



Volume: 65

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Feb 2024

FWAS Web page: <http://fortwayneastronomicalsociety.com>

General Meeting Tuesday Feb 20, 7:30pm, Visitors Welcome

Purdue Fort Wayne Walb Student Union Building Rm. WU 114, Free Parking in P2

PRESENTATION Galaxy Formation and Evolution

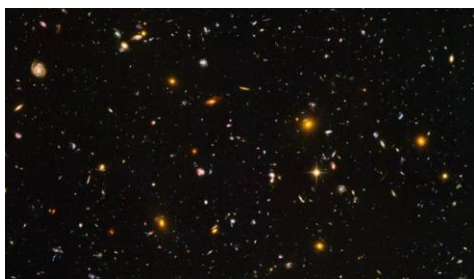
Presented by Dr. Ryan Farber

After growing up in wine & cow country in California, I graduated from Wheaton College with a Bachelor's in Physics, Mathematics and a minor in Astronomy.

During my undergraduate years I engaged in various research projects including searching for transient lunar phenomenon, determining the circulation time for material in Europa's sub-ice ocean, and simulating cosmic rays propagating through the turbulent magnetized interstellar medium.

Thereafter, I attended the University of Michigan for my PhD in Astronomy & Astrophysics, studying why certain galaxies stop making stars. After that, I worked at the Max Planck Institute for Astrophysics in Munich, Germany as a postdoctoral researcher, studying the galactic baron cycle.

I am currently a Visiting Assistant Professor of Physics at Purdue University Fort Wayne teaching introductory courses in physics & astronomy.



Meetings & Events

October

General Meeting Tuesday Feb 20.

Board Meeting Tuesday Feb 27.

November

General Meeting Tuesday March 19.

Board Meeting Tuesday March 26.

Public Saturday Night Stargazing

Jefferson Township Park every clear Saturday night starting 1 hour after sunset and continuing for 2 hours, April through November

Member Deep Sky Nights

Special Friday observing nights are scheduled, close to new Moon, for members and their guests to observe fainter objects in the night sky, along with projects in astrophotography and spectroscopy.

Our Observatory Co-director, Neil Ainslie, reminds **Observatory Training**

No scheduled Observatory Training

Must RSVP by emailing
sciencepastorneil@gmail.com or

Call/text Neil at 260-740-9162.

Rain or Shine. Classes RSVP only.

Upcoming Star Parties

If you would like to volunteer, please email
sciencepastorneil@gmail.com or

Neil call/text 260-740-9162.

- Friday, April 5, 2:30 PM: Solar Eclipse at the Towne House (retirement community) 2209 St. Joe Center Road Fort Wayne, IN 46825.

Where will you be during eclipse of April 8th, 2024. Several libraries and parks have asked the FWAS for help during the event. Where will you be on April 8th? If you are available, please email starquest.obs.dir.fwas@gmail.com.

The Society Welcomes New Member:
Emily Maroney

OFFICERS

President.....Julie Kaufman...juliek46774@gmail.com.....260-579-1777
Vice-President.....Mike Arata.....mikearata@aol.com.....260-750-5656
Secretary.....Jim Spalding.....jimspald@gmail.com.....756-210-5565
Treasurer.....Phil Hudson.....graphicad1@mac.com.....260-484-7000

APPOINTED POSITIONS

Observatory
Director.....Neil Ainslie.....sciencepastor@neil@gmail.com.....260-740-9162
Web Master.....Sarah Suraci.....suraci.sarah@gmail.com.....260-797-2726
Star*Quest
Project Manager.....Jim Spalding.....jimspald@gmail.com.....756-210-5565
Membership.....Phil Hudson.....graphicad1@mac.com.....260-484-7000
Social Media.....Adriane Day.....dayadriane@hotmail.com.....260-442-6602

NEWSLETTER "the Eyepiece"

Editor Distribution.....Julie Kaufman.....juliek46774@gmail.com.....260-579-1777

Submissions to the Eyepiece are cheerfully accepted by e-mail (preferred) on other media, or on paper. Submissions may be edited for space or style.

Hello FWAS imagers and visual observers! It's February and time for clear skies and new challenges!

Orion and Canis Major are approaching the meridian and Leo is coming up. Spring can't far away!

Special Events

9th New Moon, 1st Quarter 16th, 24th Full Moon
Jupiter still available

Galaxies

Gemini: NGC2389 Group
Canis Major: NGC2280
Ursa Major: M81/ M82, NGC2841
Perseus 1 Gal Cluster, Abell 426, 38 m15-22 galaxies,
Perseus. A very real challenge!

Nebula, Planetary & Bright & Reflection

Tau: M1 Crab Neb, Hind's variable Nebula, NGC1555,
Pleiades, M45.
Orion: M42 Great Orion Neb; M78 Casper Neb; N2024,
Flame Neb; B33 Horsehead; N1999 Pearl Neb; NGC
2174 Monkey Head Neb.
Canis Major: Sharpless 2-301, NGC2359.
Monoceros: Rosette Nebula, NGC 2237, EN, plus NGC 2239
OC., Hubble's Variable Nebula, NGC2261.
Perseus: M76, NGC1499, California Nebula, NGC1491.
Gemini: Clown Face Nebula, NGC2392, NGC2371& 2.

Globular Clusters

Canis Major: M41.
Cancer: Beehive Cluster, M44.
M46 + NGC2438 (Planetary Neb.)+ Calabash Neb.
Auriga: IC 405 Flaming Star; NGC1893 Cluster+Neb;
NGC1664 OC; NGC1857 OC; NGC1893 OC; M36; M37; M38.

Stars

Algol, look for the S&T web site for date and time of the "minimum of Algol, α PER
Sirius, extremely bright A type double star. Can you see the secondary star?

Miram/Eta Persei/HD17506 + HD237009. Double star. Gorgeous golden and blue pair. Eta A is mag 3.79, Eta B mag 8.64 (about 10x dimmer) and is close, 28" away. Look for 2nd pair 66" due west with a dozen faint stars forming a small cluster around Eta Per.

Σ 929 (Struve 929)/ HD 46482A/ HIP 31454. Double star, mag 7.20, mag 8.60. Very nice, bright yellowish-white and blue stars Delta Cephei, δ Cep. A yellow blue pair, CEP. Variable, watch for the 1 mag brightness change.

57 PEG, HIP 114347, mag 5 and mag 9 orange primary and blue companion. Peg 1 Cal cluster is about 1.5° to the northwest.

If you have favorite challenge objects or other comments, or information on the listings let me know.

Please bring your images on a thumb drive.

FWAS Observing Challenge Director Joe Novosel; joe.novosel55@gmail.com.

2024 Membership Engagement Survey

FWAS wants to hear from you! Please fill out the survey. It is asking you about your interests and what you want from FWAS. We will use everyone's responses to help plan future events, pick speakers for meetings and help to make sure that as many club members are engaged. We want to make your FWAS experience is enjoyable for everyone.

[FWAS 2024 Engagement Survey - Google Forms](#)



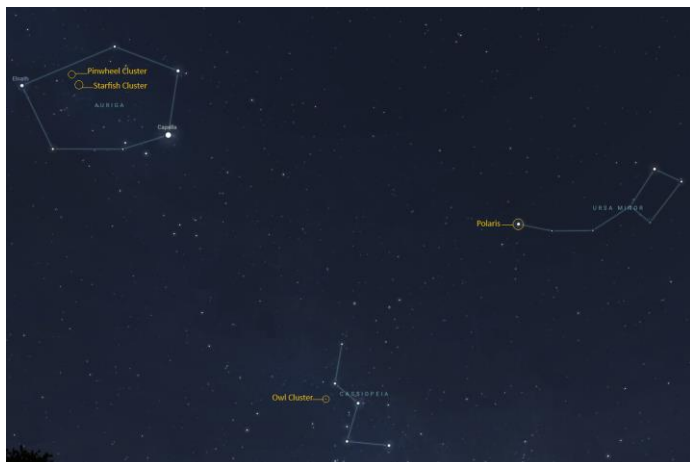
This article is distributed by NASA's Night Sky Network (NSN).

The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

Constant Companions: Circumpolar Constellations, Part I

By Kat Troche.

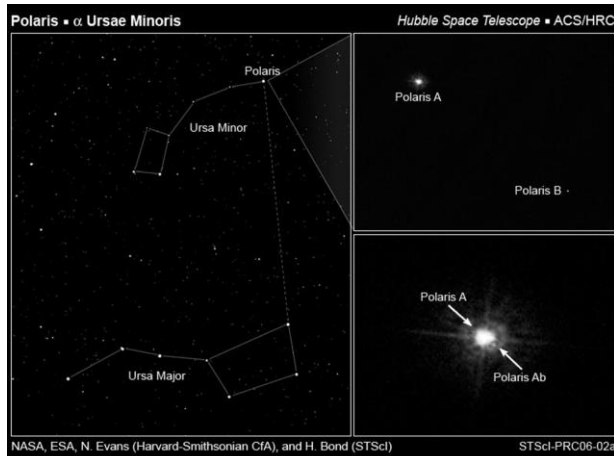
Winter in the northern hemisphere offers crisp, clear (and cold!) nights to stargazers, along with better views of several circumpolar constellations. What does circumpolar mean when referring to constellations? This word refers to constellations that surround the north and south celestial poles without ever falling below the horizon. Depending on your latitude, you will be able to see up to nine circumpolar constellations in the northern hemisphere. Today, we'll focus on three that have gems within: Auriga, Cassiopeia, and Ursa Minor. These objects can all be spotted with a pair of binoculars or a small to medium-sized telescope.



The counterclockwise circumpolar constellations Auriga, Cassiopeia, and Ursa Minor in the night sky, with four objects circled in yellow labeled: Pinwheel Cluster, Starfish Cluster, Owl Cluster, and Polaris.

Credit: Stellarium Web

- **The Pinwheel Cluster:** Located near the edge of Auriga, this open star cluster is easy to spot with a pair of binoculars or small telescope. At just 25 million years old, it contains no red giant stars and looks similar to the Pleiades. To find this, draw a line between the stars Elnath in Taurus and Menkalinan in Auriga. You will also find the **Starfish Cluster** nearby.
- **The Owl Cluster:** Located in the 'W' or 'M' shaped constellation Cassiopeia, is the open star cluster known as the **Owl Cluster**. Sometimes referred to as the E.T. Cluster or Dragonfly Cluster, this group of stars never sets below the horizon and can be spotted with binoculars or a small telescope.



A black and white image from the Hubble Telescope of the Polaris star system, showing three stars: Polaris A, Ab, and Polaris B.

Credit: NASA, ESA, N. Evans (Harvard-Smithsonian CfA), and H. Bond (STScI)

- **Polaris:** Did you know that [Polaris is a triple star system](#)? Look for the North Star on the edge of Ursa Minor, and with a medium-sized telescope, you should be able to separate two of the three stars. This star is also known as a [Cepheid variable star](#), meaning that it varies in brightness, temperature and diameter. It's the closest one of its kind to Earth, making it a great target for study and [conceptual art](#).

Meeting Speaker Schedule

Planned to add the Monthly Meeting Speaker Schedule but it is not available. It should be published in the March Eyepiece Newsletter.