



# The Observer

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

CAA Homepage: <http://www.geocities.com/cuyastro>

### CAA Officers

President:  
 Vice President:  
 Treasurer:  
 Secretary and Editor, The Observer:  
 Observatory Director:  
 Board Member:  
 Board Member:  
 Board Member:

Name	Phone	E-mail Address
Bob Wiersma	440-779-5852	<a href="mailto:RRW28141@aol.com">RRW28141@aol.com</a>
Albert Matyas	440-878-0258	<a href="mailto:aematyas@msn.com">aematyas@msn.com</a>
Art Nenadal	440-779-7034	<a href="mailto:VEGA77777@aol.com">VEGA77777@aol.com</a>
Jeff Lewis	440-734-2879	<a href="mailto:bruise@ameritech.net">bruise@ameritech.net</a>
Chuck Reinhart	440-236-9285	<a href="mailto:creinhart@adelphia.net">creinhart@adelphia.net</a>
Ted Sauppe	440-930-5228	<a href="mailto:tsauppe@mediaone.net">tsauppe@mediaone.net</a>
Ray Love	440-572-5419	
Russell Hopkins	330-220-3113	<a href="mailto:rah4@hotmail.com">rah4@hotmail.com</a>

### 2002 CAA Calendar - Summary

1/14/02 8 p.m.	CAA General Membership Meeting – RRNC
1/19/02 7 p.m.	CAA Presentation and Star Party – Letha House
1/28/02 7 p.m.	CAA Board Meeting – Location to be determined
2/11/02 8 p.m.	CAA General Membership Meeting – RRNC
2/25/02 7 p.m.	CAA Board Meeting – Location to be determined
3/11/02 8 p.m.	CAA General Membership Meeting – RRNC
3/25/02 7 p.m.	CAA Board Meeting – Location to be determined
4/8/02 8 p.m.	CAA General Membership Meeting – RRNC
4/29/02 7 p.m.	CAA Board Meeting – Location to be determined
5/13/02 8 p.m.	CAA General Membership Meeting – RRNC
5/18/02 8 p.m.	CAA Presentation and Star Party – Letha House
5/28/02 7 p.m.	CAA Board Meeting – Location to be determined
6/10/02 8 p.m.	CAA General Membership Meeting – RRNC
6/24/02 7 p.m.	CAA Board Meeting – Location to be determined
7/8/02 8 p.m.	CAA General Membership Meeting – RRNC
7/13/02 8 p.m.	CAA Presentation and Star Party – Letha House
7/29/02 7 p.m.	CAA Board Meeting – Location to be determined
8/12/02 8 p.m.	CAA General Membership Meeting – RRNC
8/26/02 7 p.m.	CAA Board Meeting – Location to be determined
9/9/02 8 p.m.	CAA General Membership Meeting – RRNC
9/30/02 7 p.m.	CAA Board Meeting –

	Location to be determined
October ??	Halloween Bonfire
10/5/02 7 p.m.	CAA Presentation and Star Party – Letha House
10/14/02 8 p.m.	CAA General Membership Meeting – RRNC
10/28/02 7 p.m.	CAA Board Meeting – Location to be determined
November ??	Twilight to Midnight – Cleveland Metroparks
11/11/02 8 p.m.	CAA General Membership Meeting – RRNC
11/25/02 7 p.m.	CAA Board Meeting – Location to be determined
12/9/02	CAA Christmas Party
	No Board Meeting in December

### 2002 CAA Calendar - Detail

#### Monday, January 14

CAA General Membership Meeting at 8 p.m. in the Cleveland Metroparks Rocky River Nature Center. CAA Member Mike Williams will be our speaker this month. Mike will present "Galaxies".

#### Saturday, January 19

CAA presentation and star party at 7 p.m. at the Letha House Warm Up Room and CAA Observatory. Please bring your telescopes for the public star party that will follow the presentation. We need a speaker for this event. Please make Al Matyas' job easier by considering giving a talk for this event. If you are interested in giving a talk, please contact Al.

#### Monday, January 28

CAA Board Meeting at 7 p.m.  
**Location to be determined.**

#### Monday, February 11

CAA General Membership Meeting at 8 p.m. in the Cleveland Metroparks Rocky River Nature Center. Program to be announced.

#### Monday, February 25

CAA Board Meeting at 7 p.m.  
**Location to be determined.**

#### Monday, March 11

CAA General Membership Meeting at 8 p.m. in the Cleveland Metroparks Rocky River Nature Center. Program to be announced.

#### Monday, March 25

CAA Board Meeting at 7 p.m.  
**Location to be determined.**

### Sky Events for January 2002

Mean Phase Calendar for January 2002

Sun	Mon	Tue	Wed	Thu	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 ☉		

**Tuesday, January 1**

Jupiter is at opposition, 1 a.m. EST.

**Thursday, January 3**

Quadrantid meteor shower peaks.

**Tuesday, January 8**

Asteroid Pallas is in conjunction with the sun, 5 p.m. EST.

Mercury passes 1.3° south of Neptune, midnight EST.

**Friday, January 11**

Mercury is at greatest eastern elongation (19°), 6 p.m. EST.

**Saturday, January 12**

Asteroid Metis is at opposition, 1 p.m. EST.

**Monday, January 14**

Venus is in superior conjunction, 7 a.m. EST.

The moon passes 4° south of Mercury, 9 p.m. EST.

**Tuesday, January 15**

The moon passes 4° south of Uranus, 5 p.m. EST.

**Friday, January 18**

The moon passes 5° south of Mars, 5 p.m. EST.

**Thursday, January 24**

The moon passes 0.08° north of Saturn, 11 a.m. EST.

**Saturday, January 26**

The moon passes 0.9° north of Jupiter, 2 p.m. EST.

**Sunday, January 27**

Mercury is in inferior conjunction, 2 p.m. EST.

**Monday, January 28**

Neptune is in conjunction with the sun, 9 a.m. EST.

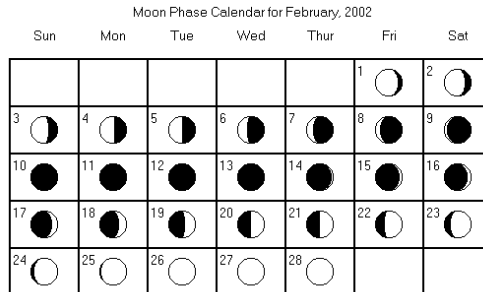
**Sky Events for February 2002**

**Friday, February 8**

Saturn is stationary, 5 a.m. EST.

**Saturday, February 9**

The moon passes 5° south of Mercury, midnight EST.



**Sunday, February 10**

Asteroid Juno is at opposition, 8 p.m. EST.

**Wednesday, February 13**

Uranus is in conjunction with the sun, noon EST.

**Saturday, February 16**

Asteroid Ceres is in conjunction with the sun, 8 a.m. EST.

The moon passes 5° south of Mars, 7 p.m. EST.

**Wednesday, February 20**

The moon passes 0.6° north of Vesta, 8 a.m. EST.

The moon passes 0.2° north of Saturn, 7 p.m. EST.

**Thursday, February 21**

Mercury is at greatest western elongation (27°), 11 a.m. EST.

**Friday, February 22**

The moon passes 0.9° north of Jupiter, 9 p.m. EST.

**Saturday, February 23**

Asteroid Flora is at opposition, 8 p.m. EST.

**Sunday, February 24**

Mercury passes 0.5° south of Neptune, 8 a.m. EST.

**Club News / Stories**

**Cuyahoga Astronomical Association  
Financial Report  
November 23, 2001**

Bank Account Balance 10/8/01	\$2556.66
Cash On Hand 10/8/01	\$ 185.53
Total Assets 10/8/01 (approx.)	\$2742.19
Bank Account Activity:	

<b>Deposits:</b>	
10/9/01 Memberships, Subscriptions, Party	\$1059.55
10/16/01 Interest	\$ 0.90
11/14/01 Memberships, Subscriptions, Party	\$1565.50
11/14/01 Transfer from Petty Cash	\$ 300.00
11/16/01 Interest	\$ 1.10
11/23/01 Membership, Subscriptions, Party	\$ 154.95
<b>Expenditures:</b>	
10/8/01 Refreshments	\$ 28.08
10/8/01 Coast Guard Club Christmas Party	\$ 300.00
10/9/01 Sky Publishing – 24 Subscriptions	\$ 718.80
10/9/01 Kalmbach Publishing – 9 Subscriptions	\$ 261.00
11/12/01 Newsletter	\$ 68.00
11/12/01 Refreshments	\$ 25.31
11/16/01 Sky Publishing – 11 Subscriptions	\$ 329.45
11/16/01 Kalmbach Publishing - 4 Subscriptions	\$ 116.00
Bank Account Balance 11/23/01	\$3792.02
<b>Petty Cash Activity:</b>	
<b>Deposits:</b>	
10/8/01 Coffee Money	\$ 37.78
10/9/01 Membership Renewals	\$ 68.95
11/12/01 Refreshments	\$ 23.95
11/12/01 LED Sales	\$ 10.00
11/12/01 Christmas Party	\$ 34.00
11/12/01 Membership Renewal	\$ 25.00
<b>Expenditures:</b>	
11-12-01 transfer to checking	\$ 300.00
Cash On Hand 11/23/01	\$ 85.21
Total Assets 11/23/01 (approx.)	\$3877.23

Art Nenadal, Treasurer

**Earlier Meeting Time To Be Discussed At The January General Membership Meeting**

At the November Board meeting, the Board discussed the possibility of moving up our General Membership meeting starting time to 7:30 p.m. from 8 p.m. We will be discussing this idea at the January General Membership meeting and we would like your input as to whether or not you would like to see this change implemented.

## 2002 Membership Renewal Reminder

If you haven't done so already, please pay your 2002 CAA membership dues to keep your membership active and to keep receiving your subscription to *The Observer*. Your subscription to *The Observer* will expire with the March 2002 issue if you haven't paid your dues.

## Don't Forget To Sign In When Using The Observatory, Warm Up Room, Or Grounds At Letha House

This is a reminder to all members that anyone using the observatory, warm up room, or grounds should sign in inside the warm up room on the clipboard on the interior door leading to the kitchen and lavatory as Standard Operating Procedure (provided someone has the keys to get into the warm up room).

## Looking Up By Charles H. Grace

### CALENDARS

This is not just about your Day-Timer. A calendar is a system for keeping track of time, in which days are grouped into units, for regulating civil matters, religious observances, and scientific work. Calendars are based on the motion of the sun, the moon, or both, so they approximately fit either a solar year or a lunar year. Today's calendars include the Gregorian (most popular), and the Moslem, Jewish, and Chinese.

**Solar Calendar:** The Gregorian calendar is solar. Its average year is 365.2425 days. Pope Gregory XIII introduced it in 1582 to improve the Julian calendar that was established in 46 BCE by Julius Caesar. (The Gregorian calendar was in committee for 300 years.) The Gregorian calendar touched up the simple Julian-calendar rule of having a leap year every four years, by skipping leap year in each "century

year" (unless the century year was divisible by 400). Thus, 1600 and 2000 were regular leap years, but 1700, 1800, and 1900 were not leap years. There is still a small discrepancy between the Gregorian year and the tropical year, but it is only about three days per 10,000 years.

**Lunar Calendar:** The lunar (synodic) month is the time between two successive new moons. The average lunar month is 29.5306 days long. A lunar year is actually 354.3672 days. A lunar calendar has 12 months, each month having either 29 or 30 days, so it has a year of 354 days, with a leap year of 355 days.

**Lunisolar Calendar:** A lunisolar calendar is a lunar calendar that is brought into step with the solar or seasonal calendar by the addition of a 13th *leap month*. To keep festivals in season and bridge the 11-day gap between the lunar and solar years, the Jewish calendar adds a whole month 7 times in a 19-year cycle.

**Easter:** Easter is a mixed solar-calendar and lunar-calendar event. It will fall on March 31, 2002. It's always the first Sunday after the full moon on or next after March 21, or one week later if the full moon falls on Sunday. If you forget, no problem; just ask a candy company, florist, or church.

## CAA Logo T-Shirts and Red LED Reflectors Still Available

We still have some CAA logo T-Shirts and red LED reflectors for sale. T-Shirts are \$10 each (\$12 for XXL), and the red LED reflectors are \$5 each. See Al Matyas at one of our upcoming meetings if you are interested.

## Swap Corner

For Sale: Celestron 9.25" OTA less than 1 year old and in excellent condition. This is a great performer offering decent aperture in a manageable package. Includes 6 X 30 finder, telrad base, visual back, 90 degree diagonal, dovetail mounting bracket,

bracket, dust cover, premium dew shield, dew heater strap (homemade) and 25mm plossl eyepiece. I've decided to upgrade my 12.5" Starmaster dob with a new equatorial tracking platform and need the \$\$\$. The C 9.25 is hard to get and usually on backorder. You can have this like-new instrument now for \$1,050. I also have a f-6.3, reducer/corrector, LNIB for \$80.00. If interested and want a look, let me know, currently in my observatory. Lon Dittrick - 236-6239 or [led500@stratos.net](mailto:led500@stratos.net)

### Upcoming Astronomical Events

## Frontiers of Astronomy Lecture Series

Thursday, March 21, 2002 at 8 p.m. at the Cleveland Museum of Natural History in Murch Auditorium.

"Life, the Universe and Everything: The Astrophysical Perspective" will be presented by Dr. Gary J. Ferland from the University of Kentucky.

People have long wondered where we, the Earth and the Universe around us came from. Astrophysics now has a pretty good idea. Dr. Gary J. Ferland, a professor in the department of physics and astronomy at the University of Kentucky, explains how astronomers have been able to see farther back in time by looking increasingly larger distances from the Earth. He discusses what the careful analysis of light from very distant objects has revealed about the events that occurred many billions of years ago, including the creation of our Solar System.

This is the fourth of five free public lectures in the Frontiers of Astronomy series. This free lecture series sponsored by the Department of Astronomy – Case Western Reserve University, The Cleveland Museum of Natural History, and The Cleveland Astronomical Society offers those with an interest in astronomy the chance to learn about some of the latest research in the field. No tickets or reservations are required. On clear evenings, the Museum's observatory will be open following the lectures.

For more information or to receive a brochure listing all speakers, call (216) 231-4600, ext. 253, 362, or 360.

## The Nathan & Fanny Shafran Planetarium at the Cleveland Museum Of Natural History

### Discover The Nature Of Your Universe

The night sky has fascinated humanity throughout the ages. Studying the heavens has revealed a tremendous amount about our world, its origins and our place within this grand scheme.

The Cleveland Museum of Natural History is proud to bring to the people of Northeast Ohio one of the finest facilities in the country in which to learn about the Universe and its wonders.

Please join us for the official ribbon-cutting marking the grand opening of the Nathan and Fanny SHAFRAN PLANETARIUM:

**Tuesday, January 15, 2002**

**11:45 a.m. to 12:45 p.m.**

**The Cleveland Museum of Natural History**

Featuring special guest Captain James Lovell, Jr., astronaut on four manned space missions including Apollo 8 and Apollo 13.

Please RSVP by January 7, 2002, by calling (216) 231-4600 or 800-317-9155, ext. 287, or email [ready@cmnh.org](mailto:ready@cmnh.org).

### Other News / Stories

## Mars Odyssey Mission Status

Media Relations Office Jet Propulsion Laboratory California Institute Of Technology National Aeronautics And Space Administration Pasadena, Calif. 91109. TELEPHONE (818) 354-5011 <http://www.jpl.nasa.gov>

November 30, 2001

Flight controllers for NASA's 2001 Mars Odyssey spacecraft report

that Odyssey has reduced its orbit period to just under 10 hours. The orbit period is the time it takes the spacecraft to make one revolution around the planet.

During each aerobraking pass, when the spacecraft skims the atmosphere to alter its orbit, Odyssey's closest approach, known as the periapsis, is just 103 kilometers (64 miles) above the Martian surface. Its farthest point from the planet, known as the apoapsis, is now 15,300 kilometers (9,500 miles).

"The Odyssey spacecraft is truly going to an unexplored region as it passes through the northern Martian atmosphere, an area called the polar vortex," said John Smith, an Odyssey navigation team member who leads the aerobraking design at JPL. "This experience has resulted in both a wealth of new atmospheric information as well as puzzles to be solved in daily aerobraking design activities."

The spacecraft has completed 55 passes through the Martian upper atmosphere. Twelve maneuvers have been performed thus far to control the spacecraft's altitude in order to achieve the proper orbit.

During aerobraking, the high-energy neutron detector is the only science instrument taking data. It is turned off briefly during each pass through the atmosphere.

The aerobraking phase is expected to finish in late January 2002. At that point, Odyssey will be in its desired circular orbit, and the science mapping mission will begin sometime in early February.

JPL manages the 2001 Mars Odyssey mission for NASA's Office of Space Science, Washington, D.C. Principal investigators at Arizona State University in Tempe, the University of Arizona in Tucson, and NASA's Johnson Space Center, Houston, Texas, operate the science instruments. Lockheed Martin Astronautics, Denver, Colo., is the prime contractor for the project, and developed and built the orbiter. Mission operations are conducted jointly from Lockheed Martin and from JPL, a division of the California

Institute of Technology in Pasadena. NASA's Langley Research Center in Hampton, Va., is providing aerobraking support to JPL's navigation team during mission operations.

## 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 edition. Also, if you have any items for sale, or if you are looking for any items, send these in and I will include it in the *Swap Corner*. Remember, this is your newsletter, and participation from the general membership can only make the newsletter better. Please send articles, items for sale, items wanted, suggestions, and/or comments to:

Jeff Lewis

5623 Allendale Drive

North Olmsted, OH 44070-4622

Or you can send them via e-mail to [bruisse@ameritech.net](mailto:bruisse@ameritech.net).

Thanks and Clear Skies!