
A Backyard Astronomy Camp
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If you had one week to introduce novice high school students to the night sky, how would you do it?

Wading into the Water Slowly

A Staged Approach to Practical Astronomy

Step 01: Shallow Water
Celestial orienteering and naked-eye constellation observing

Step 02: Knee Deep
Deep sky objects, binocular observing of Moon and planets

Step 03: Waist Deep
Introduction to telescopes with observing and imaging

Step 04: Swimming
Remote observing and image processing

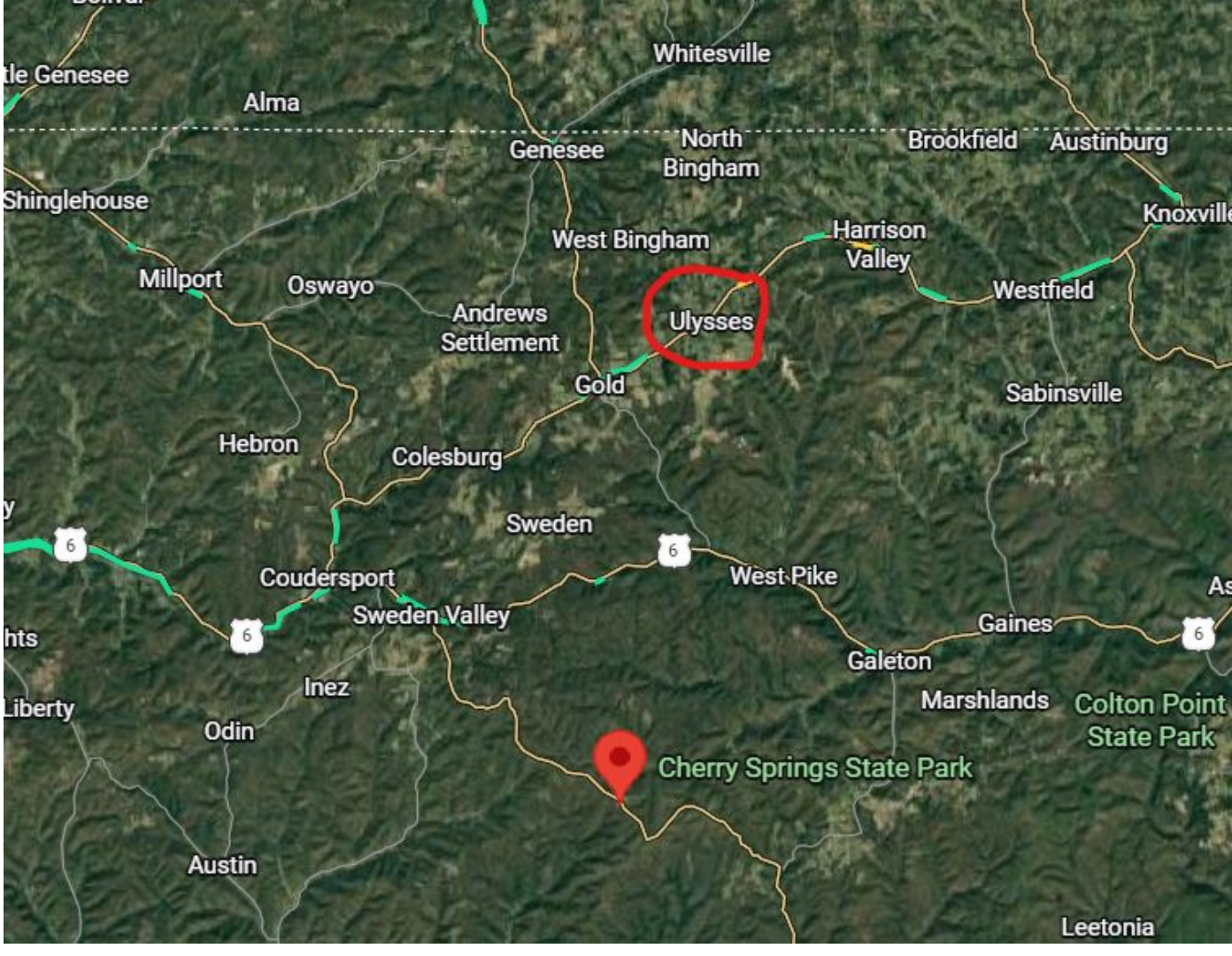
Step 05: Deep Sea
Independent student projects


THE 2025 Backyard Astro Crew

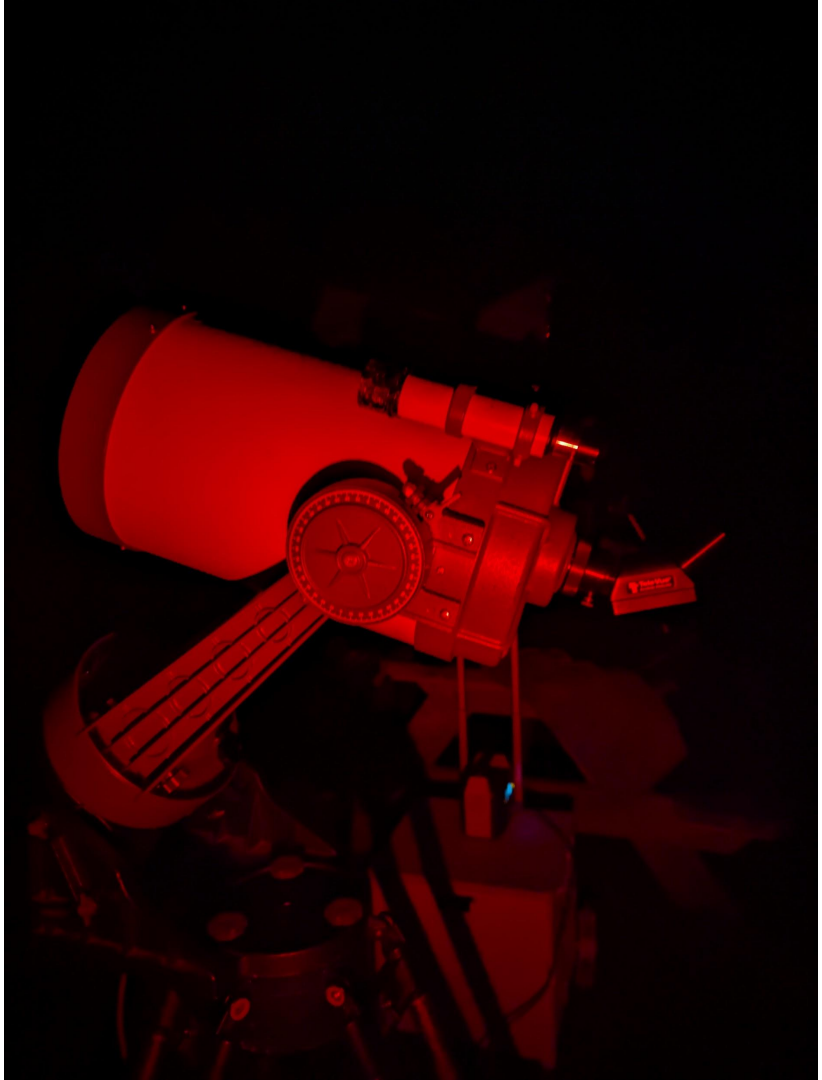
Penn-York Camp

+ Bortle 2!
+ Meals, lodging

- Very far drive :(



We brought all of our own observing equipment, including my 50 year old C8

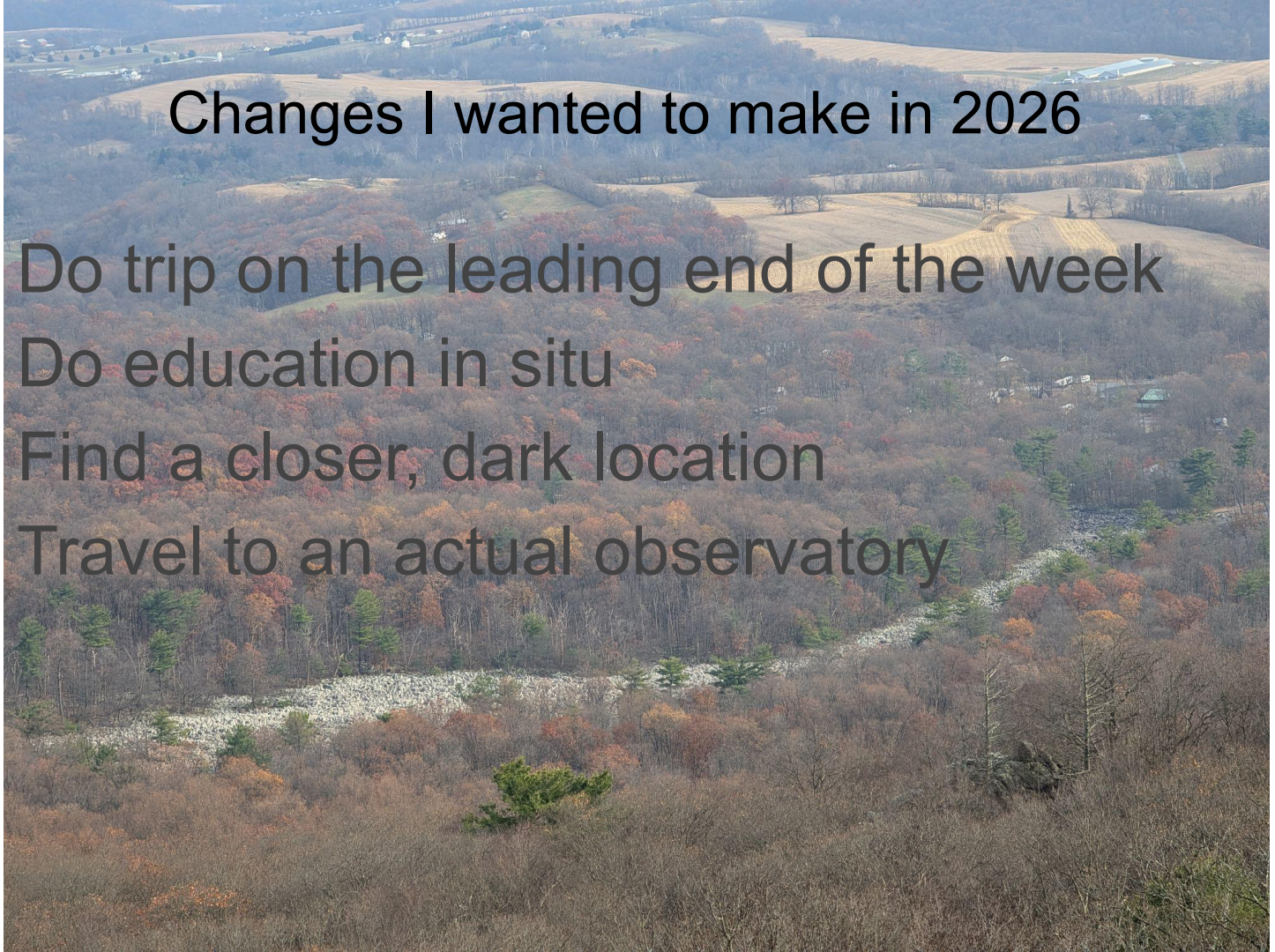


Student photo of the Moon.

Student projects included:

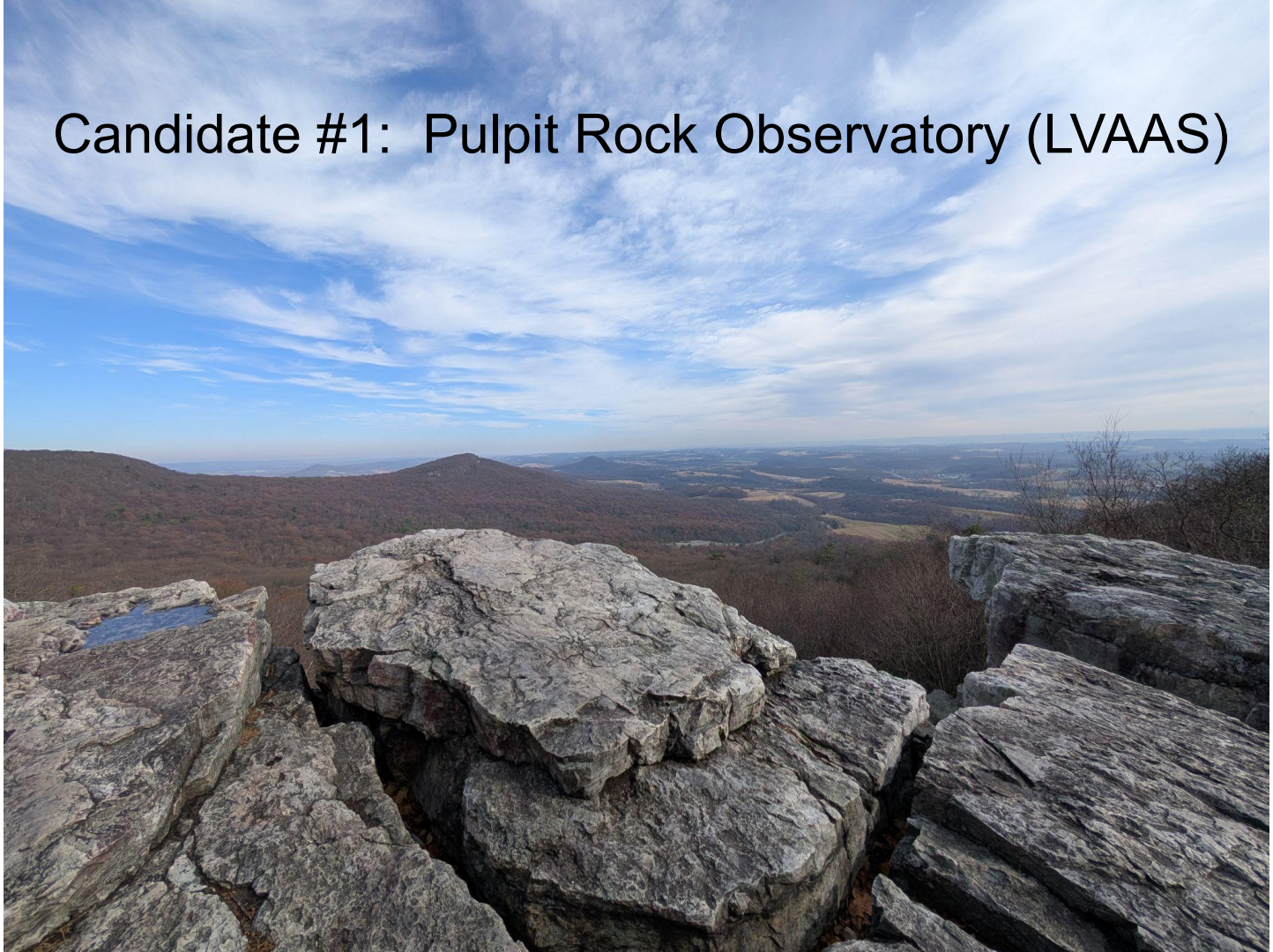
- Watching position of a circumpolar constellation change through the night
- Photographing star trails
- Seeking galaxies and nebulae through the telescopes
- Noting the movement of the Moon hourly overnight

Changes I wanted to make in 2026



- Do trip on the leading end of the week
- Do education in situ
- Find a closer, dark location
- Travel to an actual observatory

Candidate #1: Pulpit Rock Observatory (LVAAS)

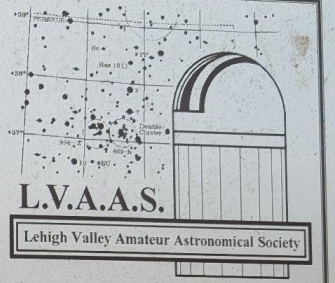


Bortle class 4.9 (but horizon light from Allentown, Harrisburg)

A *real* observatory!

But no place nearby for lodging, driving a van up the mountain would be tough…

Kawecki Observatory

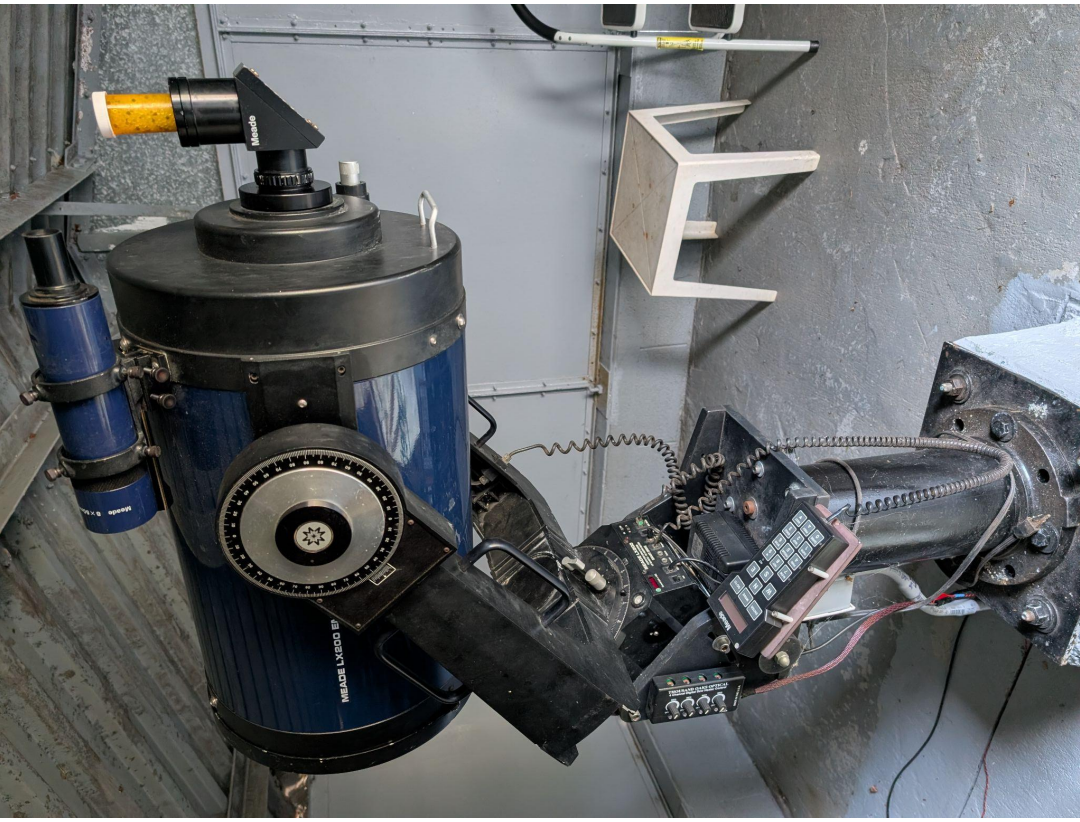


This observatory is the only one owned by the Society that was not built by the LVAAS. Henry Kawecki purchased the land and erected the observatory in the 1950's. Kawecki was CEO of the Kawecki Chemical Company which produced exotic metals. He could only access the site by helicopter.

In 1966, a member of the LVAAS discovered the observatory. At a meeting in September of that year, Kawecki offered to deed the observatory and 4.5 acres of land at Pulpit Rock to the LVAAS if the Society raised $3000 for construction of a road. Kawecki matched this two to one toward the $8500 cost of the road.

The observatory originally housed a 12.5 inch Cassegrain reflector built by Michael Spacek. The telescope was relocated to the Brooks Observatory at South Mountain and replaced with an 8 inch refractor also built by Spacek. The refractor optics were later refigured by William McHugh.

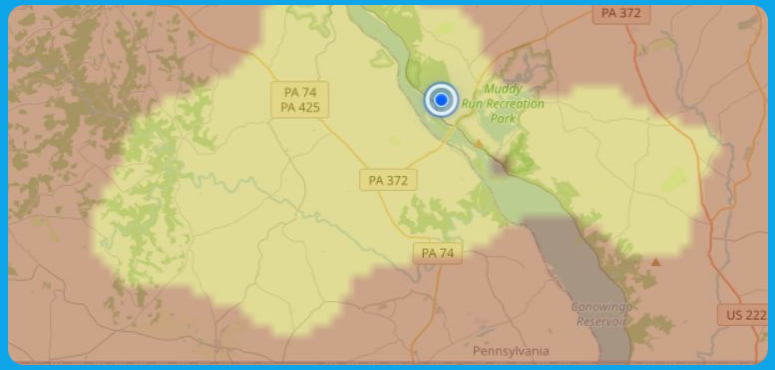
The telescope was named for Mr. Kawecki with the family's approval following Mr. Kawecki's death. He had declined this honor while alive.


Meade
MEADE LX200 GPS

Choosing the Best Site

Other Considerations

- Mt. Cuba Observatory (UD)
  Not set up for groups like ours
- South Mountain (LVAAS)
  Bortle 6.8



And the winner is...

Ryan Observatory

at Muddy Run (Bortle 5!)

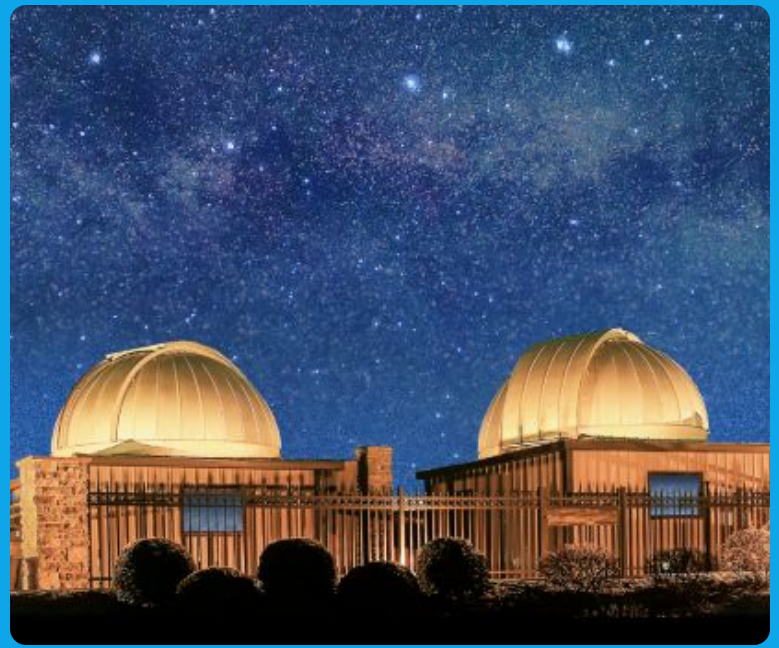
Ryan Observatory

Key Features

Educational Focus
Designed with educational outreach in mind

Dedicated Space
Has dedicated classroom space for teaching

Advanced Equipment
Equipped with imaging gear and on-site telescopes for visual observations



Lodging

We are staying in cabins a short ride from the observatory. Once we close up for the night at the observatory, we have potential to continue observing at the park.

Plenty of recreational activities for students

We will have the use of their barn as classroom space

2026 Schedule at a Glance

Wednesday

Afternoon Departure
Travel to Holtwood, PA

Evening Orientation
Class and constellation/binocular observing at Ryan Observatory

Thursday

Day Classes
Sessions at the campground barn

Evening Observing
Afternoon class and observing at Ryan Observatory

Friday

Dusk to Dawn

Intensive observing for student projects at Ryan Observatory

2026 Schedule Continued

Saturday

Conclusion

Afternoon return to Wynnewood

Mon & Tue

Analysis Phase

Remote observing and image processing

Wed & Thu

Final Prep

Wednesday: Off

Thursday: Showcase prep

Showcase Friday morning on campus

Remote Observing Opportunities

The Schools' Observatory

Programmed Observing
2-meter Liverpool Telescope (La Palma)

Live Sessions
Bookable on 2-meter Faulkes North (Haleakala) or Faulkes South (Siding Springs) telescopes

LCO & Global Sky Partners

Las Cumbres Observatory / Global Sky Partners / Photon Ranch

Queued Observing
Available via LCO network

Live Bookings
Real-time sessions can be scheduled

Teaching about image processing

Educational Resources

Interactive Workshops

- Hands-on RGB imaging sessions using JS-9

Vera Rubin Observatory

- Investigation: “Coloring the Universe”

New Capabilities

- Now featuring Astrolab via The School’s Observatory, alongside Lightroom and Photoshop potentials

How can students plan their observing sessions?

I created a website for them called ARC, the Astronomy Resource Center

Astronomy Resource Center

- Home
- Backyard Astronomy Resources
- Remote Observing
- Digital Planetarium Resources
- Telescopes
- Astrophotography
- Photo Gallery and Miscellany

Backyard Astronomy Resources

Remote Observing

Digital Planetarium Resources

Telescopes

Astrophotography

Photo Gallery and Miscellany

Questions? Want help planning your own program?

Get in Touch

Email me!

dskapik@friendscentral.org

Instagram: @deb_makes_bread

Thanks for listening!

And remember:
the sky is for
everyone!