



The Observer

A Publication of The Cuyahoga Astronomical Association
 PO Box 868, North Olmsted, OH 44070

CAA Homepage: <http://www.cuyastro.org>

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2008 CAA Calendar - Summary

5/10/08 Sat 8:00 p.m.	CAA Observatory Open House – Letha House
5/10/08 Sat TBD	Astronomy Day – LENS
5/12/08 Mon 7:30 p.m.	CAA General Membership Meeting – RRNC
5/17/08 Sat 5/18/08 Sun Daytime	NASA Glenn Open House – Booth and Solar Telescope Viewing
5/19/08 Mon 7:30 p.m.	CAA Board Meeting – Starbucks
5/31/08 Sat 6:00 p.m.	MVAS OTAA Scenic Vista Stargaze – Scenic Vista Park, Lisbon, OH
6/9/08 Mon 7:30 p.m.	CAA General Membership Meeting – RRNC
6/14/08 Sat 8:00 p.m.	CAA Observatory Open House – Letha House
6/23/08 Mon 7:30 p.m.	CAA Board Meeting – Starbucks
6/28/08 Sat 6:00 p.m.	CVAS OTAA Convention – Indian Hill Observatory
7/12/08 Sat 8:00 p.m.	CAA Observatory Open House – Letha House
7/14/08 Mon 7:30 p.m.	CAA General Membership Meeting – RRNC
7/26/08 Sat	CAA OTAA Convention – Letha House
7/28/08 Mon 7:30 p.m.	CAA Board Meeting – Starbucks
8/2/08 Sat 5 p.m.	MVAS OTAA Convention – MVCO
8/9/08 Sat 8:00 p.m.	CAA Observatory Open House – Letha House
8/11/08 Mon 7:30 p.m.	CAA General Membership Meeting – RRNC
8/25/08 Mon 7:30 p.m.	CAA Board Meeting – Starbucks
9/6/08 Sat 4:30 p.m.	BRAS OTAA Convention – Birmingham

9/8/08 Mon 7:30 p.m.	CAA General Membership Meeting – RRNC
9/20/08 Sat Day and Night	NASA Glenn – Solar Telescope and Nighttime Telescope Viewing (no booth)
9/22/08 Mon 7:30 p.m.	CAA Board Meeting – Starbucks
10/13/08 Mon 7:30 p.m.	CAA General Membership Meeting – RRNC
10/27/08 Mon 7:30 p.m.	CAA Board Meeting – Starbucks
11/10/08 Mon 7:30 p.m.	CAA General Membership Meeting – RRNC
11/15/08 Sat 8:00 p.m.	CAA Presentation “Jupiter the King of the Planets” and Star Party – Wolf Creek Environmental Center
11/24/08 Mon 7:30 p.m.	CAA Board Meeting – Starbucks
12/8/08 Mon	CAA Christmas Party
	No Board Meeting in December

2008 CAA Calendar - Detail

Saturday, May 10

CAA Observatory Open House at Letha House park from 8:00 p.m. to 11:00 p.m. There is no talk or presentation for this event.

CAA members that are planning on attending this event please let Erik Hall, CAA Observatory Director know before hand or call the Medina County Park District offices directly at 330-722-9364 to register.

Saturday, May 10

Astronomy Day at the Lake Erie Nature and Science Center, Bay Village, OH. This is an all day event and we will need telescopes for the evening star party. See meeting minutes for details.

Monday, May 12

CAA General Membership Meeting at 7:30 p.m. in the Cleveland Metroparks Rocky River Nature Center. CAA Secretary Steve Spears will be our speaker this month – topic to be announced.

Saturday & Sunday, May 17 & 18

NASA Glenn Open House: Booth and Solar Telescope Viewing – Daytime only. This event has a large attendance so we are hoping that CAA will have the opportunity to introduce our organization and possibly bring in a few new members. The board has already ordered new brochures to pass out at this event.

Monday, May 19

CAA Board Meeting at 7:30 p.m. at Starbucks Coffee Co. Starbucks is located at 24950 Lorain Road, just west of Columbia Road in North Olmsted.

Saturday, May 31

MVAS OTAA Scenic Vista Stargaze starting at 6 p.m. at Scenic Vista Park, Lisbon, Ohio.

Monday, June 9

CAA General Membership Meeting at 7:30 p.m. in the Cleveland Metroparks Rocky River Nature Center. Program to be announced.

Saturday, June 14

CAA Observatory Open House at Letha House park from 8:00 p.m. to 11:00 p.m. There is no talk or presentation for this event.

CAA members that are planning on attending this event please let Erik Hall, CAA Observatory Director know before hand or call the Medina County Park District offices directly at 330-722-9364 to register.

Monday, June 23

CAA Board Meeting at 7:30 p.m. at Starbucks Coffee Co. Starbucks is located at 24950 Lorain Road, just west of Columbia Road in North Olmsted.

Saturday, June 28

CVAS OTAA Convention. See details under *Other OTAA Events*.

Saturday, July 12

CAA Observatory Open House at Letha House park from 8:00 p.m. to 11:00 p.m. There is no talk or presentation for this event.

CAA members that are planning on attending this event please let Erik Hall, CAA Observatory Director know before hand or call the Medina County Park District offices directly at 330-722-9364 to register.

Monday, July 14

CAA General Membership Meeting at 7:30 p.m. in the Cleveland Metroparks Rocky River Nature Center. Program to be announced.

Saturday, July 26

CAA OTAA Convention at the CAA Observatory next to the Letha House Park Barn, 10311 Spencer Lake Rd., just west of Richmond Rd., in Chatham Township. We will be there rain or shine. Details to follow.

Monday, July 28

CAA Board Meeting at 7:30 p.m. at Starbucks Coffee Co. Starbucks is located at 24950 Lorain Road, just west of Columbia Road in North Olmsted.

Saturday, August 9

CAA Observatory Open House at Letha House park from 8:00 p.m. to 11:00 p.m. There is no talk or presentation for this event.

CAA members that are planning on attending this event please let Erik Hall, CAA Observatory Director know before hand or call the Medina County Park District offices directly at 330-722-9364 to register.

Saturday, September 20

NASA Glenn: Solar Telescope and Nighttime Telescope Viewing (no plans for a booth at this event)

Saturday, November 15

CAA presentation and star party at 8:00 p.m. at Wolf Creek Environmental Center. CAA member Bob Wiersma will be our speaker for this event. Bob will present "Jupiter the King of the Planets." The presentation will be put on rain or shine. Weather permitting please bring your telescopes for the public star party that will follow the presentation.

CAA members that are planning on attending this event please let Erik Hall, CAA Observatory Director, know before hand or call the Medina County Park District office directly at 330-722-9364 to register.

Sky Events for May 2008

Moon Phase Calendar for May, 2008

Sun	Mon	Tue	Wed	Thur	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Monday, May 12

The Moon passes 1.2° south of Regulus, 3 p.m. EDT.

The Moon passes 3° south of Saturn, 8 p.m. EDT.

Tuesday, May 13

Mercury is at greatest eastern elongation (22°), midnight EDT.

Tuesday, May 20

The Moon passes 0.2° south of Antares, 7 p.m. EDT.

Saturday, May 24

The Moon passes 2° south of Jupiter, 7 a.m. EDT.

Monday, May 26

The Moon passes 0.6° north of Neptune, 11 p.m. EDT.

Thursday, May 29

The Moon passes 4° north of Uranus, 5 a.m. EDT.

Sky Events for June 2008

Moon Phase Calendar for June, 2008

Sun	Mon	Tue	Wed	Thur	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Saturday, June 7

Mercury is in inferior conjunction, 11 a.m. EDT.

The Moon passes 1.1° south of Mars, 10 p.m. EDT.

Sunday, June 8

Venus is in superior conjunction, midnight EDT.

Monday, June 9

The Moon passes 3° south of Saturn, 5 a.m. EDT.

Club News / Stories

**Treasurer's Report
April 2008**

Beginning Petty Cash	\$63.80
Beginning Bank Balance	\$4,463.07
Starting Assets	\$183.45
Total Beginning Assets	\$4,710.32
Income	
Coffee Donations	\$13.59
Bank Interest	\$4.09
Total Income	\$17.68

<i>Expenses</i>	
CAA Web Site	\$125.95
Refreshments	\$13.84
Total Expenses	\$139.79
Total Income - Expenses (\$122.11)	
Ending Petty Cash	\$63.55
Ending Bank Balance	\$4,341.21
Ending Assets	\$183.45
Total Ending Assets	\$4,588.21

Ted Sauppé, CAA Treasurer

Secretary's Report April 2008

General Membership Meeting Minutes

4/14/08 7:30 p.m. at RRNC

President Jim Cofer called the meeting to order at 7:30 pm.

Treasurer's Report: No corrections.

Secretary's Report: March Board meeting minutes will be incorporated into April's minutes. No other corrections.

Bruce Lane:

- Newsletters from the Akron club are available.
- Archive material available to members from Bob Wiersma.

Guest: Mike Blair from NASA

- May, 50th anniversary of NASA
- May 17th and 18th open house at NASA 11:00 a.m. to 7 p.m.
- CAA table in hanger.
- Research aircraft available for viewing.
- CAA will be providing solar viewing.
- NASA exhibits available to public.
- CAA members should register with NASA ahead of time.
- CAA members must sign a waiver for services rendered during the open house.

Jay Reynolds, LESNC

- May 10, Astronomy Day
- Opens at 10:00 a.m.
- "Crafts For Kids"
- Comet making
- How to select a telescope
- Project Orion
- Planetarium program
- CAA solar viewing during the day
- CAA telescopes at night

Volunteers needed to man tables at both NASA and LESNC

CAA Convention:

- Heather Morrison from CWRU will be the featured speaker

Observations:

- Steve Korylak- Sun showed no activity when observed.
- John Nichols- 3/28, Observed Saturn and Titan.
- Bill Murmann- 3/28, Sunspots; Saturn; split Castor; and Bee Hive cluster.
- Mike Williams- observed "sun-dogs".

Program: Al Panzer gave us a look at the equipment he uses to observe and research solar activity.

Submitted by:

Steve Spears – Secretary, CAA

Board Meeting Minutes

4/28/08 7:00 p.m. at Starbucks

Attending: Jim Cofer, Ron Devine, Bruce Lane, Bill Murmann, Sam Mortaro, Bob Wiersman, and Steve Spears.

Jim Cofer called the meeting to order at 7:00 pm.

Bob Wiersman: 16" cassegrain focus can't be moved back. Another method will be used to make collimation easier. A steel plate is needed for mount. It should cost about \$80. The Board approved the purchase of the plate.

LENSC, May 10, 2008 – Astronomy Day

- Where is the CAA banner?
- Bill Murmann will give a talk about the Moon.
- Jim Cofer will speak about how to use a telescope.
- Events will start at 10:00 am.
- There will be a planetarium program.
- Volunteers are needed to bring telescopes for night viewing.
- Sam Mortaro will demonstrate how to make a comet.

NASA Astronomy Day, May 17th and 18th

- Volunteers are needed to bring telescopes capable of solar viewing.

Society for Handicap Citizens

- Camp Paradise- 8/7/08

- CAA will provide telescopes for public viewing
Submitted by:
Steve Spears – Secretary, CAA

CAA Loaner Telescopes

Club-Owned Telescope Availability		
Telescope Description, including mount, eye pieces, etc.		
Member Loaned To	Loan Date	Due Date
6" f/8 German equatorial reflector with eye-pieces		
Available		
6" blue tube Dobsonian reflector with 30mm and 20mm Series 500 Plossl eyepieces		
Not Available – Erik Hall needs to install a new focuser on this scope.		

Looking Up by Charles H. Grace

Light

High School Student: When you cut an apple the pieces stay where they land, but when you generate light it travels. Why?

Physics Teacher: Well, that's not so strange--water waves travel too. The water doesn't travel much; it just goes up and down, but the wave energy travels. Sound waves travel too--in air, for example.

Student: But air and water waves aren't like light. Air and water have mass and restoring forces, but light can travel in a vacuum.

Teacher: Yes. It's because a vacuum, like other media, can store energy in magnetic and electric fields. That energy can go back and forth between the two fields.

Student: But how do those fields create light?

Teacher: When a source, say a star, emits light energy into space, the energy is in electric and magnetic fields, and it travels. To illustrate what happens, your left arm can represent an electric field and your right arm can represent a magnetic field. Hold both arms in front of your chest, with the left arm vertical and the right arm horizontal, so they cross near the wrists.

Student: OK.

Teacher: When light is generated, an electric field goes positive (in an upward direction) in the left arm, then a half period later it goes negative, in sine wave fashion. The electric field doesn't move in the arm; the field just grows stronger and weaker and reverses.

In the same way the magnetic field pulsates in the right arm, first growing stronger with a leftward polarity, then subsiding and growing stronger with a rightward polarity.

The electric and magnetic fields are perpendicular to each other. In this example the direction of propagation can be either in the direction you're looking or backwards. The fields are called transverse fields because they are perpendicular to the direction of light propagation. The wave equations are too long a story for now, so trust me that these fields do move.

If the electric field is vertical the wave is said to be vertically polarized, but the polarization may rotate as the wave travels.

Student: Why does the light get weaker as it travels?

Teacher: Its energy spreads out. If a certain amount of energy in a first area spreads out to a larger area the energy density farther away is reduced by the ratio of areas. Twice as far from the source, the area is four times as great. The energy density is inversely proportional to the square of the distance from the source. That's the inverse square "law" of light attenuation.

Student: Good! How fast does light travel?

Teacher: The speed of light is 186,000 miles per second in a vacuum but slower in other media, for example in air or water. The velocity depends on the electric "permittivity" and magnetic "permeability" of the medium.

Student: Why does light bend when it enters water diagonally?

Teacher: That's called refraction. Light travels with different velocities in different media, and when light passes into water it slows down. If a flashlight beam enters the water on a slant, the lower part of the light, which strikes the interface first, is

slowed down earlier than the upper part of the light, which arrives at the interface later. Because of that, when the wave reforms itself in the water, the direction of travel is bent so as to be closer to a perpendicular to the interface.

Student: Is refraction unique to light?

Teacher: No. The equations of electromagnetism, such as Maxwell's equations, apply to all frequencies of electromagnetic radiation. That includes radio, TV, infra-red, visible light, radiant heat, X-rays, gamma rays, cosmic rays, etc.

Student: OK. Now, light goes in a straight line doesn't it?

Teacher: Usually, but it curves when it passes near a mass. Albert Einstein showed that space itself is curved near a mass, and light follows the curvature of the space.

Student: Thanks for taking the time to explain all that, Mr. Lehrer.

Teacher: You're welcome, and I'm giving you an A for asking those great questions.

Swap Corner

For Sale: I have a Byers 812 mount that my Father-in-law has asked me to sell. He is a retired neurosurgeon and can no longer use this. I Googled Byers 812 and your CAA site came up. If you would like to pass along my name and number below to any interested parties, feel free. I am not familiar with this type of equipment and can't use it, but can tell that this is a very well made piece of equipment. I have all of the manuals and correspondence between my Father-in-law and Ed Byers from the early 80's. I have quite a bit of his other equipment as well if anyone is interested. Please contact Mike Agee if you are interested.

Mike Agee
Vice President of Sales & Marketing
Baker Manufacturing Co., Inc.
Pineville, LA
888-512-7036 – Office
318-730-2765 – Mobile
318-443-7856 – Fax

www.bakermanufacturing.com

For Sale: Edmund Scientific Astro Scan 4 1/4" Reflector Scope (red

w/globe bottom). 15mm & 28mm eyepieces. Complete with packaging & papers - like new for \$150. Contact Steve Korylak (440) 734-4171.

For Sale: 90mm F5.6 Maksutov Telescope/Telephoto Lens, 45° Erecting Prism, 25 mm eyepiece and case for \$125. Contact Steve Korylak (440) 734-4171.

Upcoming Astronomical Events

OTAA Events

Saturday, May 31, 2008: MVAS will conduct another OTAA Scenic Vista Stargaze at Scenic Vista Park, near Lisbon, OH. This is the MVAS dark sky site. All OTAA clubs are invited to observe with us that night. Camping is OK.

Saturday, June 28, 2008: Chagrin Valley Astronomical Society OTAA convention at Indian Hill Observatory.

Saturday, July 26, 2008: Cuyahoga Astronomical Association OTAA convention at the CAA Observatory at Letha House.

Saturday, August 2, 2008: Mahoning Valley Astronomical Society OTAA convention at MVCO in Braceville, OH. Registration opens at 5 pm.

Saturday, September 6, 2008: Black River Astronomical Society OTAA convention at Birmingham Methodist Church Hall, Birmingham, Ohio.

Schuele Planetarium Star Parties

On the 1st and 3rd Saturdays of every month (year round) there are Schuele Planetarium star parties starting at 8:15 p.m. following the 7 p.m. Planetarium shows (weather permitting). CAA members are welcome to bring their scopes to help out at the star parties in the field across the street from the Schuele Planetarium. Any CAA members who could help out would be greatly appreciated by Jay Reynolds and the Lake Erie Nature and Science Center. All programs include the most recent news from our explorations of Mars, Saturn & Hubble Space Telescope.

Shafran Planetarium Programs at the Cleveland Museum of Natural History



May – June 2008

Alien Earths

Astronomers have discovered more than 200 planets orbiting nearby stars, most of them much larger than Jupiter. Only recently have telescopes been able to detect the smaller ones approaching Earth-size. What does the future hold?

- Mon – Fri , 2:30 pm
- Wed, 8 pm
- Sat, 10:30 am, 12:30 pm, 2 pm, 4 pm
- Sun, 12:30 pm, 2 pm, 4 pm

Children's Program

There's No Place Like Home

Is our planet the only Earth in the universe? Are there others? Would we recognize another "Earth" if we saw it? We will explore these exciting topics and boldly go where Dorothy and Toto never went before.

- Sat 11:30 am, 3 pm
- Sun 1:15 pm, 3 pm
- Starting June 16, 2008: Mon – Fri, 11:30 am

Tickets are \$4 per person with Museum admission; members are free. Please reserve tickets in advance. To guarantee seating, please arrive 20 minutes before show time to claim your tickets with your confirmation number. Unclaimed tickets will be released for purchase on a first-come, first-served basis 10 minutes before show time.

Mueller Observatory Programs at the Cleveland Museum of Natural History



May 2008

After a long absence, Saturn makes a grand entrance into the early evening sky. The silvery rings will be viewed edge-on next year—watch them gradually narrow into thin ribbons this spring. Enjoy your last chance of the year to see the narrowing rings of gorgeous Saturn.

- Wednesdays, 8:30 pm to 10 pm, weather permitting

Free with Museum admission. The Museum's Ralph Mueller Observatory houses a 105-year-old, 10 ½-inch Warner & Swasey telescope. The observatory is open to the public on clear Wednesday evenings from September through the end of May from 8:30 to 11 pm. Please arrive before 10 pm and dress for the weather.

NASA Glenn Visitor Center 2008 Third Saturday Events



Saturday & Sunday

May 17 & 18, 2008

NASA Glenn Open House

NASA Glenn opens the research center's doors to the public as we celebrate the 50th anniversary of our Agency. The Visitor Center will have special programming for this event.

All dates and topics are subject to revisions. Go to glennevents.grc.nasa.gov for more information.

Other News / Stories

A Note From the Desk of the Editor

I am always looking for articles for *The Observer*. If there are any aspiring authors out there who want to contribute an article, share a story or observation, etc. please do so, and I will include it in the next issue. Also, if you have any items for sale, or if you are looking for any items, send these in and I will include them in the *Swap Corner*. Remember, this is your newsletter, and participation from the general membership can only make the newsletter better. Thanks to all who have taken the time to send in articles. Please send articles, items for sale, items wanted, suggestions, and/or comments to bruise@roadrunner.com.

Jeff Lewis

Editor, *The Observer* – CAA