



OBSERVATIONS



A MONTHLY PUBLICATION OF THE
Chester County Astronomical Society

★ *President:* Mike Turco
★ *Treasurer:* Pete LaFrance

JUNE 2002
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<http://www.ccasastro.org>

★ *Vice President:* Steve Limeburner
★ *Secretary:* Doug Liberati

CCAS Summer Schedule

<u>June</u>	<u>July</u>	<u>August</u>
Friday June 7: Observing Session/Meeting Brandywine Valley Assoc. begins around sunset	Friday July 12: Observing Session/Meeting Brandywine Valley Assoc. begins around sunset	Friday August 9: Observing Session/Meeting Brandywine Valley Assoc. begins around sunset
Saturday June 8: cloud date	Saturday July 13: cloud date	Saturday August 10: cloud date

CCAS Beginning Astronomy Class



Photos by Ed Lurcott



Thanks to the efforts of Kathy Buczynski and the Education Committee (Nicholas La Para, Bob Popovich, Ed Lurcott, Steve Limeburner, Deb Goldader, and Mike Turco), as well as the generous support of the Flower & Cook Observatory of the University of Pennsylvania (specifically, Deb and Jeff Goldader and Rich Mitchell and family), we had another successful Beginning Astronomy class this spring. In these photos taken on February 19, at left above Kathy introduces the evening's topic and teacher. In the other photos, Bob Popovich talks about the Moon, including a demonstration of the phases of the Moon, using a lightbulb for the Sun.



Photos by Ed Lurcott



National Astronomy Day: April 20, 2002



Photo by Mike Turco



Photo by Ed Lurcott

Every year, a Saturday in spring is designated as National Astronomy Day. On this day, astronomy clubs nationwide “take astronomy to the public” with a wide variety of programs. Each club devises its own program. This year the CCAS set up a display at the Exton Square Mall. Unfortunately, the weather was just cloudy enough to preclude using a telescope to provide solar viewing to the public (we tried anyway, but no luck!). In the photo at left above, taken early in the day (before we got our second table) Pete LaFrance, Jim Anderson, and Nicholas La Para chat. In the photo at right above, Nicholas is chatting with several passersby. In the photo at right, Jim Anderson discusses telescopes with another passerby. We did get our second table, and in the photo at left below Steve Limeburner arranges display and handout materials on that table. In the foreground is Nicholas La Para’s TeleVue refractor, with Jim Anderson’s 10” Dob behind it, and Mike Turco’s AstroPhysics refractor in the background.

Finally, the picture at right below shows interested visitors of all ages at our display, located in the North Plaza, just outside one of the entrances to Strawbridge’s (near the Au Bon Pain Deli). The management of the Exton Square Mall provided us with two 8-foot tables, the blue cloth to cover them, several easels, and electrical power. The Society thanks the Mall management and merchants for their generous support of our National Astronomy Day program.

Just look at that eager-looking little guy in the bottom right corner of the photo below right. Doesn’t he look like the next Edwin Hubble? You never know what effect such events might have on people...



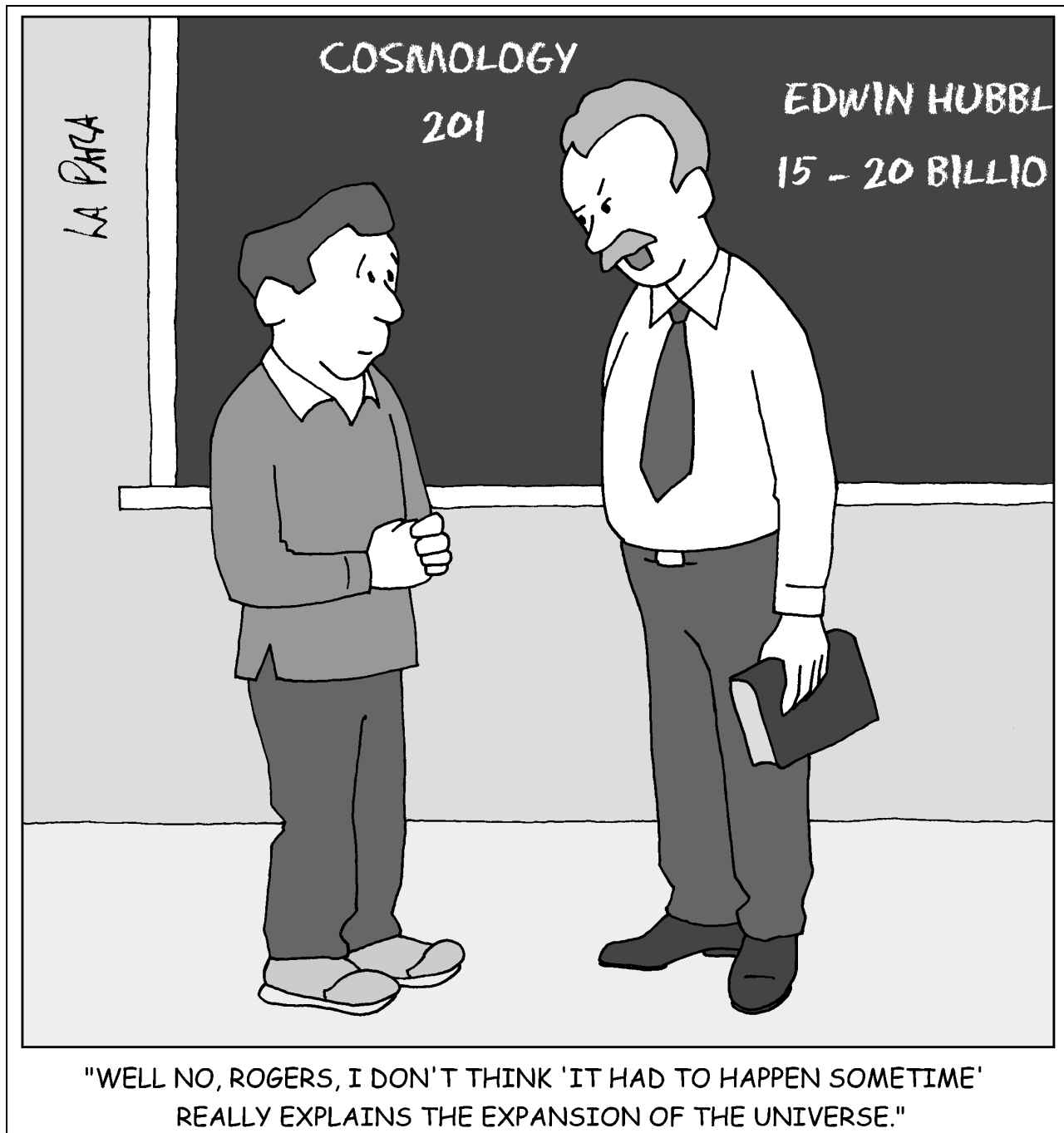
Photo by Ed Lurcott



Photo by Mike Turco



Photo by Ed Lurcott



Cartoon by Nicholas La Para



Astronomus: 14

A Journal for Young Astronomers

By Bob Popovich

"Let's Take a Dip"

"Go down until you get to the pin oak then turn right and follow that road past Crack O' Dawn farm. You can't miss it." Well, yes I can. And I have.

When we moved to Chester County from Chicago, we learned that the ability to give understandable directions was an art. And on top of this murky direction giving, orientation from person to person was often different. So asking two people for directions from point A to point B could yield seemingly unrelated instructions.

How wonderful that the grand design of our night sky provides us with a guidepost that allows navigation to and fro with relative ease. Easier, I think, than cruising Chester County. "What is that guidepost?" you ask. It's the Big Dipper, of course. So if you're ready, let's dive right in.

You could sail the heavens from one pole to the other and find only two constellations larger in size than Ursa Majoris (The Great Bear). And its seven brightest stars provide us with the familiar asterism that we all know as the Big Dipper. Just look at the seven beacons:

Name	Magnitude
Alioth	1.8
Alkaid	1.9
Dubhe	1.8
Megrez	3.3
Merak	2.3
Mizar	2.2
Phecda	2.4

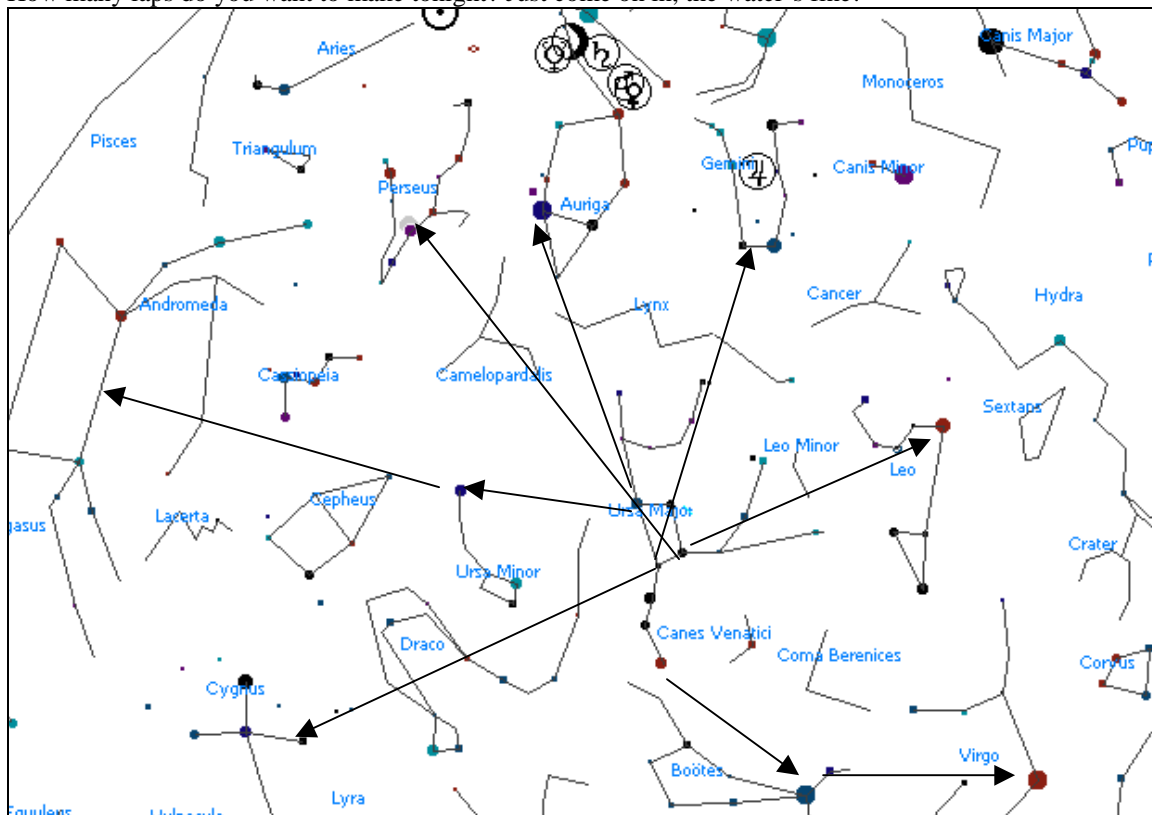
Easily visible all year in its circumpolar voyage (except when it skims the northern horizon in autumn), the Big Dipper provides an ideal marker to acquire numerous targets throughout the year. Using the Big Dipper we can arc to Arcturus, speed on to Spica, jump to Gemini, romp to Regulus, pilot to Polaris and boatloads more...

Looking at the sky map, notice the distance between the two stars that make up the outside of the dipper's bowl. These stars are Dubhe and Merak. The distance between them is about 5°—the width of your index, middle and ring fingers held at arm's length. This also happens to be the approximate field of view of typical binoculars. From this, we can measure that the distance to Polaris is five times the separation between Dubhe and Merak, or about 25°. These two stars are commonly called the Pointer Stars.

Now notice the distance between the two stars that make up the bottom of the bowl—Phecda and Merak. This distance is about 10°, or the size of your fist held at arm's length. And for those marathon swims, you've got a 25° marker in the distance between the end of the handle (Alkaid) and Dubhe & Merak.

These can be used alone or in combination as a means of estimating how many "laps" you'll need to do in order to arrive at some of the other constellations or stars. And not only can the Big Dipper guide you through unfamiliar waters to specific stars and constellations, but you can make other ports of call along the way. For example, Cassiopeia offers some wonderful sights if you continue beyond Polaris another 25°.

How many laps do you want to make tonight? Just come on in, the water's fine!



Postscript: Remember, there is always some distortion when representing the night sky on a piece of paper, but the Big Dipper remains a wonderful guidepost nonetheless.

Next Time: Moon Over West Chester



June Skies

Summer Solstice: June 21

The Sun reaches its furthest point north in its apparent annual path through our sky on June 21 at 9:24 a.m. Eastern Daylight Time. This marks the official beginning of summer in the Northern Hemisphere. In the Southern Hemisphere, it is the beginning of winter.

Moon Phases

Last Quarter	6/02
New Moon	6/10
First Quarter	6/17
Full Moon	6/24

The Planets

Mercury is in our morning sky in late June.

Venus is in the evening sky all month. As June begins, it will be close to Jupiter. As the month progresses, Venus will keep moving eastward ("above") from Jupiter, steadily increasing the apparent distance between the two planets.

Mars is in our evening sky in June. It is hard to find, however, as it stays close to the horizon. This is not a good month to look at Mars in a telescope.

Jupiter is in the evening sky, as mentioned above. Look for Jupiter early in the month, when it is higher in the sky and closer to Venus. Later in the month it sinks ever lower, and closer to Mars.

Saturn is behind the Sun this month.

Uranus is in Capricornus this month, and highest in our sky shortly before sunrise.

Neptune is also in Capricornus, and best placed for observing in the early morning hours.

Pluto is in Ophiuchus in June, reaching opposition on June 6. You'll need at least an 8" telescope, dark skies, good finder charts, and lots of patience to find Pluto.



Welcome New Members!

Several people have recently joined the CCAS. They are:

Gary Brogna of Exton;

Roger Corneliussen of Exton;

Pedro Geraldino of Lower Gwynedd;

John Helper of Exton;

Charles Kosten of Exton;

David Pioch and Family of Paoli;

Steven Plotkin of Newtown Square;

and Thomas Snow of Exton.

Hello and Clear Skies to all!



Telescope for Sale

CCAS member Beryl Kuntz is selling a Celestron NextStar 5 complete with tripod for \$700.00 (or best offer). You can contact Beryl at 610-431-2757.



Newsletter Deadlines

These are the deadlines for submitting material for publication in the newsletter, through the September 2002 issue.

<u>Issue</u>	<u>Deadline</u>
July 2002	06/21/2002
August 2002	07/26/2002
September 2002	08/23/2002



Help Needed With Society's 20" Telescope

The Society's 20" telescope belongs to the whole Society; it is intended to be available for use by members at Observing Sessions, and even for short-term borrowing by Society members. The problem we have with implementing this policy is, simply put, lack of mobility. We need a member with a big enough truck or minivan, and preferably with the storage space at home for the telescope, to volunteer to be the telescope's "custodian" and "chauffeur." The custodian would of course be able to use the telescope whenever it wasn't out on loan. The biggest part of the telescope is the bottom part; it weighs a couple hundred pounds. We have wheels and handles that convert that piece into a large "wheelbarrow" for moving it, though, and ramps so it can be wheeled right into a vehicle. Ed Lurcott is willing to keep storing the telescope in his garage, if someone can volunteer to be the chauffeur, but not the custodian. If you can help, please call Ed Lurcott. Thanks.



Join the Fight for Dark Skies!

You can help fight light pollution, conserve energy, and save the night sky for everyone to use and enjoy. Join the nonprofit International Dark-Sky Association (IDA) today. Individual memberships start at \$30.00 for one year. Send to:

International Dark-Sky Association
3225 N. First Avenue
Tucson, AZ 85719-2103

Dark-Sky Website for PA

The Pennsylvania Outdoor Lighting Council has lots of good information on safe, efficient outdoor security lights at their Website:

<http://home.epix.net/~ghonis/index.htm>



Closing Thought

"Poets say science takes away from the beauty of the stars—mere globs of gas atoms. I, too, can see the stars on a desert night, and feel them. But do I see less or more? The vastness of the heavens stretches my imagination—stuck on this carousel my eye can catch one-million-year-old light. It does no harm to the mystery to know a little about it."

Richard Feynman, *The Feynman Lectures on Physics*



CCAS Information Directory

CCAS Lending Telescope

Contact Kathy Buczynski to make arrangements to borrow the Society's lending telescope. CCAS members can borrow the lending telescope for a month at a time; longer if no one else wants to borrow it after you. Kathy's phone number is 610-436-0821.

CCAS Lending Library

Contact our Librarian, Bill O'Hara, to make arrangements to borrow one of the books in the CCAS lending library. Copies of the catalog are available at CCAS meetings. Bill's phone number is 610-696-1422.

Contributing to Observations

Contributions of articles relating to astronomy and space exploration are always welcome. If you have a computer, and an Internet connection, you can attach the file to an email message and send it to

jim.anderson@mckesson.com

Or mail the contribution, typed or handwritten, to:

Jim Anderson
1249 West Kings Highway
Coatesville, PA 19320-1133

Get CCAS Newsletters via E-mail

You can receive the monthly newsletter by e-mail. All you need is a PC or Mac with an Internet e-mail connection. To get more information about how this works, send an e-mail request to Jim Anderson, the newsletter editor, at:

jim.anderson@mckesson.com

CCAS A.L. Award Coordinators

These are the members to contact when you have completed your observing log for the Messier, Binocular Messier, Lunar, or Double Star Awards:

Messier (both): Frank Angelini
 (610-873-7929)

Lunar: Ed Lurcott
 (610-436-0387)

Double Star: Jim Anderson
 (610-857-4751)

CCAS Purpose

The Chester County Astronomical Society was formed in September 1993, with the cooperation of West Chester University, as a non-profit organization dedicated to the education and enjoyment of astronomy for the general public. The Society holds meetings (with speakers) and observing sessions once a month. Anyone who is interested in astronomy or would like to learn about astronomy is welcome to attend meetings and become a member of the Society. The Society also provides telescopes and expertise for "star nights" for school, scout, and other civic groups.

CCAS Officers

For further information on membership or society activities you may call:

President: Mike Turco
 (610) 399-3423

Vice Pres: Steve Limeburner
 (610) 353-3986

Treasurer: Pete LaFrance
 (610) 268-2616

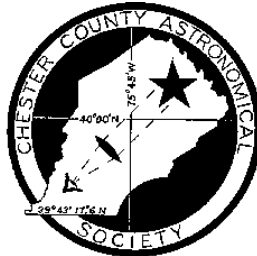
Secretary: Doug Liberati
 (610) 827-2149

ALCor and Newsletter: Jim Anderson
 (610) 857-4751

Librarian: William O'Hara
 (610) 696-1422

Observing: Ed Lurcott
 (610) 436-0387

Education: Kathy Buczynski
 (610) 436-0821



CCAS Membership Information

The present membership rates are as follows:

REGULAR MEMBER.....\$20/year
SENIOR MEMBER.....\$10/year
STUDENT MEMBER.....\$ 5/year
JUNIOR MEMBER.....\$ 5/year
FAMILY MEMBER.....\$ 30/year

Membership Renewals

Check the date printed on the address label of this issue of *Observations*; "exp." appears in front of it, just after your name. If you are due to renew, you may send your renewal check made out to our Treasurer, Pete LaFrance. Mail to:

Pete LaFrance
413 Church Rd.
Avondale, PA 19311-9785

Sky & Telescope Magazine Group Rates

Subscriptions to this excellent periodical are available through the CCAS at a reduced price of **\$29.95** which is much less than the newsstand price of \$54.00, and also cheaper than individual subscriptions (\$39.95)! Make out a check to the Chester County Astronomical Society, note that it's for *Sky & Telescope*, and mail to Pete LaFrance. Or you can bring it to the next Society meeting and give it to Pete there. Buying a subscription this way also gets you a 10% discount on other Sky Publishing merchandise.

CCAS Website

Pete LaFrance is the Society's Webmaster. You can check our Website at:
<http://www.ccasastro.org>

Pete welcomes any additions to the site by Society members. The contributions can be of any astronomy subject or object, or can be related to space exploration. The only requirement is that it is your own work; no copying copyrighted material! Give your contributions to Pete LaFrance (610-268-2616) or e-mail to lafrance@kennett.net

