

Sky **WAA** tch

The Monthly Publication of the Westchester Amateur Astronomers

July 2007



◀ The Pinwheel

Rick Bria and Ted Schimenti took this LLRGB image of the Pinwheel Galaxy, or M101, at the Round Hill Observatory. The luminance channel is a stack of 30, 6-minute images (from 2006), and the red, green, and blue channels are stacks of 35, 4-minute images (from 2007). The image was processed in MaximDLCCD, and PhotoshopCS. Says Rick: "This is our first image to use the luminance layering technique, which blends the luminance and color in stages, not just once. I may have to tweak the procedure for maximum effect." For details: <http://www.robgendlerastropics.com/LLRGB.htm>

M101 is 170,000 light-years across and is almost twice the size of our own Milky Way galaxy. It has some of the largest HII regions known (red glowing nebulas).



◀ Lunar Shot

Bob Kelly took this crisp image of the Moon with his new 8-inch Orion Dob! It's 1/80 sec iso exposure, from a 100-f2.8 Canon A40

Events for July 2007

➤ Monthly Meetings

Editors Note: There will be no monthly meeting for July or August at the Andrus Planetarium. Our next meeting will be the Amateur Night in September. See below for details on the Starway to Heaven and our Annual Telescope workshop.

WAA Amateur Night.

Friday September 7, 8:00PM

Andrus Planetarium

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.

➤ “Starway to Heaven”

Saturday, July, 14, 9:00-midnight

Meadow Picnic Area, Ward Pound Ridge Reservation, Cross River

This is our scheduled observing date for July, weather permitting. Free and open to the public. The scheduled rain /cloud date is July 21st.

➤ “Telescope Workshop”

Saturday, August 4th, 7:00-11pm

Meadow Picnic Area, Ward Pound Ridge Reservation, Cross River

This is our annual workshop for members and the public who might need help in setting up, collimating and using their telescopes.

Club Bits

New Members...

Betty Migler, Croton-on-Hudson, NY

Renewing Members...

Angela & Mike Virsinger, Seaford, NY

Bill Newell, Mt. Vernon, NY

Jose Castillo, Pelham Manor, NY

Elizabeth Scott, Bronx, NY

Anthony Monaco, Bronx, NY

Matt Ganis, Carmel, NY

Ihor Szkolar, White Plains, NY

Patricia Mahon, Yonkers, NY

Charles & Darlene Ekholm, Lake Peekskill, NY

Rosalind Mendell, Hartsdale, NY

Mario Palmieri, Cortlandt Manor, NY

Kevin Doherty, White Plains, NY

Lydia Maria Petrosino, Bronxville, NY

Frank Jones, New Rochelle, NY

Jennifer Jukich & Jimmy Gondek, Jefferson Valley, 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/>.

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.

Photo Gallery

Besides our normal monthly lectures at the Andrus Planetarium and Starways to Heaven at Pound Ridge, the WAA has been active of late. Last April, members manned a table at the North East Astronomy Forum (NEAF), the East Coast's premiere astronomy expo. April also saw the WAA offering its telescope at local schools—Quaker Ridge in Scarsdale and George Washington Elementary in Mohegan Lake. In June, we took time off at the annual WAA Picnic. Here are a few reminders of the action. **Thanks to Jimmy Gondek** for the NEAF and GW pictures and **Bob Davidson** for the pictures of the WAA picnic.



◀ **WAA Members pose for a group shot at NEAF**

Front L-R: Angela and WAA Treasurer Mike Versinger, WAA. President Charlie Gibson.

Standing L-R: Warren Lindholm, WAA Vice-President Pat Mahon and Darryl Ciucci. Taken on Saturday April 28th.

More Members at NEAF ▶

Left to Right: Retired WAA president Mike Cefola, retired WAA newsletter editor George Thomas, WAA president Charlie Gibson and Angela Virsinger hang out at the WAA table during Saturday at NEAF.





◀ At the GW Star Party

The viewing area is full of activity on April 24th at the GW Elementary School!

The Heavy Artillery at GW ▶

Former WAA President and current webmaster Bob Davidson makes sure everyone has a safe trip up to the eyepiece of the club's 20" Obsession.



◀ Searching the Heavens

A young astronomy enthusiast at GW gathers an eyeful of starlight at Doug Towers telescope.



▲ Group Photo at GW

Teacher Betsy Kates and her daughter take a moment to pose with the WAA team after an excellent night of observing. (L-R) Harry Butcher, Jimmy Gondek, Tony Kim, Dave Butler, Doug Towers, Bob Davidson, Charlie Gibson and Bill Newell.

WAA PICNIC



▲ Flipping Burgers

Angela Virsinger and Pat Mahon on cooking duty after Darryl Ciucci and Harry Butcher christen the new grill.



▲ Kicking Back

Harry Butcher, George Thomas, and Vivian & Doug Towers relax in their usual spot under the shade of the trees.



A late-day group shot of club members with the WAA banner.

Observing Report

Venus Is a Great Target **By Dave Butler**

Most people don't think Venus is much to view, but it's a great target to watch as its percentage illumination decreases, and it gets bigger and bigger. Venus was the best evidence Galileo had for planets revolving around the Sun. Granted, Jupiter was important too as the Jovian moons showed that the Earth was not the only planet with a satellite.

On June 6, I took my small 90mm scope out for a test. Venus is so much bigger than Saturn or Jupiter. I started at 9pm and ended at 10pm. Venus was a touch more than 50% lit and was viewed at 156x. It looked like a small 1/2-lit moon. Saturn was next. It was smaller than the last time I viewed it and lower in the sky. I could only see Titan with the 90mm scope; no divisions in the rings or band(s) on Saturn were discernible. All of this is probably due to my scope's smaller aperture. I noticed the Gemini Twins and tried to split Castor. At 39x and 52x it looked like a single star. At 78x it was a rectangle twice as long as it was wide with a division. At 104x it separated cleanly and at 156x it was less tight and more appealing. Next, I looked at globular M3, but decided not to try to resolve any stars but wait until I tried M13. Next, Jupiter came up and to its right was Antares, twinkling and orange. Jupiter's moons seemed to have diameter. I made the same mistake with my big scope last year. Because they are low in the sky, Jupiter's moons are refracted just as the Moon and Sun appear bigger at the horizon.

The bands of Jupiter were very washed out, I checked the front of the scope and the lens had dewed over. I had failed to put on the cardboard dew shield. I next tried M13 to see if I could resolve stars even with a little dew. It was mottled with only a couple of stars resolved, and I couldn't be sure that they weren't foreground stars. So I would have to say no; 90mm is too small to resolve the stars. I will check again with a dew shield.

Constellation Corner:

By Matt Ganis

Our skies this month contain two mythological figures that deserve a bit of our attention. Looking straight up into our zenith we see the "kite-like" shape of Bootes, the hunter, followed closely by the Greek hero Hercules—two giants in our summertime sky.

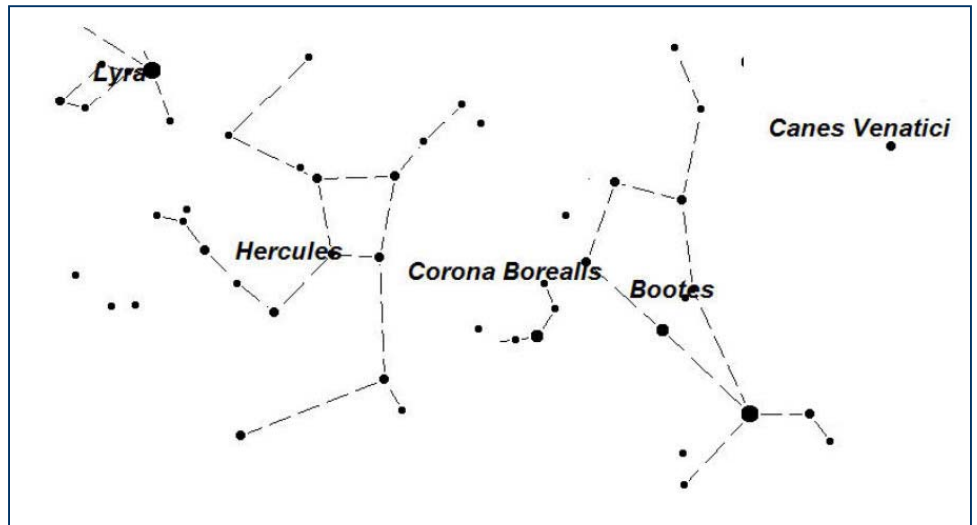
Hercules was the half mortal son of Zeus and the princess Alcmena. When Hera, the ever-jealous wife of Zeus, learned of the child; she sent serpents to kill the baby Hercules in his crib. However, the child with an astonishing feat of strength managed to strangle the serpents, and grow up to become the strongest of men. Not to be defeated, Hera later schemed against Hercules so that he would become indentured to King Eurystheus, only to perform the famous Twelve Labors in an effort to win his freedom.

The first of these labors was to kill the Nemean Lion, a fierce creature with an impenetrable hide that had fallen from the Moon and was laying waste to the valley of Nemea. Hercules succeeded in strangling the beast, whereupon Zeus placed the lion in the sky as the constellation Leo. Hercules' next task was to kill the many-headed monster, the Hydra, which also became a constellation. Among his other challenges was subduing the Cretan Minotaur, who some say is the origin of the constellation Taurus.

Hercules later won the hand of the beautiful maiden Deianeira. One day, the centaur Nessus kidnapped her. Hercules, hearing her cries, shot the centaur with an arrow. Dying, Nessus gave Deianeira a drop of his blood, telling her, untruthfully, that a touch of it would restore Hercules' love if his affections ever strayed. Later, thinking her husband was losing interest in her, Deianeira put the drop on Hercules tunic. When he donned the garment, the blood burned into his skin, causing him terrible torment. Seeing what she had done, Deianeira hanged herself. Hercules, in his anguish, incinerated himself, and as a result his father placed him in the sky.

Hercules is a northern constellation located between Lyra and Corona Borealis. It is traditionally depicted as the hero Hercules in a kneeling position (possibly fighting or hunting). There are no bright

stars in Hercules and only three stars that are of third magnitude. The brightest of these 3rd magnitude stars, Ras Algethi (Alpha Herculis), is a red giant and possibly the largest visible star in the whole sky. The constellation contains the globular star cluster M13, barely visible to the naked eye but spectacular even in a small telescope.



The other mythological figure in our July skies is Bootes. One legend says that Bootes, whose name comes from the Greek word for "ox-driver" or "herdsman", was the son of Demeter, the goddess of agriculture. In this popular myth, he is called the Hunter and, with his Hounds (Canes Venatici), he eternally circles the Bears, Ursa Major and Ursa Minor, around the North Pole. In fact, the brightest star in Bootes is Arcturus, which can be loosely translated as "Bear Guard". This is also why he's sometimes called "the Herdsman" – so that in his journey around the pole it remains his task to keep the celestial beasts together.

In another myth, Bootes was the son of Zeus and Callisto. Transformed into a bear by Zeus's jealous wife, Hera, Callisto was in danger of being killed by her son Bootes, who was out hunting, until Zeus rescued her and took her into the heavens. There Callisto became the constellation of Ursa Major, the Great Bear.

So take some time this July, and after honoring our own heroes (serving in our armed forces) lift your gaze skyward and spend some time with celestial heroes as well! Enjoy your summer.

Almanac

For July 2007 by Matt Ganis

Don't you just love a parade? The colors, the marching bands, the vintage cars—and the 4th of July parades are always the best! This month, we get two parades, one on the 4th and a parade of planets in the sky!

As the month opens we still find Saturn and Venus in close proximity to each other in our western skies. At the start of the month, the two planets are less than a half-degree apart, but the two planets are quickly moving apart. By mid-month they will be separated by about 7 degrees and widening the gap to about 9 degrees by month end. Venus however, will loop back past Saturn on August 9th and overtake it again in October.

Around mid-July, the face of Venus will be about 23% lit by the Sun and measure about 40 arc seconds from tip-to-tip. By month's end, the crescent shape will be thinner still and the planet will measure about 50 arc second across (larger even than Jupiter's disk). This is how I love to observe the planet. If I can't get a good look at the surface details, seeing a distinct crescent shape really makes it worthwhile. I'd check this out.

Saturn is shining at about a magnitude +0.5 so is not very obvious, but nearby Venus (only a few degrees south west) will help you find it. Its brightest neighboring star is Regulus, which is a bit dimmer, shining at only a +1.5 magnitude.

On the 16th and 17th of July the waxing crescent Moon will occult (or pass in front) of Saturn at around midnight Universal Time (UT). You have to be at the right place and time to see this event. If you happen to be on vacation at the time, you must be at least 20 degrees south of the Earth's equator for the plane to line up correctly (for the Moon to pass in front of Saturn) and, of course, you must be able to see Saturn at that time. Only people in South America, south of 20 degrees south latitude, will see the Moon occult Saturn (assuming they have clear skies) while people north of that latitude (North America and the rest of South/Central America) will see the Moon slide just to the south of Saturn. If nothing else, the nice little "meeting" of Saturn, Regulus, Venus and the Moon could prove interesting.

Mars has a magnitude of about +1.0 and spends most of July moving through Aries (from west to east) crossing into Taurus a few days before the



July 7



July 13

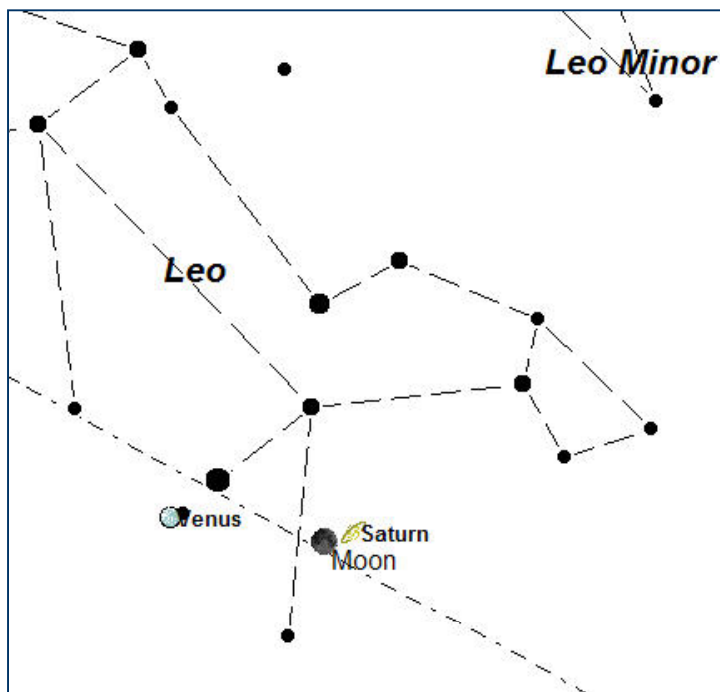


July 21



July 31

end of the month. The red planet is starting to become a prominent object in the pre-dawn skies,



shining at a magnitude of about +0.7. It's still pretty small (even in a telescope) at this point – only taking up about 7 arc seconds. Mars will pass through Gemini by late September and finally become an interesting sight on Christmas Eve 2007 when it reaches opposition. So stay tuned.

Mercury rises just a minute or two before the Sun at the beginning of this month but moves rapidly away from the sunrise until, on July 20th; Mercury reaches its greatest western elongation (20 degrees west of the Sun). On that morning Mercury will rise about an hour and a half before the Sun and be an obvious, bright (magnitude +0.0) object near the eastern horizon. Its nearest bright neighbor will be Betelgeuse (magnitude 2.5) to the south. After July 20th, Mercury will move back towards the sunrise and grow dimmer.

Jupiter is really the planet that's "on display" this month. The big planet is like a beacon in our nighttime skies, shining at a magnitude of -2.5 (or brighter) throughout the month. The planet is the dominant object in Ophiuchus just to the northeast of Antares (a magnitude 1.6 star) – so it's clearly an object you can't miss!