



# the Skyscraper

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July  
2010

Amateur Astronomical Society of Rhode Island ★ 47 Peeptoad Road ★ North Scituate, Rhode Island 02857 ★ [www.theSkyscrapers.org](http://www.theSkyscrapers.org)

## Seagrave Memorial Observatory is open to the public

weather permitting

**Saturdays 9pm - 11pm**

Please note that the observatory may be inaccessible for after extended periods of heavy rain. See web site for updates.

**No Public Observing on Saturday, July 3 during holiday weekend or Saturday, July 10 during summer cookout/meeting.**

Phases of the Moon



4



11



18



25

**OTHER NOTABLE EVENTS:** Earth is at aphelion on the 6th. Venus is 1.1° N of Regulus on the 9th. Mercury 0.3° S of Regulus on the 27th.

## July Cookout & Meeting with Bruce Berger

**SATURDAY, JULY 10, 4:00PM**

**SEAGRAVE MEMORIAL OBSERVATORY**

Many opportunities exist for amateur astronomers to make contributions to scientific research. My interest is in helping to classify asteroids and Kuiper Belt Objects for the scientists at MIT and Williams College, and also to report my observations through a worldwide network called the International Occultation Timing Association. One of the better ways to gather data on these distant objects is by recording the light curves of certain stars as the asteroids eclipse or occult them. It only takes simple, inexpensive equipment to get started, and from there you can take it across the world, as I've been able to do.

Bruce Berger has lectured on amateur astronomy, occultations and telescope making across the US, South America and Asia.

His passion for astronomy and astronomy gadgets fuels his desire to learn more and to share his experiences with others through his Scopemaker.com website. As a long-time member and past president of the Amateur Telescope Makers of Boston, Bruce has promoted professional-amateur collaboration projects with scientists at the MIT-Williams College Occultation Consortium and the San Pedro Martir National Observatory of Mexico. Along with John Briggs and several others, Bruce is a co-author of a just published (6/17/10) article in *Nature* titled "A Glimpse of an Icy World in the Outer Solar System" He has given talks about amateur astronomy and telescope making to groups in Brazil, Japan and China.

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Tom Thibault

# President's Message



Dear Skyscrapers Members,

I would like to thank Francine Jackson and Clark Collins for their hospitality at Frosty Drew Observatory and allowing us to host our June Meeting there. The Frosty Drew organization has a beautiful facility in Charlestown, RI, that not only includes their recently completed meeting hall, but also a 16" Meade SCT in a domed observatory. Unfortunately due to the weather we were unable to take advantage of that dark sky location.

Our business meeting was followed by John Briggs' slide show presentation of his 1994 Antarctic Winter-over. I'm sure many of you were envious, as was I, of John being able to take advantage of such a once in a life time opportunity. At the conclusion of his presentation John informed those attending that he has accepted a tremendous job in Colorado, and with a heavy heart will be resigning as 1st Vice President of Skyscrapers. Please join me in wishing John success in his upcoming business opportunity. He will be surely missed by us all. John has secured our July speaker, Bruce Berger of the ATMs of Boston, speaking on his recent MIT-sponsored trips to Mexico and Brazil to observe occultations by Kuiper-Belt objects.

Our July Meeting and annual Cookout has been scheduled for Saturday, July 10th.

The Cookout will begin at 4:00 pm and the meeting will follow at its regular time of 7:30 pm. Planning is underway and I look forward to seeing many of you at this event. See more details in this newsletter. Tickets will be \$7.50 per person, (\$3.00 for children

under 12) and includes all you can eat and drink. This is an excellent opportunity to socialize with fellow members and their families outside of our normal meeting setting. I hope all of you can attend. Tickets can be purchased in advance or on the day of the picnic, but I request an RSVP in either case so we can determine the amount of supplies needed for the cookout. RSVP's can be sent to me via my e-Mail at [DeepSpaceViewer@AOL.Com](mailto:DeepSpaceViewer@AOL.Com). Advance payment can be made by check. Checks should be made out and sent to:

**Skyscrapers, Inc.**  
**Attn: Members Cookout**  
**47 Peepoad Road**  
**North Scituate, RI. 02857**

The deadline for RSVPing is July 7.

As I noted at our June meeting, Jupiter is rising in the east and can be viewed early in the morning at pre-dawn. I had the opportunity to do some viewing on the morning of June 9th and was pleased to verify the recent reports that the major South Equatorial Belt has disappeared from view. The view that morning had an added bonus, the meridian transit of the Great Red Spot, which stood out nicely. June mornings also provided a view of Comet C/2009 R1 (McNaught) of which I have not been able to see to date due to the weather. I encourage all to get out and take a look. And for those of you who have and have taken photos, please send them to Jim Hendrickson so we can share with all on our web site.

Clear Sky  
 Tom Thibault

## Skyscrapers Annual Summer Cookout

The cookout will be held on Saturday July 10th beginning at 4pm. All members and their guests are invited to attend. The cost is only \$7.50 per person (\$3 for kids under 12) for all you can eat. We will be serving hamburgers, hotdogs, veggie-burgers, clam chowder, and corn on the cob, salads and deserts. Some members have asked if it is okay to bring some additional potluck items. Well the answer is "yes", the more the merrier! Just let me know at [DeepSpaceViewer@AOL.Com](mailto:DeepSpaceViewer@AOL.Com), what you're planning to bring so that we can coordinate our efforts. Some of you have already sent in your money for the cookout, which is

greatly appreciated. If you have not already done so, please send us a check before July 7th. Our address is Skyscrapers, Inc., 47 Peepoad Road, North Scituate, RI 02857, Attn: Members Cookout. You may also pay at the door, but please let us know that you're planning to attend so that we know how much food we need to purchase. We're also looking for volunteers to help set up for the cookout, starting at noon on July 10th. If you are willing to help out, please let me know. In addition to the cookout, we are working on having a 90mm Coronado solar telescope set up to offer some spectacular views of the sun, weather permitting.

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

Tom Thibault [DeepSpaceViewer@aol.com](mailto:DeepSpaceViewer@aol.com)

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### Editor

Jim Hendrickson [jim@distantgalaxy.com](mailto: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 no later than **July 23** to Jim Hendrickson, 1 Sunflower Circle, North Providence, RI 02911 or e-mail to [jim@distantgalaxy.com](mailto:jim@distantgalaxy.com).

### E-mail subscriptions

To receive The Skyscraper by e-mail, send e-mail with your name and address to [jim@distantgalaxy.com](mailto:jim@distantgalaxy.com). Note that you will no longer receive the newsletter by postal mail.

# Some Beautiful Sky Scenes for July

## & By Jove, What's Happening with Jupiter?

Dave Huestis

What's up with Jupiter? Do you remember back in 1994 when Jupiter was hit with at least 21 fragments of Comet Shoemaker-Levy, leaving huge scars in the planet's cloud tops that persisted for weeks? Well, jump ahead to July 19, 2009, and an amateur astronomer noted another scar in Jupiter's atmosphere, indicating yet another impact.

We haven't been observing Jupiter at the local observatories recently because the planet was too close to the Sun in the sky to be seen from our Earthly perspective. When finally emerging from the solar glare, it was noted that something was amiss with Jupiter once again.

Jupiter's South Equatorial Belt (SEB) was gone. This belt is the one in which the Great Red Spot resides. The Spot was fine, but the brownish belt was missing. And guess who first reported this event? The same amateur astronomer who first observed the 2009 impact scar!

This time is not the first time that the belt has disappeared. And it will most likely return. There are plenty of images up on the web to see what Jupiter looks like now and what it looked like before losing this prominent feature. Here is one web site you can review:

[http://science.nasa.gov/media/medialibrary/2010/05/19/loststripe\\_strip.jpg](http://science.nasa.gov/media/medialibrary/2010/05/19/loststripe_strip.jpg)

However, if you do have a telescope of any size you should be able to see for yourself. Jupiter is the brightest star-like object about 20 degrees above the ESE horizon at around 3:00 am. It won't be until September at the earliest that the local observatories will be able to show Jupiter at a reasonable hour, say before 10:00 pm. Perhaps the SEB will return by then. Perhaps not.

But wait, there's more! Back on June 3 two amateur astronomers independently videoed the impact of a body of unknown origin into Jupiter's cloud tops. The videos can be seen at these web sites:

[http://www.universetoday.com/wp-content/uploads/2010/06/wesley\\_jupimpact\\_color.jpg](http://www.universetoday.com/wp-content/uploads/2010/06/wesley_jupimpact_color.jpg)

[http://www.youtube.com/watch?v=DaRwaw9d\\_LQ&feature=related](http://www.youtube.com/watch?v=DaRwaw9d_LQ&feature=related)

It was quite fortuitous they were imaging Jupiter at the time of impact. What's even more impressive is that one of those amateur astronomers was the same individual who had first noticed the July 2009 impact scar and the person to note the missing SEB. I should have him pick a few Powerball numbers for the next drawing! While luck has something to do with it, this gentleman from Australia, Anthony Wesley, is a vigilant Jupiter observer.

I would encourage you to check the web for any updates on Jupiter's appearance be-

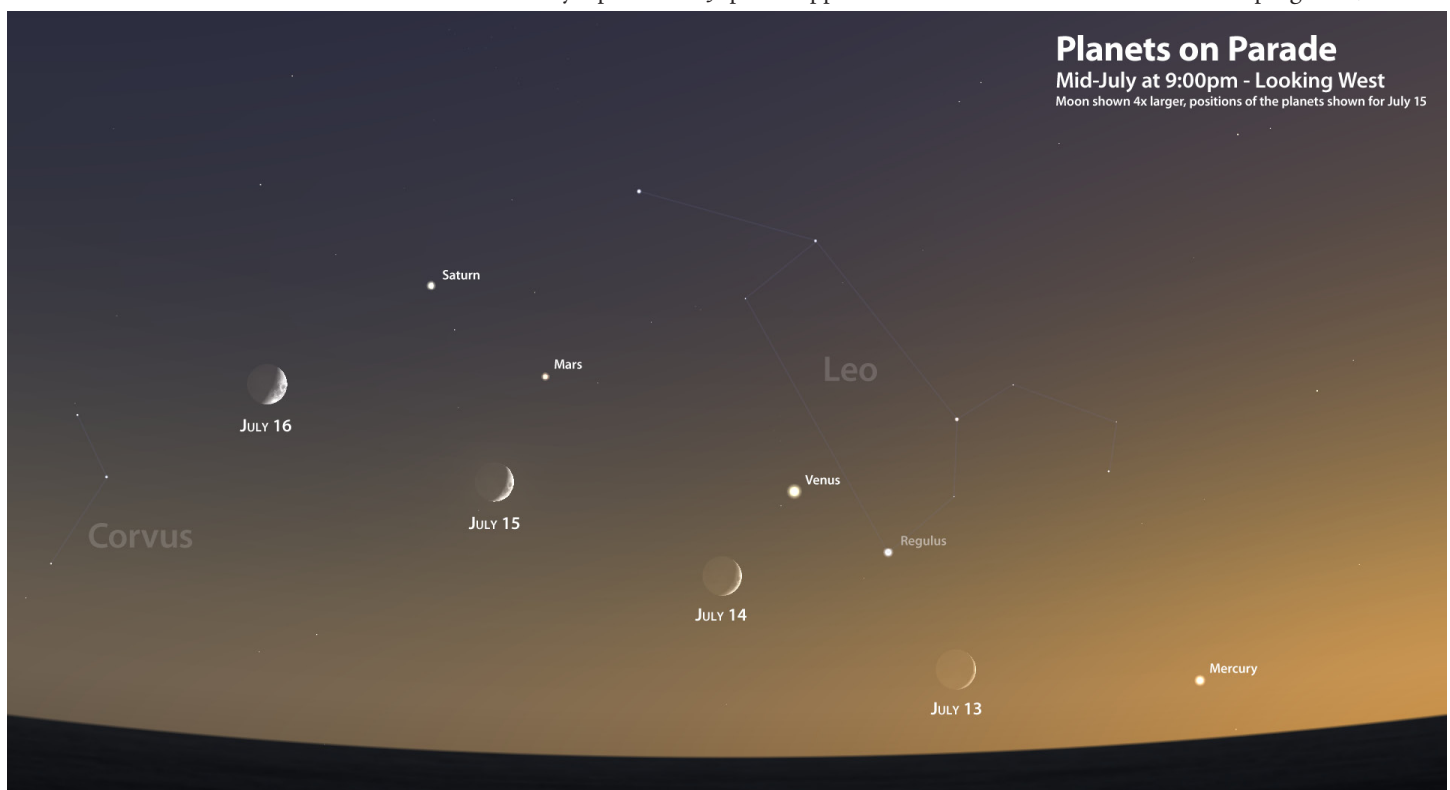
tween now and September. I will announce when the local observatories will be able to provide you an opportunity to observe Jupiter firsthand through some large telescopes.

And let's hope if someone asks what's happening with Jupiter they don't get the response, "Something wonderful." If you know the source of that quote please email me your answer at [dhuestis@bryant.edu](mailto:dhuestis@bryant.edu). Deadline is July 14. All correct answers will be entered into a drawing for a special prize.

During July evenings I want you to focus your attention towards the western sky about an hour after sunset. The first object that will catch your attention will be brilliant Venus. As twilight deepens you will see that the goddess of love is in the constellation of Leo. Arcing up to the left of Venus you'll encounter Regulus, the brightest star of Leo and also his heart. To the upper left of Regulus you'll find reddish Mars. Continue that arc higher still to the upper left and you'll find Saturn.

Three planets in one glance! Telescopes will show Saturn's rings and Venus as a waning gibbous phase (75% illuminated) early on and just more than half illuminated (60%) by month's end. Mars will be too small to show any detail.

Watch as the month progresses, for the



### Planets on Parade

Mid-July at 9:00pm - Looking West

Moon shown 4x larger, positions of the planets shown for July 15



positions of these heavenly orbs will change. It will provide you a little insight into the dynamics of our solar system. Venus will slide by Regulus on July 9. Then around the 13th the crescent Moon will be seen just above the western horizon. Each successive night through the 16th you'll find the Moon positioned beneath a different member of the celestial arc.

In addition, around the 13th Mercury will join the planetary grouping as well. You'll need to look about 35 to 45 minutes after sunset. From here in Rhode Island you'll need an unobstructed view almost right down to the horizon. On the 27th Mercury will pass Regulus.

The accompanying star graphic will help you to find and identify all the players in this beautiful sky scene.

Much of this month-long event will not be visible from the main telescopes at Seagrave Memorial Observatory (<http://www.theskyscrapers.org>) in North Scituate because of our western tree line. In addition, Seagrave Observatory will be closed for public viewing July 3 (holiday weekend) and July 10 (for a private function.) Regardless, the naked-eye and binoculars will show it best, so find a location with a good western horizon and enjoy the show. For the rest of July our summer hours are from 9:00 – 11:00 pm, weather permitting.

Unfortunately Ladd Observatory (<http://www.brown.edu/Departments/Physics/Ladd/>) in Providence will be closed most if not all of July for a restoration of the transit room in the rear of the building. Please check the web site for updates in case the

project takes longer than expected.

And finally, while there are two meteor showers during the last three or four days of July, the Delta Aquarids and the Alpha Capricornids, the bright Moon (Full on the 26th) will drown out all but the brightest of these shooting stars. Still, if clear skies prevail you may catch a glimpse of a couple of them.

Keep your eyes to the skies.

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## An Observation of Craig Cortis Comet C/2009 R1 (McNaught)

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Seems as if astronomers in this part of the country end up getting “skunked” more often than not, when we'd *really* like to view an important celestial object's transient appearance. You know the formula, I think: clouds, rain, a bright Moon, something that sets too early or rises too late, an object's low altitude above the horizon, maybe a new “killer” floodlight a neighbor just installed in exactly the worst possible position with respect to your best viewing direction, etc., etc. (Sound familiar?) I don't believe in *luck*, but there's no better word to describe the confluence of conditions that favored me on the morning of June 15, 2010. The consensus of opinion among various astronomical authorities held that mid-June would be the best time to see Comet C/2009 R1 (McNaught) from our local latitude. I knew the comet's predicted position in Perseus and was aware of reports on its brightness and general appearance. I also checked my planisphere to determine the altitude above the northeast horizon for a given time period, and consulted a table so as to know when morning astronomical twilight would begin. Naturally, my chosen earliest time for realistic observing—3:00am—just about coincided with the beginning of the loss of darkness to twilight, about 3:05am. You can't have everything, as is often said.

Still, the Moon was New just a few days prior and skies had been predicted to clear during late evening of June 14th, improving

to all-clear for early morning of the 15th. My observing friend Tim Dube of East Douglas, Massachusetts and I made tentative plans to set up for observing in Tim's yard at 2:00am, subject to the cloud situation. We were delighted at seeing weather forecasts actually turn out as predicted. The sky cleared thoroughly after midnight, although you could feel some humidity—sky transparency wasn't optimal, but the comet was in a favorable direction from our observing site with respect to both skyglow from Worcester *and* viewing obstructions involving buildings and trees. We had a good, clear sight line low to the northeast that also remains blessedly free of any unshielded, bright streetlights or other “glare-bombs,” as Editor Jim Hendrickson likes to call such things.

I had that old feeling of pleased anticipation as I drove the route from my home in Oxford Massachusetts over rural roads to East Douglas. Tim had his 16-inch Dobsonian set up near the house when I arrived just after 2:00am. Unfortunately, we could not move it quickly or conveniently to a better position about 40 feet away, due to the scope's size and weight. (One pesky tree interfered with the sight line to central Perseus!) We ended up using Tim's 8-inch Schmidt-Cassegrain scope on a handy alt-az mount to see the comet from a better vantage point after 3:00 am. The eyepiece he'd chosen was a 30mm Wide-Scan, which yields a magnification in

the 8-inch of 68x.

Somewhere around 2:40am I trained a 10x50mm binocular on Delta Persei and almost immediately picked up the comet, glowing like a very bright and compressed, unresolved globular cluster with a distinct blue-gray color. No tail, either ion *or* dust, was discerned. The fortuitous position near Delta Persei made finding this comet a snap, although any savvy amateur with good information and a fair knowledge of Perseus could've located it equally easily, due to its conspicuous brightness. I'm not the best estimator of magnitude; the comet *may* have been roughly magnitude 5.0, according to some reports, and 5.3 or so might be a better guess(?). We switched to a hand-held 15x70mm binocular for further viewing—still no sign of a tail.

Tim and I used his 8-inch SCT from 3:10 to about 3:35am for our best views, which revealed a not-quite distinct false nucleus within the head. No other features or structures were noted, including a tail. I'm sure others elsewhere saw the ion tail at different times during the comet's apparition—did any of *you*? I *did* note definite movement over about a half-hour's time in relation to a 3-star asterism nearby. The change in position was unmistakable! A few thin tendrils of clouds moved in near the comet just as we were packing things up, but it didn't matter. Our luck held!

# June Reports

Jim Crawford, *Secretary*  
Lloyd Merrill, *Treasurer*

**EXECUTIVE COMMITTEE MEETING**

**WEDNESDAY, JUNE 2, 2010**

**SEAGRAVE OBSERVATORY**

**TOM THIBAUT**

**ATTENDEES:** Bob Horton, Bob Napier, Tom Thibault, Jim Brenek, Tom Barbish, Dave Huestis, Jim Hendrickson, Pat Landers, Steve Siok, Gene Kusmierz, and Jim Crawford

Items discussed:

**MONTHLY MEETINGS**

June 4th meeting to be held at Frosty Drew, Charlestown RI. A moment of silence will also be held for the passing of Les Coleman a long time Frosty Drew member. • No July meeting due to the annual cookout on the 10th. • August meeting changed to the Friday 13th.

**NEW MEMBERS HANDBOOK:** Final draft of the new handbook provided by Dave Huestis and Jim Hendrickson. • Names of the new treasurer, secretary and librarian will need to be changed. • Printing of handbook will be discussed at next E-board meeting. • New members will receive the handbook when they pay their first membership. dues. Treasurer will record that new members received a copy.

ceived a copy.

**POSITION APPOINTMENTS:** Amber Lesperance volunteered for the Librarian. • Jim Crawford (Treasurer) will be Acting Secretary until permanently filled.

**JULY COOKOUT:** Saturday, July 10th, 4: pm, designated as the cookout date. • Request for volunteer's for the Cookout Committee. • Committee will provide list of items that will be needed, grills, tarps, propane, food, etc. • Cost to be \$7.50/person. • Order Porte John for delivery the day before. • Complete volunteer list for next E-Board meeting before cookout.

**SIGN KIOSK MATERIALS AND CONSTRUCTION:** Tom Thibault will generate list of material and ask for donations.

**FACILITY SECURITY:** Tabled pending review of documentation on types of systems and equipment.

Meeting adjourned 8:pm

**JUNE MEETING**

**FRIDAY, JUNE 4, 2010**

**FROSTY DREW OBSERVATORY**

Tom Thibault welcomed all members and guests and introduced Clark Collins and Francine Jackson of Frosty Drew Observatory. Tom announced Lloyd Merrill's resignation as Treasurer and the appointment of Jim Crawford to that position. Jim will continue as acting Secretary until Jim's replacement as Secretary can be filled by appointment. It was announced that anyone interested in the position of Secretary, please contact Tom Thibault or a Member of the E-Board. Tom announced the continued appointments of Dave Huestis as Historian, Bob Forgiel as Outreach Coordinator, Jim

Hendrickson as Web Site Coordinator and Newsletter Editor. It was also announced that Amber Lesperance has accepted the appointment as Librarian.

**SPEAKER:** John Briggs presented a slide show presentation of his 1994 Antarctic Winter-over at the South Pole.

**SECRETARY'S REPORT:** May report accepted by membership.

**FINANCIAL REPORT:** May report accepted with no corrections.

**1ST VP: JOHN BRIGGS,** No report.

**2ND VP: STEVE HUBBARD** not present, No report.

**HISTORIAN: DAVE HUESTIS** reminded all members that we still have more commemorative postal caches for \$3.00 each which includes the stamp with Frank Seagrave on it.

**LIBRARIAN: AMBER LESPERANCE,** No report.

**OUTREACH COORDINATOR: BOB FORGIEL,** No Outreach Programs currently scheduled.

**TRUSTEE REPORT: JIM BRENEK,** No report.

**OLD BUSINESS:** No old business.

**NEW BUSINESS:** Discussions and vote of Glenn Jackson's (3) accepted motions from May's Meeting. • Donation of \$50.00 annually to maintain Skyscrapers Clear Sky Chart. Noted, due to this donation being an annual expenditure, it would be considered an operational expense and will be considered yearly by the E-Board and budgeted accordingly based on available finances. Membership approved a one time donation for this year. • Donation of \$110.00 to support the Stellafane Flanders Pavilion. "Messier Club" members will be acknowl-



**Cash Flow**

5/4/10-6/2/10

**INFLOWS**

Donation	\$29.00
Dues	
Family	\$150.00
Regular	\$320.00
Senior	\$10.00
TOTAL Dues	\$480.00
Starparty	\$129.50
<b>TOTAL INFLOWS</b>	<b>\$638.50</b>

**OUTFLOWS**

Corporationfee	\$22.00
Postage and Delivery	\$8.80
Refreshment Expense	\$93.75
Tressurer	\$100.00
Trusteexp	\$235.79
Website Domain	\$75.00
<b>TOTAL OUTFLOWS</b>	<b>\$535.34</b>

**OVERALL TOTAL \$103.16**

**Banking Accounts**

Citizens Checking	\$3,657.13
Capital One	\$16,355.98
Money Market	
<b>Total Cash</b>	<b>\$20,013.11</b>



Sky Theater at Frosty Drew Observatory & Nature Center at Ninigret Park in Charlestown.



edged in a permanent display with the \$110.00 donation. Membership approved the donation. • Donation of \$50.00 for a one foot square paver, the Skyscrapers name will be inscribed and custom molded for the Pavilion. The paver will be set in place to make up the floor of the Stellafane Flanders Pavilion. Membership approved the donation.

**GOOD OF THE ORGANIZATION:** Penny Lesperance informed the membership of the opportunity to display information within a

display case at the Gloucester Public Library. Penny will be working with Dave Huestis on the content. • Dave Huestis presented the recently completed "New Members Guide" he and Jim Hendrickson developed and invited the group to view copies he had on hand. • Bob Napier questioned the memberships if there is anyone interested in assisting as a moderator for the Skyscrapers Yahoo Discussion Group and requested anyone with an interest contact him. • Bob Napier also informed the members of the recent

reports concerning the loss of Jupiter's South Equatorial Belt and another meteor impact of Jupiter's cloud tops.

Business Meeting adjourned at 9:00 pm followed by John Briggs' presentation.

Respectfully submitted by Tom Thibault in Jim Crawford's absence.

## Black Holes No Joke

By Dr. Tony Phillips



*Kip Thorne: Why was the black hole hungry?*

*Stephen Hawking: It had a light breakfast!*

Black hole humor—you gotta love it. Unless you're an astronomer, that is. Black holes are among the most mysterious and influential objects in the cosmos, yet astronomers cannot see into them, frustrating their attempts to make progress in fields ranging from extreme gravity to cosmic evolution.

How *do* you observe an object that eats light for breakfast?

"Black holes are creatures of gravity," says physicist Marco Cavaglia of the University of Mississippi. "So we have to use gravitational waves to explore them."

Enter LIGO—the NSF-funded Laser Interferometer Gravitational-wave Observatory. According to Einstein's Theory of General Relativity, black holes and other massive objects can emit gravitational waves—ripples in the fabric of space-time that travel through the cosmos. LIGO was founded in the 1990s with stations in Washington state and Louisiana to detect these waves as they pass by Earth.

"The principle is simple," says Cavaglia, a member of the LIGO team. "Each LIGO detector is an L-shaped ultra-high vacuum system with arms four kilometers long. We use lasers to precisely measure changes in the length of the arms, which stretch or contract when a gravitational wave passes by."

Just one problem: Gravitational waves are so weak, they change the length of each detector by just 0.001 times the width of a proton! "It is a difficult measurement," allows Cavaglia.

Seismic activity, thunderstorms, ocean waves, even a truck driving by the observatory can overwhelm the effect of a genuine



Laser Interferometer Gravitational-wave Observatory in Livingston, Louisiana. Each of the two arms is 4 kilometers long. LIGO has another such observatory in Hanford, Washington.

gravitational wave. Figuring out how to isolate LIGO from so much terrestrial noise has been a major undertaking, but after years of work the LIGO team has done it. Since 2006, LIGO has been ready to detect gravitational waves coming from spinning black holes, supernovas, and colliding neutron stars anywhere within about 30 million light years of Earth.

So far the results are ... nil. Researchers working at dozens of collaborating institutions have yet to report a definite detection.

Does this mean Einstein was wrong? Cavaglia doesn't think so. "Einstein was probably right, as usual," he says. "We just need more sensitivity. Right now LIGO can only detect events in our little corner of the Universe. To succeed, LIGO needs to expand its range."

So, later this year LIGO will be shut down so researchers can begin work on

Advanced LIGO—a next generation detector 10 times more sensitive than its predecessor. "We'll be monitoring a volume of space a thousand times greater than before," says Cavaglia. "This will transform LIGO into a real observational tool."

When Advanced LIGO is completed in 2014 or so, the inner workings of black holes could finally be revealed. The punchline may yet make astronomers smile.

Find out more about LIGO at <http://www.ligo.caltech.edu/>. The Space Place has a LIGO explanation for kids (of all ages) at <http://spaceplace.nasa.gov/en/kids/ligo>, where you can "hear" a star and a black hole colliding!

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

# NGC 6207

## Glenn Chaple's Sky Object of the Month

Unless you're a rank beginner, you've no doubt marveled at the spectacular stellar swarm that is M13. Taking on the appearance of a spoonful of sparkling sugar dropped on a sheet of black velvet, the great globular cluster in Hercules is one of the night sky's most dazzling sights.

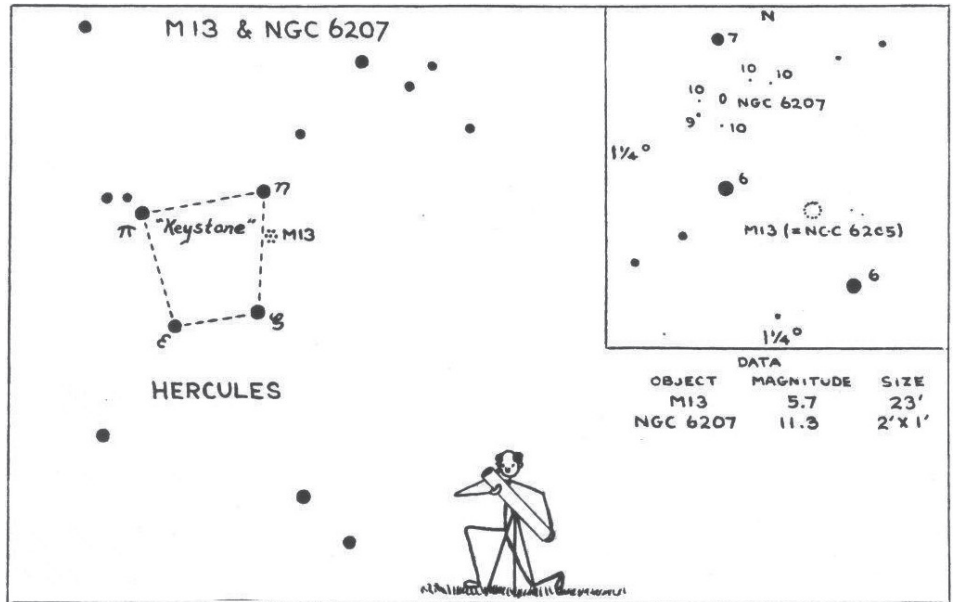
Most backyard astronomers are so entranced by M13, that they fail to notice a

small, faint oval patch of light a half degree to the northeast. This is the 11th magnitude galaxy NGC 6207. Years ago, I was just able to glimpse this 2' by 1' smudge in a 3-inch f/10 reflector. Most of the time, NGC 6207 will require a 4 to 6 inch scope, or larger.

M13 and NGC 6207 may appear close

together, but they're light years apart – literally! While M13 is a "mere" 23 thousand light years away, the light from NGC 6207 comes from a distance of 46 MILLION light years – two thousand times more distant!

Your comments on this column are welcome. E-mail me at [gchaple@botmail.com](mailto:gchaple@botmail.com).



This is my first attempt with my old Canon 20D unmodified on my C14. I used Nebulosity to take and process the image. Nineteen 55 sec images at ISO 1600 with darks and biases applied. Photo by Lloyd Merrill.

### Executive Committee Meeting

WEDNESDAY, JULY 7TH AT 7PM  
SEAGRAVE OBSERVATORY

All members are welcome to attend.









During the past few clear nights I was able to shoot this from my new, but yet still unnamed, observatory. The shutter, scope and guide scope all stayed synchronized while I went for a beer. 18 subs @ 3 min. for each LRGB; 8" LX200GPG w/ 3.3 focal reducer; Meade DSI pro II w/ standard Meade LRGB filters; guided with Celestron 5" Mak-Cass and DSI pro 1. Image by Bob Forgiel.

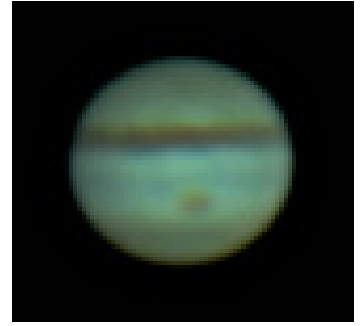


Photo was taken on June 9th at 4:30 AM with an 11" SCT. Camera was an Orion Star Shoot and pictures were 20 second video's stacked and processed with RegiStax followed with PhotoShop. Note the missing Southern Equatorial Band and the GRS meridian transit. Seeing was not the best due to Jupiter's low position above the S.E horizon.



## Mirror Making Workshop

1. Ed Turco pouring a pitch lap;
2. Bob Horton pours a pitch lap;
3. Ed demonstrates the polishing strokes to Scott MacNeil;
4. Ed and Bob check the reflectivity of the surface after a couple hours of polishing;
5. Ed helps Tom Thibault set up for polishing.

Photos by Jim Hendrickson.

# 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, Rhode Island 02857