



# OBSERVATIONS



A MONTHLY PUBLICATION OF THE  
**Chester County Astronomical Society**

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

**OCTOBER 2002**

(VOLUME 10, NO. 10)

<http://www.ccasastro.org>

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

## CCAS October Meeting

**DATE:** Tuesday October 8, 2002  
**TIME:** 7:30 p.m. EDT  
**PLACE:** Department of Geology and Astronomy Lecture Room (Room 113 – Boucher Building) West Chester University  
**LOCATION:** South Church Street West Chester, PA (see map on page 9)

Our guest speaker for the October meeting will be Dr. Harry Augensen, Professor of Physics and Astronomy at Widener University. His topic will be "Astronomy Education in the 21st Century: Challenges and Aids." This talk will discuss the challenges facing astronomy educators, from students' preconceptions to light pollution, as well as some of the wealth of aids available to educators today. This promises to be a valuable presentation not only for formal astronomy educators (like teachers and professors) but also for informal astronomy educators (like amateur astronomers doing star nights for the general public).

Dr. Harry J. Augensen has been teaching at Widener University since 1981. A native of Chicago, he earned his B.A. in Physics and Mathematics (dual major) from Elmhurst College (in Illinois), and his Ph.D. in Astronomy from Northwestern University. Dr. Augensen's research interests include galactic structure, planetary nebulae, and the late stages in stellar evolution. He has conducted research at many of the leading astronomical observatories in the world, and published articles in a number of professional astronomical publications, as well as in more popular magazines such as *Astronomy* and *Mercury*.

Dr. Augensen also maintains a strong interest in astronomy education, particularly for disadvantaged students. His 81-page document "Astronomy Education and Instructional Aids" was recently distributed worldwide by the International Astronomical Union.

If you have any interest in astronomy education, whether formal or informal, don't miss this presentation by a leading expert in the field!



## CCAS Schedule of Events

October 4/5, 2002 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
October 8, 2002 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EDT
November 1/2, 2002 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
November 12, 2002 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EST
December 6/7, 2002 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
December 10, 2002 (Tuesday)	CCAS Meeting Location: TBA 7:30 p.m. EST



## Workshop: How To Buy A Telescope

The Education Committee has announced they will hold a workshop entitled "How to Buy a Telescope" on Saturday November 23, 2002 from 7:00 to 8:30 p.m. EST. The workshop will be at the Flower & Cook Observatory in Malvern. The class will cover the types of telescopes and mounts, the pros and cons of each type, and what you can expect to see in the different types and sizes of telescopes. Call Kathy Buczynski (610-436-0821) to reserve your space(s).



*Editor's Note: This month's "Space Place" article did not arrive in time for our October newsletter. It will appear in next month's newsletter.*



## CCAS Secretary's Report

Meeting of September 10, 2002

By Doug Liberati

Meeting convened on September 10, 2002 at approximately 7:30 PM.

Officers in attendance were President Mike Turco, Vice President Steve Limeburner and Secretary Doug Liberati.

Attendance was 19 people, including officers.

Mike welcomed the group back to another year. Ed Lurcott announced that he was reinstating the observing column, due to the high number of requests in the recent mail poll of members. Kathy Buczynski requested a meeting of the Education Committee after the meeting proper.

Kathy also has available an order form for copies of *Skywatch 2003* at \$6.00 per copy instead of the retail price of \$6.99. Interested members should contact her soon, as she will be ordering copies for upcoming astronomy classes.

The following speakers and activities are planned for upcoming meetings:

October - Dr. Augensen of Widener University

November - Emil Volcheck, subject to be announced

December - Currently open. Steve may report on the Black Forest Star Party. Members interested in presenting, or who have ideas, should contact Steve Limeburner.

Steve Limeburner, in a brief report, said that the Black Forest Star Party was a great success, with clear skies and little to no dew four nights in a row. There was a beautiful auroral display as well.

Ed Lurcott attended the Mason Dixon Star Party, where the mid-East meeting of the Astronomical League was also held. John Goss was elected as the new Chairman for the region.

Rich Mitchell reported on the situation at Flower and Cook Observatory. Permission has been granted to resume public nights, with Rich to e-mail details as they become available. In the meantime, a sale looks sure, probably sometime in late 2003. Rich and others are putting a plan together to try to buy it and operate it in the public interest.

The speaker was Professor Laurence DeWarf of Villanova University, speaking on "Young Stellar Objects."

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### October Skies

#### Moon Phases

New Moon	10/6
First Quarter	10/13
Full Moon	10/21
Last Quarter	10/29

#### The Planets

Mercury is in our morning sky this month, making its best morning appearance of the year for us. Greatest elongation from the Sun (meaning, the best time to look for it) is on October 13. Look due east about the time that morning twilight starts.

Venus is in the evening sky as the month begins, but is close to the horizon and getting increasingly tough to spot. By mid-month it will disappear into the Sun's glare.

Mars is in the morning sky in October, getting higher each morning before the Sun rises. It is so far away now that it is a tiny featureless dot in a telescope.

Jupiter is in the morning sky, and is the brightest object visible in the sky before the Sun rises. It is in Cancer this month.

Saturn is rising in the latter part of the evening, and it is high enough for good views by about 1:00 a.m. EDT this month.

Uranus is in Capricornus this month, and thus visible in the evening sky. This is a good month to find Uranus using a telescope. It looks like a blue-green disk in a telescope, small and featureless.

Neptune is also in Capricornus. October is a good time to track down Neptune with a steady telescope using moderate to high magnification. It will appear as a tiny disk, perhaps bluish in color; much smaller than Uranus.

Pluto is in Ophiuchus, in the evening sky, but it is now too low in the sky to see this dim world. You'll have to wait until next summer to look for Pluto.

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### Night

By Nicholas La Para

Beneath the night

I feel not small, oh no,

Oh no.

Granny-gowned earth

Trundles her way

Cupboard to sink to table to bed,

While over her shoulder

Universes open.

Chips of stars cold as fire

And distant as yearning

Come lover-close,

And my eyes

Become eyes of my heart,

And my heart

Flower-wide as the sky.

Small?

At my desk, perhaps,

Or tying my shoes.

But beneath the night,

Deeper than dreaming,

Eye, I, sky

Devour each the other,

And I am the universe.

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## October Observing Opportunities

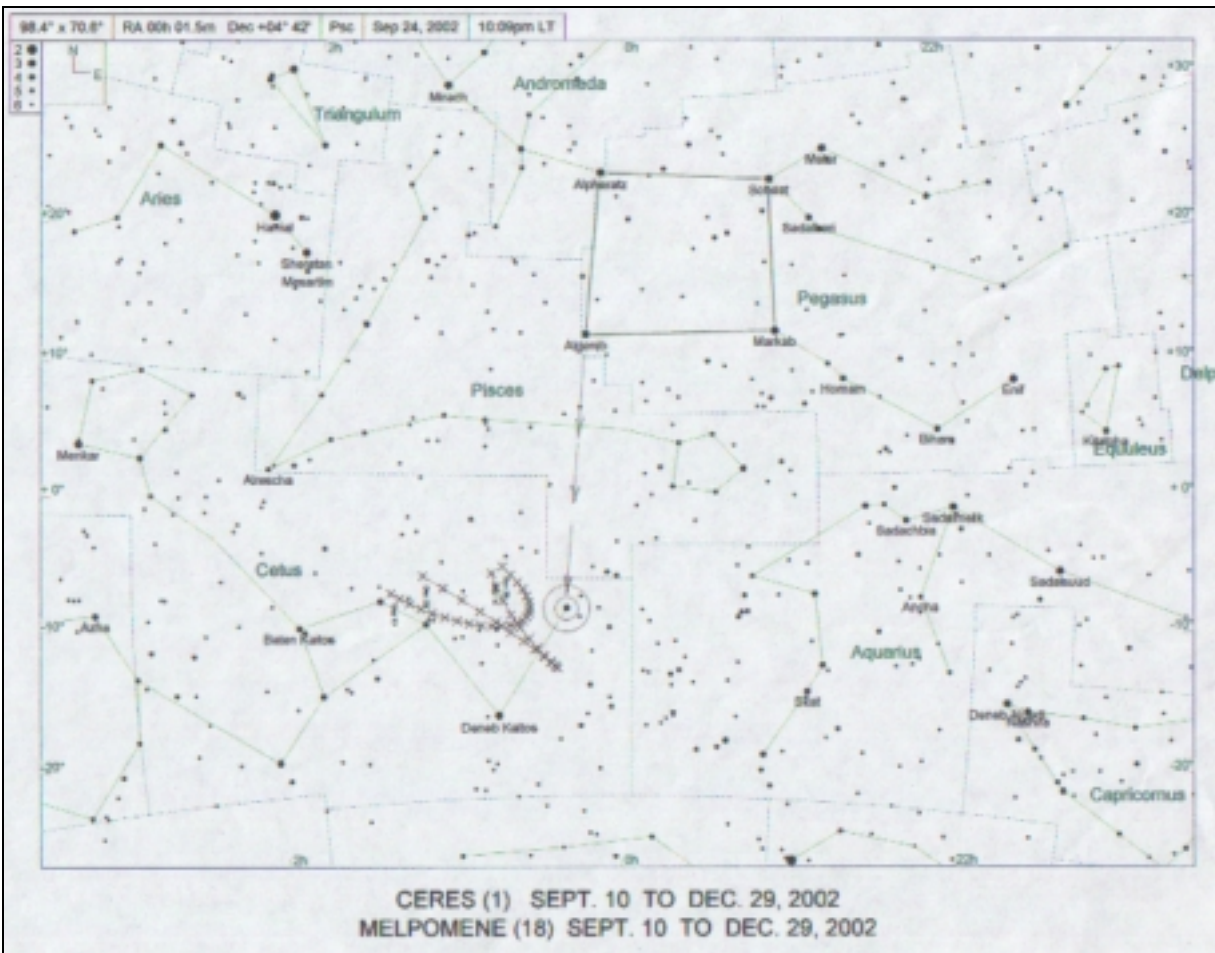
By Ed Lurcott, Observing Chair

It is rare that binocular users can view an asteroid and follow it for months, but this fall and winter allow you to see not one but two asteroids on clear moonless nights. Early this month you will have to wait until after 10:00 p.m. or so because they are in the southeastern sky. Later this fall they will be on or close to the meridian earlier in the evening.

To locate minor planets 1 (Ceres) and 18 (Melpomene) find the great square of Pegasus, now high in the east about 9:00 p.m. Imagine a line connecting the two eastern stars of the square, Alpheratz and Algenib, and extend it due south for a distance of one and two-thirds the distance between them. There you find a magnitude 3.5 star, Iota Ceti, which might be considered the nose of Cetus the Whale swimming westward under Pisces, the Fishes. From Iota go eastward one binocular field-of-view ( $7^\circ$ ) to the wide pair ( $1.4^\circ$  separation)  $\Psi^1$  and  $\Psi^2$  (magnitudes 4.7 and 5.2, respectively). On October 18/19, Ceres (at magnitude 7.6) will pass just north of  $\Psi^2$  and on October 27/28 it will pass just north of  $\Psi^1$ . Ceres is 580 miles in diameter and orbits the Sun once every 4.6 years. Piazzi discovered it in 1801.

On October 1/2 Melpomene (at magnitude 7.8), is located about  $2^\circ$  due west of  $\Psi^1$  Ceti and moving in a southwesterly direction, slowing down to a standstill about November 1. It then moves in a northeasterly direction passing just north of  $\Psi^1$  on December 8/9, now much dimmer at magnitude 9.3. This will be only 51 days after Ceres passed this same spot. Melpomene is only 93 miles in diameter, and orbits the Sun once every 3.48 years. Hinds discovered it in 1852.

Follow Ceres and Melpomene the next few months by using the chart(s) below and on page 4. If you follow both asteroids to the beginning of December you will see both in the same binocular field-of-view for a while (they will be as close as  $3.5^\circ$ ).



References:

*Sky & Telescope* magazine, October 2002

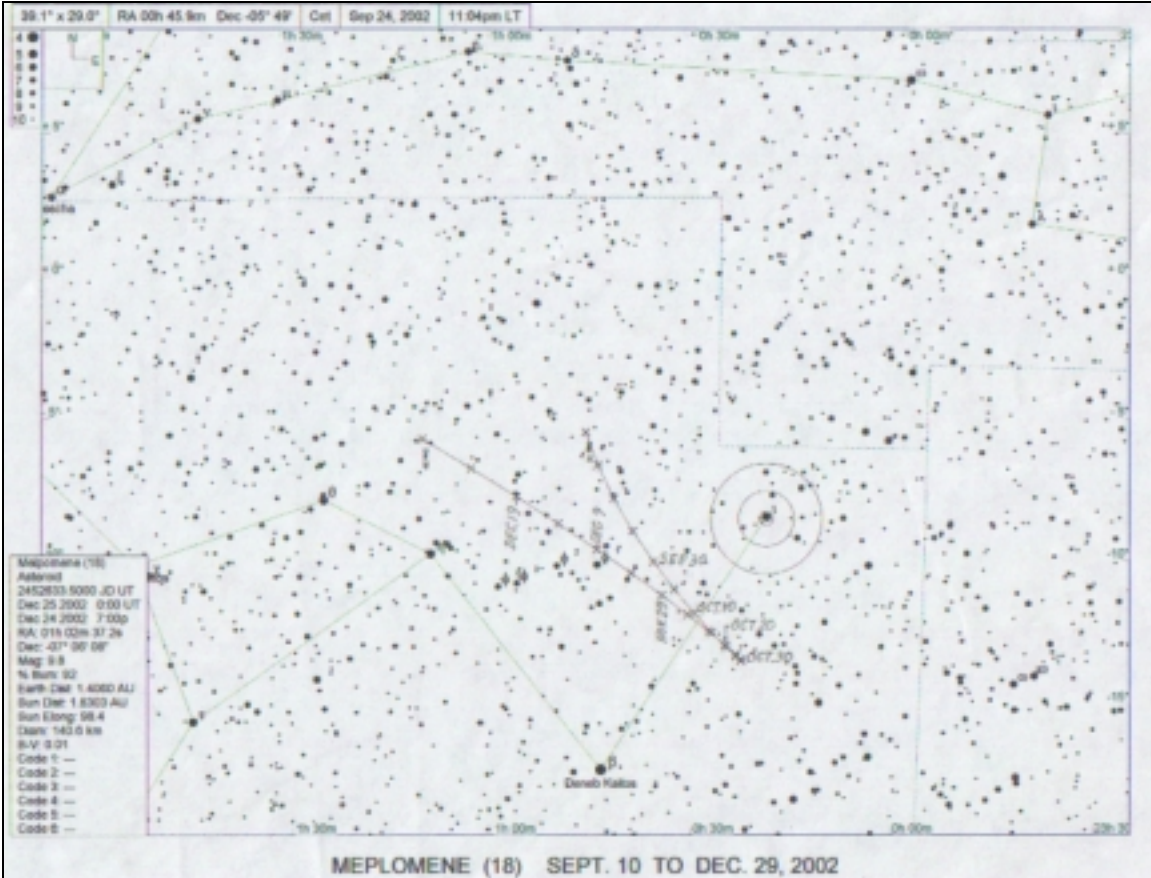
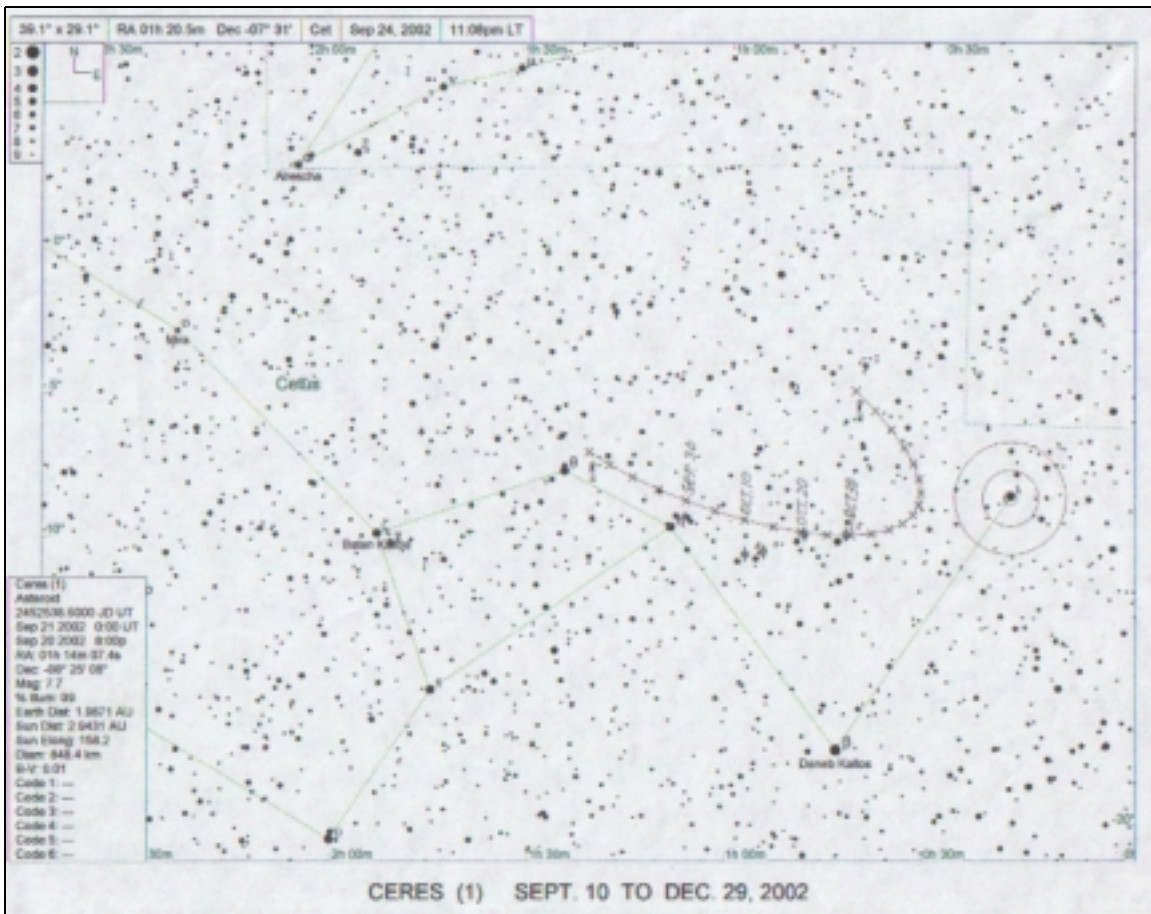
*Observer's Handbook 2002*, Royal Astronomical Society of Canada

*Sky Catalogue 2000.0, Vol. I, Second Edition*, Sky Publishing

*Tables of Minor Planets*, Pilcher, Meeus, 1973

*Mega Star V5.0 Sky Atlas for Windows*







**WHEN ASTRONOMERS SNAP**

Cartoon by Nicholas La Para



**Astronomus: 18**

*A Journal for Younger Astronomers*

By Bob Popovich

“It’s Fall, Everybody Up”

Put down that remote, get away from that air conditioner and get outside! After a summer that most would rightly call oppressive, autumn has finally arrived. And you know what that means, astronomy fans: a season that promises some of the best skies and most delightful weather of the year. No more fumbling for an eyepiece as a horde of winged vampires drink their fill. Gone are the skies with the consistency and transparency of the Schuylkill River.

I for one felt a bit cheated during this summer when I stepped outside on a “clear” night only to find that Albireo represented the limiting magnitude. So let’s shelve those picture books that show us what the sky *should* look like and let’s get up and see for ourselves.

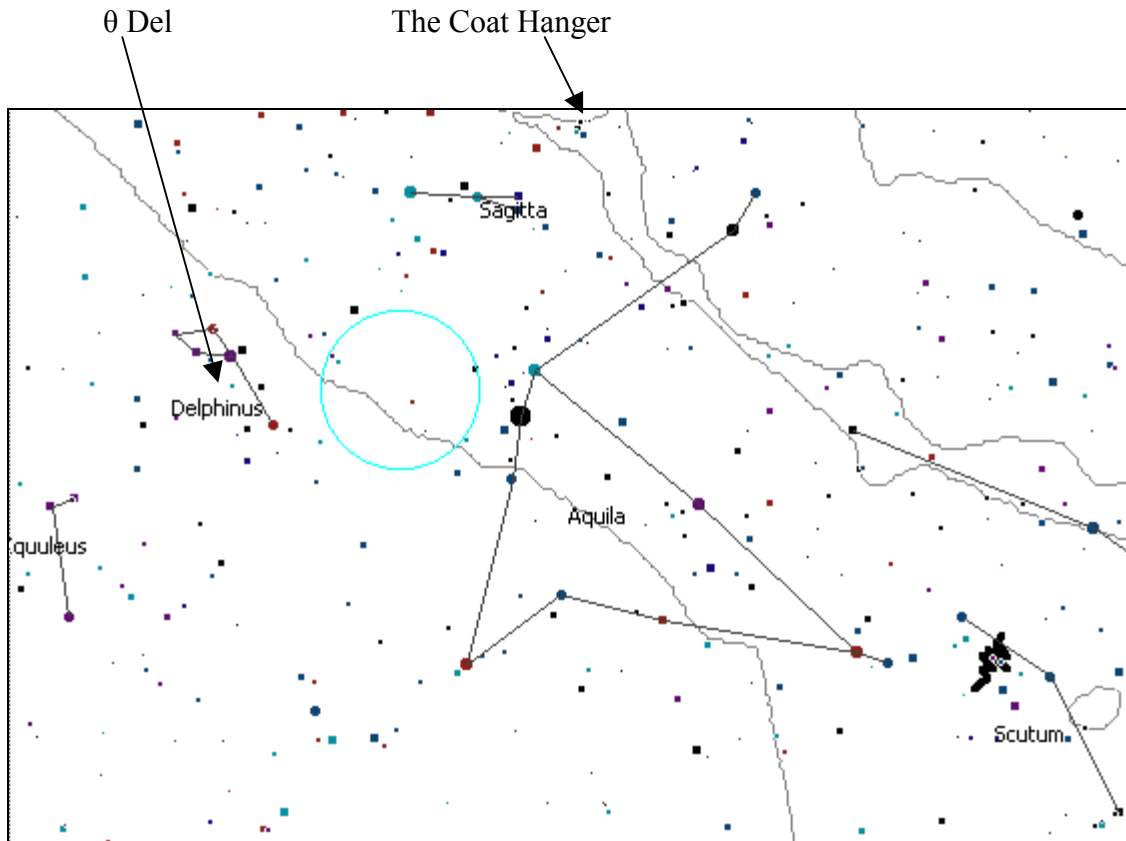
Facing south, let’s get our bearings by finding Altair—one of the three stars of the summer triangle. Placing Altair on the right edge of your binocular field of view (FOV), go east two FOV. This will put you at Delphinus with its prominent diamond-shaped body. About half way between this diamond and the trailing star representing its tail is the  $\theta$  star. Next to this star is a good test of whether your eyes are dark-adapted. Can you see the tiny equilateral triangle of stars? If you can’t, wait a few minutes and try again. And while you’re waiting, why not take a look at the lovely blue double at the uppermost point of the diamond.

Next we need to nudge to the north/northwest about 2 FOVs. This puts us right at Sagitta. The two stars making up the shaft of the arrow share the same color. Can you identify it? This color is subtle, but if we glance at them quickly with averted vision it should be easy. Just about halfway between these two stars, and a little bit below, are M71 and Harvard 20. They’re just beyond the grasp of my binoculars, but a telescope easily acquires them both. They’re separated by just  $.28^\circ$ .

And now if we move to the tail of the arrow and then go up to the northwest one FOV, we’ll come to an asterism that is on just about everyone’s list of favorites—the Coat Hanger, or Brocchi’s Cluster. How many stars can you count in this cluster? The Coat Hanger is actually within the confines of Vulpecula, but it’s just too much fun to pass by without a look.

Let’s return to Altair and follow the body of the eagle down to the two stars that mark its tail. These two stars, one blue and one reddish, are a bit more than a degree apart. Now if we look to the west about one-half of a FOV, we’ll see the first of three stars that dogleg to the south. This is Scutum, the shield. Unlike the dolphin and the arrow, which are of classical origin, the shield was devised by Hevelius in 1690. And aside from requiring quite an imagination to see a shield among these stars, this constellation appears to be the least interesting of the three. Mind you, I said *appears*. Once we begin to scan the entire area in and around Scutum our opinion will do a complete about face. Clusters, star clouds, nebulae and streams of stars fill our view. And little wonder since Sagittarius just to the south marks the direction towards the center of the galaxy. We should take our time here and truly enjoy. It’s absolutely delightful!

There you have it. This little corner of the cosmos has really gotten the old astro-blood flowing. How about you?

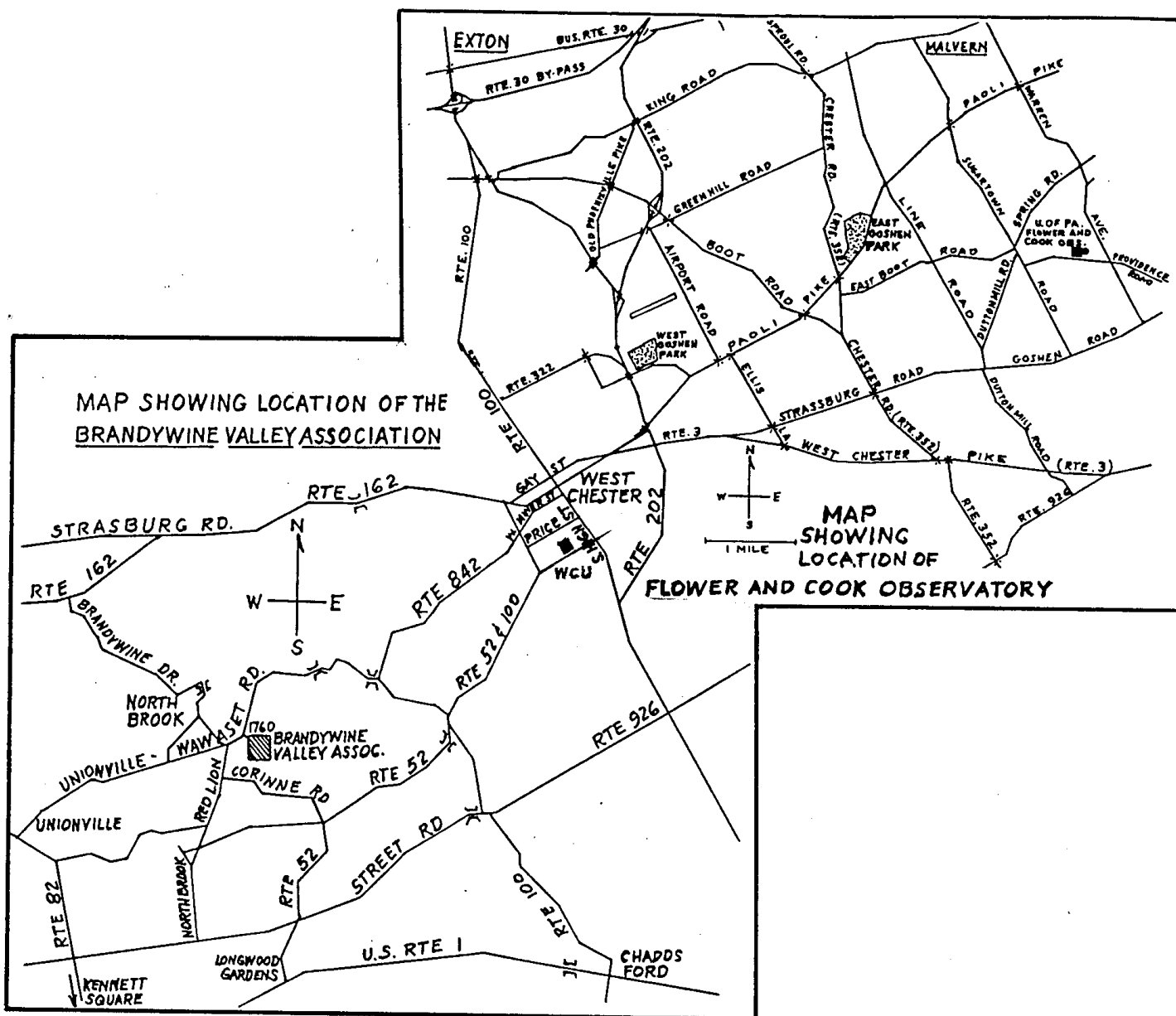


Note: The circle near Aquila represents one field of view for 7x50 binoculars

Next time: Boy, is he/she ugly!

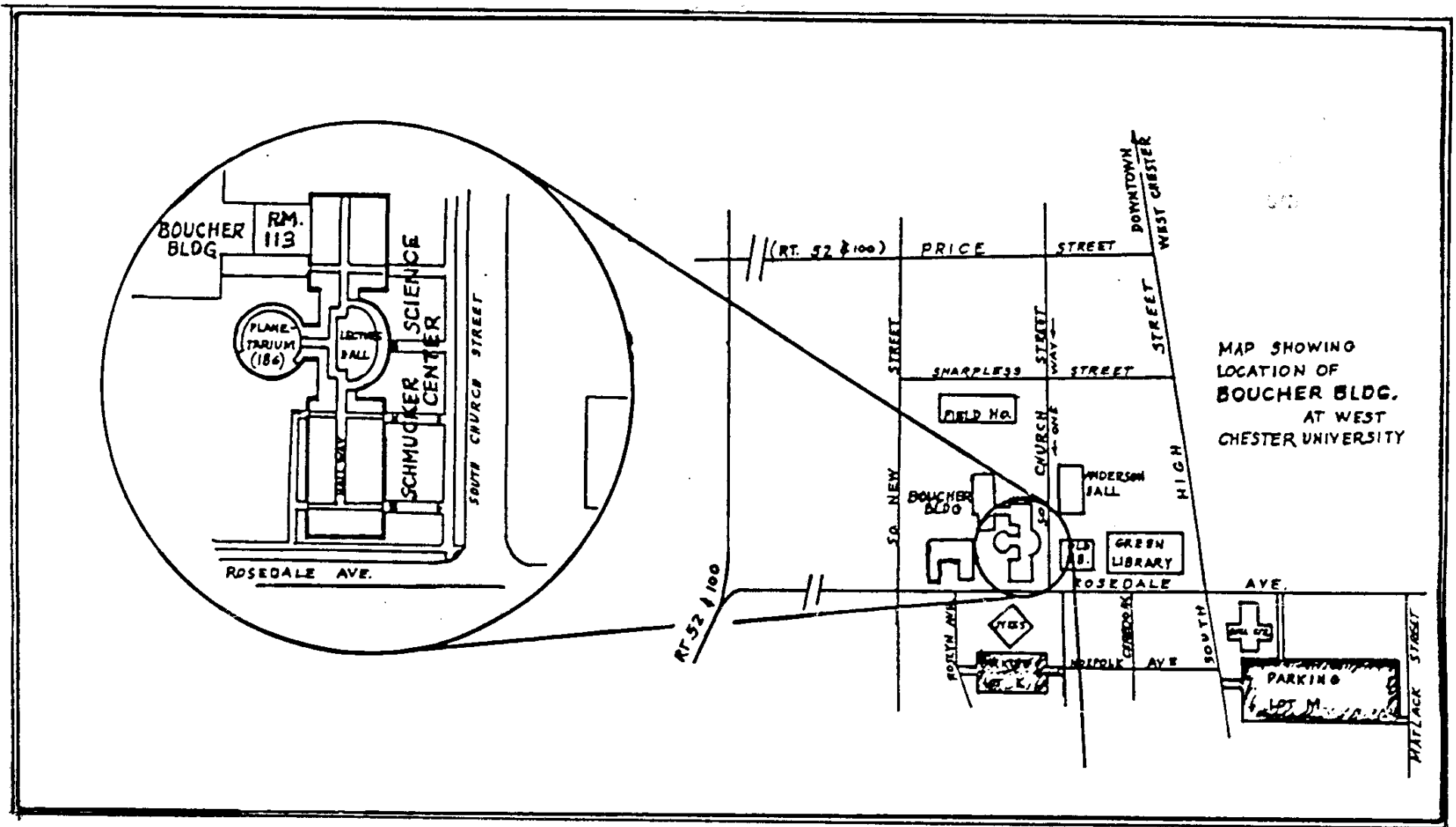
**Note:** In the August 2002 *Observations*, the quiz answer for question 1 was wrong: it should have been **0° Kelvin** = Absolute Zero.





To get to the Myrick Conservation Center of the Brandywine Valley Association from West Chester, go south on High Street in West Chester past the Courthouse. At the next traffic light, turn right on Miner Street, which is also PA Rt. 842. Follow Rt. 842 for about 6 miles.

To get to the observing site at the BVA property, turn off Route 842 into the parking lot by the office: look for the signs to the office along Route 842. From that parking lot, go up the farm lane to the left; it's about 800 feet or so to the top of the hill. If you arrive after dark, please turn off your headlights and just use parking lights as you come up the hill (so you don't ruin other observers' night vision).



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.