



The Night Sky

The Newsletter of
The Astronomy Club of Akron

www.acaoh.org

October 2022

ACA MEETING - Sunday, October 16th, 2022 at 2:00 PM

President's Column

By Cathy Loboda

ACA Monthly Meetings

Just a quick reminder, ACA meetings are now held on Sundays at 2:00 pm. The meeting location is the Portage Lakes Kiwanis Civic Center, 725 Portage Lakes Drive, Akron. The transition to in-person meetings on a new day is not without obstacles. Please share meeting dates, time, and location with friends and family who are interested in astronomy. Meetings are normally scheduled for the third Sunday of the month, so mark your calendars for upcoming club meetings on October 16th and November 20th. Looking forward to seeing you!

Membership Renewals Due

The ACA Board continues to remind you that membership fees were due for the upcoming year in September. If you were unable to attend the September meeting and/or have yet to renew your membership, please mail your dues to treasurer Dave Hartsook at:

The Astronomy Club of Akron
c/o Dave Hartsook
4174 Meadow Wood Lane
Uniontown, Ohio 44685-7717

Your dues pay for observatory maintenance and insurance, gratuity for guest speakers, membership picnic entree, pavilion fees and any costs incurred in support of our outreach programs. Your membership is needed and much appreciated!

Star Parties

The season for Star Parties is sadly coming to a close. The upcoming and final 2022 Star Parties are scheduled for October 22nd and October 29th at 7:00 p.m. For details about what Observatory Director Ron Kalinoski has on the viewing list, see the 2022 Observatory Schedule found on the ACA website. Also check out the website often for notice of Impromptu Star Parties. Stop in at the ACA Observatory and support!

Special Thanks

ACA wants to extend a heartfelt thank you to Mike Sanders who graciously took on the position of Trustee on the ACA Board. The Board is still in need of two Trustees and the importance of a full board cannot be under-

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OFFICERS 2022 — 2024

President: Cathy Loboda

E-mail: president@acaoh.org

Vice President: Gary Smith

E-mail: vice.president@acaoh.org

Treasurer: Dave Hartsook

E-mail: treasurer@acaoh.org

Secretary: Marnie Sanders

E-mail: secretary@acaoh.org

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Trustee: Mike Sanders

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Trustee: position vacant

E-mail:

Trustee: position vacant

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OTAA Representative: Lou Poda



(Continued from page 1)

estimated. Board members are the driving force behind a successful club as we look to the future. Please consider serving on board! If you have questions or are interested, email President Cathy Loboda.

Members Social

ACA's next Members Social is scheduled for Sunday, November 6th. We will meet at the ever-popular Galaxy Restaurant for Sunday Brunch at 12:00 pm. If you are interested in attending, please email ACA Secretary Marnie Sanders before November 1st. Hope to see you there!

Observatory Report

By Ron Kalinoski

Hello Members,

We had an impromptu star party on September 29th. The skies were near perfect. Observers were treated to fabulous views of a crescent Moon, Jupiter, and Saturn, as well as many star clusters. After the star party Dave Hartsook and I set up the observatory telescope for winter storage. We should have plenty more impromptu star parties before the end of the year, but from this point until early summer, the observatory telescope will be parked in its winter configuration.

Jim Watson found a company to rent a 4-inch pipe tap to clean the coupling threads of our 5-inch refractor base. Jim plans to clean the threads this month sometime. We were having problems with threading the pier into the coupling base more than just a couple threads and this was making the mount unstable. Thank you Jim for your help! We also purchased a coupling and 12-inch pipe nipple to raise the mount. During our last solar party, it was evident the eyepiece was too low while observing the Sun which was high overhead. In the new configuration, the eyepiece will be approximately 14 inches higher.

We are planning to have another maintenance day at the observatory to finish up some of the items we didn't get to this summer. We plan to have a cookout during the event, using hamburgers and hotdogs left over from our summer club picnic. A notice will go out soon.





Agenda for October ACA Members Meeting

By Marnie Sanders

Meeting Date October 16th, 2022
Meeting Time 2 PM
Meeting Location Portage Lakes Kiwanis Civic Center
725 Portage Lakes Dr
Akron, Ohio 44319

Meeting Agenda

Call to order President
Officers' reports Vice President
Secretary
Treasurer

Come for the Program...
...and the Refreshments...
...and the best free coffee in Akron!
A brief meeting will follow the program.
SEE YOU THERE!!!!

Astronomy Club of Akron Membership Renewal

By Dave Hartsook

Greetings ACA Members,

Just a friendly reminder that membership renewals are due in September. If you have already renewed your membership through 8.31.2023 - Thank You! If you haven't renewed yet, please consider doing so today!

Renewal forms are available in the newsletter and on the ACA website at: <https://www.acaoh.org/membership.htm/>. Payment via PayPal is available as an option. Also, the renewal form is attached for your convenience.

Mailing address for Renewal forms:
The Astronomy Club of Akron
c/o Dave Hartsook
4174 Meadow Wood Lane
Uniontown, OH 44685-7717

Clear Skies!
Thank you,
Dave Hartsook
ACA Treasurer



Neptune discovered on this date in 1846 (this email was originally dated September 23rd, 2022)

By Marnie Sanders

EarthSky News <deborahbyrd@earthsky.org>

"The fascinating story of the discovery of Neptune— outermost major planet in our solar system—found on September 23, 1846. It was the first planet to be discovered not solely by looking in the sky... but by using mathematics."

The above statement is the conclusion to just one of the articles in my EarthSky News publication this week. If you haven't discovered this free newsletter, you may want to do so! Even in the 1800's, such things as political tension and human pride were part and parcel in the endeavors of the humans who explored our universe. The article began as follows:

"Astronomers found the outermost major planet in our solar system — Neptune— on September 23, 1846. It was the first planet to be discovered using mathematics. Johann Gottfried Galle, Urbain Jean Joseph Le Verrier, and John Couch Adams all worked independently to help find this distant world, which isn't visible to the eye. Their separate endeavors led to an international dispute as to who should get the credit for Neptune's discovery."

Every edition of this newsletter yields interesting pictures and articles, and if you want to subscribe, just go on their website for the free access. Enjoy!

EarthSky | DART strikes its asteroid, in 1st planetary defense test

By Marnie Sanders

As the EarthSky newsletter greets me in my mailbox and sends such current and exciting news, I just had to share with those who may not have connected with EarthSky, which is a totally free up-to-the-minute publication with lots of pictures, videos, and commentary.

The DART mission was to test Earth's ability to deflect possible asteroid strikes. The subject of which many of our exciting sci-fi movies have explored. ("Don't Look Up" is the last one that I viewed. While some of the actors were interesting, the movie was "just ok" in my opinion, as too much political nonsense was included. And I prefer PG, but Hollywood has its own agenda also.)

Well, guess what? The DART impact was evaluated as "spot on" and the deflection path will now be monitored. All the various "assumptions" in these experiments are not always complete. I'm curious how deflection may be calculated to guarantee no further trouble from a future asteroid. And I am no mathematician, but I'm sure those qualified folks will be madly calculating all the requirements per asteroid for any future deflections. And, in these types of scenarios, I'm always most curious about the "what don't we know" stuff that almost always subsequently materializes.

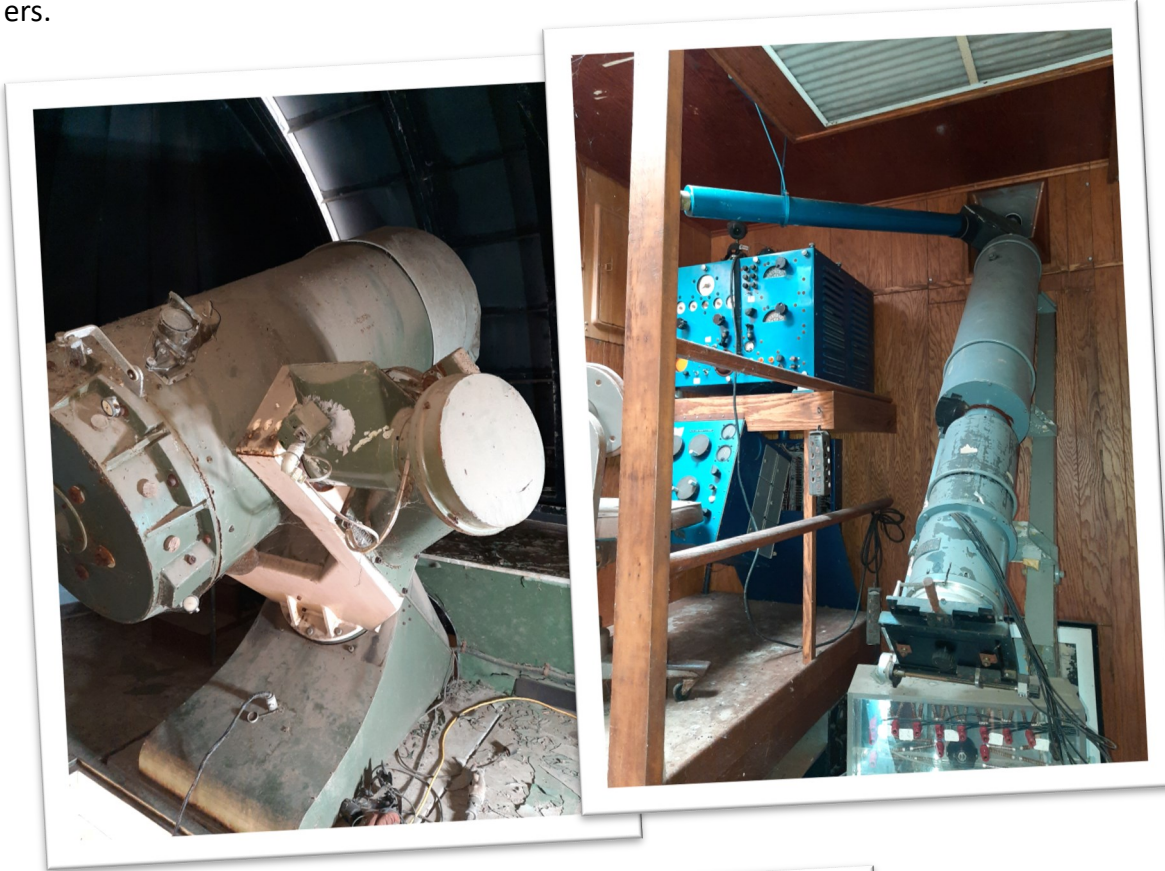
Enjoy and sign-up for the EarthSky newsletter if you like what you see in this example!



Telescope Postmortem Part II

By Ron Kalinoski

In our August newsletter, I posted one of two letters I sent to the ACA Board about astronomical equipment in an Ohio observatory that was abandoned in 1998 and was scheduled for demolition by new property owners.



High cost of equipment removal, cost of refurbishment, required labor, and environmental working conditions in the observatory brought no response to move forward with this unusual proposition. However, Gary Ciesielczyk and I decided to hire a crane company to remove

the telescope from the observatory so it could be evaluated for possible refurbishment or part salvage. We worked several weeks to prepare the telescope and observatory dome for removal. This pre-work allowed us to minimize the time required for the crane company to be on site.

As previously stat-



ed, the observatory was very dusty and a half-face respirator was needed to work safely in the area, since the dust contained deteriorated paint that probably contained lead and chromium (based on paint color). Since the telescope used a pressurized oil system and was constructed in 1963, I wanted to have the lubricating oil tested for PCBs before proceeding with disassembly. PCBs were widely used in the 60's to modify transformer and hydraulic oil characteristics. PCB manufacturing was banned in the United States in 1976 because PCBs are highly carcinogenic. The results from the analytical laboratory showed several types of PCBs in the lubricating oil. This added an additional issue and concern, as the telescope would need to be decontaminated,

and approximately 10 gallons of hazardous waste oil would need to be disposed of properly.

We moved forward using personal protective equipment to minimize exposure to the chemicals. On the day of the lift, we were very excited to see if our rigging set-



up was sufficient to bring the equipment safely to the ground without incident. The telescope weighed 3400 pounds (the weight of a Toyota Camry) and the observatory dome weighed 900 pounds. Fortunately, the lifts went smoothly with no incident.

Next, we needed to disassemble the telescope as we had no way to lift the telescope onto Gary's trailer for hauling. At a minimum, the mirrors needed to be removed; but we did manage to disassemble the telescope into five main components and several subcomponents for transport. As stated in the August newsletter, this telescope was set up as a Schmidt telescope with a Coude focus.

The telescope had five mirrors that reflected light approximately 25 feet to control room instrumentation located on the floor below the observatory. The light path traveled from the primary mirror to the secondary mirror and then to a tertiary mirror located directly in front of the primary mirror. The tertiary mirror directed the light path down the declination axis to outside the telescope main tube to a quaternary mirror located outside the fork mount. The quaternary mirror reflected light back down through the forks to a quinary mirror located inside the forks that finally reflected light down the polar axis to the control room.

The objective of all this was to have the light path enter instrumentation mounted in the control room (not on the telescope, for balance consideration), regardless of where the telescope was pointed. The last setup of instrumentation, as we found it, was an image intensifier shown in one of the photos. This observatory was constructed and used by Dr. James Rodman. He had a contract with Mount Union College of Alliance to teach students astronomy and give them observational instruction. The contract ran from 1965 to 1998.



At some point, the secondary mirror was removed and its whereabouts are unknown. A diagonal mirror was installed at prime focus with an eyepiece just outside the main tube. This modification was unknown to Gary & me until we were able to get the telescope on the ground to examine and compare it with what we saw in an old photo that showed the original secondary mirror. The modification as far as we are concerned, has little value because the eyepiece elevation when the telescope is pointed at zenith is over twelve feet above the floor, making observations unsafe.

Decontamination of the telescope to remove PCBs is the first issue that needs to be addressed before analysis of the equipment can continue. That process will take place over the next few months. Testing of the mirror can take place during the same timeframe. The mirror coating will probably need to be removed before testing can occur, since corrosion of the coating will make reading the cur-

vature of the mirror difficult. The primary mirror is $f/4$, 24 inches in diameter, and 4 inches thick. It has a large chip near the center that was probably caused during installation of the tertiary mirror. The tertiary mirror cell is mounted to a plate bolted to a post that runs through the primary mirror and is secured to the primary mirror cell. Gary & I struggled to remove the tertiary mirror assembly but did so without incident. See photo of tertiary mirror.



Blast From Octobers Past

By Glenn R. Cameron

Here are some pictures I took on October 3rd, 2015, when the ACA visited NASA Glenn in Cleveland. One of the highlights of the visit was seeing the Simulated Lunar OPERations (SLOPE) lab. They created simulated lunar regolith and put some of it on an experimental slope, in order to test prototype Goodyear tires for future lunar rovers. The design was incredibly light weight. Great fun!



October Astronomical Events

Date	EST (h:m)	Event
02	19:14	FIRST QUARTER MOON
04	12:01	Moon at Perigee: 369335 km
05	10:51	Saturn 4.1°N of Moon
06	16:00	Mercury at Perihelion
08	13:06	Jupiter 2.1°N of Moon
08	16:00	Mercury at Greatest Elong: 18.0°W
09	15:55	FULL MOON
11	16:49	Moon at Ascending Node
12	22:46	Pleiades 2.7°N of Moon
14	23:28	Mars 3.6°S of Moon
17	05:21	Moon at Apogee: 404330 km
17	10:41	Pollux 1.8°N of Moon
17	12:15	LAST QUARTER MOON
21	13:00	Orionid Meteor Shower
22	16:00	Venus at Superior Conjunction
25	05:49	NEW MOON
25	06:00	Partial Solar Eclipse; mag=0.862
26	01:30	Moon at Descending Node
27	21:48	Antares 2.3°S of Moon
29	09:48	Moon at Perigee: 368289 km

November Astronomical Events

Date	EST (h:m)	Event
01	03:37	FIRST QUARTER MOON
01	18:08	Saturn 4.2°N of Moon
04	17:19	Jupiter 2.4°N of Moon
05	15:00	S Taurid Meteor Shower
08	03:08	Moon at Ascending Node
08	07:59	Total Lunar Eclipse; mag=1.359
08	08:02	FULL MOON
08	13:00	Mercury at Superior Conjunction
09	06:00	Uranus at Opposition
09	09:16	Pleiades 2.7°N of Moon
11	10:43	Mars 2.5°S of Moon
12	14:00	N Taurid Meteor Shower
13	20:43	Pollux 1.7°N of Moon
14	03:41	Moon at Apogee: 404924 km
16	10:27	LAST QUARTER MOON
17	21:00	Leonid Meteor Shower
21	00:36	Spica 4.3°S of Moon
22	13:23	Moon at Descending Node
23	19:57	NEW MOON
25	22:30	Moon at Perigee: 362826 km
29	01:40	Saturn 4.2°N of Moon
30	11:36	FIRST QUARTER MOON

September 2022 ACA Treasurer's Report
By Dave Hartsook
10/3/2022

Checking Beginning Balance	\$1,605.08
Income	
Membership Dues Received (2 Family + 4 Adult)	\$200.00
PayPal Net Fee/Charge	\$0.20
Total Income	<u>\$200.20</u>
Expenses	
Reimburse Observatory Director for pipe and parts for extending 5" refractor mount	-\$94.87
Reimburse Secretary for Picnic shelter rental fee	-\$51.50
Total Expenses	<u>-\$146.37</u>
Income Less Expenses	\$53.83
Checking Ending Balance	<u><u>\$1,658.91</u></u>
Savings Beginning Balance	
\$3,768.53	
Interest Income	\$0.03
Savings Ending Balance	<u><u>\$3,768.56</u></u>
Petty Cash Beginning Balance	
\$50.00	
No Activity	
Petty Cash Ending Balance	\$50.00
Grand Total	\$5,477.47

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Newsletter of the Astronomy Club of Akron

c/o Glenn R. Cameron, Editor

The Astronomy Club of Akron
c/o Dave Hartsook
4174 Meadow Wood Lane
Uniontown, OH 44685-7717

Yes! I want to become a member of the Astronomy Club of Akron

Check one: New Membership
 Renewal

www.acaoh.org
(PLEASE PRINT)

Name: _____ Phone: _____

Address: _____

City: _____ State: _____ Zip: _____

Email Address: _____

Astronomy Club of Akron annual memberships renew in the month of September.

Initial dues for New Members are prorated. If joining in Sep-Nov, pay full amount below; Dec-Feb pay 75%; Mar-May pay 50%; Jun-Aug pay 25%

Adult (ages 18 and older) \$30.00

Junior (ages 12 to 17) \$15.00

Additional Adult Member \$15.00

Family Membership \$40.00

Visit us on the Web at www.acaoh.org