



NR111

April 2026

The newsletter of the Richland Astronomical Society and Warren Rupp Observatory

May 2 Program, Small Town Universe

By Mitch Luman



Our program on **May 3** will be a screening of the film, “*Small Town Universe*”. This documentary explores the meditative aspects of life and isolation in a quiet rural community, Green Bank, West Virginia, home the world's most sensitive radio telescope. Green Bank is a town where time feels suspended and the ordinary is unordinary. Green Bank is the only U.S. town where Wi-Fi and cell phones are banned. In this radio-quiet community, scientists search for signs of extraterrestrial life while locals navigate everyday necessities as well as occasional struggles. When government defunding threatened the telescope's future, the town had to decide what connections truly matter. The program will take place at **8:30 PM EDT** following the general member meeting. The public are invited to attend.

C/2025 R3 (PANSTARRS)

Home Longitude=81°57'00" West Latitude=+40°48'33" Time zone=EDT

4h00m UT	Date Coord.		Magn.	Elong.	Phase angle	Rise	Transit	Set	Morning		Evening	
	RA	DE							Astronomical	Nautical	Astronomical	Nautical
4/5/2026	22.874676	19.980406	5.93	33.23	63.86	4:09:31 AM	11:25:35 AM	6:41:41 PM	+14° Az75°	+20° Az80°	-20°	-23°
4/6/2026	22.915032	19.988777	5.74	33.33	66.95	4:08:01 AM	11:24:12 AM	6:40:23 PM	+13° Az75°	+20° Az80°	-20°	-23°
4/7/2026	22.960426	19.984181	5.54	33.36	70.23	4:06:53 AM	11:23:08 AM	6:39:22 PM	+13° Az75°	+20° Az80°	-20°	-24°
4/8/2026	23.011641	19.96417	5.35	33.32	73.71	4:06:11 AM	11:22:27 AM	6:38:40 PM	+13° Az75°	+19° Az80°	-20°	-24°
4/9/2026	23.069587	19.925784	5.16	33.19	77.42	4:05:58 AM	11:22:12 AM	6:38:19 PM	+13° Az75°	+19° Az80°	-21°	-24°
4/10/2026	23.135308	19.865437	4.96	32.96	81.36	4:06:19 AM	11:22:27 AM	6:38:24 PM	+12° Az74°	+19° Az80°	-21°	-24°
4/11/2026	23.210003	19.778752	4.77	32.60	85.56	4:07:21 AM	11:23:16 AM	6:38:57 PM	+12° Az74°	+18° Az79°	-21°	-24°
4/12/2026	23.295038	19.660371	4.59	32.10	90.02	4:09:08 AM	11:24:45 AM	6:40:03 PM	+11° Az74°	+18° Az79°	-21°	-25°
4/13/2026	23.391957	19.50372	4.41	31.43	94.77	4:11:50 AM	11:27:00 AM	6:41:46 PM	+10° Az73°	+17° Az79°	-21°	-25°
4/14/2026	23.502481	19.300733	4.23	30.57	99.82	4:15:33 AM	11:30:08 AM	6:44:09 PM	+09° Az73°	+16° Az78°	-21°	-25°
4/15/2026	23.628499	19.041555	4.06	29.49	105.18	4:20:28 AM	11:34:15 AM	6:47:19 PM	+08° Az72°	+15° Az77°	-21°	-25°
4/16/2026	23.772027	18.714246	3.90	28.16	110.89	4:26:46 AM	11:39:29 AM	6:51:19 PM	+07° Az71°	+13° Az77°	-21°	-25°
4/17/2026	23.935145	18.304566	3.75	26.54	116.94	4:34:37 AM	11:45:58 AM	6:56:14 PM	+05° Az70°	+12° Az76°	-21°	-25°
4/18/2026	0.119868	17.79596	3.61	24.60	123.37	4:44:12 AM	11:53:49 AM	7:02:06 PM	+03° Az69°	+10° Az75°	-21°	-25°
4/19/2026	0.327971	17.169934	3.49	22.31	130.18	4:55:43 AM	12:03:09 PM	7:08:57 PM	+01° Az68°	+07° Az74°	-20°	-24°
4/20/2026	0.560721	16.407104	3.39	19.65	137.36	5:09:17 AM	12:14:00 PM	7:16:45 PM	-01°	+05° Az72°	-20°	-24°
4/21/2026	0.818551	15.48919	3.30	16.61	144.90	5:25:00 AM	12:26:23 PM	7:25:28 PM	-04°	+02° Az71°	-19°	-24°
4/22/2026	1.100686	14.402173	3.24	13.22	152.74	5:42:49 AM	12:40:12 PM	7:34:56 PM	-08°	-01°	-18°	-23°
4/23/2026	1.404809	13.14043	3.20	9.54	160.72	6:02:33 AM	12:55:15 PM	7:45:00 PM	-12°	-05°	-17°	-23°
4/24/2026	1.726876	11.711085	3.19	5.86	168.38	6:23:53 AM	1:11:14 PM	7:55:24 PM	-16°	-09°	-16°	-22°
4/25/2026	2.061202	10.137098	3.22	3.52	173.10	6:46:19 AM	1:27:46 PM	8:05:53 PM	-20°	-14°	-15°	-21°
4/26/2026	2.400894	8.45736	3.27	5.55	169.24	7:09:13 AM	1:44:23 PM	8:02:04 PM	-24°	-18°	-14°	-20°
4/27/2026	2.738579	6.722809	3.36	9.54	161.62	7:31:55 AM	2:00:38 PM	8:12:21 PM	-28°	-22°	-12°	-19°
4/28/2026	3.06726	4.989189	3.47	13.78	153.50	7:53:49 AM	2:16:05 PM	8:22:11 PM	-32°	-26°	-11°	-18°
4/29/2026	3.381061	3.30876	3.62	17.91	145.50	8:14:23 AM	2:30:28 PM	8:31:22 PM	-36°	-30°	-10°	-17°
4/30/2026	3.675684	1.723619	3.78	21.79	137.82	8:33:17 AM	2:43:33 PM	8:39:47 PM	-39°	-34°	-08°	-16°
5/1/2026	3.948525	0.262334	3.97	25.35	130.57	8:50:18 AM	2:55:15 PM	8:47:19 PM	-42°	-37°	-07°	-15°
5/2/2026	4.198511	-0.060087	4.17	28.55	123.78	9:05:24 AM	3:05:32 PM	8:53:57 PM	-44°	-40°	-06°	-14°
5/3/2026	4.425777	-2.239945	4.38	31.38	117.46	9:18:37 AM	3:14:28 PM	8:59:41 PM	-47°	-42°	-05°	-13°
5/4/2026	4.631303	-3.281695	4.60	33.87	111.62	9:30:03 AM	3:22:07 PM	9:04:35 PM	-49°	-44°	-05°	-12°
5/5/2026	4.816587	-4.194862	4.82	36.03	106.21	9:39:51 AM	3:28:36 PM	9:08:42 PM	-50°	-46°	-04°	-12°
5/6/2026	4.983388	-4.991576	5.05	37.89	101.21	9:48:10 AM	3:34:02 PM	9:12:05 PM	-52°	-48°	-04°	-11°
5/7/2026	5.13354	-5.684822	5.27	39.48	96.60	9:55:11 AM	3:38:32 PM	9:14:48 PM	-53°	-49°	-04°	-11°
5/8/2026	5.268837	-6.287335	5.49	40.83	92.32	10:01:02 AM	3:42:11 PM	9:16:56 PM	-54°	-50°	-03°	-11°
5/9/2026	5.390961	-6.810981	5.72	41.98	88.36	10:05:52 AM	3:45:07 PM	9:18:32 PM	-55°	-51°	-03°	-11°
5/10/2026	5.501451	-7.266467	5.93	42.93	84.69	10:09:48 AM	3:47:24 PM	9:19:40 PM	-55°	-52°	-03°	-11°
5/11/2026	5.601687	-7.663251	6.15	43.73	81.27	10:12:58 AM	3:49:06 PM	9:20:23 PM	-56°	-53°	-03°	-11°
5/12/2026	5.692893	-8.00958	6.36	44.38	78.08	10:15:27 AM	3:50:19 PM	9:20:44 PM	-56°	-53°	-04°	-12°
5/13/2026	5.776148	-8.312581	6.57	44.91	75.10	10:17:20 AM	3:51:05 PM	9:20:45 PM	-57°	-54°	-04°	-12°
5/14/2026	5.852393	-8.578379	6.77	45.33	72.32	10:18:42 AM	3:51:28 PM	9:20:28 PM	-57°	-54°	-04°	-12°
5/15/2026	5.922453	-8.812226	6.97	45.65	69.70	10:19:36 AM	3:51:31 PM	9:19:55 PM	-57°	-54°	-04°	-13°
5/16/2026	5.987044	-9.018617	7.17	45.90	67.25	10:20:06 AM	3:51:15 PM	9:19:09 PM	-58°	-55°	-05°	-13°
5/17/2026	6.046789	-9.201397	7.36	46.06	64.93	10:20:15 AM	3:50:43 PM	9:18:10 PM	-58°	-55°	-05°	-14°
5/18/2026	6.102232	-9.363857	7.54	46.17	62.75	10:20:05 AM	3:49:57 PM	9:16:59 PM	-58°	-55°	-06°	-14°
5/19/2026	6.153847	-9.508816	7.73	46.22	60.69	10:19:38 AM	3:48:58 PM	9:15:38 PM	-58°	-55°	-06°	-15°
5/20/2026	6.202047	-9.638691	7.90	46.22	58.75	10:18:57 AM	3:47:47 PM	9:14:09 PM	-58°	-55°	-07°	-15°
5/21/2026	6.247193	-9.755561	8.08	46.17	56.90	10:18:02 AM	3:46:27 PM	9:12:30 PM	-58°	-55°	-07°	-16°
5/22/2026	6.289602	-9.861214	8.25	46.09	55.15	10:16:56 AM	3:44:57 PM	9:10:45 PM	-58°	-56°	-08°	-16°
5/23/2026	6.329552	-9.957196	8.41	45.97	53.48	10:15:40 AM	3:43:19 PM	9:08:52 PM	-59°	-56°	-08°	-17°
5/24/2026	6.367288	-10.04485	8.57	45.82	51.90	10:14:14 AM	3:41:34 PM	9:06:54 PM	-59°	-56°	-09°	-18°
5/25/2026	6.403026	-10.12532	8.73	45.65	50.39	10:12:40 AM	3:39:42 PM	9:04:49 PM	-59°	-56°	-10°	-18°
5/26/2026	6.436957	-10.19965	8.89	45.46	48.95	10:10:59 AM	3:37:44 PM	9:02:40 PM	-59°	-55°	-10°	-19°
5/27/2026	6.46925	-10.26869	9.04	45.24	47.58	10:09:11 AM	3:35:40 PM	9:00:25 PM	-59°	-55°	-11°	-20°
5/28/2026	6.500055	-10.33324	9.19	45.01	46.27	10:07:17 AM	3:33:31 PM	8:58:06 PM	-59°	-55°	-11°	-20°
5/29/2026	6.529506	-10.39398	9.33	44.76	45.01	10:05:17 AM	3:31:18 PM	8:55:43 PM	-59°	-55°	-12°	-21°
5/30/2026	6.557722	-10.45149	9.47	44.50	43.81	10:03:13 AM	3:29:01 PM	8:53:17 PM	-59°	-55°	-13°	-22°
5/31/2026	6.584808	-10.50631	9.61	44.23	42.66	10:01:04 AM	3:26:39 PM	8:50:47 PM	-59°	-55°	-13°	-22°

Times are in days - format rise/transit/set columns as time



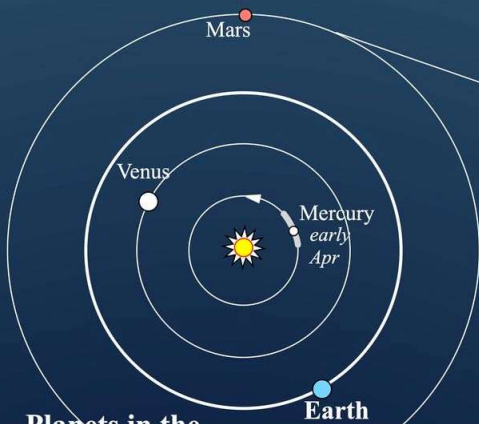
Relative planet positions this April



The planets are in constant motion

What planet is closest to Earth in April?

What planet is always farthest from Earth?

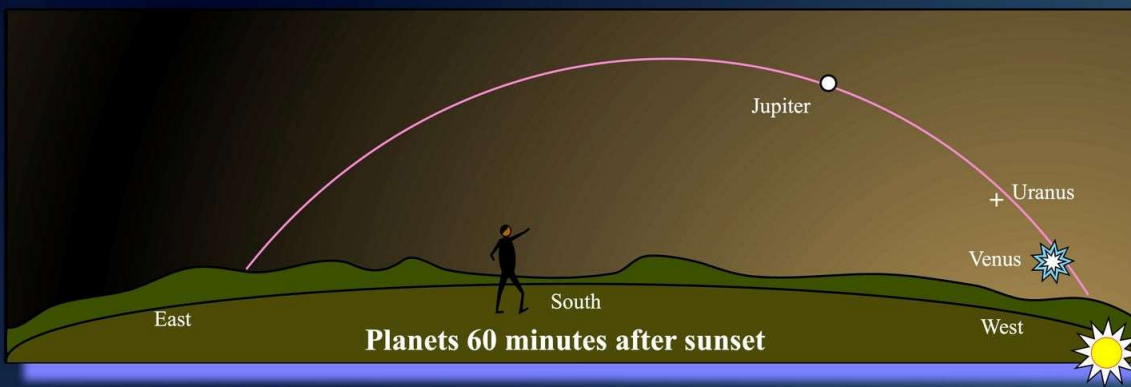
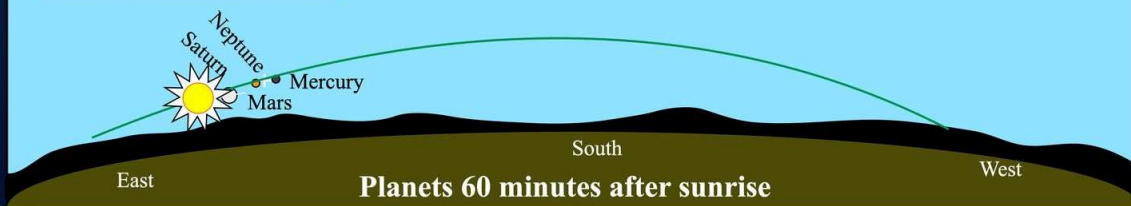


Planets in the Inner Solar System



Planets in the Outer Solar System

Mercury, Mars, Saturn, and Neptune are all clustered in the sun's direction, and precede the sun as it arcs across the sky.





“So the Messiers weren’t enough for ya. What now?”

Hunting for Herschels

Consider the Herschel 400 Observing Program



*If you have finished the Messiers,
you have already observed 17 Herschels.*

Herschel – Messier duplications

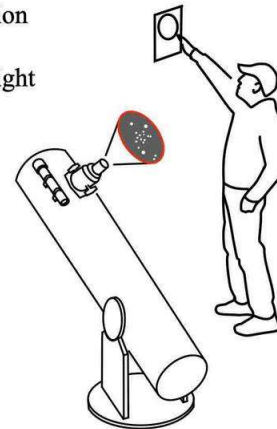
- M20, 33, 47, 48, 76, 82, 91, 104 – 110
- plus
- M35 (NGC 2158 Background cluster)
- M46 (NGC 2438 Foreground planetary nebula)
- M51 (NGC 5195 Whirlpool Galaxy companion)

Seeing farther into the depths of space,
especially when using smaller aperture scopes

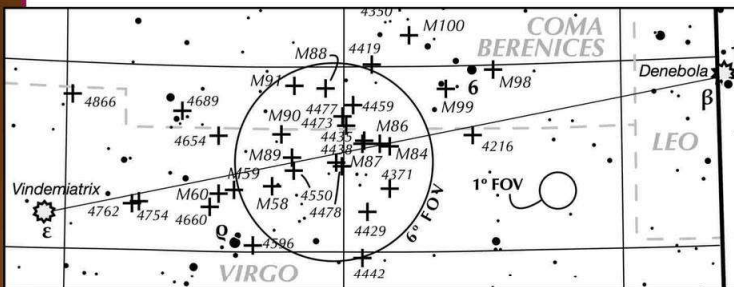
- Need dark, transparent skies
- Use averted vision
- Tap the tube
- Increase magnification
- Have clean optics
- Eliminate all stray light

Tips

- Use charts with stars plotted to 8th magnitude.
- Magnifications commonly used: 75-125x, and 200x for planetary nebulae and very dim galaxies.
- Hunt for objects in a south to north direction, and in a west to east direction.
- Use contrast enhancement filters for NGC 246, 2264, 2371, and 7000.
- Remember, many Herschels have another Herschel in the same field!
- When viewing in the extreme northerly declinations using a telescope with a fork mount and an equatorial wedge, turn the complete telescope assembly 180°. Polar alignment is lost, but the view in the finder will be right side up, and your back and neck will thank you.



*Minimum suggested aperture:
8 inches, 10 is better.*



Virgo/Coma and the Spring Wall

- Don't become discouraged at the great many of galaxies in the late winter through spring sky! Proceed in an orderly fashion, locating targets in a south to north and west to east manner.

- Carefully draw a star map of

the region between Vindemiatrix and Denebola using small (8x30) binoculars. Add the galaxies as you find them through your scope. That way, you'll keep track of what you've found.



Not all is tough, though **Binocular Herschels**

NGC 752, 2353, 2264, 2232, 6633,
1528, 869 & 884, 1647, 6940, and 6682



NGC 752 • NGC 1342 • M42 • NGC 2244 • M48 • M84 • M4 • M6 • M27 • Beta Cygni • M11 • NGC 7789 • NGC 2232 • M2

NGC 129 • M31 • Hyades • M36 • NGC 1981 • M41 • M67 • Mel 111 • M87 • M5 • M7



Urban Observing Program



All observations must be conducted at locations where the Milky Way cannot be seen by the unaided eye.

Observing under the starry dome is an activity that amateurs relish. After an extended period of poor weather, they eagerly prepare for a clear night, getting their gear ready. With the literally thousands of celestial treasures to examine, which ones make it on the observing agenda for the evening?

To help, the Astronomical League offers a wide range of suitable targets from which its members can pick and choose. Here is but one Observing Program ...

Can't see the Milky Way? The Urban Observing Program is for you!

It's a crystal clear night and you want to observe. However, you live in a city and you don't have the time or energy to drive to your favorite dark sky location. So ... how about your backyard?

The **Urban Observing Program** was established to bring amateur astronomy back to the cities, back to those areas that are affected by heavy light pollution. Amateur astronomy used to be called "backyard astronomy." But as cities grew, so did light pollution, and the amateur astronomer was forced to drive further and further into the dark countryside to escape the brightening sky glow. The Urban Observing Program was created to allow those who want to enjoy the wonders of the heavens from the comfort of their homes to do so, and to maximize their observing experience despite the presence of considerable light pollution.

In addition to the moon and planets, there is a plethora of deep sky objects that can be enjoyed under poor urban skies, and it only takes a small to medium sized telescope to experience them. This program will introduce you to these wonders and to the pleasures of convenient, backyard observing.

Clear skies and good observing!

<https://www.astroleague.org/urban-observing-program/>

You may observe the objects with the unaided eye, binoculars, or any size telescope. However, telescopes from six to ten inches of aperture are recommended since a larger aperture helps pull out fainter objects in non-contrasty skies.

NGC 457 • M45 • M38 • M81 • M3 • M92 • M35 • NGC 2392 • M17 • M57 • Algol • M39

Double Cluster • M37 • M50 • M44 • M86 • NGC 7662 • Gamma Andromedae • M22 • M32 • M13 • M8 • Epsilon Lyrae • M15



The Camel, an asterism in Hydra

This area of the sky offers more than you might first think!

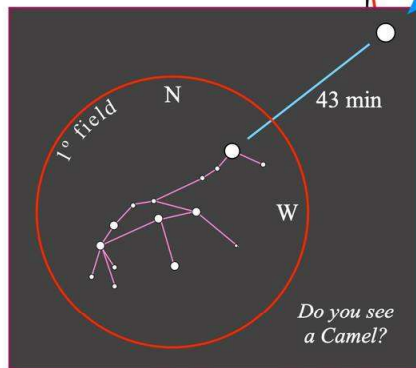
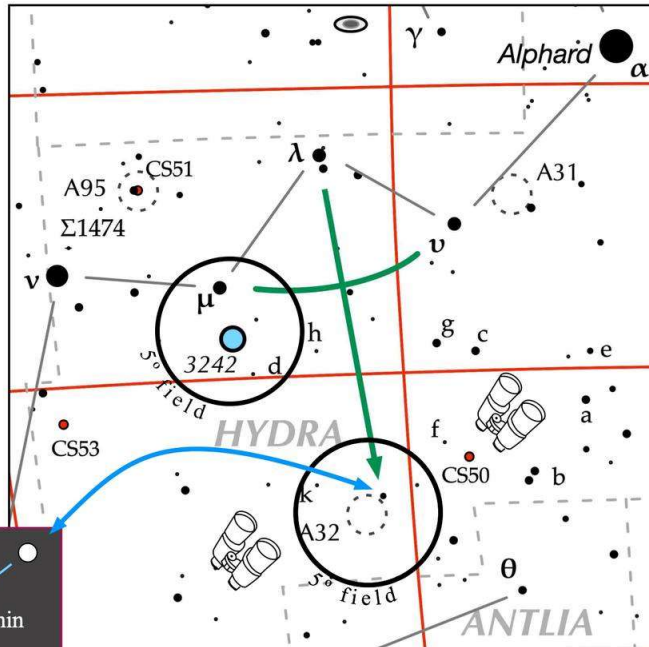


Asterism in central Hydra

A32, the Camel is a group of 11-15 stars ranging in magnitude from 7 through 11. They roughly form with some imagination a miniature camel. It is about 40 arc-minutes across.

How to locate the Camel

1. Locate Alphard, a second magnitude star south of Regulus.
2. Follow the line of stars east and south from Alphard: 4.1 magnitude Upsilon (υ), 3.6 magnitude Lambda (λ), and 3.8 magnitude Mu (μ).
3. Evenly bisect the angle made by Upsilon, Lambda, and Mu.
4. Follow the line formed south about twice the distance Mu is from Lambda.
5. The line hits a 5.7 magnitude star.
6. Point the telescope 90 arc minutes southeast of that star.
7. A 1° eyepiece field should have the Camel situated within it.



NGC 3242, a planetary nebula, "Ghost of Jupiter," Caldwell 59

1. Place 3.8 magnitude Mu (μ) Hydrae at the northern edge of a 5° field.
2. NGC 3242 sits near the field's center.
3. Use an eyepiece giving $>100x$.

Binocular Carbon star CS5 in Hydra Y Hydrae resides 4° west-northwest of the Camel.

1. Find Theta (θ) Antliae, magnitude 4.8.
2. Place Theta at the southern edge of a 5° (binocular) field. Two stars, 4.8 and 4.9 magnitude, lie near the west-southwestern rim.
3. Y Hydrae (CS50) lies on the northern edge.
4. Magnitude range: 6.5 – 9.0; Period: 154 days.
5. It will exhibit a distinct yellow–orange cast.

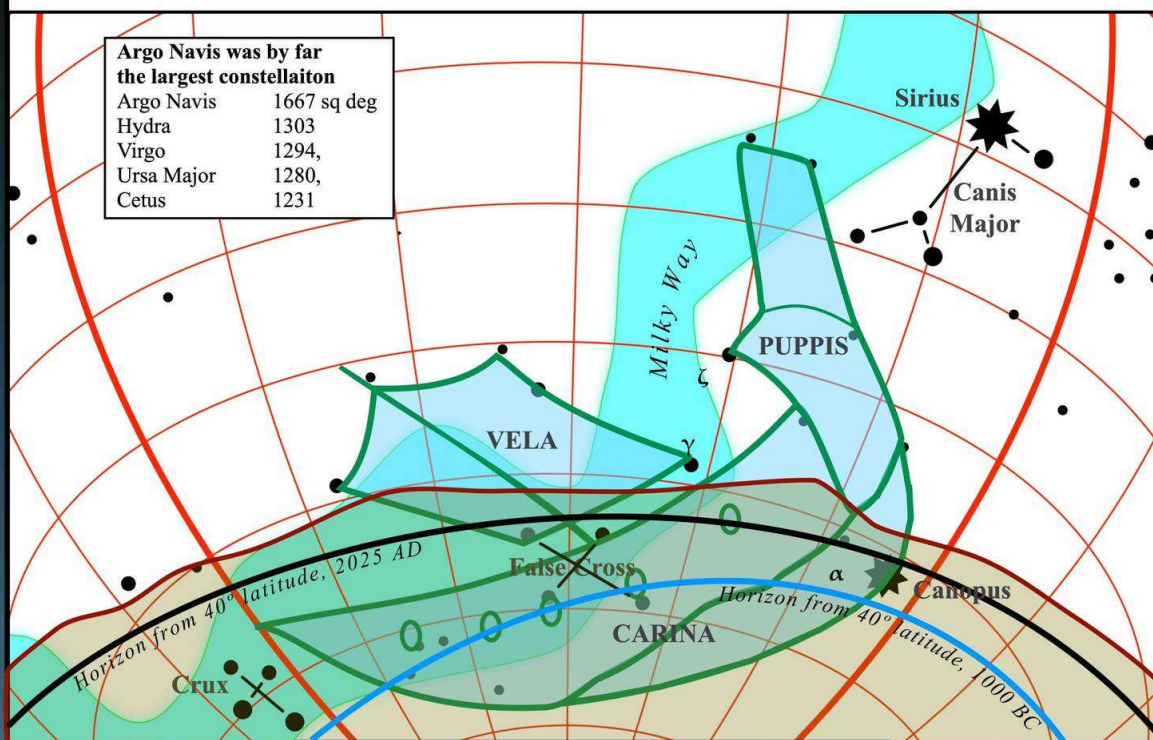




300 years ago, the largest constellation was not Hydra as it is today.



Where is Argo Navis and why we don't see it today?



Facing south two hours after sunset in early March.

Argo Navis survived for centuries until the French Astronomer/Cartographer Nicolas Louis de Lacaille published his catalogue of the southern stars in 1756. Lacaille wrote, "I have divided [Argo] into three parts, namely *las Pouppe* [Puppis, the poop deck], *le Corps* [Carina, the keel] and *la Voilure* [Vela, the sails]."

Lacaille split the Bayer designations of Argo Navis among the three new constellations. Alpha and Beta were given to the two brightest stars of Carina, one of them being Canopus (α). As a result, neither Puppis nor Vela have an Alpha nor a Beta. The brightest stars in Puppis and Vela are Zeta (ζ) and Gamma (γ), respectively. Also, Carina has no Zeta nor Gamma.

Because of precession, many of the stars of Argo Navis have dropped below the horizon for viewers at 40° north latitude. In 1000 BC, the upper two-thirds of the constellation was visible with Canopus culminating a couple of degrees above the southern horizon.

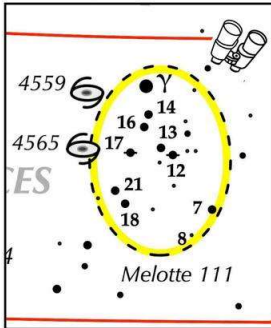


Coma Berenices Open Cluster aka Melotte 111



Easily visible in the early evening from mid March through July.

The two-dimensional celestial dome is deceiving in regard to the true spacing of stars in three-dimensional space.



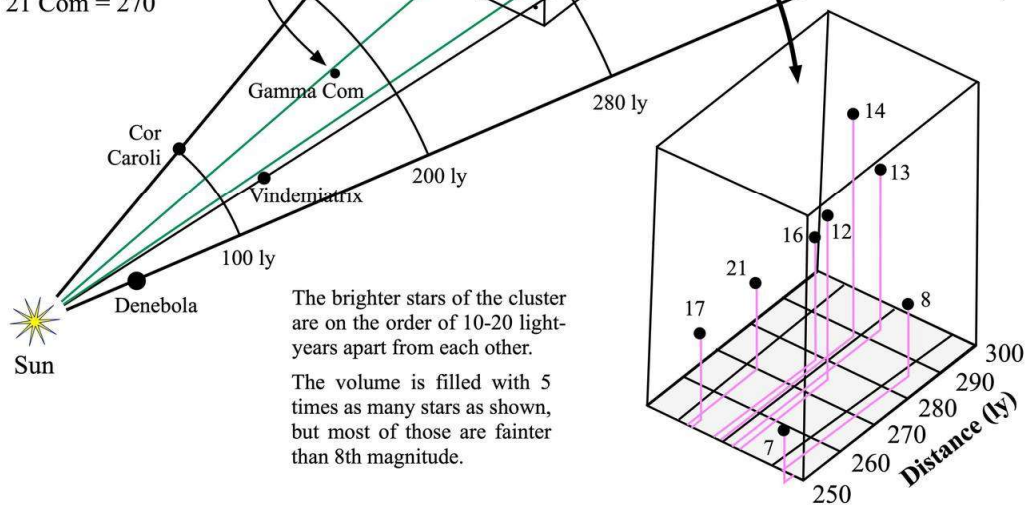
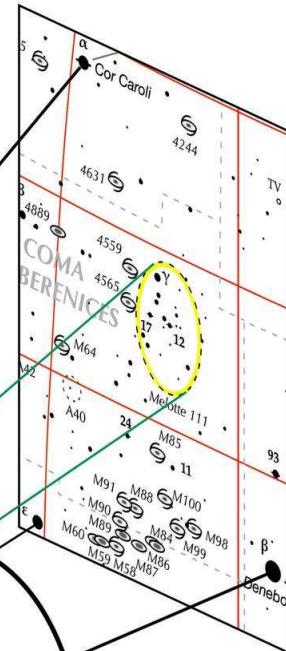
Melotte 111 is thought to have over 40 stellar members, most being below naked eye visibility down to 9th and 10th magnitude.

The galaxies shown are typically 150,000 times farther than the Coma Berenices Open Cluster (Melotte 111).

Gamma, the brightest member, is not a true member of the cluster, but a foreground star.

Distances (in light-years)

- Gamma = 169
- 7 Com = 249
- 8 Com = 286
- 12 Com = 276
- 13 Com = 293
- 14 Com = 289
- 16 Com = 279
- 17 Com = 251
- 21 Com = 270



ITS ALMOST TIME FOR ALCON!!!



- Nationally Recognized and Regional Astronomy Speakers
 - Happy Hours
 - Special Events
 - Tours
- The Annual StarBO at The Cincinnati Museum Center
- The Sunday Afterparty at The Moeller Observatory

Learn More and Register at
ALCON2026.ORG