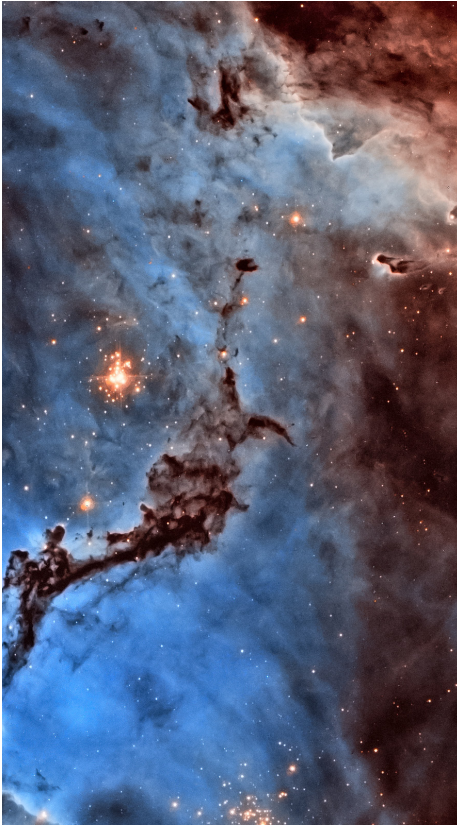




the Skyscraper

vol. 40 no. 1
January 2013

AMATEUR ASTRONOMICAL SOCIETY OF RHODE ISLAND * 47 PEEPTOAD ROAD * NORTH SCITUATE, RHODE ISLAND 02857 * WWW.THESKYSCRAPERS.ORG



January Meeting Friday, January 4, 7:30pm at North Scituate Community Center Mining for Hubble's Hidden Treasures with PixInsight

Josh Lake, winner of the 2012 Hubble's Hidden Treasures image processing contest, will share his methods for composing the winning image of NGC 1763. He'll illustrate the basics of navigating the publicly available Hubble Legacy Archive data, then demonstrate the powerful tools and methods of the PixInsight imaging platform. He'll cover methods for combining two channels of narrowband data into a full color image, drawing out dusty detail with local histogram equalization, and finishing an image with Adobe Photoshop. Josh's main objective is to bring sophisticated image processing options to a wide public audience, and he believes that anyone can compose beautiful images from their own telescopes, the HST, and other instruments if shown the right software tools and tutorials.



Attention Astrophotographers: Your images are needed for the January Meeting!

Our January meeting will feature Josh Lake, winner of the 2012 Hubble's Hidden Treasures image processing contest.

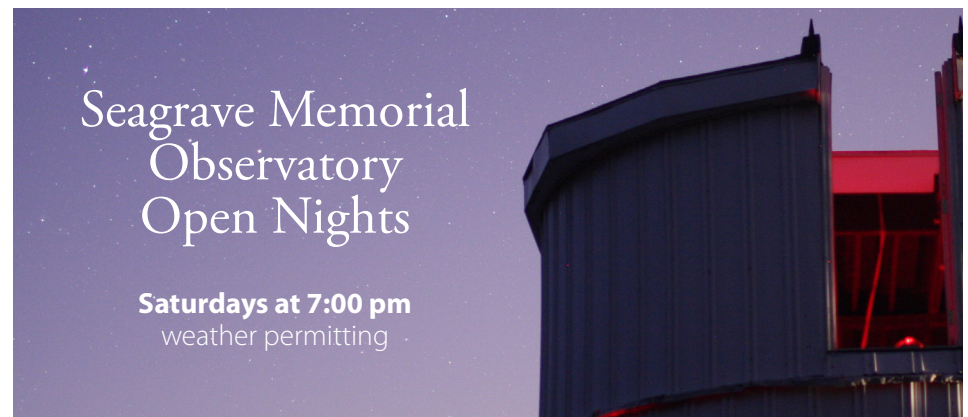
Josh will be showing us how to get the most out of astronomical images, and he is hoping that some of you might want to share some of your own images as part of the evening's program.

The idea is that you will supply master FITS files or camera raw images ahead of time, and Josh will spend some time doing image processing work to demonstrate "before" and "after" shots of your work.

If you are interested, please contact me at Robert.Horton@brown.edu, and I will forward your e-mail to Josh so that he may contact you.

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President's Message

Ed Haskell

By the time you read this we will have all survived ... er, enjoyed, the holidays season and will be resolving to accomplish all that we wished we had done in 2012. This is an annual rite which hopefully leads to steady improvement. As you reflect on your approach to the year ahead please consider your relationship with Skyscrapers.

I have previously remarked on the close connection between volunteering and the success of the Society. Arguably one of the vital determinants of that success is how well the leadership positions are staffed. The Nominating Committee is beginning its yearly assignment of recruiting members with the talent and dedication required to fill the elected positions for the next term. You have an important role to play in how well the committee accomplishes its mission.

The Nominating Committee operates openly but without much fanfare as it attempts to find at least one qualified candidate for each position. Its members take seriously their charge to solicit other members to come forward and declare their desire to serve the Society. The committee interviews each of these prospective candidates in an

attempt to fit the abilities and experience of each into one of the positions open for election. Part of this process involves educating prospects on what each of the positions requires in terms of experience and commitment. From this exercise emerges the committee's slate of candidates.

If you have an interest in serving please bring yourself to the attention of the committee.

A second, lesser known, duty of the Nominating Committee is to serve as a recruiter for other than the elected positions. For example a member may have come to the committee's attention who might be a prospect for an elected office but who, on further learning of what was required or for other reason, decided that they were not interested in standing for election now. This member might be well suited for some other function. There are numerous areas where volunteers are needed. If the committee inquires into your interest in serving in a non-elected position, either as a result of your initiative or theirs, please give thoughtful consideration to helping out.

Thanks for all you do for Skyscrapers.



The Skyscraper is published monthly by Skyscrapers, Inc. Meetings are held monthly, usually on the first or second Saturday of the month. Seagrave Memorial Observatory is open every Saturday night, weather permitting.

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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 **January 18** to Jim Hendrickson, 1 Sunflower Circle, North Providence, RI 02911 or e-mail to 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. Note that you will no longer receive the newsletter by postal mail.



Telescope Class for Beginners

Conrad Cardano

On Saturday Jan 19, I will hold a class from 10am to noon on how a telescope works. This is a class aimed at new astronomers.

Topics:

1) What are focal length and f-ratio. How to calculate them. Why are they important.

2) The major telescope designs: refractor, reflector, and SCT.

3) Telescope mounts: altazimuth, dobsonian, equatorial, and fork mount.

4) Eyepieces. How to calculate magnification and field of view.

Everyone is welcome. If you know someone who is interested in astronomy, bring them!

I will hold this class even if only 1 person is interested.

If Jan 19 is a bad day for you, please let me know. I will be happy to repeat this class in the spring.

If you are interested in attending, please contact me at cardanoc@verizon.net.

Phases of the Moon

Last Quarter Moon

January 5 03:58

New Moon

January 11 19:44

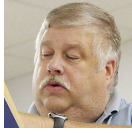
First Quarter Moon

January 18 23:45

Full Moon

January 27 04:38





Meteor Shower Prospects for 2013 and other Astronomical Highlights

Dave Huestis

I can't believe it is once again time to preview the visibility forecast for a new year of meteor showers and other astronomical events. Where has the time gone? If you are reading this column it is obvious the Doomsday 2012 scenarios passed us by so we can celebrate another year of stargazing.

While many of the meteor showers for 2012 were not spectacular, and we were clouded out locally for the transit of Venus, the skies did cooperate from time-to-time to provide some decent views of the heavens.

So what does 2013 have in store for us here in Southern New England? Let me highlight some of the major events we will have the opportunity to experience.

In 2013 there are five eclipses—two solar and three lunar. Of the two solar eclipses, the total eclipse of **November 3 will be visible for a short time as a partial eclipse at sunrise**. Some members of Skyscrapers have already been “scoping” out locations in Rhode Island from where they will get an unobstructed view of the eastern sky.

While the penumbral lunar eclipse on May 24-25 will technically be visible from our location, the Moon will just barely graze the Earth's lighter shadow and will not be noticeable. A much “deeper” penumbral lunar eclipse will occur on October 8 from about 5:48 p.m. until 9:52 p.m. EDT as the Moon slides farther into the Earth's lighter shadow. At mid-eclipse a keen observer should notice a slight darkening of a portion of the lunar surface.

In addition, Jupiter, the largest planet in the solar system, will be well placed for observing from all of the local observatories. But also, if you have even a small telescope it will easily reveal Jupiter's bands and zones and his four Galilean moons. Jupiter can be exciting to observe as these moons parade around in the equatorial plane of the planet, providing a number of events to observe, including eclipses, transits and occultations. Jupiter will remain easily visible through May.

Also, while Saturn will be observable in the early morning hours during the winter months, as we move into spring this beautiful ringed world will rise earlier and earlier. On February 7, Saturn will rise be-

fore midnight, and by April 28 magnificent Saturn will rise above the eastern horizon at sunset. It will remain visible to evening stargazers for several months.

Venus and Mercury will be visible before sunrise and after sunset at various times during 2013. During the end of May you will be able to find Jupiter, Venus and Mercury above the western horizon after sunset. In fact, **on May 26, this conjunction of planets will form a beautiful triangle contained within a three-degree circle**. That's only six Full Moon diameters. It will be a beautiful sight to the naked-eye and through binoculars.

But perhaps the most exciting event for 2013 will be the arrival of a new comet heading inbound towards the Sun from the outer reaches of our solar system. At its closest approach (perihelion) to the Sun on November 28, 2013, it will pass within approximately 750,000 miles of the solar surface. If **Comet ISON** survives this close encounter, it is predicted to be easily visible to the naked-eye before dawn and after sunset through the first couple of weeks of December. Some predictions have the comet appearing brighter than the Full Moon, and even possibly so bright it will be seen in broad daylight. But, as famed comet discoverer David H. Levy has said about comets, “Comets are like cats: they have tails, and they do precisely what they want.”

We can only hope that Mother Nature will cooperate and provide us some cloud-free skies so we can enjoy the celestial sights

noted above. But wait, there's more. I know many readers of this column love to venture outside into a clear and dark sky to watch for “burning rocks” to fall from the sky. As you may remember, 2012 was perhaps the best meteor shower observing year in some time. Can we expect the same to occur for 2013? Only time will tell.

I like to plan ahead to see what meteor showers will be seen to best advantage for the coming year. And I know many of you will be excited to know that the viewing prospects for some of the shooting star displays will benefit from favorable Moon phases.

It's always nice to welcome in the new-year with the **Quadrantid meteor shower**. Unfortunately for 2013 the peak activity will occur around 8:00 a.m. on January 3 (about an hour after sunrise) for us on the east coast. This shooting star display has a very sharp peak lasting only about two hours, so it is likely we will miss the best numbers this shower has to offer. Combine the poor timing with a bright waning gibbous Moon (almost last quarter), and I suspect observers will not count an abundance of meteors. Still, predictions can be wrong. The radiant point, the area of sky from where the meteors appear to originate, is not far from the end star (Alkaid) of the Big Dipper's handle. From midnight till dawn this area of sky will rise higher and higher above the north-east horizon, and by 4:00 a.m. it will be almost at zenith (directly overhead).

Meteor Shower Prospects for 2013

Month	Shower	Date	Moon Phase
January	Quadrantids	3-4	Waning Gibbous
April	Lyrids	21-22	Waxing Gibbous
May	Eta Aquarids	5-6	Waning Gibbous
July	Delta Aquarids	28-30	Last Quarter
July	Capricornids	29-30	Last Quarter
August	Perseids	12-13	Waxing Crescent
October	Orionids	20-21	Waning Gibbous
November	Leonids	16-17	Full Moon
December	Geminids	13-14	Waxing Gibbous

Select an observing location as far from interfering lights as possible. In addition, please dress warmly if you plan on spending more than a just a few minutes outdoors viewing the Quadrantids. If you scan the sky with the Moon to your back you will maximize your chances of seeing as many meteors as possible. The Quadrantids are often blue and frequently blaze more than halfway across the sky at 25.5 miles per second. (The night of January 3 to the early morning hours of the 4th will produce even fewer shooting stars.)

The observing prospects for the rest of the major meteor showers for 2013 are not the greatest, but also not the worse we have

seen in the past either. At least the August Perseids will peak once a waxing crescent Moon has set. As usual, all we have to do is hope for cloud-free skies so we can enjoy the shooting star displays when they occur.

Clip and save this 2013 meteor shower prospects chart and use it to plan your observing schedule for the coming year. I will highlight the specifics of each shower in my monthly columns as the peak dates approach.

Though you don't need a telescope to enjoy the beauty of a meteor shower display, the local observatories do remain open year-round to provide splendid views of the Moon, planets and other celestial

objects. These facilities are unheated, so dress warmly. Seagrave Memorial Observatory (<http://www.theskyscrapers.org>) in North Scituate is open every clear Saturday night. Ladd Observatory (<http://www.brown.edu/Departments/Physics/Ladd/>) in Providence is open every Tuesday night. Frosty Drew Observatory (<http://www.frostydrew.org/>) in Charlestown is open every clear Friday night. Snow or ice can force closures, so please check the respective websites for any cancellation notices before venturing out for a visit. Currently the winter hours for Seagrave and Ladd are 7-9 p.m., while Frosty Drew begins at 6:00 p.m. with no set end time.



Planetary Nebula in Andromeda NGC 7662: the Blue Snowball

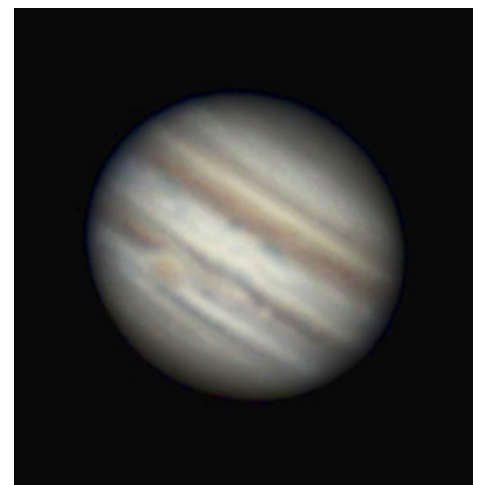
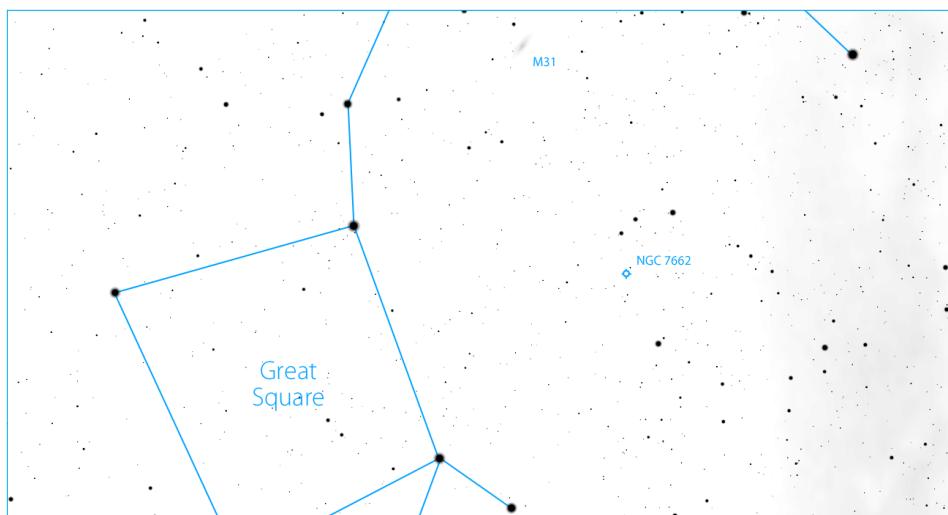
Glenn Chapple

What could be a more appropriate telescopic destination for a wintry night in January than the “Blue Snowball?” More formally known as NGC 7662, the Blue Snowball is a beautiful planetary nebula located in Andromeda. Discovered by William Herschel in 1784, it sports as the nickname implies a circular form and eye-pleasing bluish hue.

To capture NGC 7662, point your telescope towards the Y-shaped asterism known as “Frederick’s Glory” - a quartet of 4th and 5th magnitude stars in the north-west part of Andromeda (look in the upper right-hand corner of the accompanying finder chart). From iota (ι) Andromedae (the base of the Y), move 2 degrees westward until 6th magnitude 13 Andromedae is centered in the finderscope field. With

your telescope and an eyepiece that captures a chunk of sky at least a degree across and magnifies 40x to 50x, scan the surrounding area. If you spot what appears to be a tiny out-of-focus star about one-half degree to the southwest of 13 Andromedae, you’ve found NGC 7662.

An 8th magnitude object with an apparent diameter comparable to that of Saturn, the Blue Snowball can be viewed with telescopes of all sizes. I’ve glimpsed it with a 3-inch f/10 reflector and magnifying power of just 60x. Its dazzling hue and intricate detail mandate larger telescopes and magnifications exceeding 200x. Whether you own a common 60mm refractor or a huge Dob, look for the Blue Snowball on the next clear January evening.



I have a new planet imager. Someone who bought my old 16" turned me on to this company in China called ZWO Optical. From all I've been able to find, their cameras are better than the Imaging Source ones and at a fraction of the price.

These 2 Jupiter images were after some processing through my 12" SCT with only fair seeing. Both prime focus.

Steve Hubbard



Partnering to Solve Saturn's Mysteries

By Diane K. Fisher

From December 2010 through mid-summer 2011, a giant storm raged in Saturn's northern hemisphere. It was clearly visible not only to NASA's Cassini spacecraft orbiting Saturn, but also astronomers here on Earth—even those watching from their back yards. The storm came as a surprise, since it was about 10 years earlier in Saturn's seasonal cycle than expected from observations of similar storms in the past. Saturn's year is about 30 Earth years. Saturn is tilted on its axis (about 27° to Earth's 23°), causing it to have seasons as Earth does.

But even more surprising than the unseasonal storm was the related event that followed.

First, a giant bubble of very warm material broke through the clouds in the region of the now-abated storm, suddenly raising the temperature of Saturn's stratosphere over 150 °F. Accompanying this enormous

“burp” was a sudden increase in ethylene gas. It took Cassini's Composite Infrared Spectrometer instrument to detect it.

According to Dr. Scott Edgington, Deputy Project Scientist for Cassini, “Ethylene [C₂H₄] is normally present in only very low concentrations in Saturn's atmosphere and has been very difficult to detect. Although it is a transitional product of the thermochemical processes that normally occur in Saturn's atmosphere, the concentrations detected concurrent with the big ‘burp’ were 100 times what we would expect.”

So what was going on?

Chemical reaction rates vary greatly with the energy available for the process. Saturn's seasonal changes are exaggerated due to the effect of the rings acting as venetian blinds, throwing the northern hemisphere into shade during winter. So when the Sun again reaches the northern hemi-

sphere, the photochemical reactions that take place in the atmosphere can speed up quickly. If not for its rings, Saturn's seasons would vary as predictably as Earth's.

But there may be another cycle going on besides the seasonal one. Computer models are based on expected reaction rates for the temperatures and pressures in Saturn's atmosphere, explains Edgington. However, it is very difficult to validate those models here on Earth. Setting up a lab to replicate conditions on Saturn is not easy!

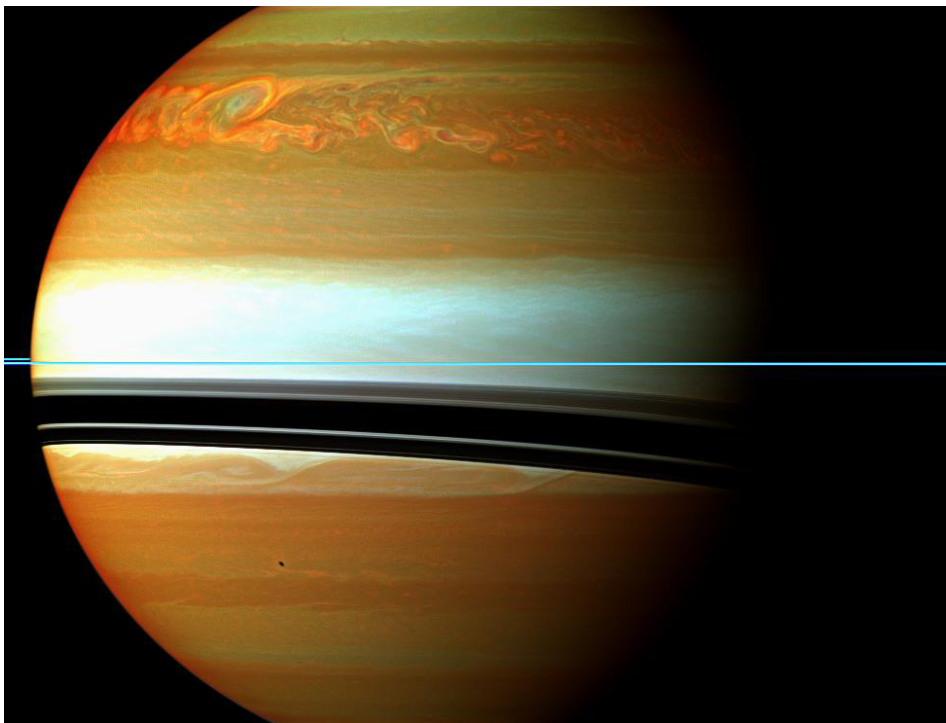
Also contributing to the apparent mystery is the fact that haze on Saturn often obscures the view of storms below. Only once in a while do storms punch through the hazes. Astronomers may have previously missed large storms, thus failing to notice any non-seasonal patterns.

As for atmospheric events that are visible to Earth-bound telescopes, Edgington is particularly grateful for non-professional astronomers. While these astronomers are free to watch a planet continuously over long periods and record their finding in photographs, Cassini and its several science instruments must be shared with other scientists. Observation time on Cassini is planned more than six months in advance, making it difficult to immediately train it on the unexpected. That's where the volunteer astronomers come in, keeping a continuous watch on the changes taking place on Saturn.

Edgington says, “Astronomy is one of those fields of study where amateurs can contribute as much as professionals.”

Go to <http://saturn.jpl.nasa.gov/> to read about the latest Cassini discoveries. For kids, The space Place has lots of ways to explore Saturn at <http://spaceplace.nasa.gov/search/cassini/>.

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



This false-colored Cassini image of Saturn was taken in near-infrared light on January 12, 2011. Red and orange show clouds deep in the atmosphere. Yellow and green are intermediate clouds. White and blue are high clouds and haze. The rings appear as a thin, blue horizontal line.

DECEMBER REPORTS



Secretary

Tom Thibault

Skyscrapers December Meeting Minutes – 12/1/12

Our Holiday Meeting began at 5:30 with a Pot Luck Dinner. As has been the tradition, our members filled the tables with a wonderful assortment of wonderful entrée's and delicious desserts. The membership sat with friends enjoyed the great food. Everyone was also treated to displays of Astrophotography fellow members had set-up for everyone's enjoyment.

President Ed Haskell, called the Skyscrapers December Members Meeting to Order at 7:10PM.

President, Ed Haskell: Ed thanked 2nd Vice President Kathy Siok for all her effort in organizing the very successful Astro-Assembly this year.

Good of the Organization: Al Hall reminded the membership of the upcoming Geminid Meteor Shower. Al noted favorable conditions have suggested the possibility of a great show.



Historian, Dave Huestis: Dave introduced our guest speaker, **Steve Cascione**, a Meteorologist for WLNE TV6. Dave noted Steve as one of his primary sources when determining the forecasted weather for upcoming events.

Long time member, **Conrad Cardano** followed with his presentation on "Low Resolution Spectroscopy with a C5 and Canon Camera.

1st Vice President, Bob Horton: Bob informed the membership that January's speaker will be **Josh Lake** on the topic of Astro Imaging and Processing. Bob requested members send him raw image data and Josh would process them for display at the upcoming meeting.

Ed Haskell closed the meeting at



Steve Cascione

8:45PM.

Submitted by Tom Thibault - Secretary

Acting Secretary's Notes from the Skyscrapers' Executive Board Meeting of December 17th, 2012.

Officer's Reports:

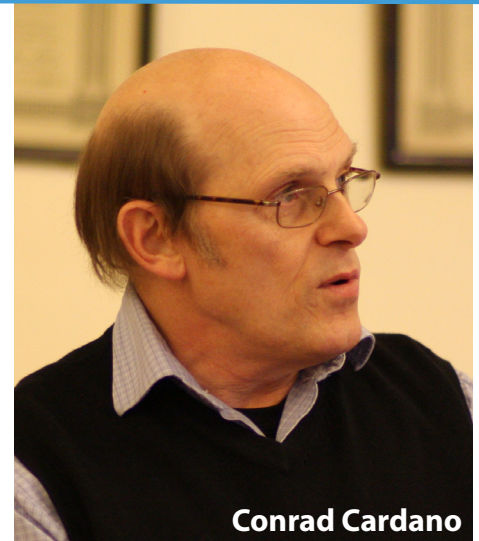
First Vice President—Bob Horton reported that Glenn Chaple has agreed to give a talk on double stars and observing them at April's meeting. Bob hopes that the same night, members will bring their scopes and optics to observe double stars and test optics. Having more observing nights is a goal for 2013, and member and non-member nights were discussed. There was also discussion about having talks geared for beginners on weekend days.

Second Vice President: Kathy Siok reported that she discussed internet access pricing with Cox Cable. No special pricing is available for non-profits like Skyscrapers. More work needs to be done to determine equipment needs.

Secretary's Report—Tom Thibault was unavailable for the meeting so none was presented.

Treasurer's Report—Lloyd Merrill reports that no increase in member dues is contemplated this year. Costs are expected to remain at present levels.

Nominating Committee—Dave Huestis reported that he had discussions with several members to gauge their interest in running for available positions. He'd like to get new members involved. Ed Haskell and Bob Horton were non-committal as whether they would run for



Conrad Cardano

re-election.

Automation Committee—Steve Siok reported that he was able to run a wire from the meeting hall to the building housing the 16" Meade, so laptops should be able to communicate between those buildings. He's talked with a vendor who will provide us with a schedule and plan for implementation of a permanent system. Some members have offered equipment to help in the process. There was also discussion about improving the mount for the Meade to an equatorial design.

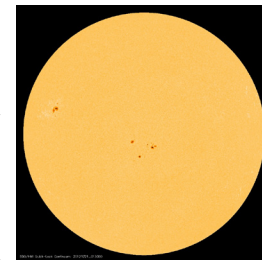
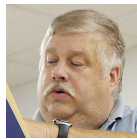
Old Business: Member's Viewing Night—Pat Landers discussed his continued interest in hosting member observing nights, most likely on Friday nights. He's hopeful to schedule one for January, and several for the warmer months. He will provide a proposed letter to the members regarding the occasion once it's scheduled.

Matters Arising from the President—a) Ed Haskell discussed his interest in crafting a **budget** for next year with significant input from fellow E-board members. b) He also discussed his belief that we need to place greater emphasis on **name tags** at monthly meetings to foster a more collegial atmosphere for newer members c) he wondered if there should be further dialogue about scaling back the number of public nights; d) that long-time member **Ken Dore** passed away e) he received a donation of an 80 mm Celestron refracting telescope which may be used as a guide scope on larger scopes.

Trustees Comments—Steve Siok reported that the mailbox at Seagrave was apparently struck by a car and is damaged. He'll look into getting it repaired.

Skyscrapers Sunspot Count Project

Dave Huestis



Treasurer

Lloyd Merrill

Cash Flow YTD December 19, 2012

Category Description 4/1/2012-12/19/2012

INFLOWS

Astro Assem	
Banquet-Registration	2,648.00
Grille	327.00
Misc	147.00
Raffle	600.00
TOTAL Astro Assem	3,722.00

Donation	
Misc Donations	903.05
Refreshment Donation	5.00
Starparty Donations	1,210.00
TOTAL Donation	2,118.05

Dues	
Family	730.00
Junior	30.00
Regular	1,300.00
Senior	620.00
TOTAL Dues	2,680.00

Misc Income	
Book Income	33.00
Interest Inc	32.24
Sale of Items	240.00
TOTAL Misc Income	305.24

TOTAL INFLOWS	8,825.29
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OUTFLOWS

Astro Assem Exp	
Caterer	960.00
Food Fri-Sat	43.19
Grille	208.08
Misc	12.95
Reception	127.24
Speaker Fee	108.00
Tent Rental	585.00
TOTAL Astro Assem Exp	2,044.46

Facilities Expense	
Electric	133.54
Insurance, Property	2,573.00
Propane	80.25
Property Maintenance Fund	445.00
Trustee Exp	888.26
TOTAL Facilities Expense	4,120.05

Misc Expenses	
Corporation, State Fee	22.00
Postage and Delivery	18.00
Refreshment Expense	221.68
TOTAL Misc Expenses	261.68

TOTAL OUTFLOWS	6,426.19
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OVERALL TOTAL	2,399.10
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Account Balances - As of 12/18/2012

Bank Accounts	
Capital One Bank	12,289.29
Checking	10,091.92
PayPal Account	0.00
TOTAL Bank Accounts	22,381.21

We will officially begin the **Skyscrapers Sunspot Count Project on January 1, 2013**. However, if you like you can begin immediately to practice what you learned during our workshop. Simply follow the procedure outlined below. If you begin immediately you can send me your counts at any time. As of January 1 you must conform to the directions which follow.

Here's how the project will proceed.

1) While each member could visit the web site each day (images are taken regularly) to conduct a sunspot count, there is an easier alternative. On a weekly basis visit this web site: http://sohodata.nascom.nasa.gov/cgi-bin/data_query.

Under **Image Type** highlight **HMI Continuum**.

Under **Resolution** select **1024**.

Under **Display** check off **List**.

Supply **start and end dates** in the required format. Click **Search**.

This will bring up a list of images by date and time (ex. 2012101 0100). I want each member to select the image taken at **1500 hours** for each of the days in the weekly period. (That way I can more easily compare each member's effectiveness in determining how many groups and how many spots are present.)

If there is no image for 1500 hours, select the next available time. Once the image is selected from the list it will display

a white light image (with yellow/orange filter) of the Sun. Bring your cursor to the solar image and left click.

A more detailed image will appear. You will use this image to conduct a daily sunspot count and record the data on a spreadsheet I will provide. (Be careful about dust specs - hint, they will not rotate with the spots). Please keep your data archived should we need to retrieve it in the future.

2) On a weekly basis, **by noon each Tuesday, each member will email me their spreadsheet**. The data will be collected from Tuesday to Monday. So technically, your first email to me will not be until Tuesday, January 8 at noon, and will include January 1 - 7 counts. Note: If you have your last count for the week early (1500 UTC is 10:00 am EST) then please send it along. When emailing me your spreadsheet you must **name it "your last name and the Monday "week-ending date", ie Huestis20130107**.

Please submit your weekly counts by the deadline so I can process the data and include everyone's results in the graphed data that I will send out to every contributor.

I will save and graph everyone's sunspot counts with mine, and will provide each contributor the results of everyone's counts.



AWARDS & RECOGNITIONS



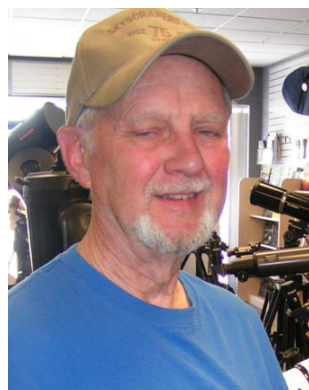
Hello Astro Friends,

I am pleased to inform you that at the 101st Meeting of the AAVSO on November 3rd, I was awarded the 43rd Merit Award for astronomical observations and service to that organization since 1978. I have attached photos.

Gerry



Frosty Drew Person of the Year
Francine Jackson, Frosty Drew Observatory Director, leads dedicated astronomers at the observatory. She has traveled throughout the state to show *The City Dark*, brought Moon rocks and meteorites to Frosty Drew and to schools, traveled to schools and libraries to talk to children and adults about astronomy, and more!



Ken Dore
 passed away on
 December 7

While I have spent many days on the road in different places with Ken in the pursuit of all things astronomical, I would like to chime in here and wish him well on his journey!

Love you Ken!!! Travel well my friend and until we meet again ...

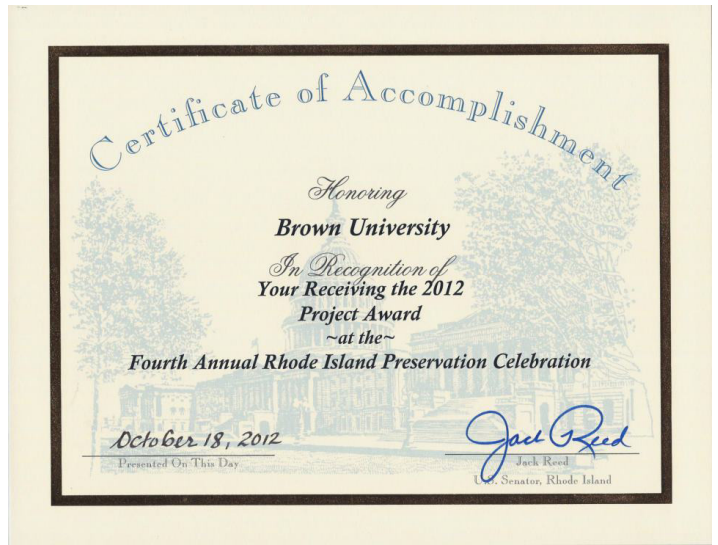
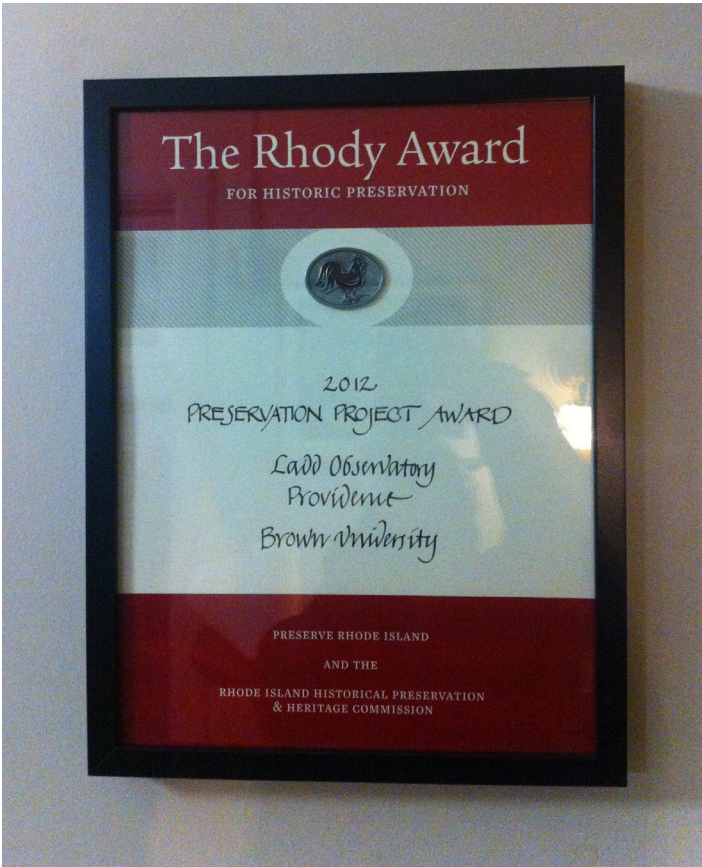
~ Dan

As the eternal optimist, Ken truly touched everyone's life that knew him.

~ Roger

A very sweet man.

~ Ted



On October 18, **Ladd Observatory** receives a **Rhody Award** from **Preserve Rhode Island** and the **Rhode Island Historical Preservation and Heritage Commission** at the 2012 Preservation Celebration. "Project Award to Brown University in Providence for restoring the historic Transit Room at Ladd Observatory (1890-91) and for making the facility available to both academic researchers and amateur star-gazers." — with Francine Jackson, Dave Targan, and Mike Unbricht at Rosecliff.



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.
- or • 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