

Scutum is well placed for viewing in August and contains some of the Milky Way's best star fields. Read more on page 4.

In This Issue **President's Message** 2 Glenn Jackson **Thunderstones of August** 3 Dave Huestis August 2008 Celes-3 tial **Events** A Starhop Through Scutum 4 Craig Cortis **Death of a Supergiant** 6 8 **July Meeting Notes** Nichole Mechnig

The Skyscraper

SKYSCRAPERS, INC · Amateur Astronomical Society Of Rhode Island · 47 Peeptoad Road North Scituate, RI 02857 · www.theSkyscrapers.org

August Meeting with Heather Knutson Friday, August 8 at Seagrave Memorial Observatory

Heather is a 4th year graduate student in the astronomy department at Harvard University. Her research focuses on observations of planets orbiting other stars known as extrasolar planets.

Heather, along with her thesis advisor, David Charbonneau has published a series of exciting observations including the first temperature map of an extrasolar planet and the first detection of a temperature inversion in the atmosphere of an extrasolar planet. She use observations of eclipsing systems, where the planet periodically passes in front of then behind it's parent star to determine the properties of the planet.

She is planning on talking about extrasolar planets in general, how do we find planets around other stars, and then how do we figure out their properties.

August 2008

2 Saturday	9:00 pm	Public Observing Night Seagrave Memorial Observatory, weather permitting
8 Friday	7:30 pm	August Meeting with Heather Knutson Seagrave Memorial Observatory
9 Saturday	8:30 pm	Public Observing Night Seagrave Memorial Observatory, weather permitting
16 Saturday	8:30 pm	Public Observing Night Seagrave Memorial Observatory, weather permitting
23 Saturday	8:30 pm	Public Observing Night Seagrave Memorial Observatory, weather permitting
30 Saturday	8:30 pm	Public Observing Night Seagrave Memorial Observatory, weather permitting

Number of the set of the

President's Message

Glenn Jackson

I hope everyone has recovered from the July 12th Cookout. I know I am still suffering from eating too much. The food was good and the company even better. Good to see 55 members of Skyscrapers show up for this event. Thanks to all who made this event a success.

We are now looking forward to the annual AstroAssembly October 3rd and 4th. As usual this is a huge undertaking by the group. Kathy Siok is well on her way with the logistics for the event. Several speakers have already been scheduled, including our keynote speaker Dr. Alan Marscher of Boston University. To insure that this event is a success we rely on the membership to volunteer for multiple tasks before and during the event. If you haven't volunteered in the past this would be a great time to step to the plate and offer your assistance. We need your help.

Skyscrapers is a unique organization. Unlike many other Astronomy groups we have and maintain an observatory. This uniqueness also brings along with it some baggage. That is the observatory needs to be maintained, and manned on public nights. This is a commitment that our forefathers committed to with the purchase of the observatory. The Trustee's are charged with maintaining the telescopes and the grounds of our observatory. In the near future there will be several work sessions not only to maintain the grounds but also the buildings and telescopes. I would like to encourage everyone to assist in this undertaking, even if you can only commit for an hour or two your help will be appreciated. We can't continue to rely on only a small percentage of the group to carry on the traditions of our organization. What ever your talent is we have a task for you. Watch your e-mail for the Trustee Work Sessions for dates and times. Hope to see you there.

Have you joined and or participated in the Skyscraper Yahoo discussion group? This is a group forum to discuss Astronomy that is limited to members only. Do you have any Astronomy related questions? This group can provide you with assistance and some answers. You can find us at Yahoo under Skyscrapers_RIAS. To join send a reply message with your name so that we can verify that you are a member of Skyscrapers. Hope to see you join the discussion.

Looking forward to clear skies, low humidity, and few mosquitoes!





The Skyscraper is published monthly by Skyscrapers, Inc. Meetings are usually held on the first Friday of the month. Public observing is usually held every Saturday night at Seagrave Memorial Observatory, weather permitting.

> President Glenn Jackson skyscraperglenn@aol.com

1st Vice President Steve Hubbard cstahs@yahoo.com

> 2nd Vice President Kathy Siok kathys5@cox.net

Secretary Nichole Mechnig jrmnk1@cox.net

> Treasurer Jim Crawford jcrawford@cox.net

Members at Large Joe Sarandrea jboss2@cox.net Roger Forsythe galaxy-77@cox.net

Trustees

Tracey Haley mtk99h@cox.net Steve Siok Jim Brenek jbrenek@cox.net

Star Party Coordinator Bob Forgiel bforgiel@cox.net

Librarian Tom Barbish labtjb@verizon.net

Historian Dave Huestis dhuestis@aol.com

Editor

Jim Hendrickson jim@distantgalaxy.com

Directions

Directions to Seagrave Memorial Observatory are located on the back page of this newsletter.

Submissions

Submissions to *The Skyscraper* are always welcome. Please submit items for the newsletter by August 15 to Jim Hendrickson, 1 Sunflower Circle, North Providence, RI 02911 or email to jim@distantgalaxy.com.

Email subscriptions

To receive *The Skyscraper* by email, send email with your name and address to jim@distantgalaxy.com. Note that you will no longer receive the newsletter by postal mail.

Thunderstones of August

Dave Huestis

Do you have any plans for the early morning hours of August 12 yet? Well, if the weather cooperates I hope you will consider spending a few of those hours scanning the heavens for shooting stars.

More than 200 years ago scientists believed the appearance of meteors streaking across the sky was an atmospheric phenomenon. Rocks couldn't fall from the sky! However, in 1803 France, a huge fall of about 3,000 "thunder stones" was witnessed by many citizens in broad daylight. Presented with overwhelming evidence, scientists finally accepted that meteorites were of extraterrestrial origin.

Today we know that most meteors are particles stripped off comets and deposited in orbit about the Sun. When the Earth passes through these streams of cometary debris, the meteors plunge into our atmosphere at many miles per second and disintegrate. The displays are called meteor showers. Some solitary and more dense meteors are fragments of asteroids.

Some individual meteors do reach the ground as meteorites. Two houses in Wethersfield, Connecticut, one mile from each other, were struck in 1971 and 1982. A car was heavily damaged by a 27.3 pounder in Peekskill, New York on October 9, 1992. And I found a report about a Georgia woman being struck, but not killed, by an eight pound meteorite in 1954. Occasionally a larger and more fragile piece may fragment and scatter hundreds of meteorites over a wide area, like the 1803 French event.

Though such events are rare, they do occur from time to time. However, don't let this deter you from enjoying the annual Perseid meteor shower peak on the morning of August 12. The likelihood of being struck by a meteorite is astronomical!

Outdoor activities abound during August, and this fact contributes to the Perseids being the most well known of all the meteor showers. And this year observing conditions will be quite good. Unfortunately the shower peaks on a week night/morning, so you'll need to catch a few zzzz's if you can before beginning your observing run.

On peak morning the waxing gibbous Moon (midway between First Quarter and Full) will set around 1:15 a.m. for southern New Englanders. That timing will provide a dark sky observing window of about three hours or so before dawn's early light brightens the sky. If you can, select a location well away from light pollution and get comfortable on a lounge chair or in sleeping bag. Remember the bug spray!

The Perseids appear to radiate from an area of sky, called the radiant point, in the constellation Perseus. Perseus is well up in the northeast sky after midnight. Face this general direction when you first begin your observing session and gradually follow the radiant across the sky. As Perseus rises higher into the sky, the number of meteors will increase as the morning progresses.

With the Moon absent, and assuming a minimum of light pollution, an observer may see between 60 and 90 meteors blazing across the heavens at 134,222 miles per hour. The Perseids are usually green, red or orange in color. And some members of this shower are bright and often produce exploding fireballs. Also, fireballs may be more prevalent as we approach morning twilight. Why? At that time we are

August 2008 Celestial Events

	1	6:13pm	New Moon Total solar eclipse in Arctic & central Asia
	3	10:00am	Saturn 4° N of the Moon
	4	8:00am	Mars 4deg N of the Moon
	5	4:00pm	Mars 1.1° N of Regulus
\bigcirc	8	4:20pm	First Quarter Moon
	10	1:00am	Mercury 1.1° S of Regulus
	10	3:00pm	Moon 0.4° S of Antares
	10	4:00pm	Moon at apogee
	12	morning	Perseid Meteor Shower peaks
	13	10:00am	Jupiter 3° N of the Moon
	13	3:00pm	Venus 0.2° N of Saturn
	15	5:00am	Neptune at opposition
	15	8:00pm	Mercury 0.7° S of Saturn
	16	3:00pm	Neptune 0.8° S of the Moon
\bigcirc	16	5:16pm	Full Moon Total lunar eclipse in eastern Europe, Middle East & Africa
	18	10:00pm	Uranus 4° S of the Moon
	23	1:00am	Mercury 1.2° S of Venus
\bigcirc	23	7:50pm	Last Quarter Moon
	26	12:00am	Moon at perigee
\bigcirc	30	3:58pm	New Moon

hitting the meteor stream head- on! Hopefully you'll see more shooting stars than fireflies.

Mother Nature is not often kind to us around here when it comes to astronomical events. So, if bad weather is forecast for peak morning, try observing the morning before and/or the morning after if the weather cooperates. You'll see about one quarter of the peak night rates, or about 15-25 meteors per hour at best. Good luck with the best meteor shower of the year. Just one word of caution ... if you suddenly see a bright meteor that appears to be heading in your direction, duck!

Don't forget to visit Seagrave Memorial Observatory on Peeptoad Road in North Scituate this summer on any clear Saturday night. Jupiter will once again be well placed for observing. Check out his four bright moons as they orbit around this giant planet. Also be sure to ask one of our volunteer telescope operators to show you a few of summer's heavenly wonders, like globular cluster M13, the Ring Nebula (M57) and beautiful double star Alberio.

Visit our web site for additional information: www.theskyscrapers. org.

Keep your eyes to the skies.

A Starhop Through Scutum

Craig Cortis

My submission last month may have prompted some of you to wonder why I did not include some of the more wellknown Messier objects in a listing of seasonal deep sky objects. M22, M4, M8, M20, M16, M17, M24 and others were omitted-for a good reason. Most of you have either already seen, or will view in the future, these "standard" items. My choices were intended as alternatives to the summer "menu" so often followed at public star parties and/or by those who may not be familiar with observing beyond the Messier catalog. Several fine M-objects were included, though. Those items, to me, seemed not very well-known to many amateurs, so I made sure to list them.

I now want to concentrate on a rich, star-packed region of the sky in the constellation Scutum, which lies between Aquila to the north and east, Serpens Cauda to the north and west, and Sagittarius to the south and southeast. The wonderful Scutum Star Cloud stands out on dark, clear nights away from heavy light pollution as a conspicuous patch of luminosity within the Milky Way, the most concentrated such patch to be discerned by the naked eye from our latitude of approximately 42° north.

Actually, the central mass of the Great Sagittarius Star Cloud, centered about 2° north-northwest of 3rd magnitude Gamma Sgr (the Teapot's Spout), is brighter but it is nearly 20° further south in declination than the Scutum Cloud. The combination of much more pronounced atmospheric extinction, greater effects of local skyglow from the low altitude, and the seasonal problem



of summer-associated haze and murk in even seemingly clear skies when viewed through denser layers of atmosphere down low is usually enough to render the Sagittarius Star Cloud inferior in appearance to the Scutum Cloud. (This would not be the case if we could see the southern skies from a latitude a good deal south of our local latitude).

Back to Scutum: I'll break my own tradition regarding well-known Messier objects by first mentioning the marvelous, very rich, deservedly famous M11, the so-called "Wild Duck Cluster" at RA 18h 51m, Dec -6° 18'. No wonder we all love this one as a telescopic target! It is about magnitude 6 with a magnitude 8 star that stands out from all other cluster members, of which there may be several hundred to possibly 1,500 or more. You can use M11 as a starting point for star-hopping to other key parts of Scutum. (Depending on sources, a recent value for this open cluster's distance is around 6,000 light years.) A large region of dark nebulosity begins just ¼° due north of M11 and continues north to a point ¼° south of the border with Aquila. The western edge of this mass lies ¼° to the east of magnitude 4.2 Beta Scuti, a yellowish star which is the 2nd brightest in all of Scutum.

E. E. Barnard's "B" catalog of over 340 dark nebulae is the most wellknown such listing among several that feature these seemingly star-free "holes" in the sky along or adjacent to richer sections of the Milky Way. The region in Scutum that I just described actually is comprised of several individually-numbered "B" dark spots, too numerous to list here. With one huge exception, dark nebulae nearly always require moonless, dark, clear, transparent skies in order to be distinguished well. Famous examples include the Coalsack in Crux, the Pipe Nebula in Ophiuchus, and the difficult but worthwhile Horsehead in Orion. The exception to the demanding criteria regarding visibility is the very long "Great Rift" that appears to divide the Milky Way along the plane of the galactic equator from Cygnus at the Rift's northern terminus down through several constellations southwestward, over many degrees of sky in length. A notable section of this Rift adjoins the Scutum Star Cloud to the northwest. Reasonably clear, dark nights in low light pollution areas will reveal the Great Rift to the naked eye!

Just ^{1/2°} northwest of M11 lies one of four fairly bright stars that, together, comprise a striking asterism that somewhat resembles a greatly enlarged version of the Trapezium in the Orion Nebula, M42. (The side nearest M11 is much more sharply angled than any of the Trapezium's sides, though. The other three sides of this pattern in Scutum are fairly square to one another.)

The star nearest M11 - the one marking the angled "point" of the group - is ADS 11719, also identified as HD 174208. It's a wide, easy double of mags 6.1 and 8.6; spectral class K1 & K0, separation 114". At the northwest corner of the group - about 1° from M11, of a similar golden hue to ADS 11719 - is a very notable variable star, R Scuti. This is one of the first dozen or so variables to have been discovered and

is explained fully in Burnham's Celestial Handbook, pages 1747-1750. R has a range of mag 4.5 at maximum to 8.2 at minimum over a period of 140.05 days. Distance is perhaps 1,400 light years. The two fainter stars at corners of the southern side of the asterism are both white and close in brightness. The star southwest of ADS 11719 is also a double, though not as dramatic. This is ADS 11695, also listed as Struve 2391. Magnitude 6.5 and 9.8 stars comprise the pair, at 38" separation. Altogether you have a four-point asterism with two doubles at one end and easy colorcontrast between the brighter, deep golden stars and fainter, white ones.

If you enjoy bright, pretty starfields, take a line beginning at R Scuti and extend it first through the magnitude 7 star at the southwest corner of my asterism, then continue southwest through a ragged line of four semibright stars spaced approximately equidistant from one another, set amid a sparkling little starfield. (This line is not a straight one, but it'll serve the purpose - distance from R Scuti down through my row is about 1.8°) The average magnitude of these four is 6.6 and their spectra range from F7 to M0.

Try spotting a small, concentrated patch of stars just 1.5° to the westsouthwest of R Scuti: NGC 6683 at RA 18h 42m, Dec -06° 17', size 11'. Although bearing the NGC number, it's probably not a true open cluster, just a small concentration of a starfield within the star cloud, and perhaps not too conspicuous. Just ¹/4° due west of this is another dark nebula, B103, one of the better ones among many in Scutum. The blankness of the Great Rift begins, in turn, just west of B103. A much larger starfield concentration which is not a cluster - and is many times bigger than NGC 6683, in angular size - is NGC 6682, centered at RA 18h 39.5m Dec -04° 46'. This spot is due west of Beta Scuti by 1.9°, just west of the Galactic Equator. Notice, if you can, how abruptly the starry region "drops off" to the seeming void of the Great Rift, which begins just west of NGC 6682!

Open cluster M26 is a worthwhile, but small, condensed object at RA 18h 45.2m, dec -09° 24′. This is a magnitude 8 cluster about 15′ in size. Use magnitude 4.7 Delta Scuti, which marks nearly the center of Scutum, as a reference for star-hopping: M26 lies 0.8° southeast of Delta. Another fine object to hunt down is the globular cluster NGC 6712 at RA 18h 53.1m, dec -08° 42′. There are no bright stars nearby from which to star hop. Still, at magnitude 8.2 and 7′ in size, you won't want to miss it - I speak from experience, having stumbled upon NGC 6712 by lucky accident years ago.

Do you like red stars? In southwest Aquila near the northeast border of Scutum, at RA 19h 04.4m, Dec -05° 41′, is a classic bright, easy carbon star: the variable V Aquilae, magnitude 6.6 to 8.4, period 353 days, semi-regular. This star is a real "honey," having fine reddish color and positioned luckily roughly mid-way between two bright naked-eye stars, magnitude 3.4 lambda Aquilae at 1° to the northeast and magnitude 4.0 12 Aquilae about ³/₄° to the west. An easy and beautiful find.

I'll finish with a personal favorite: a triangular asterism that resembles an arrowhead, with a great orange carbon star at its western tip, the variable S Scuti, magnitude 6.7 to 9.0, at RA 18h 50.3m, dec -07° 55'. Five other reasonably bright stars make out the arrowhead, it'll stand right out to you. Four other stars stream off to the southwest, forming-perhaps- the arrow's rather short, curved shaft. Except for the clusters mentioned, lowpower views will definitely be the most pleasing in Scutum. Rich-field scopes and large binoculars will work best. Ideal magnification range for sweeping around Scutum is 15x-25x.

No mention of star clouds would be complete without including M24, the fantastic and glittering Small Sagittarius Star Cloud in northern Sagittarius! Low power is the rule here and 10x to 15x binoculars are superb for such an object. No wonder Messier actually included such a detached, bright Milky Way region in his catalog as an independent object! You'll easily spot this at RA 18h 17m, Dec -18° 30'. Magnitude is 4.2 total and size is 2° by 0.9°.

Death of a Supergiant

By all outward appearances, the red supergiant appeared normal. But below the surface, hidden from probing eyes, its core had already collapsed into an ultra-dense neutron star, sending a shock wave racing outward from the star's center at around 50 million kilometers per hour.

The shock wave superheated the plasma in its path to almost a million degrees Kelvin, causing the star to emit high-energy ultraviolet (UV) radiation. About six hours later, the shock wave reached the star's surface, causing it to explode in a Type IIP supernova named SNLS-04D2dc.

Long before the explosion's visible light was detected by telescopes on Earth, NASA's Galaxy Evolution Explorer (GALEX) space telescope captured the earlier pulse of UV light scientists' first glimpse of a star entering its death throes.

"This UV light has traveled through the star at the moment of its death but before it was blown apart," explains Kevin Schawinski, the University of Oxford astrophysicist who led the observation. "So this light encodes some information about the state of the star the moment it died."

And that's exactly why astronomers are so excited. Observing the beautiful nebula left behind by a supernova doesn't reveal much about what the star was like before it exploded; most of the evidence has been obliterated. Information encoded in these UV "pre-flashes" could offer scientists an unprecedented window into the innards of stars on the verge of exploding.

In this case, Schawinski and his colleagues calculated that just before its death, the star was 500 to 1000 times larger in diameter than our sun, confirming that the star was in fact a red supergiant. "We've been able to tell you the size of a star that died in a galaxy several billion light-years away," Schawinski marvels.

"GALEX has played a very important role in actually seeing this for a few reasons," Schawinski says. First, GALEX is a space telescope, so it can see far-UV light that's blocked by Earth's atmosphere.



NASA's Space Place

supernova. At top right, the bright UV flash called the shock breakout indicates a red supergiant has collapsed. At bottom left, moments later, the flash is mostly gone. As the debris expands, it heats up again and becomes brighter (bottom right). The supernova became 10 times the size of the original over the following few days, thus becoming visible to supernova hunters.

Also, GALEX is designed to take a broad view of the sky. Its relatively small 20-inch primary mirror gives it a wide, 1.2-degree field of view, making it more likely to catch the UV flash preceding a supernova.

With these advantages, GALEX is uniquely equipped to catch a supernova before it explodes. "Just when we like to see it," Schawinski says.

For more information, visit www. galex.caltech.edu, "Ultraviolet Gives View Inside Real 'Death Star'." Kids can check out how to make a mobile of glittering galaxies at spaceplace.nasa. gov/en/kids/galex_make1.shtml.

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

6



Skyscrapers at Camp Alaria 1941. I have seen several slides that reference Skyscrapers at Lake Sunapee with the **Smileys**. At this time I do not know if Charles and Margaret owned or rented a place at Lake Sunapee in New Hampshire during the summer. A good number of Skyscrapers members were obviously invited. I love the signs. Perhaps it was an inside joke that we may never understand. In addition, this image and others like it have been found together with images of **Stellafane**. All the images had the same style writing on them with the date stated as Summer 1941. I theorize that the group stayed at Sunapee and drove over to *Stellafane* in Springfield, VT. Using roads that existed during that year the mileage would only be 29.0 miles and would have taken just under an hour to traverse.



Skyscrapers Cookout, Saturday, July 12. Above, Bob Horton shows his 6" Dobsonian telescope which will be entered in this year's Stellafane convention. In the evening, the telescope provided crisp views of Jupiter and its moons. Right: Solar observing, socializing, and eating are the order of the day during the cookout. Photos by Steve Hubbard & Jim Crawford.









July Meeting Notes

Saturday, July 12, 2008; Seagrave Memorial Observatory *Nichole Mechnig*

Guest Speaker: Rev. Douglas McGonagle, Chaplain Director at Newman Catholic Center at UMASS Amherst, "Science and Religion, 2 Sides of the Same Coin." Believe it or not I put down my pen for this extraordinary speech I just wanted to listen so I'm sorry there are not any notes.

Business Meeting was called to order at 910pm by President Glenn Jackson • First the picnic was a success costing the organization only \$43.00 there was extra food and it will be donated to the food banks in Warwick and East Greenwich.

Secretary's report was amended for the month of June to show that Sue Hubbard had donated a port a potty for the annual summer picnic.

Treasurer's report for the month of June was unanimously accepted for the month of June

1st V.P. Steve Hubbard: the list of the upcoming guest speakers * August 8th Heather Knutson- Planet Atmosphere * September 5th Nitya Kallivayalil-Magellanic Clouds

2nd V.P. Kathy Siok- AstroAssembly: Sign Up please to volunteer * Still looking for guest Speakers or members that would like to give a presentation

Historian Dave Huestis: Scituate Library is having a Lawn Party July 26th and would like our members to come and be volunteers the time is 11-3pm on Saturday, to contact Dave Huestis please e-mail him at Dhuestis@Aol. com

Librarian Tom Barbish: No Activities * Tom will be updating the calendar on the door to the library to show the correct month

Star Party Bob Forgiel: Many upcoming events Volunteers needed * July 17th Thursday Camp Sure Fire * August 15th Boy Scouts * So far this year the Star Party has made \$610.00 with 425 students in attendance

Variable Star workshop: TBA on hold until September

Trustees: Congratulations to Steve



Siok he was elected as the newest Trustee taking over for Jerry Jeffrey

New Business: Dave Huestis proposal and email was sent to New England astro societies to be distributed amongst their members sample pages sent announcing possible second printing asking for verbal commitment minimal order of

25 copies need to have commitment of 18+ before order is placed. Cost of book is \$33 includes tax. Dave Huestis has asked that Skyscrapers allocates \$825(25 copies x \$33) to cover the cost of printing an additional 25 copies of 75 Years of Skyscrapers. Should printing proceed the entire amount will be recovered once all the books are sold. Again, no order will be placed until a commitment of 18 copies has been reached (unless otherwise decided by the eboard). This matter will be voted on at the next monthly meeting • Bob Napier is asking of a donation of \$50.00 to send to Clear Sky Charts. This donation will be voted on at the next monthly meeting • Dan Lorraine made a motion to repay Sue Hubbard for renting the port a potty for the Skyscrapers picnic. This motion will be voted on at the next monthly meeting

New Member: Santo Caraballo was introduced.

Old Business: None

Membership list will be purged before the next Executive Council takes over in April of 2009

Good of the Organization: if you are not receiving the newsletter-mail or snail mail please let us know asap

July 24th is the next eboard meeting at Seagrave all are welcomed

President Message: Marilyn Fetterman is moving to Pa. she has graciously donated many of her garden tools and a picnic table to Skyscrapers and will want to take the time to say THANK YOU to her and to say we will miss you and good luck • Any questions or concerns or thoughts do not hesitate to contact Glenn at his e-mail address: Glenn.Jackson6@verizon.net Meeting adjourned at 940pm





Scituate Library Lawn Party, Saturday, July 26. Many thanks to all who participating in Skyscrapers "Astronomy on the Scituate Common" this past Saturday, and to those who helped out with our public open night back at Seagrave. I think everyone involved thought it was a tremendous success. I spoke with library director Leslie after we packed up and she was very very pleased with the turnout, and was glad we could participate. She's hoping this will become a yearly event, and has already asked for us join in next year. I personally appreciate all of you who brought scopes for solar observing. Too bad the sun was and has been spotless. The H-alpha images though were great! Also, most folks didn't know you could see the Moon in the daytime (thanks Jim Hendrickson), or Saturn as well (thanks Joe!). We distributed lots of handouts about astronomy, space science and Skyscrapers. A few people did return for the evening program at Seagrave. Jupiter got better and better through the Clark as the night progressed.

Thanks once again to everyone who helped to make this event a big success. Dave Huestis Photos by Jim Crawford & Tom Barbish.







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.



47 Peeptoad Road North Scituate, RI 02857