September Meeting with Federica Bianco

Friday, September 5 at Seagrave Memorial Observatory

Federica Bianco, a predoctoral fellow at the Harvard-Smithsonian Center for Astrophysics, will give a talk entitled “Chasing Shadows: Occultation Surveys of the Outer Solar System.” The outer solar system is still largely unprobed and unknown. She will describe the occultation technique – the only known method to explore the small and the very distant objects that populate the outer solar system. She will talk about the difficulties encountered and the achievements of this peculiar observational method, with particular attention to the Taiwan-America Occultation Survey (TAOS) and the MMT/Megacam surveys.
President's Message

Glenn Jackson

Last night was our first of, hopefully, many Members Nights at Seagrave Observatory. If you were not able to join us there were somewhere between 30 and 35 members and friends in attendance. Some of the members were working on the 16” Meade getting it ready to be sent out for repairs. Some others were removing bird’s nest from the tube on the Patton. Bob Forgiel was doing some digital imaging with his 8” SCT. Then there were the member’s telescopes. Everyone took time not only to view different deep sky objects but also had the time to discuss the pros and cons of various eyepieces. Several of the members in attendance had their first opportunity to view the night sky through a telescope. Several other members spent their time getting checked out on the various scopes at Seagrave. In addition to the time spent viewing and star hopping across the sky there were opportunities to just socialize and enjoy the camaraderie. Hope to see you at the next Members Night.

As Kathy Siok puts it “Skyscraper Christmas Time” is nearing. That is our annual AstroAssembly, which is scheduled for October 3rd and 4th at Seagrave Observatory. Every year in the past our AstroAssembly has been a success, as I am sure this year’s will also be. This is our biggest event of the year. I would like to encourage each and every member to attend at least some portion of the weekend events. There is a great line up of speakers, exhibitors, and food. Many members will be putting many hours of preparation into the event to support our organization. Come out and show your support. This is also a great opportunity for those of you new to the organization to meet other members and to become involved in the activities of Skyscrapers.

Our mission is to educate the members of Skyscrapers as well as the members of the public. Our star parties are our second largest source of income. If any of you know some one involved with any type of group such as Boy Scouts, Girl Scouts, Home Educators, or school groups, pass the word that we have a multitude of different programs that we can offer not only at Seagrave but also at their location. Help us educate the public about the wonders of the night sky.

Hope to see you soon at one of our many events,

Astronomical Potpourri in September

Dave Huestis

Well, I don’t know about you, but I’m looking forward to the Fall season in a few weeks. This Summer has been bad for us stargazers. First it was the heat and humidity. Then the 4-inch rain deficit was erased in just two days. Then for several weeks the unstable atmospheric conditions and stagnant weather pattern produced almost daily thunderstorms and lots of lingering clouds.

While we have to wait until September 22 at 11:44 am for the autumnal equinox (Fall for the northern hemisphere) to occur, usually we begin to see a change in the weather by the time of the Labor Day weekend celebration. I can’t wait.

But before then, there are several astronomical events I’d like you to check out, weather permitting of course.

On September 1st you can try to see a nice gathering of planets and the Moon just above the western horizon after sunset. You’ll need to see right down to the horizon. Providing there are no clouds or heavy thick haze to spoil your view, you will be able to observe bright Venus, reddish/orange Mars, Mercury, and a very thin crescent Moon. This scene could be a little difficult to view. However, if you find a high spot from which to observe, or a flat location at
a beach with a good view to the west, you should be well rewarded. Try to take a picture if you can and send your best images to skyscrapers webmaster jim@distantgalaxy.com.

Each successive night Mercury will rise higher and higher into the sky. By the 11th this fast moving world will be at its highest position off the western horizon...about 10 degrees (a fist held at arm’s length gives this approximate measurement). After that evening Mercury will move closer to the horizon each night until it eventually disappears into bright twilight.

After the first of the month you will continue to see Venus and Mars as well. In fact, the two will be at their closest to one another on the 11th. Use binoculars or a telescope to see how close they come to one another.

Just more than a week later, on September 19, the Moon, now in waning gibbous phase, will pass in front of the Pleiades star cluster. The event begins with the objects very low on the eastern horizon just after moon rise at around 9:00 pm. Soon thereafter the Moon will occult (pass in front of) some of the cluster’s major stars. The first will be Electra at about 9:12 pm, followed later by Maia and Alcyone. The Moon clears the cluster by 11:00 pm. Since the Moon will be quite bright, binoculars or a small telescope or spotting scope will provide the best view.

September’s event will be the fourth time the Moon has occulted stars in the cluster this year. Two more occultations are scheduled for the remainder of 2008. The next one on October 17 cannot be observed here, whereas the last one on December 11 can be watched after 2:00 am.

And finally, we cannot overlook bright Jupiter in our sky the entire month. On September 1st at 9:00 pm Jupiter can be found about 25 degrees above the southern horizon. You can’t miss him. It will be the brightest object in that area of the sky. While a few keen-eyed children, and even fewer adults, can see some of Jupiter’s moons without optical aid, to really appreciate the Jovian system requires at least a small telescope.

On January 7, 1610, Galileo Galilei focused his 1-inch in diameter, three foot long, 28 power refractor on Jupiter and not only saw the bands and zones of the planet’s cloud tops, but also saw three, and then later four of his moons. We call them the Galilean Satellites in his honor. They are: Io, Europa, Ganymede and Callisto.

It didn’t take Galileo long to realize the moons were revolving around Jupiter. This evidence was proof that the Copernican system was correct...the Sun was at the center of the solar system and the planets revolved around it...just like Jupiter’s moons revolved around him.

Despite Galileo’s indisputable proof, it was still disputable. Some people even refused to look through the scope to see for themselves, else they’d be corrupted by the device. Eventually everyone “came around,” but Galileo remained under house arrest by the Church for the rest of his life.

You too can observe what Galileo did back in 1610. And with the telescopes at Seagrave Observatory in North Scituate and Ladd Observatory in Providence, you will see much more detail than Galileo could have dreamed of.

You’ll easily notice the more prominent dark bands or belts in Jupiter’s cloud tops. The once dominant feature of Jupiter (from at least Galileo’s time through the mid 1970s) was the famous Great Red Spot. It is nothing more than a giant storm in Jupiter’s clouds that has been active for more than 400 years. Unfortunately the storm’s not as red or great as it once was, so it might be difficult to detect in smaller instruments without special filters to enhance the image. In recent years the red coloration has come back somewhat, making the Great Red Spot a little easier to see than it had been for the last 15 or so years.

In addition, the Galilean Satellites will immediately catch your eye. While these satellites parade around Jupiter in the plane of his equator, many interesting events occur for us earth-bound astronomers to observe. You can observe one of Jupiter’s moons pass in front of his disk, and you can observe a moon casting a shadow on his cloud tops. You may also be fortunate to observe a moon disappear into Jupiter’s shadow, or simply pass behind the planet.

If you own your own telescope get outside and view the fascinating system of Jupiter. If you don’t have access to a telescope or you’d like to explore the universe with larger instruments, then by all means visit Seagrave Memorial Observatory on Peep-toad Road in North Scituate. We offer public viewing free of charge every clear Saturday night. More information, including open times, directions and membership, can be found at our website: www.theskyscrapers.org.

Furthermore, you can visit Ladd Observatory on the corner of Hope Street and Doyle Avenue on Providence’s East Side every clear Tuesday night. Admission is also free. More information, including open times and directions, can be found at Ladd’s website: http://www.brown.edu/ladd. Please note this is a new web address. The web site has recently been redesigned and improved. Additional content, including a wealth of weather data collected right at the observatory, will be coming soon, so log on often.

Let’s all hope the transition to Fall will provide us with clear skies to observe every one of the astronomical happenings I’ve highlighted. And remember two things. Keep your eyes to the skies. And in true Rhode Island style...If you don’t like New England weather...complain about it!!
Exploring the Southern Constellations
Craig Cortis

In the summer of 1865, noted American newspaperman and politician Horace Greeley penned, in an editorial, an admonishment to young civil servants in Washington DC. Greeley urged those who complained of low pay grades in the Capitol area to “Go west, young man!” This maxim applies, in an astronomical sense, to me, except for the word “west” - I’d substitute west south, as in “Look south, stargazers!” Throughout my years in astronomy I’ve been intrigued by constellations, stars, and deep-sky objects that only just rise above our southern horizon from my local latitude of about 42 degrees north. Even more alluring are those southerly objects, so mythical in our imagination, that lie concealed beneath the horizon owing to their declinations of greater than -48 degrees, which is the unfortunate southern limit for viewing in these parts–we simply can’t ever see anything further south in the sky than declination -48, from latitude 42 degrees north, that is.

However, even -48 declination is, in nearly all cases, impossible to achieve because everything’s got to be perfect to permit seeing right down to what I term the “theoretic horizon.” You can’t have any trees, buildings, hilly terrain, etc. which would block your view south. Nor can there be any haze, fog, or clouds at the horizon, not to mention nuisance skyglow from heavy light pollution, or a bright Moon in the sky. Sounds like a fantasy, right? Well, my good friend Tim Dube, a veteran amateur from Douglas, MA, got me interested in Wallum Lake several years ago. The lake lies half in Rhode Island and half in Massachusetts, and the northern terminus has a handy public boat ramp adjoining it with a generous cleared area surrounding, with no lights save for a few at homes a fair distance away along the east shore. Even these are screened by trees and brush and present no problem when we’re viewing due south from the boat ramp, which is part of a Massachusetts State Park. Wallum Lake’s longer axis is oriented due north-south, meaning that views to the

### Constellations Spanning the Southern Horizon from Latitude 42 North

<table>
<thead>
<tr>
<th>Const. name (Abbr)</th>
<th>Directional Limits</th>
<th>Central Point</th>
<th>Culmination Midnight on</th>
<th>Size Rank, Area</th>
<th>Brightness Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Scy, For) Phoenix (Phe) 1596</td>
<td>N(Dec) -39 1/2, -58</td>
<td>E(RA) 02h24m, 23h24m</td>
<td>RA, Dec 00h54m, -49</td>
<td>04 Oct 37th 1.138%</td>
<td>64th</td>
</tr>
<tr>
<td>(Phe, For) Eridanus (Eri) orig.</td>
<td>00 1/2, -58</td>
<td>05h09m, 01h22m</td>
<td>03h15m, -29</td>
<td>10 Nov 6th 2.758%</td>
<td>47th</td>
</tr>
<tr>
<td>(Eri) Horologium (Hor) 1756</td>
<td>* -39 1/2, -67</td>
<td>04h18m, 02h12m</td>
<td>03h15m, -53 1/2</td>
<td>10 Nov 58th 0.603%</td>
<td>81st</td>
</tr>
<tr>
<td>(Eri) Caelum (Cae) 1756</td>
<td>-27, -49</td>
<td>05h03m, 04h18m</td>
<td>04h40m, -38</td>
<td>01 Dec 81st 0.303%</td>
<td>85th</td>
</tr>
<tr>
<td>(Cae, Col) Pictor (Pic) 1756</td>
<td>* -43, -64</td>
<td>06h51m, 04h32m</td>
<td>05h41m, -53 1/2</td>
<td>16 Dec 59th 0.598%</td>
<td>55th</td>
</tr>
<tr>
<td>(Col) Puppis (Pup) 1756</td>
<td>-11 1/2, -51</td>
<td>08h26m, 06h02m</td>
<td>07h14m, -31</td>
<td>08 Jan 20th 1.633%</td>
<td>7th</td>
</tr>
<tr>
<td>(Pup, Pyx, Ant) Vela (Vel) 1756</td>
<td>* -37, -57</td>
<td>11h24m, 08h02m</td>
<td>09h43m, -47</td>
<td>13 Feb 32nd 1.211%</td>
<td>4th</td>
</tr>
<tr>
<td>(Hy) Centaurus (Cen) orig.</td>
<td>-30, -65</td>
<td>14h59m, 11h03m</td>
<td>13h01m, -47</td>
<td>30 Mar 9th 2.571%</td>
<td>25th</td>
</tr>
<tr>
<td>(Cen, Lib, Sco) Lupus (Lup) orig.</td>
<td>-30, -55</td>
<td>16h05m, 14h13m</td>
<td>15h09m, -42 1/2</td>
<td>09 May 46th 0.809%</td>
<td>5th</td>
</tr>
<tr>
<td>(Lup, Sco) Norma (Nor) 1756</td>
<td>* -42 1/2, -60</td>
<td>16h31m, 15h25m</td>
<td>15h58m, -51</td>
<td>19 May 74th 0.401%</td>
<td>31st</td>
</tr>
<tr>
<td>(Sco, Cep) Ara (Ara) orig.</td>
<td>** -45 1/2, -68</td>
<td>18h06m, 16h31m</td>
<td>17h18m, -56 1/2</td>
<td>10 Jun 63rd 0.575%</td>
<td>34th</td>
</tr>
<tr>
<td>(Cep, Str) Telescopium (Tel) 1756</td>
<td>** -45 1/2, -57</td>
<td>20h26m, 18h06m</td>
<td>19h16m, -51</td>
<td>10 Jul 57th 0.610%</td>
<td>49th</td>
</tr>
<tr>
<td>(Mic) Indus (Ind) 1596</td>
<td>** -45, -75</td>
<td>23h25m, 20h25m</td>
<td>21h55m, -60</td>
<td>12 Aug 49th 0.713%</td>
<td>80th</td>
</tr>
<tr>
<td>(Ps, Sc) Grus (Gru) 1596</td>
<td>* -36 1/2, -57</td>
<td>23h25m, 21h25m</td>
<td>22h25m, -47</td>
<td>28 Aug 45th 0.886%</td>
<td>50th</td>
</tr>
</tbody>
</table>

First column: constellation name in large bold type with constellation abbreviation in parentheses. Small constellation abbreviations in parentheses above the constellation name are the constellations that border it to the north. Below the constellation name is year of origin; orig. = on Ptolemy’s list of 48 original “ancient” constellations; 1596 = created in that year by PD Keyser & F de Houtman; 1756 = created in that year by N.L. de Lacaille, (l) Vela & Puppis (plus Carina) were created from Argo Navis, the ship in 1756, but all other constellations sharing that date were actually created by Lacaille during his time at the Cape of Good Hope, 1751-2. His list was completed by 1756. Area: total percentage of sky covered by the constellation. Directional Limits: (*) indicates extremely low constellations; (**) denotes a constellation that technically breaks the horizon, but is so low to the south that observation of any stars will be very difficult from latitude 42 north. Brightness Rank: is derived from a formula relating the number of stars of a certain magnitude range to the total area of sky occupied by a constellation; Eridanus, for example, is a large straggling constellation that is the 6th biggest of the 88, yet ranks only 47th in total brightness.
I suppose many of us tend to want most what we know we can’t have—it’s human nature after all. This explains my interest in low-lying stars that are tough to see most of the time, as well as all those splendid objects further south that will only become visible here after many thousands of years hence, when Earth’s axial precession will reveal the Southern Cross to mid-latitude Northern Hemisphere observers. (Assuming, of course, that distant descendents of ours will be around!) I’ll write a piece on observing from the Big Cypress Swamp Preserve (adjacent to the far northwestern corner of the Everglades) in southern Florida in a future issue, but for now, let me tell a little anecdote about just one experience at Wallum Lake.

Gamma Velorum is a favorite star of mine, one I’ve seen many times from Florida. A few years back I figured I’d try to spot it from this latitude, in March. I checked its coordinates and consulted a sidereal time chart so as to calculate a transit (culmination) time, critical for having any hope of glimpsing anything so very, very low above the horizon. Gamma Velorum is a possible multiple system; the primary itself is a spectroscopic binary and the brighter of these suns is the brightest Wolf-Rayet class star known—the combined apparent magnitude of this tight binary is 1.8 variable, making it about the 33rd brightest star in the entire sky. Declination of the primary is -47° 20’ 12”, but there’s an unrelated visual companion of magnitude 4.3 even further south by 32”, separated by 41” from the primary. Remember, -48 degrees declination is as far as it is possible to go from latitude 42!

Tim Dube and I set up at the boat ramp on a near-perfect night with no clouds or haze visible at the southern horizon. I started scanning with 10x50mm binoculars a few minutes prior to estimated transit time and there it was—Regor (Gamma’s proper name) glimmered back at me, almost at the horizon over the lake’s southern shore! We put a scope on the star and, using a low-power eyepiece, managed to resolve the magnitude 4.3 companion. I was delighted and thought this event to be significant.

The accompanying special constellation table is something I dreamed up years ago. I was curious about exactly which constellations might technically be visible along the southern horizon throughout the year from our “home” latitude here. A good deal of time and research went into the resulting information. I checked star atlases and consulted several good texts to generate the table. I hope others will appreciate the results.

Of the 88 constellations covering the entire sky, would you believe that only 15 are not ever visible from our latitude? We can see small extreme northern sections of many, but just 15 never rise at all here.

Observing Reports

Perseids Report: 08/13
Dave Huestis

Well, that persistent LOW up north kept us from observing the peak of the Perseid meteor shower Tuesday morning. Other areas of the world that were clear had peak rates between 60 and 70 per hour.

However, it was clear on Wednesday morning. First, around 11:15pm on Tuesday night I stepped out onto my porch and saw a very nice yellow Perseid meteor. I then went to bed.

I woke up at just before 3:00 am and observed until 4:00 am. The sky was fairly clear at zenith, but all around me their was some haze ... more like the atmosphere was loaded with moisture. Indeed, everything on my porch was soaked, and that wasn’t from the rain we had earlier in the day. Temp was in the mid-50’s.

During my one hour observing run I counted 14 Perseids and 1 sporadic (not associated with the Perseid shower). Many were yellow in color and at least as bright as the brighter stars that were visible. And quite a few left dust trails as they disintegrated in our atmosphere.

Not bad for the day after peak. The one day past peak number of 15 is what one would expect of the Perseids.

Fortunately the activity was sufficient to prevent me from falling asleep!

Full Moon Star Parties
Jim Hendrickson

On the evening of August 19, Tony Tripodi and Jim Hendrickson took advantage of a break in the weather to set up their 5” refractors at Seagrave Observatory and observed a multitude of star clusters, double stars, and the Moon.

The following night was our Members’ Star Party.

Do you have an observing report, astrophoto, product review, or anecdote about an interesting experience while observing? Please submit to jim@distantgalaxy.com.

WWW.THESKYSCRAPERS.ORG
Skyscrapers member makes clean sweep at Stellafane
Springfield Vermont August 2, 2008

At this year's Stellafane Convention, long time Skyscrapers' member Al Hall in collaboration with Dick Parker from the Greater Astronomical Society of Hartford won a coveted four of a possible four first place prizes for their twin 16” Classical Cassegrain telescopes. Not only were the mirrors ground, hand figured, and polished by Al and Dick, but virtually all of the parts were machined by the pair. Each took a slightly different approach in their design -- Dick decided for the somewhat portable approach (right side of photo) utilizing a tripod with virtually the same equatorial head and a lighter optical tube assembly (80 lbs. versus 160 lbs.). Al opted for the much heavier observatory pier -- his finished telescope weighs almost a 1/2 ton! The project took six years from start to finish and seeing them on Breezy Hill at the most celebrated convention on the planet for amateur telescope makers was a real treat for all convention goers. Bottom right: Dick & Al were presented with a congratulatory cake at the August meeting.
A Google for Satellites: Sensor Web 2.0

If you could see every satellite passing overhead each day, it would look like a chaotic meteor shower in slow motion. Hundreds of satellites now swarm over the Earth in a spherical shell of high technology. Many of these satellites gaze at the planet’s surface, gathering torrents of scientific data using a dizzying array of advanced sensors — an extraordinary record of our dynamic planet.

To help people tap into this resource, NASA researchers such as Daniel Mandl are developing a “Google for satellites,” a web portal that would make requesting data from Earth-observing satellites almost as easy as typing a search into Google.

“You just click on it and it takes care of all the details for you across many sensors,” Mandl explains.

Currently, most satellites are each controlled separately from the others, each one dauntingly complex to use. But starting with NASA’s Earth Observing-1 (EO-1) satellite, part of the agency’s New Millennium Program, Mandl and his team are building a prototype that stitches these satellites together into a seamless, easy-to-use network called “Sensor Web 2.0.”

The vision is to simply enter a location anywhere on Earth into the website’s search field along with the desired information types — wildfire maps, vegetation types, floodwater salinity, oil spill extent — and software written by the team goes to work.

“Not only will it find the best sensor, but with proper access rights, you could actually trigger a satellite to take an image in the area of interest,” Mandl says. Within hours, the software will send messages to satellites instructing them to gather the needed data, and then download and crunch that raw data to produce easy-to-read maps.

For example, during the recent crisis in Myanmar (Burma) caused by Cyclone Nargis, an experimental gathering of data was triggered through Sensor Web 2.0 using a variety of NASA satellites including EO-1. “One thing we might wish to map is the salinity of flood waters in order to help rescue workers plan their relief efforts,” Mandl says. If the floodwater in an area was salty, aid workers would need to bring in bottled water, but if flood water was fresh, water purifiers would suffice. An early and correct decision could save lives.

Thus far, Mandl and his team have expanded Sensor Web 2.0 beyond EO-1 to include three other satellites and an unmanned aircraft. He hopes to double the number of satellites in the network every 18 months, eventually weaving the jumble of satellites circling overhead into a web of sensors with unprecedented power to observe and understand our ever-changing planet.

To learn more about the EO-1 sensor web initiatives, go to http://eo1.gsfc.nasa.gov/new/extended/sensorWeb/sensorWeb.html. Kids (and grown-ups) can get an idea of the resolution of EO-1’s Hyperion Imager and how it can distinguish among species of trees—from space at http://spaceplace.nasa.gov/en/kids/eo1_1.shtml.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.
August Meeting Notes
Saturday, August 8, 2008; Seagrave Memorial Observatory
Nichole Mechnig

Steve Hubbard Introduced guest speaker: Heather Knutson, Heather Knutson, a fourth-year graduate student at the Harvard University Astronomy Department, is talked about extrasolar planets in general, how do we find planets around other stars, and then how do we figure out their properties.

Business Meeting: 9:06pm
Started with a 5 minute impression of Stellafane 2008 by Jerry Dyck

Secretary Report: for July in the August monthly newsletter-accepted

Treasurer's Report: for July in the August monthly newsletter-accepted

1st V.P. Steve Hubbard: monthly guest speakers the same as last month published

2nd V.P. Kathy Siok: Please, we are in need of Volunteers for AstroAssembly
• Less than 50% of our members go to AstroAssembly please attend

Organizer Dave Huestis: Lawn Party at the Scituate Library was a success • Good day • Good turn out • 75th Anniversary Book updates 4 people to buy

Librarian: Out of Town
Star Party Bob Forgiel: August 15th Cub Scouts for their “Belt Loop” 6:30-7:00

Volunteers needed: Tonight: bring in the sign • Pack up the LCD projector • Coffee pots bring home and clean • Take out the Garbage • Last one out lock the gate

Presidential Information: Conjunction August 29th-31th 100 miles North of Seagrave Observatory • CT Star Party September 26th-28th Ashford CT 35 miles west of Seagrave Register by September 15th • AstroAssembly October 3rd-4th Banquet is limited seating sign up early

Volunteers needed: Tonight: bring in the sign • Pack up the LCD projector • Coffee pots bring home and clean • Take out the Garbage • Last one out lock the gate

Volunteers needed: Tonight: bring in the sign • Pack up the LCD projector • Coffee pots bring home and clean • Take out the Garbage • Last one out lock the gate

meditech grant working on: needed for information • running list of people at Star Parties • number of members at our monthly meetings • number of people at Saturday night • membership numbers • % of financial contributions from the Board members • In kind services from the members (Volunteers)

Perseid meteor shower this Tuesday August 12th • Questions Concerns Thoughts please call me Glenn Jackson at 884-1513 • Or E-mail me at Glenn. Jackson6@Verizon.net

Meeting adjourned at 9:51: 50 members in attendance
## September 2008 Celestial Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5:00pm</td>
<td>Moon 5° S of Venus</td>
</tr>
<tr>
<td>1</td>
<td>7:00am</td>
<td>Moon 3° S of Mercury</td>
</tr>
<tr>
<td>2</td>
<td>4:00am</td>
<td>Moon 5° S of Mars</td>
</tr>
<tr>
<td>3</td>
<td>10:00pm</td>
<td>Saturn at superior conjunction</td>
</tr>
<tr>
<td>6</td>
<td>11:00pm</td>
<td>Moon 0.3° S of Antares</td>
</tr>
<tr>
<td>7</td>
<td>10:04am</td>
<td>First Quarter Moon</td>
</tr>
<tr>
<td>7</td>
<td>11:00am</td>
<td>Moon at apogee</td>
</tr>
<tr>
<td>9</td>
<td>4:00pm</td>
<td>Moon 3° S of Jupiter</td>
</tr>
<tr>
<td>10</td>
<td>evening</td>
<td>Mercury at greatest eastern elongation (27°)</td>
</tr>
<tr>
<td>11</td>
<td>evening</td>
<td>Venus 0.3° N of Mars</td>
</tr>
<tr>
<td>12</td>
<td>evening</td>
<td>Mercury 3° S of Mars</td>
</tr>
<tr>
<td>12</td>
<td>10:00pm</td>
<td>Moon occults Neptune</td>
</tr>
<tr>
<td>12</td>
<td>10:00pm</td>
<td>Uranus at opposition</td>
</tr>
<tr>
<td>15</td>
<td>4:00am</td>
<td>Moon 4° N of Uranus</td>
</tr>
<tr>
<td>15</td>
<td>5:13am</td>
<td>Full Moon</td>
</tr>
<tr>
<td>17</td>
<td>evening</td>
<td>Venus 4° N of Spica</td>
</tr>
<tr>
<td>18</td>
<td>evening</td>
<td>Mercury 4° S of Mars</td>
</tr>
<tr>
<td>19</td>
<td>11:00pm</td>
<td>Moon at perigee</td>
</tr>
<tr>
<td>22</td>
<td>1:04am</td>
<td>Last Quarter Moon</td>
</tr>
<tr>
<td>22</td>
<td>11:44am</td>
<td>Autumnal Equinox</td>
</tr>
<tr>
<td>23</td>
<td>evening</td>
<td>Mars 2° N of Spica</td>
</tr>
<tr>
<td>27</td>
<td>morning</td>
<td>Moon 5° S of Saturn</td>
</tr>
<tr>
<td>29</td>
<td>4:12am</td>
<td>New Moon</td>
</tr>
</tbody>
</table>

---

The first Skyscraper/ASSNE joint public event was blessed with the clearest sky I have ever encountered at the Providence River. This was our most successful WaterFire ever. Chris and Elvis had made up a wonderful backlit sign that attracted a crowd. We kept 8 scopes busy from 8 until Jupiter set behind a tall building at around 10:30.

Barnaby Evans came by to express his gratitude to Skyscrapers and ASSNE for adding what he thought was a wonderful bit of variety to his Waterfire event, and it should be noted that the large Waterfire donation jar at the “gate” was filled to the top with donations.

Thank you George, Matt, Jeff, Bruce, Bob Sikes, Bob Forguel, Glenn, Bob Z, Joe, Kevin, Steve and Spence. This was a great team effort where everyone made a significant contribution to the overall success of the event. It is estimated that we had between 700 and 1200 viewers.

Pete Peterson
Clyde Tombaugh, discoverer of the planet Pluto, visited with Skyscrapers, September 1987. Left to right: Steve Hubbard, Frank Dubeau, Clyde Tombaugh, Dave Huestis, Brian Magaw, Ed Walker.

Andromeda taken from Stellafane; taken with Nikon D40 and 50mm f/1.4 lens; 20 seconds. Photo by Dan Lorraine.

Top: Bob Horton and Jim Brenek disassemble the 16” Meade. Bottom: Bob Napier tests the electronics to determine the source of a problem with the drive system. Photos by Chris Chapman.
SKYSCRAPERS INCORPORATED PRESENTS

ASTROASSEMBLY 2008
FRIDAY, OCTOBER 3 & SATURDAY, OCTOBER 4
AT SEAGRAVE MEMORIAL OBSERVATORY

Friday evening will feature informal talks from local amateur astronomers starting at 8pm and observing, weather permitting.

Saturday's festivities will begin with registration starting at 9am.
At 11am Gerry Dyck, well-known amateur astronomer and teacher, will offer Three Views of the Planets, a talk for beginners that is suitable for children as well.

William Sheehan, noted author, will be one of our afternoon speakers.
Saturday evening will begin with our banquet at the North Scituate Community Center followed by Dr. Alan Marscher, of Boston University, to share his recent discoveries about black holes in a talk entitled: “Jets from Black Holes in Active Galactic Nuclei”. Dr. Marscher will also share some of his astronomical songs with us throughout the day.

Due to space constraints at our facility, attendance is limited. For that reason, we strongly recommend that you pre-register. Tickets for the banquet will not be sold at the door and must be preordered. Our dinner banquet is an all you can eat buffet and no one has ever left hungry.

Name
______________________________________________________________
Address
______________________________________________________________
Email
______________________________________________________________

Registrations at $17.00 each

Banquet tickets at $17.00 each
Banquet tickets must be pre-ordered. No tickets will be sold the day of the event.

Total $________________

Total $________________

☐ I would like to give a short 20-minute talk on Friday evening:
Indicate the title of your talk below. AstroAssembly registrar Kathy Siok will contact you via email to confirm your talk.

Send completed form and check (made payable to Skyscrapers Inc.) to:

Kathy Siok
AstroAssembly Registrar
86 Spring Road
North Kingstown, RI 02852
Directions to Seagrave Memorial Observatory

From the Providence area:
Take Rt. 6 West to Interstate 295 in Johnston and proceed west on Rt. 6 to Scituate. In Scituate bear right off Rt. 6 onto Rt. 101. Turn right onto Rt. 116 North. Peeptoad Road is the first left off Rt. 116.

From Coventry/West Warwick area:
Take Rt. 116 North. Peeptoad Road is the first left after crossing Rt. 101.

From Southern Rhode Island:
Take Interstate 95 North. Exit onto Interstate 295 North in Warwick (left exit.) Exit to Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.

From Northern Rhode Island:
Take Rt. 116 South. Follow Rt. 116 thru Greenville. Turn left at Knight’s Farm intersection (Rt. 116 turns left) and follow Rt. 116. Watch for Peeptoad Road on the right.

From Connecticut:
• Take Rt. 44 East to Greenville and turn right on Rt. 116 South. Turn left at Knight’s Farm intersection (Rt. 116 turn left) and follow Rt. 116. Watch for Peeptoad Road on the right.
• Take Rt. 6 East toward Rhode Island; bear left on Rt. 101 East and continue to intersection with Rt. 116. Turn left; Peeptoad Road is the first left off Rt. 116.

From Massachusetts:
Take Interstate 295 South (off Interstate 95 in Attleboro.) Exit onto Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.