



Observations

A Monthly Publication Of The
CHESTER COUNTY ASTRONOMICAL SOCIETY

SEPTEMBER 2007

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Visit our website at www.ccas.us

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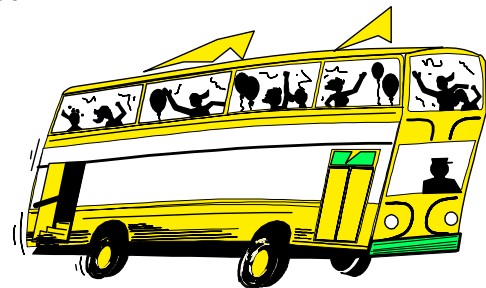
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Important September 2007 Dates

- 3 Last Quarter Moon, 10:32 p.m. EDT.
- 9 Uranus at opposition (visible all night).
- 11 New Moon, 8:44 a.m. EDT.
- 11 **CCAS Meeting**
Location: West Chester University
7:00 – “Cosmology—the Really Big Picture” (DVD).
7:30 – Regular Meeting Starts
Constellation of the Month: Scutum
Main Presentation: “Light Pollution”
See page 3 for more details.
- 15 **CCAS Observing Session**
Location: **Anson B. Nixon Park in Kennett Square**
Time: sunset, or earlier (see page 4 for more details.)
- 19 First Quarter Moon, 12:48 p.m. EDT.
- 23 Autumnal Equinox at 5:51 a.m. EDT.
- 26 Full Moon, 3:45 p.m. EDT—the Harvest Moon or Fruit Moon.



Make your reservation for the CCAS NYC bus trip now!

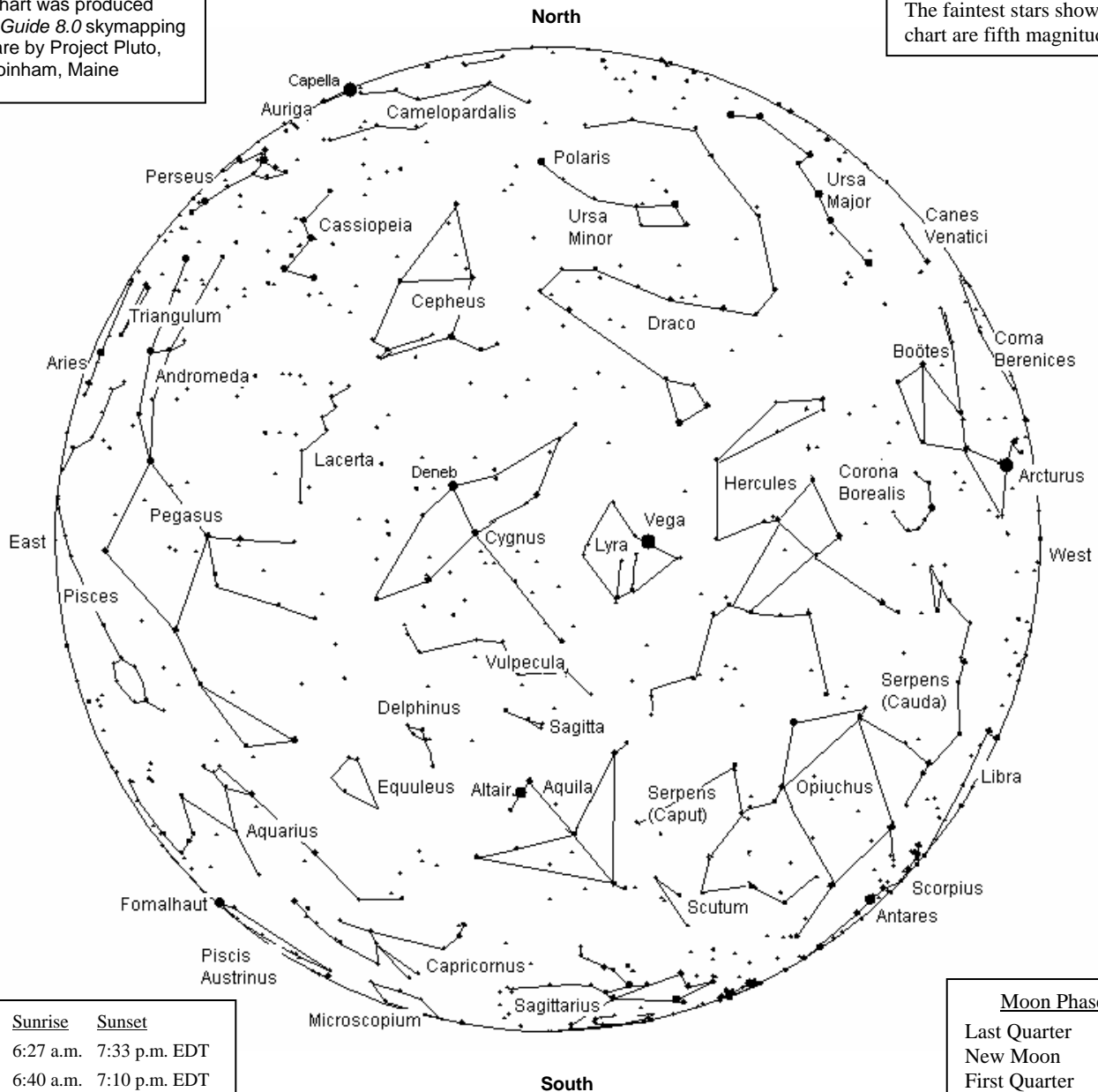
Don't get left behind!

See page 4 for details.



This chart was produced using *Guide 8.0* skymapping software by Project Pluto, Bowdoinham, Maine

The faintest stars shown on this chart are fifth magnitude.



Date	Sunrise	Sunset
9/1	6:27 a.m.	7:33 p.m. EDT
9/15	6:40 a.m.	7:10 p.m. EDT
9/30	6:55 a.m.	6:45 p.m. EDT

Moon Phases	
Last Quarter	09/03
New Moon	09/11
First Quarter	09/19
Full Moon	09/26

The sky over Chester County
September 15, 2007 at 9:00 p.m. EDT

The Planets, by Don Knabb

Mercury: This is not an easy month to see Mercury from Chester County, but if you want to try then pick September 21 when Mercury and Spica are 1/2° apart in the evening sky.

Venus: You'll need to get up before dawn to see Venus, but it is worth it to see Venus at its most brilliant on September 23.

Mars: The Red Planet rises around midnight early in September, but about an hour earlier late in the month. And Mars is now close enough that it is becoming a decent telescopic object, although it will get better in a couple of months.

Jupiter: Catch Jupiter early in September before it hides below the horizon for a bit. By the end of the month it will be setting by 10 pm.

Saturn: The ringed beauty is only visible early in the pre-dawn sky. And it is a bit less bright than it was during the last few months because the rings are at a smaller tilt toward us.

Uranus & Neptune: This is an excellent time to add green Uranus and distant Neptune to your "life list". The outer gas giants are well placed for observing. Uranus can be found relatively easily with binoculars at 10:00 pm during the middle of the month. You'll need a modest sized telescope to find Neptune, but go for it after you find Uranus. Finder charts are in the July issue of *Sky and Telescope*.

Pluto: Pluto, the ex-planet, is a challenging 14th magnitude speck in the general area near Jupiter.

Note: the constellation stick figures used on the chart above were adapted from the book *The Stars: A New Way to See Them*, by H. A. Rey. This excellent guide to learning the constellations can be purchased at many area book stores, or from online booksellers.

September Observing Highlights

by Don Knabb, CCAS Observing Chair

Planets: The ever changing play of the planets shifts in September as it does every month. If you really try you can see Mercury half an hour after the sun sets. You'll need to try hard NOT to see Jupiter at the same time of the evening, hanging in the fading light like a beacon. Stay up late and you'll see Mars rising around midnight. And September is a great time to grab your binoculars and add Uranus to your list of planets, and with a bit of effort and a telescope you can add Neptune to your list too. And if you wake up before dawn Venus and Saturn are easy to find.

Constellations: The evening starts with the Summer Triangle high in the sky. In an hour or two the great square of Pegasus takes over. Look for Triangulum (only one guess on the shape of this constellation) to the left of Pegasus, followed by Perseus then Auriga with bright Capella rising above the horizon like a UFO.

Deep sky: We lose the southern Messier objects as September moves on but the Andromeda galaxy makes up for that loss. What a sight that is! The Double Cluster in Perseus is a worthwhile target and late at night the clusters in Auriga rise out of the eastern horizon.

Comets: There are no bright comets in the sky at this time.

Meteor shower: On September 1 the Aurigid meteor shower occurs, but it is not likely that we'll see much in our Chester County skies. There have been some surprises from this shower, but you'll need to fly to California if you want to have a good chance of seeing any fireballs.

Sept. 3	Last quarter Moon, 10:32 p.m. EDT
Sept. 9	Uranus at opposition.
Sept. 11	New Moon, 8:44 a.m. EDT
Sept. 19	First quarter Moon, 12:48 p.m. – no Lunar X this month!
Sept. 23	Equinox, 5:51 a.m. EDT
Sept. 26	Full Moon, 3:45 p.m., the Harvest Moon or Fruit Moon.

★ ★ ★ ★ ★

CCAS has an Urgent Need

The Society's collection of lending telescopes, including the 20-inch Dob, needs a new home. For many years, CCAS Founder and Past President Ed Lurcott has generously housed the telescopes in his garage. Ed and his wife Evelyn, however, have retired to smaller living quarters. There will no longer be room to store the telescopes.

We need to find someplace to keep the Society's telescopes. Anyone providing storage for the telescopes is of course welcome to use them whenever they are not out on loan. If you can provide storage space, please contact CCAS President Kathy Buczynski ASAP at **610-436-0821**.

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New This Fall: Cosmology Series!

The CCAS Executive Committee has decided to try something new for our monthly meetings, starting with the September meeting on Tuesday September 11, 2007.

The Society recently purchased a set of DVDs from The Teaching Company. We got the series entitled *Understanding the Universe: An Introduction to Astronomy, Second Edition*. This series of lectures (96 in all) is taught by Dr. Alex Filippenko, from the University of California at Berkeley. Dr. Filippenko earned his Ph.D. at the California Institute of Technology, and has received numerous teaching awards in his career.

Each month we will show one of the thirty-minute lectures **starting at 7:00 p.m.** The regular meeting will then start at 7:30, when the video ends. We picked a series of eight lectures on cosmology to show this year. Many of our members have expressed interest in cosmology, and this is a way to provide an excellent educational experience of this exciting topic.

These videos will not replace our regular program of live speakers, nor will it replace the Constellation of the Month series. It supplements our program, providing information on an often-requested topic by an excellent instructor, and by starting it at 7:00 the meeting can still end by about 9:00 p.m. The Executive Committee members are quite excited about starting this series, and we hope that many of our members will attend! **The videos will start promptly at 7:00 p.m.!**

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CCAS September Meeting

DATE: Tuesday September 11, 2007

PLACE: Room 113 – Boucher Building
West Chester University

LOCATION: South Church Street
West Chester, PA

TIME: 7:00 p.m. EDT for Cosmology Class
7:30 p.m. EDT for regular meeting

A map of the campus showing the location is on page 14.

Cosmology Class: **Cosmology—The Really Big Picture**

This month's Constellation of the Month (COM) will be **Scutum**, presented by Jim Anderson.

This month's presentation will be on light pollution and you, by Stan Stubbe, president of the Pennsylvania Outdoor Lighting Council. Stan will cover two topics:

1. What the Pennsylvania Outdoor Lighting Council can do for the CCAS and other amateur astronomy clubs.
2. What homeowners can do with their outdoor lighting to save energy (and therefore money), be a good neighbor, protect the environment and save the stars by using good lighting practices.

Stan Stubbe is a lighting consultant to municipalities in Chester, Bucks, Berks and Montgomery Counties, assisting them in writing lighting ordinances and reviewing submitted lighting plans and installations for conformance with those ordinances. He is past chairman of the North Coventry Township Planning

Commission, member emeritus and national committee officer of the Illuminating Engineering Society of North America, past president of Green Valleys Association and current president of the Pennsylvania Outdoor Lighting Council, Pennsylvania Section of the International Dark-Sky Association. He understands **both** the municipal process **and** lighting technology, and applies both to control light pollution and protect the night sky. Don't miss this informative session!

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Special CCAS Observing Session September 15, 2007

Calling all CCAS members:

On Saturday September 15 at 7:30 p.m. we will be hosting a star party at **Anson B. Nixon Park in Kennett Square**. <http://www.ansonbnixonpark.org/index.html>

The gathering will begin at 7:30 p.m. when we can share views of the crescent moon and Jupiter. As the sky darkens we will go deeper into the wonders of the universe. This observing session replaces our normal BVA observing session for September.

Anson B. Nixon Park hosts many community events for southern Chester County residents. Let's try to get out as many CCAS members as possible for this event. You don't need a telescope or binoculars, but bring them if you have them. Don Knabb will bring star charts to hand out to everyone.

The diagram on page 13 of this newsletter is a bit old, but is a great help to find where we will be observing. If you head west into Kennett Square on State Street ("Old Route 1") you will see North Walnut Street heading to the right just as you enter town. Follow that road to the right, bypassing the main park entrance to what is labeled "future athletic fields" on the map. The fields are no longer "future," they now exist and there is parking space and portable toilets available. Just watch for the "Y" as in YMCA signs on the left as you head north and turn in to the parking lot on the left.

If you have any questions write to observing@ccas.us or dknabb00@comcast.net no later than 6:00 p.m. on Saturday September 15, or call Don Knabb at **484 888 1831**.

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CCAS Bus Trip to NYC: Update

Date: Saturday October 20, 2007

Destination: Museum of Natural History in New York City.

Contact: Linda Lurcott-Fragale at 610-269-1737

Cost: \$60.00 per person

Checks should be made payable to "Chester County Astronomical Society"

Payment Deadline: September 17, 2007

Cost includes bus fare, tip for driver, and Museum entrance ticket. Friends and family members of CCAS members are very welcome to travel with us, but we will not accept any unaccompanied minors (under the age of 18).

We have reserved a 54 passenger bus for Saturday, October 20, 2007 to go to New York City. Our morning event will be visiting the Museum of Natural History for the special program called *Beyond*. See the flyer on page 10 for more details. You can make copies of the flyer to give to friends and family.

The afternoon will be "on your own." The new Hayden Planetarium is also part of the Museum of Natural History complex (in case you're wondering). You can leave the museum complex if you like. We will meet back at the Museum for the ride home.

Need to see an enticing preview of *Beyond*? Visit

http://www.amnh.org/exhibitions/photo/beyond/?src=e_h

Departure: 7:00 a.m.—Meet the bus in the parking lot of the Goshen Shopping Center on Paoli Pike outside West Chester, near the Chester County Book Company.

Return: 5:00 p.m.—Bus leaves the Museum complex in NYC at 5:00 sharp! Miss the bus and you're on your own!

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CCAS October Observing Session

by Don Knabb, CCAS Observing Chair

October CCAS Observing Session will be on Friday October 12, 7:30 p.m. at Hoopes Park in West Chester. This will be a Community Star Party. I will provide more details in the October newsletter, but mark your calendars for Friday October 12 at 7:30 p.m. We'll be hosting a star party for the West Chester community at Hoopes Park. This event will be listed in the West Chester Recreation Activity Guide that will be published shortly and handed out at the popular West Chester Restaurant Festival.

Hoopes Park has power, parking, restrooms and a large open field that is a nice viewing location. Yes, there are some trees but this is a great opportunity to share the night sky with the West Chester community. I hope to see you all there!

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Treasurer's Report

by Bob Popovich

July 2007 Financial Summary

Beginning Balance	\$1,426
Deposits	190
Disbursements	<u>100</u>
Ending Balance	\$1,516

Membership Renewals Due

09/2007:	Bogucki Holenstein Lurcott
10/2007:	Anderson End Morgan
11/2007:	Athens Bower Buczynski Hepler Murray O'Hara

Membership Renewals

You can renew your CCAS membership by writing a check payable to "Chester County Astronomical Society" and sending it to our Treasurer:

Bob Popovich
416 Fairfax Drive
Exton, PA 19341-1814

The current dues amounts are listed in the *CCAS Information Directory* on page 12 in this newsletter.

Important Notice Regarding Sky & Telescope Subscriptions

For members who have current subscriptions through the Society at the special club discount:

You may now renew directly with the publisher—there is no longer a need to send anything to our Treasurer! You can **renew via mail or telephone** (1-800-253-0245). Sky Publishing will confirm your CCAS membership with Bob.

If you wish to **start** a subscription through the Society, you must still send the check to Bob first. This is only for new subscriptions at the special club rate of \$32.95 per year. As in the past, this initial check should be made out to Chester County Astronomical Society. Bob will then forward the needed information and payment on to Sky Publishing. But once you are started, you too can renew directly with Sky Publishing in subsequent years.

If you have **any questions** about this **call Bob** at 610-363-8242.

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Welcome!

This month we welcome two new family-members to the Society: James Gustainis & Family, and Ron Foley & Family. Both families live in the West Chester area. We're glad you decided to join us under the stars! Clear Skies to all!

★ ★

Looking Up: Uranus, the Distant Green Jewel

by Don Knabb, CCAS Observing Chair

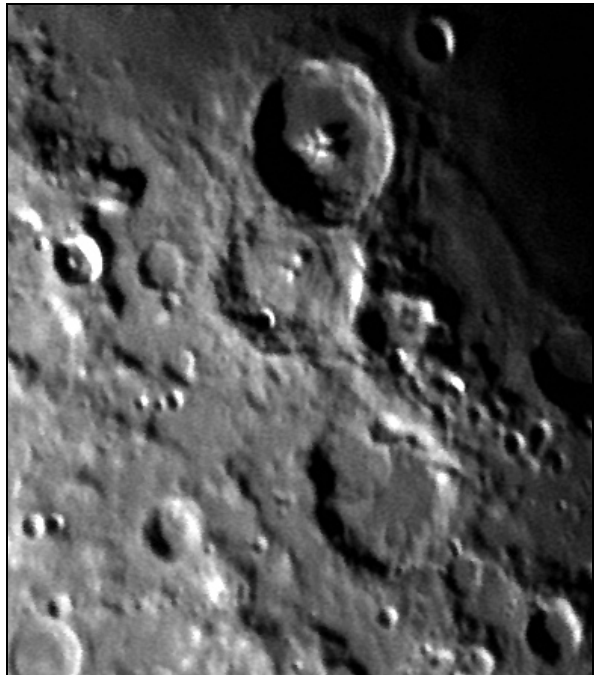
I'm sure nearly everyone can list Mercury, Venus, Mars, Jupiter and Saturn on your list of planets that you have seen with your naked eyes or with the help of binoculars or a telescope. How about making an effort this month and adding Uranus to that list? September is a great time to see Uranus during evening observing hours.

Let's clear up the first question everyone asks about Uranus: what is the correct pronunciation for this gas planet? I've looked at a few sources and most suggest saying "YOOR-a-nus", or "YER-a-nus" not "your-AY-nus" or "urine us". Using the correct pronunciation can save some embarrassment when dealing with middle school aged astronomy fans.

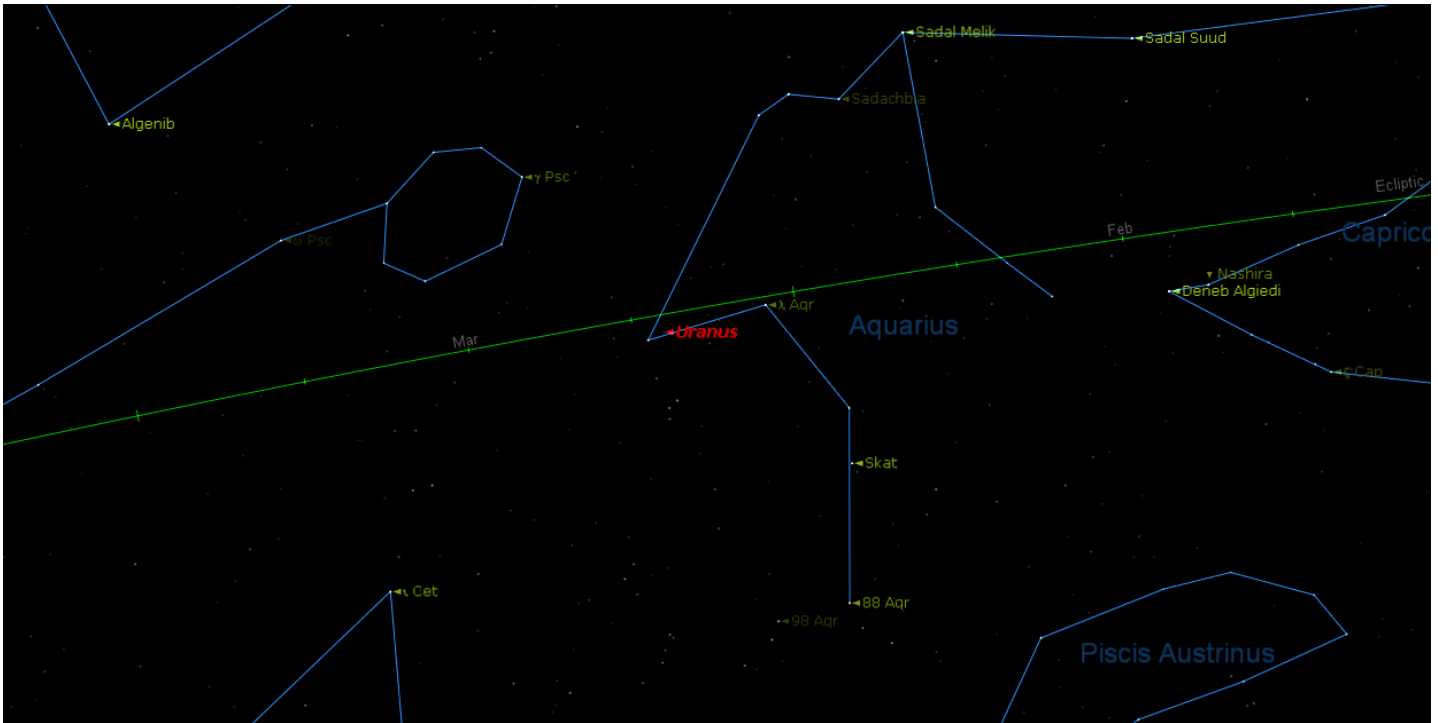
At magnitude 5.8 Uranus is at the threshold of naked eye vision. But with binoculars you can relatively easily find Uranus in the southeastern skies in September.

Sunset Over Theophilus

by Vic Long



I took this photograph of Theophilus (top), Cyrillus (middle) and Catharina (bottom) with a 4 inch Skywatcher refractor and Neximage webcam. These craters lie to the west of Mare Nectaris on the Moon. Catharina is 97 km in diameter and is the oldest according to Gerald North's *Observing the Moon*. Its walls are eroded and crater splattered. It is connected to 93 km Cyrillus by what looks like a channel. There is a double peaked mountain near the center of Cyrillus. Theophilus is clearly younger as it overlaps Cyrillus. Theophilus has some nicely terraced walls and a magnificent central mountain cluster (note the long shadows). I compared this photo to one in Gerald North's book taken with the 1.07m reflector at the Pic Du Midi observatory in France and was surprised how many features could be captured with a small telescope and a webcam under the pristine skies of Delaware County. These are good times indeed to be an amateur astronomer!



Above is a screen shot from *Starry Night* planetarium software for 10:00 p.m. on September 15. The green line is of course the ecliptic, from which the planets hardly stray. You can find a better chart in the July issue of *Sky and Telescope* that will show you the position of Uranus through January 2008, or download the same chart from <http://www.skyandtelescope.com/observing/highlights/9124251.html> . Unfortunately I cannot put the map in this article since it is copyrighted.

I have difficulty seeing much color with regular binoculars, but using my 8" Schmidt-Cat at 100X the bluish green planet looks markedly different from a star and is a distinct disk.

Uranus is the seventh planet from the Sun and third largest planet in the solar system. It is named after the ancient Greek deity of the sky Uranus, the father of Kronos (Saturn) and grandfather of Zeus (Jupiter).

Uranus was the first planet discovered in modern times. It was discovered by William Herschel while systematically searching the sky with his 6 inch Newtonian reflector telescope on March 13, 1781. It had actually been seen many times before but ignored as simply another star. Herschel named it "the Georgium Sidus" (the Georgian Planet) in honor of his patron, King George III of England. Others called it "Herschel". The name "Uranus" was first proposed by Bode in conformity with the other planetary names from classical mythology but didn't come into common use until 1850.

The picture below is from *Voyager 2*, the only spacecraft that has been to Uranus. *Voyager 2* was launched in 1977 and took this picture while performing a flyby in January 1986.

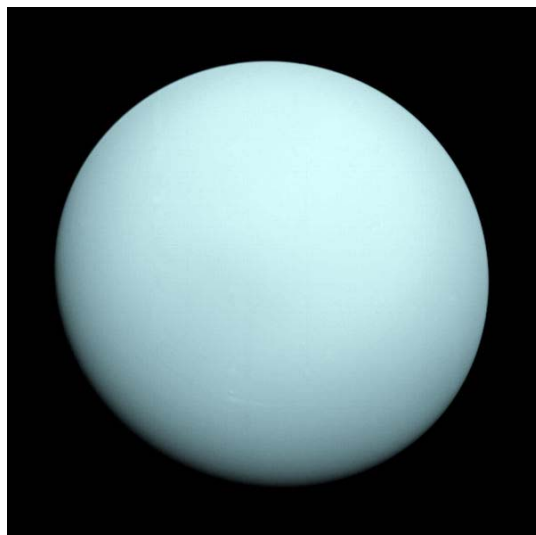


Photo credit: NASA *Voyager 2*

Like the other gas planets, Uranus has rings. Like Jupiter's, they are very dark but like Saturn's they are composed of fairly large particles ranging up to 10 meters in diameter in addition to fine dust. There are 11 known rings, all very faint. The Uranian rings were the first after Saturn's to be discovered. This was of considerable importance since we now know that rings are a common feature of planets, not a peculiarity of Saturn alone. The rings not able to be seen from Earth, other than with electronically amplified imaging equipment.

The Uranian system is unique in the solar system because its axis of rotation is tilted sideways, nearly into the plane of its revolution about the Sun; its north and south poles lie where the other planets have their equators. Seen from Earth, Uranus' rings appear to circle the planet like an archery target and its moons revolve around it like the hands of a clock. In addition to the rings, Uranus has 27 moons, the largest being Miranda, Ariel, Umbriel, Titania and Oberon.

So join us in Kennett Square at Anson B. Nixon Park on September 15 and we will look for Uranus!

Information sources:

<http://www.nineplanets.org/uranus.html>

<http://en.wikipedia.org/wiki/Uranus>

Pasachoff, Jay M. 2000. *A Field Guide to the Stars and Planets*. New York, NY. Houghton Mifflin.

Dickinson, Terence 2006. *Nightwatch: a practical guide to viewing the universe*. Buffalo, NY. Firefly Books



Astronomus

“IYA 2009”

By Bob Popovich

September 19 of each year is National Talk Like a Pirate Day. Aarr!! National Pickle Week is the week following Mother's Day. Mommy, dearest who thought of this one? And September, as we all know, is National Chicken Month. The list goes on—and painfully so.

Is it possible that someone has actually devised a yearlong observance of something? Something even more glorious than pirates, pickles or poultry? YES! Yes, I tell you, someone has. The International Astronomical Union, the folks who brought you the 8-planet solar system, have designated 2009 as the INTERNATIONAL YEAR OF ASTRONOMY [*applause!*] Under the banner of “The Universe, Yours to Discover”, the world-wide observance of the 400th anniversary of Galileo's first use of an astronomical telescope is intended to stimulate worldwide interest, especially among young people, in astronomy and science. The major goals of IYA 2009 are to:

- Increase scientific awareness.
- Promote widespread access to new knowledge and observing experiences.
- Empower astronomical communities in developing countries.
- Support and improve formal and informal science education.
- Provide a modern image of science and scientists.
- Facilitate new networks and strengthen existing ones.
- Improve the gender-balanced representation of scientists at all levels and promote greater involvement by underrepresented minorities in scientific and engineering careers.
- Facilitate the preservation and protection of the world's cultural and natural heritage of dark skies and historical astronomical sites.



THE UNIVERSE
YOURS TO DISCOVER

INTERNATIONAL YEAR OF
ASTRONOMY
2009

Given all the public outreach that the CCAS does, I think IYA2009 is a wonderful opportunity for us to go national...maybe even international!

The Brazilians are organizing an astronomical Olympiad—a first for the southern hemisphere. The Canadians are hoping to have 1,000,000 people look through a telescope (hopefully not just one ‘scope). The Irish will sponsor a competition to win a telescope. The Japanese will have a “lights down” event to “Take the Milky Way Back for Children.” And the US will have a conference on Galileo’s legacy in late December in Hawaii (this one sounds promising!) Looking at the website, all these events, and many others, have a contact person’s email. At this point, the Astronomical League has no formal agenda, but they do intend to participate. From correspondence with the US coordinator, I understand that the soon-to-be website www.astronomy2009.us will provide loads of information and opportunities for participation in IYA2009 festivities.

How about it, fellow CCAS members? Shall we pin our star on one of the activities listed on the IYA websites? Or shall we devise our own festivities? Let’s be part of this. We may not have another IYA in our lifetime.

But be forewarned, *anyone* who suggests a September 19 observing session for pickle-eating chickens will be asked to leave!

There is simply too much on this topic for me to cover in a proper way. So please go to the site—<http://www.astronomy2009.org>—and see for yourself.

Let’s Do It!

Next Time: A Royal Family.



Cosmic Cockroaches

By Dr. Tony Phillips

Cockroaches are supposed to be tough, able to survive anything from a good stomping to a nuclear blast. But roaches are wimps compared to a little molecule that has recently caught the eye of biologists and astronomers—the polycyclic aromatic hydrocarbon.

Polycyclic aromatic hydrocarbons (PAHs for short) are ring-shaped molecules made of carbon and hydrogen. “They’re all around us,” says Achim Tappe of the Harvard Center for Astrophysics. “PAHs are present in mineral oils, coal, tar, tobacco smoke and automobile exhaust.” Aromatic, ring-shaped molecules structurally akin to PAHs are found in DNA itself!

That’s why Tappe’s recent discovery may be so important. “PAHs are so tough, they can survive a supernova.”

The story begins a few thousand years ago when a massive star in the Large Magellanic Cloud exploded, blasting nearby star systems and interstellar clouds with hot gas and deadly radiation. The expanding shell, still visible from Earth after all these years and catalogued by astronomers as “N132D,” spans 80 light years and has swept up some 600 Suns worth of mass.

Last year “we observed N132D using NASA’s Spitzer Space Telescope,” says Tappe. Spitzer is an infrared (IR) telescope, and it has a spectrometer onboard sensitive to the IR emissions of PAHs. One look at N132D revealed “PAHs all around the supernova’s expanding shell. They appear to be swept up by a shock wave of 8 million degree gas. This is causing some damage to the molecules, but many of the PAHs are surviving.”

Astronomers have long known that PAHs are abundant not only on Earth but throughout the cosmos—they’ve been found in comet dust, meteorites and many cold interstellar clouds—but who knew they were so tough? “This is our first evidence that PAHs can withstand a supernova blast,” he says.

Their ability to survive may be key to life on Earth. Many astronomers are convinced that a supernova exploded in our corner of the galaxy 4-to-5 billion years ago just as the solar system was coalescing from primitive interstellar gas. In one scenario of life’s origins, PAHs survived and made their way to our planet. It turns out that stacks of PAHs can form in water—think, primordial seas—and provide a scaffold for nucleic acids with architectural properties akin to RNA and DNA. PAHs may be just tough enough for genesis.

Cockroaches, eat your hearts out.



Using the IR spectrometer on the Spitzer Space Telescope, scientists found organic molecules in supernova remnant N132D.

Find out about other Spitzer discoveries at www.spitzer.caltech.edu.

The preceding article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

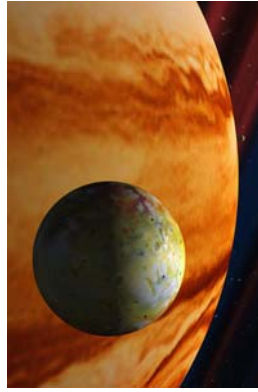
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Cartoon by Nicholas La Para

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Beyond



A trip through space and time with the Chester County Astronomical Society

“Beyond” is a spectacular exhibition of painstakingly restored images taken by robotic Solar System explorers. It is the brainchild of Michael Benson, a writer, photographer and filmmaker. Astronomy fuses with fine art in this collection of historic photographs from missions as old as Mariner and as recent as Cassini.

Limited engagement in the IMAX gallery at the American Museum of Natural History in New York City.

DATE: Saturday, October 20

COST: \$60 per person, includes bus fare and museum admission

DEPART: 7:00 a.m. from West Goshen Center (Paoli Pike & RT 202)

RETURN: 7:30 p.m. (approximate time)



I oughta be
in pictures!

**Don't miss out! Make your reservation today with Linda at 610-269-1737.
Payment due September 17.**

Need to see an enticing preview?

Visit http://www.amnh.org/exhibitions/photo/beyond/?src=e_h

CCAS Information Directory

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 North First Avenue
Tucson, AZ 85719

Telephone: 520-293-3198
Fax: 520-293-3192
E-mail: ida@darksky.org

For more information, including links to helpful information sheets, visit the IDA web site at:

www.darksky.org

Note that our CCAS Webmaster John Hepler has a link to the IDA home page set up on our Society's home page at www.ccas.us.

Dark-Sky Website for PA

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

www.POLCouncil.org



Good Outdoor Lighting Website

One of the biggest problems we face in trying to reduce light pollution from poorly designed light fixtures is easy access to good ones. When you convince someone, a neighbor or even yourself, to replace bad fixtures, where do you go for good lighting fixtures? Now there is a web site and business intended to address that very problem. At this site you can find information on all kinds of well-designed (that is, star-friendly) outdoor lighting fixtures. This company, Starry Night Lights, intends to make available all star-friendly fixtures they can find, and information on them, in one place. Check it out, and pass this information on to others. Help reclaim the stars! And save energy at the same time!

<http://www.starrynightlights.com/>



Local Astronomy Store: Skies Unlimited

There is an astronomy equipment store called *Skies Unlimited* in our area, in Pottstown to be specific, at:

Suburbia Shopping Center
52 Glocker Way
Pottstown, PA 19465

Telephone: 610-327-3500 or 888-947-2673

<http://www.skiesunlimited.net/>

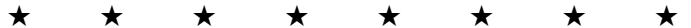


Find out about Lyme Disease!

Anyone who spends much time outdoors, whether you're stargazing, or gardening, or whatever, needs to know about Lyme Disease and how to prevent it. You can learn about it at:

www.LymePA.org

Take the time to learn about this health threat and how to protect yourself and your family. It is truly "time well spent"!



CCAS Information Directory

CCAS Lending Telescopes

Contact Kathy Buczynski to make arrangements to borrow one of the Society's lending telescopes. CCAS members can borrow a 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, Linda Lurcott Fragale, to make arrangements to borrow one of the books in the CCAS lending library. Copies of the catalog are available at CCAS meetings, and on the CCAS website. Linda's phone number is 610-269-1737.

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 e-mail message and send it to stargazer1956@comcast.net

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 (**in full color!**) via 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:

stargazer1956@comcast.net

CCAS Website

John Hepler is the Society's Webmaster. You can check our Website at:

<http://www.ccas.us/>

John 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 John Hepler (484-266-0699) or e-mail to webmaster@ccas.us

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 Executive Committee

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

President: Kathy Buczynski
610-436-0821

Vice Pres: Jim Anderson
610-857-4751

ALCor and Treasurer: Bob Popovich
610-363-8242

Secretary: Don Knabb
610-436-5702

Newsletter: Jim Anderson
610-857-4751

Librarian: Linda Lurcott Fragale
610-269-1737

Observing: Don Knabb
610-436-5702

Education: Kathy Buczynski
610-436-0821

Webmaster: John Hepler
484-266-0699

Public Relations: Deb Goldader
610-304-5303

CCAS Membership Information

The present membership rates are as follows:

REGULAR MEMBER\$25/year
SENIOR MEMBER\$10/year
STUDENT MEMBER\$ 5/year
JUNIOR MEMBER\$ 5/year
FAMILY MEMBER\$35/year

Membership Renewals

Check the Treasurer's Report in each issue of *Observations* to see if it is time to renew your membership. If you are due to renew, you can mail in your renewal check made out to "Chester County Astronomical Society." Mail to:

Bob Popovich
416 Fairfax Drive
Exton, PA 19341-1814

Sky & Telescope Magazine Group Rates

Subscriptions to this excellent periodical are available through the CCAS at a reduced price of **\$32.95** which is much less than the newsstand price of \$66.00, and also cheaper than individual subscriptions (\$42.95)! To start a subscription, make **sure** you make out the check to the **Chester County Astronomical Society** (do **not** make the check out to Sky Publishing, this messes things up big time), note that it's for *Sky & Telescope*, and mail to Bob Popovich. Or you can bring it to the next Society meeting and give it to Bob there. **If you have any questions by all means call Bob first (610-363-8242).** Buying a subscription this way also gets you a 10% discount on other Sky Publishing merchandise.

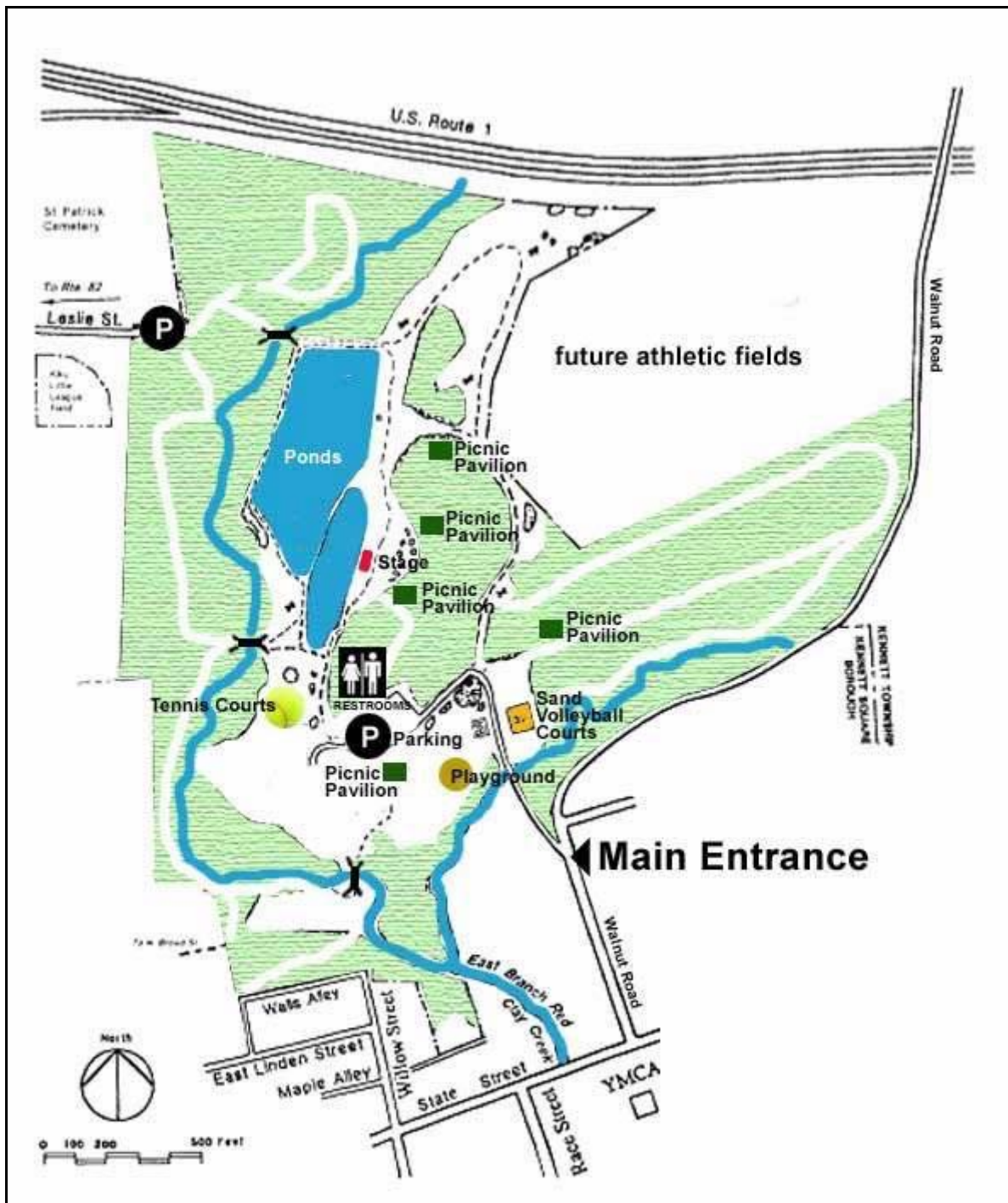
Astronomy Magazine Group Rates

Subscriptions to this excellent periodical are available through the CCAS at a reduced price of **\$34.00** which is much less than the individual subscription price of \$42.95 (or \$60.00 for two years). If you want to participate in this special Society discount offer, **contact our Treasurer Bob Popovich.**

Phone: 610-363-8242

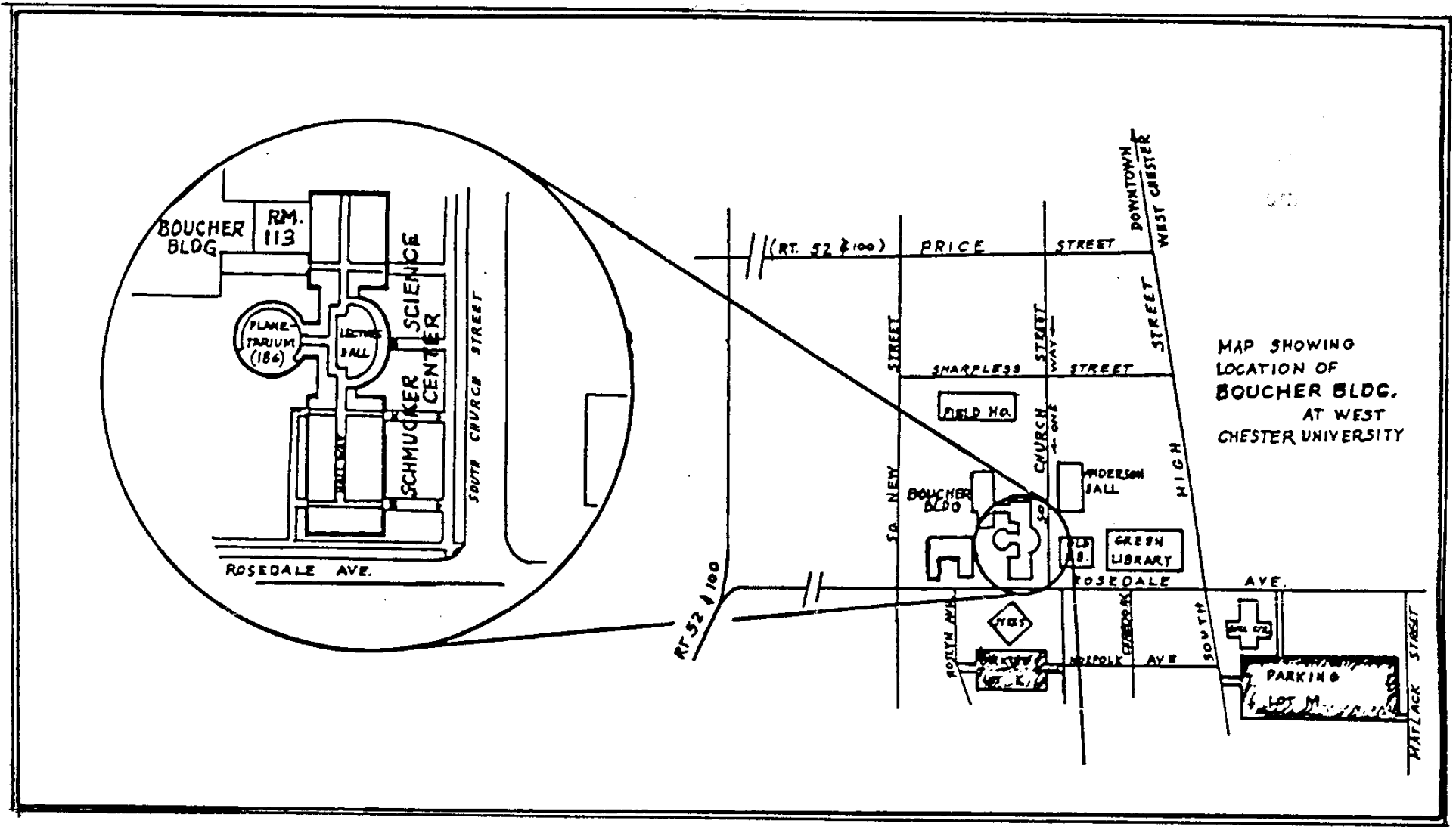
e-mail: B2N2@verizon.net





Map of Anson B. Nixon Park in Kennett Square.

If you head west into Kennett Square on State Street ("Old Route 1") you will see North Walnut Street heading to the right just as you enter town. Follow that road to the right, bypassing the main park entrance to what is labeled "future athletic fields" on the map. The fields are no longer "future," they now exist and there is parking space and portable toilets available. Just watch for the "Y" as in YMCA signs on the left as you head north and turn in to the parking lot on the left.



Parking is available behind Sykes Student Center on the south side of Rosedale Avenue (Parking Lot K), and behind the Bull Center at the corner of Rosedale Avenue and South High Street (Parking Lot M). If you arrive early enough, you may be able to get an on-street parking space along South Church Street, or along Rosedale Avenue. You can take the Matlack Street exit from Rt. 202 South; Matlack Street is shown on the map at the lower right corner with Rt. 202 off the map. If approaching West Chester from the south, using Rt. 202 North, you would continue straight on South High Street where Rt. 202 branches off to the right. This would bring you onto the map on South High Street near Parking Lot M, also in the lower right corner.