If we receive significant alternative suggestions, we will modify the recommendations accordingly and then distribute the recommendations widely.

20 Years Ago – 2006

- “We are getting a good reputation for doing these star parties, word is out and more requests are coming in for us. Three or four more schools are scheduled soon. I will post details for more volunteers. These are good fun nights that really open up the eyes of kids, when they see Saturn or huge globular cluster, Orion nebula, some for the first time, they walk away with something they would never had experienced without us; surely a positive move in right direction. We do make a difference.” GG
- “Well the dark sky marine cold night award goes out to Dan LaFaive, after giving his short topic talk about how to dress for the cold, at the last LAS meeting, he was not kidding. We had record low temperature night of 8 degrees, and he slept outside in 20 below sleeping bag, wow! I did have my motor home there for warming up in during the night of viewing. Probably my longest night in cold this year. You know we were desperate for a good dark night to endure like that. Our record lows are below zero but not too often anymore with global warming going on, winters are not as severe anymore it seems.” GG
- New Business: Shaw Middle School Next Tuesday. If you can make it let Gary know. We will be going to work on basic stuff for the kids. It’s a long drive but they are expecting 50 to 100 kids. This starts at 6pm. For directions email Gary. We should be done by 9pm.



Vance Brand in Longmont by Gary Garzone

Vance Brand (Longmont native) was in town Saturday afternoon at Cultural center and museum in Longmont. I got his autograph and talked with him shortly after his talk there. He was scheduled for Apollo 18, moon mission but trips to moon were then canceled. He then went on to Soviet and American cooperation in space, then space shuttles, commander once for Challenger and twice for Columbia. He does have some history behind him. He looks great for his age, 75 years old!

- We want to see more short topics: Short 10 to 15 minute topics on astronomy. Constellation of the month needs to be brought back, again 10 – 15 minute long talks on a particular constellation. We need to get back to

basics that have been lost in the last few years. There are lots of great topics so feel free to volunteer for any of these topics.

Report from Pawnee by Mike Hotka

- I too was at Pawnee Friday night. This was the first night I have had in quite some time where the sky was incredibly still and transparent. I spent the evening looking at open clusters that are part of the Astronomical League’s Open Cluster Observing Club. I am learning that trying to find open clusters in the heart of the winter Milky Way is not as easy as it might seem. But I did find 13 on the list and learned that I need to prepare my observing session a whole lot better BEFORE I go out, for I found myself looking through the books I take with me, trying to find a description of the OC to see if what I was looking at in the eyepiece was the OC I was trying to find. So, I have a whole new system for taking observing notes to the field with me.

- ALCOR: There are a lot of us who have not done any of the Astronomical League programs. So we are going to work on the certification by the AL called Constellation Hunter. There are 39 constellations on the list. All you have to do is find the constellations and draw what you see with the naked eye. You need local time and date, latitude and longitude, constellation name, sky conditions, sketch. Why do this? Because it helps us learn the night sky and makes it easier for us to find other objects later. This is a fun project and naked eye astronomy.

10 Years Ago – 2016

Upcoming Events:

- February 17th, 6pm – Space Foundation Community Night at Erie High School, 3180 Co Rd 5, Erie, CO 80516. The Space in the Community program is designed to inspire students about the wonders of space and to reignite the imagination of all members of the community. Program will feature Dr. Leroy Chiao, a former NASA astronaut and commander of Expedition 10.
- LAS Meeting, Feb 18th The speaker at the Feb 18th meeting will be Dr. John Bally, Dept. of Astrophysics and Planetary Science University of Colorado at the February 18th LAS meeting. His topic is “Observations of Orion with ALMA, Gemini, and HST”. He gives popular talks on astronomy and cosmology; he and Bo Reipurth have written a popular book, “The Birth of Stars and Planets”.
- March 3rd 6 pm “Hawk Air Voyage to Pluto” at Hygiene Elementary, 11968 N 75th St. Longmont, CO

2015 Year in Review:

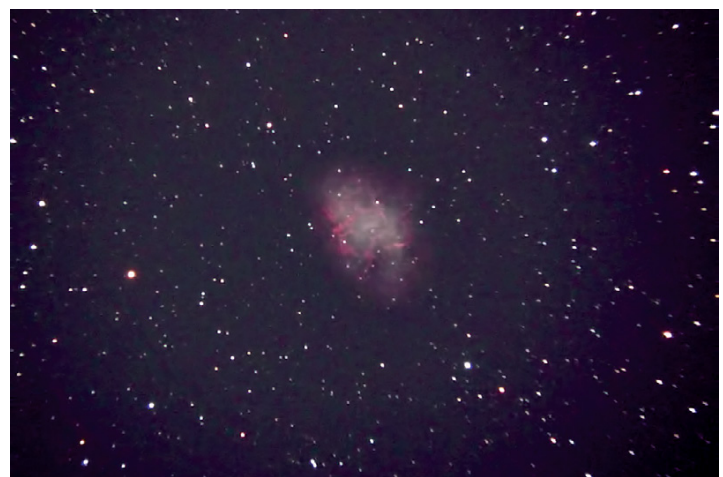
- 22 star parties scheduled/9 canceled (LAS averages ~20 annually)
- Library Telescope Project: Modified and donated 6 library telescopes to Longmont Library (purchased 6 kits and 5 scopes – \$1710) One scope donated by Horkheimer Foundation/Astronomical League
- As of this meeting, 36 people are waiting to check the scopes out (2 week period checkout)

Upcoming Projects for 2016:

- Planning for total solar eclipse August 21, 2017
- NW Nebraska Star Party August 5-7
- Astro Workshop at Hall Ranch after June 25/Sept23 star parties
- Upgrade All Sky Camera
- Radio Telescope project
- Extend the library telescope project to other libraries
- Suggested event in 2016: High Plains Library in Firestone (on open hill) very receptive library staff (we can turn the parking lot lights off!)



Horse Head Nebula by Gary Garzone



M1 by Tally O'Donnell

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SHRIMP NEBULA BY M. J. POST