

Sky **WAA** tch

The Monthly Publication of the Westchester Amateur Astronomers

September 2007



Phoenix Rising

On August 4th, NASA's Mars Phoenix mission lifted off. The mission targets Mars' largely unexplored North polar region. The region contains water ice and so is considered an interesting place to look for clues of life. The mission Lander will not be mobile, but includes a camera, robotic arm and small chemistry lab. Touchdown is slated for May 25, 2008. For more info, see: http://www.nasa.gov/mission_pages/phoenix/main/index.html.

Events for September 2007

➤ **Monthly Meetings**

WAA Amateur Night.

Friday September 7, 8:00PM

Andrus Planetarium

Workshop South

Hudson River Museum, Yonkers

WAA members will showcase their astrophotos and equipment. Let us know if you have something to show or tell. Please email the club with a brief idea of what you will be presenting.

➤ **Stamford Observatory Night**

Saturday, September 16, 7 pm

39 Scofieldtown Rd., Stamford, CT

Charles Scovil, author of "The AAVSO Variable Star Atlas" and observatory curator, will "drive" the 22-inch Maksutov telescope around the fall sky. "Cloudout" date is Oct 7.

➤ **"Starway to Heaven"**

Saturday, September 8, 8:00-11:00PM

Meadow Picnic Area, Ward Pound Ridge Reservation, Cross River

This is our scheduled observing date for September, weather permitting. Free and open to the public. The scheduled rain /cloud date is September 15.

Renewing Members...

Tom Boustead, White Plains, NY

Mike and Ann Cefola, Scarsdale, NY

Al Forman, Croton-on-Hudson, NY

James Frost, Rye Brook, NY

Alexander Halimou, Pleasantville, NY

Alan Marzullo, South Salem, NY

Barbara Moroch, Tarrytown, NY

Christine Nowakowski, Mt Vernon, NY

Terry Pratt, Scarsdale, NY

Robin Stuart, Valhalla, NY

Call: 1-877-456-5778 (toll free) for announcements, weather cancellations, or questions. Also, don't forget to periodically visit the WAA website at: <http://www.westchesterastronomers.org/>.

Astronomy Book Giveaway

Anthony Maida, a friend of the WAA, has offered to donate the following books to club members. Call, e-mail or talk to a club officer if you are interested in a particular title and we will reserve it for you on a first-come, first-served basis.

- 1) The Cambridge Encyclopedia of Astronomy
- 2) Astronomy With Binoculars, James Muirden
- 3) Imaging Saturn: The Voyager Flights To Saturn, Henry Cooper
- 4) Comets: A Descriptive Catalog, Gary W. Kronk
- 5) Astronomy An Intro For The Amateur Astronomer, Jacqueline Mitton
- 6) Space Time Infinity, James Trefil
- 7) The Realm Of The Terrestrial Planets, Zdenek Kopel
- 8) Astronomy Today, Dinah Moche
- 9) Pictorial Astronomy
- 10) The Comet Book, Robert Chapman
- 11) Moons And Planets, William Hartman
- 12) The Illustrated Encyclopedia Astronomy and Space
- 13) Black Holes, Walter Sullivan
- 14) Observational Astronomy For Amateurs, J.B. Sidgwick
- 15) The Stars And Their Courses, James H. Jeans
- 16) A Complete Manual Of Amateur Astronomy, P. Clay Sherrod
- 17) Solar System, Peter Ryan forward by Carl Sagan
- 18) Atlas Of The Planets, Paul Doherty
- 19) Astronomy Through The Telescope, Richard Learner
- 20) A Guide To Astronomy, Loyd Mallan
- 21) Highlights In Astronomy, Fred Hoyle
- 22) The New Solar System, intro by Carl Sagan
- 23) Observe And Understand The Sun
- 24) Astronomy In Color, Peter Brown
- 25) Shuttle Into Space, G. Harry Stine
- 26) The Moon Explorers, Tony Simon

Westchester Amateur Astronomers, Inc., a 501(c)(3) organization, is open to people of all ages with the desire to learn more about astronomy. The Mailing address is: P.O. Box 44, Valhalla, New York 10595. Phone: 1-877-456-5778. Meetings: Andrus Planetarium, Hudson River Museum of Westchester, 511 Warburton Ave., Yonkers. Observing at Ward Pound Ridge Reservation, Routes 35 and 121 South, Cross River. Annual membership is \$25 per family, and includes discounts on *Sky & Telescope* and *Astronomy* magazine subscriptions. Officers: President: Charlie Gibson; Senior Vice President: Pat Mahon; Secretary: Barbara Moroch; Treasurer: Michael Virsinger; Vice President Membership: Karen Seiter; Vice President Programs: John James; Vice President Field Events: David Butler; Newsletter: Tom Boustead; Webmaster: Robert Davidson.

WAA Telescope Workshop

On August 4th. WAA'ers conducted our annual workshop at Pound Ridge for new telescope owners who might need help with their telescopes. Here are some highlights. Thanks to Bob Davidson for the photos.



Tony Kim standing with his newly refurbished 12.5-inch Astro-Systems Dobsonian along with Dave Butler, Charlie Gibson and guests Emily and Louise.



Harry Butcher assisting Karen set up her ETX90, with the ever-needed instructions in hand.



Jan checks out Doug Tower's "Old Reliable" refractor.

Observing at the Telescope Workshop by Dave Butler

This year's telescope workshop saw excellent attendance. While poor seeing plagued the Pound Ridge skies, at least the skies offered good transparency. Attendees were treated to a Go-to workshop at the east end of the parking lot. For those interested in viewing: Jupiter and its four moons made an engaging target. In fact, one of the moons obligingly passed behind Jupiter during the session.

Although the sky was supposed to be clear all night, clouds began arriving around 10pm. While conditions permitted, Bob Davidson showed the Western part of the Veil Nebula on the 20" Obsession Dobsonian. Many thought that this was the best view of the Veil they had ever seen. You could move the Obsession and follow the Veil on both sides of the field of view.

A babysitter came by with two kids. She was very interested in deep sky objects. So, I turned my scope to the globular clusters M4, M80, M22, M13 and M56 at 167x; individual stars were easily seen. However, I viewed the Sunflower and the Black Eye Galaxies at that power thinking I was at 83x and the views were poor at that power. Later I viewed Andromeda and its companion M32. Double stars Alberio, Cygni 61 and Antares were viewed with a light Blue and a Nebula filter. I tried Rasalgethi but was pointing in the wrong area of the sky. The planetary Ring Nebula was a crowd favorite shown on most scopes. It looks like a small puff of smoke with a hole in it. The Cat's Eye planetary nebula proved quite bright and best at high power; at low power it is quite star-like and thus easy to miss. Two objects that I missed because they were in the clouds were comet C\2006 VZ13 and the Swan Nebula.

Constellation Corner:

By Matt Ganis

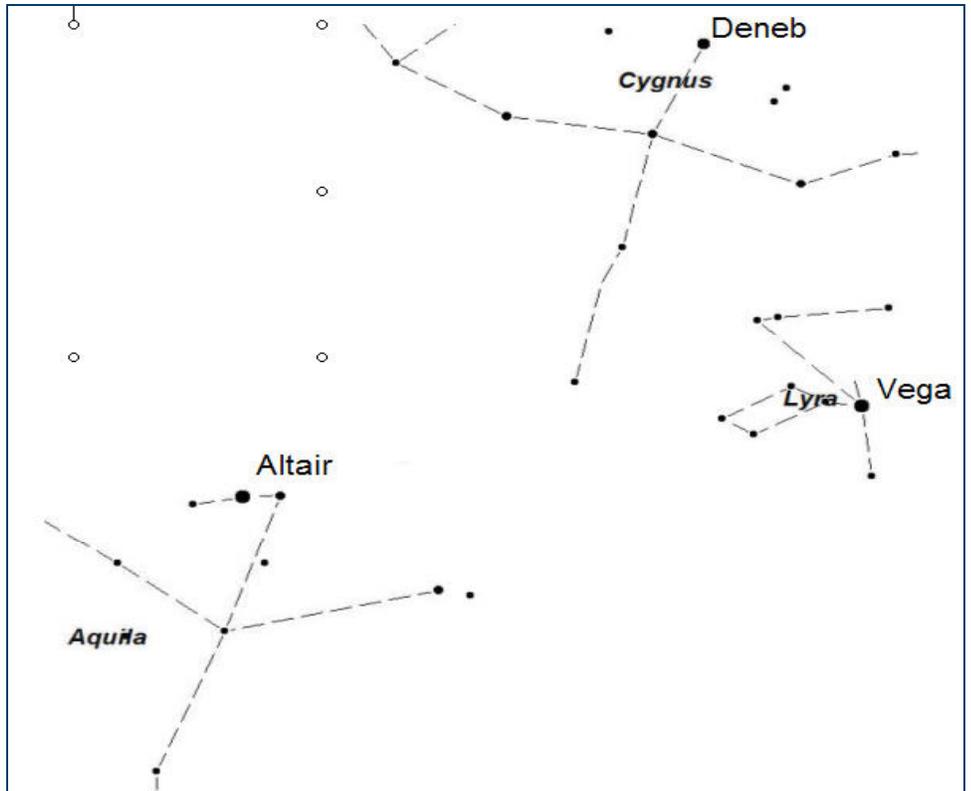
As September roles in, we find some old friends high in our evening skies. Rather than just discuss constellations and the various myths that surround them, I thought I'd focus instead on a star (or two) that might be interesting to some of you. I know when I first picked up James Kaler's "*The Hundred Greatest Stars*" I thought to myself "who in their right mind would write a narrative book about stars?" – what could you possibly say! Well, the answer was "LOTS" (and interesting things too)!

Let's start with one of the brightest stars in our autumn skies (actually it's the fifth brightest star overall), Vega. This bright star, also known as Alpha Lyrae or "The Harp Star" is located about 25 light-years away from us and is the brightest star in Constellation Lyra. Vega is the lower right member of the "Summer Triangle", formed with Altair at the lower left, and Deneb at upper right (all Alpha Stars in their respective constellations). Due to the slowly changing orientation of Earth's axis in space - the Precession of the Equinoxes - Vega was at one time the North Celestial Pole Star (approximately 12,000 years ago) and will be again in another 10,000 years.

Vega is a Delta Scuti type of pulsating variable star (a star with a change in brightness over 0.1903 days). A Delta Scuti variable (also known as a Dwarf Cepheid) is a variable star, which exhibits variations in its luminosity due to both radial and non-radial pulsations of the star's surface. Typical brightness fluctuations would range from 0.003 to 0.9 magnitudes in visual magnitude over a period of a few hours.

In comparison to our own Sun, Vega has a mass of about 2-3 times the mass of our own star and is about 2.73 times larger in diameter.

However, looking at the ages of the two stars, Vega is a relative "baby" compared to our Sun being only about 350 million years old (compared to the 5 billion year-old Sun). However, Vega is so much bigger and hotter than our Sun that it will exhaust its core hydrogen after only another 650 million years



or so (for a total life of around a billion years) and turn into a red giant or Cepheid variable before "blowing" away its outer layers to reveal a remnant core as a white dwarf.

So if you get a chance to look up this month, have a look at Vega. I think it's interesting to know some of these "physical" attributes and think about what the sky will look like without this bright star in our skies.

Almanac

For September 2007 by Matt Ganis



Sep 4



Sep 11



Sep 19

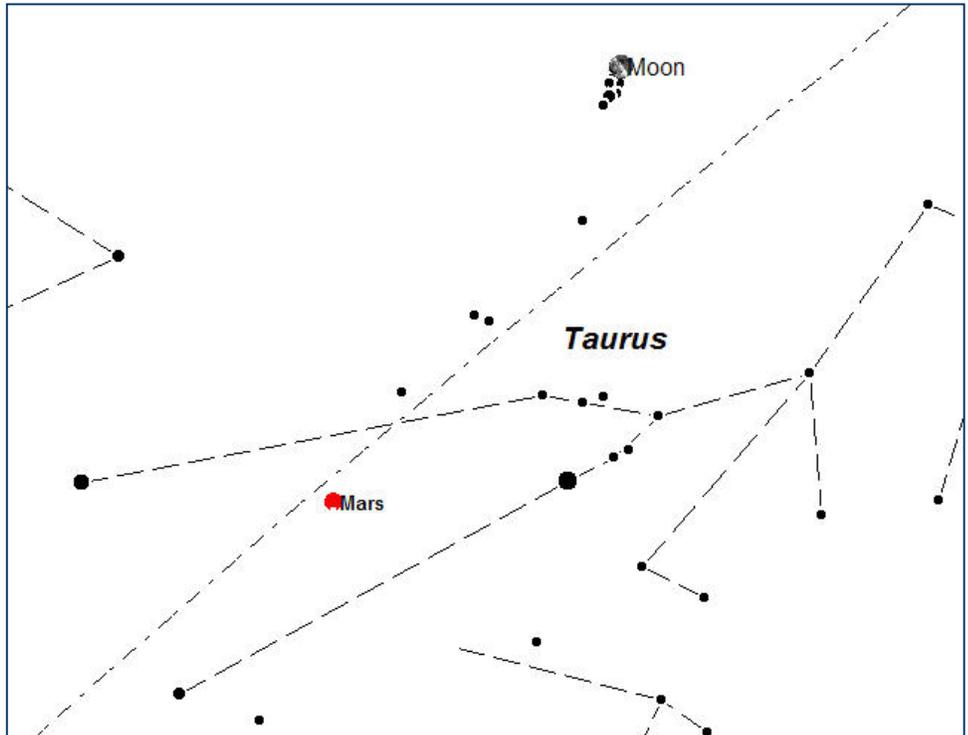


Sep 26

As I got into my car to drive home from work tonight (around 8pm) I had to turn my lights on and I realized that it's getting dark earlier! Woohoo! I don't know about you, but to me, the autumn sky is the best time to get out and do some real quality stargazing. Crisp, cool evenings and the rise of the wintertime constellations really gets me excited!

our solar system its outer surface would lie between the orbits of Mars and Jupiter. On the evening of September 17th (into the 18th), look for the Moon to be just opposite of Antares – about 5 degrees to the south (the same distance Jupiter is to the North of the star).

The planet Mars ushers in the month of September as it rises into our evening skies just around the midnight hour. The "red planet" is quite bright since it's shining at a "healthy" magnitude +0.2 and brightening to a -0.7 by month's end (no doubt due to the fact that it's getting higher in our evening skies as the month progresses). Mars is currently in the constellation of Gemini making its way westward into Taurus.



While we're talking about Taurus, you may want to think about having a look at the Moon on the evening of September 3rd when it "passes over" (or occults) Messier object 45, the Pleiades star cluster. It might be interesting to watch the brighter stars of the Pleiades disappear over the course of the evening, starting with Electra, followed by Celaeno, Taygeta, Maia and finally Sterope (the prominent stars of the cluster).

For those of you that get up early you can catch a glimpse of Saturn and Venus in the wee hours of the morning. If you look in your eastern skies around 5am, you'll be able to see Saturn rising in the constellation of Leo (it actually rises about 4:45am). Venus is a bit higher in the sky (rising about 3:45am) and is located about 20 degrees to the Southwest of Saturn. The two planets will continue to approach each other and come within 3 degrees of each other in October.

Jupiter is still the "King" of the sky this month, shining at an impressive magnitude of -2.0. The planet rises in our skies around 2pm so obviously it will be well positioned in our skies as darkness falls. It will set around 11:30pm, so you'll find it in your western or southwestern sky. This month finds Jupiter in the constellation of Scorpius, located about 5 degrees to the north of the reddish star Antares, the heart of the Scorpion. Antares is a huge star, if it were placed in the center of