SKYSCRAPERS

the Skyscraper

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

In This Issue:

Skyscrapers Board Meetings

Third Monday of the Month
All Members Welcome

Phases of the Moon

Full Sturgeon Moon
August 7 18:11

Last Quarter Moon
August 15 01:15

New Moon
August 21 18:30

First Quarter Moon
August 29 08:13

Friday, August 4 at Seagrave Observatory

Gravitational Waves Found!

A billion years ago, two black holes collided and merged, sending powerful ripples across the fabric of space-time. In 2015 those gravitational waves reached Earth and tickled the detectors of the Laser Interferometer Gravitational-Wave Observatory (LIGO). This first-ever detection of gravitational waves confirmed a long-standing prediction of Einstein's general relativity. It also was the culmination of a decades-long effort." This talk is given by Dr. Rainer Weiss, one of the co-founders of LIGO. He will speak about the challenges of LIGO and of the implications of this momentous discovery.

Dr. Rainer Weiss is Professor of Physics, emeritus at MIT and co-founder of the Laser Interferometer Gravitational-Wave Observatory.

Partial Solar Eclipse at Seagrave Observatory Monday, August 21, 2017 1-4pm

(rain date, April 8, 2024)

Jeff Padell will be leading our local solar eclipse star party at Seagrave Observatory on Monday afternoon 1-4pm with white light and hydrogen-alpha-filtered solar telescopes. For more information, contact Jeff at jeffpadell@gmail.com.

Astronomy Nights at River Bend Farm

Joshua Bell is one of the rangers at Blackstone River Valley National Historical Park and contacted us suggesting that Skyscrapers might be interested in attending the upcoming Night Sky Programs to be held at River Bend Farm.

The park has partnered with local Civil Air Patrol Squadrons to run the program. They'll be explaining basic stuff to visitors like how telescopes work and what it is that they'll be looking at. They'll have some beginner telescopes, but folks should feel free to bring their own. The following dates are scheduled: June 16 — 9:00-10:00pm • July 14 — 9:00-10:00pm • **August 11 - 8:30-9:30pm • September 15 - 7:30-8:30pm • October 20 - 6:30-7:30pm**

If we have poor weather an email will be sent out that day to let you know that the program has been postponed until the next evening (Saturday). If both days give us bad weather, we'll just have to wait until the following month.

Please don't hesitate to contact Josh with any questions at joshua_bell@nps.gov

Let's Go "Back to the Moon for Good" at the URI Planetarium

University of Rhode Island Planetarium
Upper College Road
Kingston, RI
Saturday, August 12th, 2017
6:00 P.M.
Contact: Francine Jackson: 401-527-5558

It's been over 48 years since humans have walked on the Moon. But, are there plans to go back? Should we? Could we? How could this happen? Please join the URI Planetarium as plays this award-winning show about the possibility of returning to our one and only natural satellite. "Back to the Moon for Good" will be shown Saturday, August 12th, at 6:00 P.M. In addition, a short program on Light Pollution will be shown, then The Skies of the URI campus, a live introduction to the night sky.

Admission is only $5.00, to benefit the University of Rhode Island Planetarium Fund.

The University of Rhode Island Planetarium is located on Upper College Road, on the Kingston campus, across from the Art Center.

The University of Rhode Island Planetarium is available for programming for schools and other organizations. For more information, please contact Francine Jackson at 401-527-5558.

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

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 **August 15** 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.

Library Telescope Program is "Off the Ground"

by Linda Bergemann

Back in January, Skyscrapers' President Steve Siok challenged us to get a Library Telescope Program "off the ground in Rhode Island." At a weak moment during the February Board of Directors meeting, I accepted his challenge and embarked on an exciting adventure.

I proposed a pilot program working with three libraries within Rhode Island. Steve and Kathy Siok donated the funds to purchase and modify telescopes for North Kingstown Free Library and East Greenwich Free Library. I donated funds for a telescope for Cross' Mills Public Library in Charlestown.

With funding in hand, I got started. I spoke with John Root, of the Aldrich Astronomical Society about their program. I corresponded with Pete Smith, of the New Hampshire Astronomical Society, about the origins of the Library Telescope Program, and the details of the modifications made to the telescope to make it more durable and user-friendly. I ended up working closely with Ron Thompson of Southern Maine Astronomers and purchased three Orion StarBlast 4.5" telescopes from Cornerstones of Science of Brunswick, ME.

Then, I proceeded to modify the telescopes. Each telescope got a zoom eyepiece, and the thumbscrews holding it in the focuser were replaced by socket head screws to make tampering more difficult. Thumbscrews for collimating the primary mirror were removed and replaced. The button-battery for the finder scope was replaced with a AA battery pack. Lanyards were added to the dust covers. Safety and informational decals were applied. And, a bag was attached to each scope to stow the instruction manual, a constellation guide and a red light headlamp. The total cost of each modified telescope package came to around $350.

I am happy to report that Steve Siok and I delivered the first telescope to North Kingstown Free Library in early July. The second telescope was delivered to East Greenwich Free Library a week later. The enthusiasm by the staff of both libraries was exhilarating. The third telescope is ready and will go to Cross' Mills Public Library in early August. Steve will work with the library staff at North Kingstown and East Greenwich to care for and promote the library telescope. I will do likewise for Cross' Mills. So, I think it's safe to say that we are "off the ground." But, there is more to do; we now have to "fly the plane."

Update: Just as we were preparing for delivery of the second telescope, I was contacted by Coventry Public Library about two telescopes they had just purchased. Having heard Francine Jackson speak about the Library Telescope Program at a RI Library Association conference, they were aware of modifications being made to the telescopes. Immediately following our meeting with East Greenwich, I met with the librarian in Coventry about modifying their telescopes. We agreed that the library would purchase the materials needed to modify and outfit the telescopes (at a cost of about $150 per scope), and Skyscrapers will provide the necessary consumable materials and modify the telescopes as a donation to the library. One telescope will reside at Coventry Public Library on Flat River Road and the other at Greene Public Library on Hopkins Hollow Road. If you would like to be the mentor for one or both of these telescopes, please contact me.

Steve Siok with staff of North Kingstown Free Library

Three modified telescopes ready to go

Perseid Meteor Shower: "Meteor-ocre" Display for 2017

by Dave Huestis

While the premiere event during August is the Great American Total Solar Eclipse on August 21, we shouldn't neglect the most widely observed meteor shower of the year. I'm talking about the Perseids. Under favorable observing conditions 60-120 shooting stars can be observed.

Unfortunately this year a bright waning gibbous Moon will rise around 10:41 p.m. EDT, and it will be less than 50 degrees from the shower's radiant point in Perseus in the constellation of Pisces. It will be in the sky during the entire nighttime hours, so it will blot out all but the brightest meteors.

Normally 60+ Perseids can be observed per hour, but with bright interference from the Moon I suspect perhaps half that number will be visible. Fortunately this shower produces a few brilliant meteors called fireballs that blaze across the sky. The Persieds are also a colorful display, producing shooting stars that are usually green, red or orange.

Usually the best time to observe the Perseids is after midnight, but with the bright Moon you can start as soon as it gets dark on the evening of the 12th. To locate the radiant point in Perseus first find a pattern of stars in the northeast sky that looks like a sideways "M" or "W" (that's Cassiopeia), Perseus is below it so you're looking in the correct direction.

The Perseids are about the size of a thumb nail as they plunge into our atmosphere at 134,222 miles per hour (37 miles per second) and disintegrate.

Good luck and keep your eyes to the skies.

Dave Huestis is Skyscrapers Historian and has been contributing monthly columns to local newspapers for nearly 40 years. See more at http://theskyscrapers.org/dave-huestis

Voyages to the Stars

by Francine Jackson

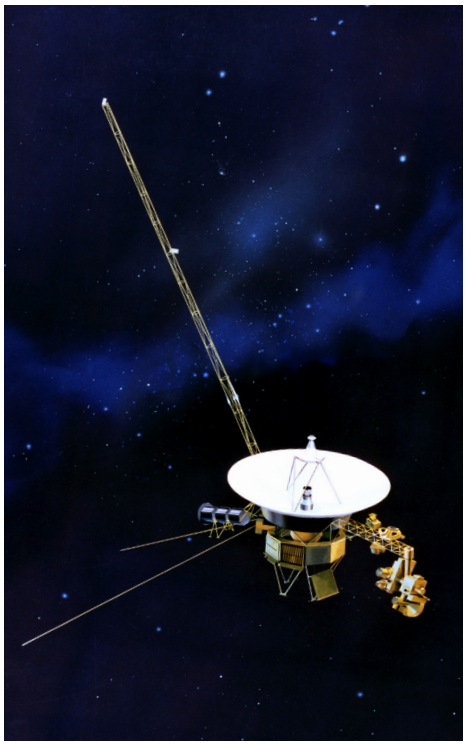
Many of us are traveling south and/or westward this month to view a beautiful part of Nature that only we on Earth are able to observe. The total solar eclipse is causing a real exodus from places where the eclipse won't be totally visible, making some of us travel thousands of miles from home. However, in the scheme of things, our voyages from one part of the country to another are virtually infinitesimal compared to several of our workhorse craft, some of which have been away from home for decades. Thanks to a recent notation in Astronomy Magazine, we have a location and apparent destination for our five outward bound machines.

Pioneers 10 and 11, although not being the farthest, were the first to venture outward, through the asteroid belt in an attempt to determine whether it was actually possible to safely send spacecraft to our gas (and ice) giant planets. Launched March 3, 1972 and April 6, 1973, respectively, their goals – should they not be destroyed beforehand – were to take the first up-close and personal images of Jupiter and Saturn. And these in essence, "tin cans" delivered beautifully. They proved the asteroid belt wasn't a stone wall of objects, but a region of mainly empty space, easy for a craft to travel through. Pioneer 10 is about 115 Earth distances (astronomical units) from us, on its way to Taurus's flaming eyeball, Aldebaran, in a couple million years. Pioneer 11, the slowpoke of the two, is only about 96 astronomical units away, and will eventually, four million years from now, be close to Lambda Aquilae, 125 light years from us.

The "jewels" of the outward bound fleet are the Voyagers, 1 and 2. They had to wait to leave us until the Pioneers determined the trip would be safe for them, but, when that reassurance came, the two left for the outer planets. Voyager 2 lifted off first, on August 20, 1977, because its sister craft, Voyager 1, would reach their first goal, Jupiter, first. It left September 5, 1977. After successful missions, to Jupiter and Saturn, with Voyager 2 continuing to Uranus and Neptune, they both are traveling faster than the Pioneers: Voyager 1 is 138 Astronomical units from us, moving toward the star Gliese 445, in Camelopardalis, for rendezvous in 40,000 years, while Voyager 2, moving a tad more slowly, is only 117 Earth distances away, on its way to Ross 248 in Andromeda in 40,000 years.

Finally, we have the newest member of the group, New Horizons, which just two years ago made a quick trip to Pluto, leaving us all open-mouthed in wonder at this incredible tiny world. Although it took almost 10 years to reach its first destination, having launched January 19, 2006, New Horizons is at present just under 38 astronomical distances from us, and is now on its way to another member of this part of our solar system – the Kuiper Belt – KBO 2014 MU69 within the next couple years, after which, it, too, will leave us behind, one of a band of spacecraft going where it appears we humans may never go to, at least in any of our lifetimes.

Francine Jackson is Skyscrapers Public Relations Spokesperson, writes the weekly newsletter for Ladd Observatory and serves as planetarian at the University of Rhode Island. See more at http://theskyscrapers.org/francine-jackson



Star Cloud in Sagittarius & Open Cluster

M24 & NGC 6603

by Glenn Chaple for LVAS

M24 – Star Cloud in Sagittarius (Mag. 4.6 (2.5, according to Stephen O'Meara); Size 1 X 2 degrees)
NGC 6603 – Open Cluster in the Sagittarius Star Cloud (Mag. 11.1; Diam. 4')

M24 is one of the more easily-seen Messier objects – at least from regions where skies are dark enough to afford a clear view of the Milky Way. Why, then, was it such a stern challenge when I first set out to observe all of the Messier Catalog objects back in the 1970s? The answer lay in identity confusion.

The object Messier cataloged is a 1 by 2 degree patch of the Milky Way. In his description, he clearly refers to it as a "large nebula in which there are many stars of different magnitudes." However, M24 is sometimes connected with the embedded open cluster NGC 6603, described in the New General Catalog as "very rich and very much compressed; diam 4'; about 50 stars mags 14…" Messier could not have seen this tiny 11th magnitude open cluster with the instruments he used in the 18th century. Nevertheless, I decided not to notch M24 until I had seen NGC 6603.

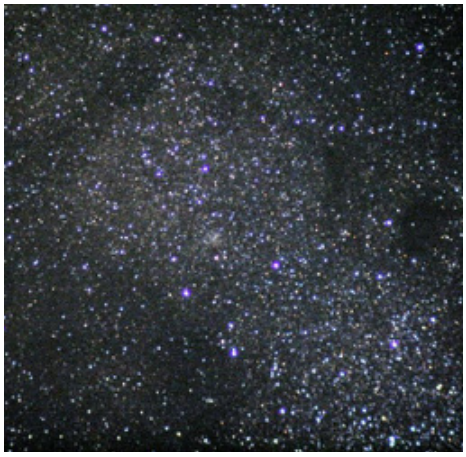
On the evening of July 28, 1978, I made it official by observing M24 with 7X50 binoculars and then NGC 6603 with my 3-inch f/10 reflector and a magnifying power of 60X. Through the binoculars, M24 appeared as a "Large, oval patch of light, studded with a handful of bright stars." Through the telescope, NGC 6603 was "Incredibly faint, but a persistent averted vision haze."

On the LVAS website (www.lvastronomy.com) the August Observer's Challenge is listed as "M24 – Star cloud in Sagittarius." I'm going to take the liberty of re-defining the Challenge as "NGC 6603, Open Cluster in M24 (Sagittarius Star Cloud)."

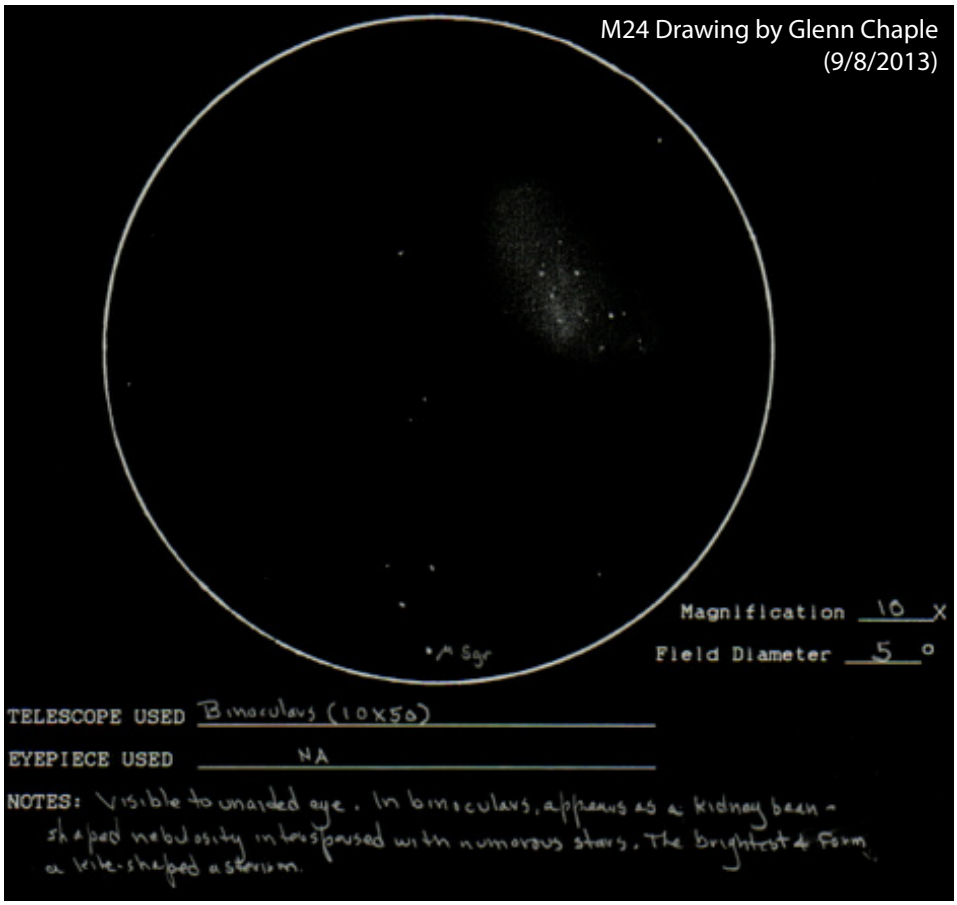
M24 was discovered by Charles Messier on June 20, 1764; NGC 6603 fell to William Herschel's son, John, on July 15, 1830. If we accept a published distance of 9400 light years, NGC 6603 is 14 light years in diameter.

The purpose of the LVAS Observer's Challenge is to encourage the pursuit of visual observing. It is open to everyone that is interested, and if you are able to contribute notes, drawings, or photographs, the LVAS will be happy to include them in our monthly summary. If you would like to contribute material, submit your observing notes, sketches, and/or images to either Roger Ivester (rogerivester@me.com) or Fred Rayworth (queex@embarqmail.com). To find out more about the LVAS Observer's Challenge or access past reports, log on to lvastronomy.com/observing-challenge.

ESA/Hubble (ground-based image) M24 is at top left



M24 and NGC 6603 (center) Image by Christ Steverson of the St. John's Centre of the RASC



July Reports

Report of the July 2017 Meeting

• Steve Siok started the meeting at 7:30pm and asked for anyone at our meeting for the first time to identify themselves and give us a little information about how they found us, what their interests might be and such.

• Trustees report: The trustees reported that the stand of trees by the wall separating the courtyard from the parking lot was removed. We now have much better access to views of the southern skies. There is a split rail fence along our driveway and our neighbor's property now.

Astroassembly report: Kathy Siok provided a general outline of the progress so far. The event will be on October 14 this year, the evening banquet will be at a senior center instead of the Scituate Community center. Mrs. Siok graciously allowed Mr. Siok to provide an outline of the speakers lined up for the event. It was suggested that anyone who went to see the Solar Eclipse on August 21 wear a T shirt or other identifier of where they were at Astroassembly for a group photo. There will still be an astro bakeoff and an astro photo contest. Having the attendees judge the photos last year worked well and will be repeated this year.

Outreach report: Francine Jackson and Jim Hendrickson reported on star parties that members can attend for the next few months at River Bend Farm in Uxbridge Ma.

Library Telescopes: Linda Bergemann reported that 3 telescopes have been given to local libraries. They have been provided with star charts and instructions.

Upcoming meetings: Ian Dell'Antonio reported that our August meeting will feature Ray Weiss, creator of the LIGO gravity wave experiment. September meetings will feature members reports from the recent eclipse. There are 2 possible speakers for November, but neither has been fully confirmed as of yet.

Skyscraper Solar Eclipse: For anyone staying in RI for the eclipse, member Jeff Padell is spearheading our efforts to view the eclipse here. Mid eclipse will be in mid afternoon.

The meeting adjourned with member Tracy Prell introducing our speaker, Pranvera Hyseni

Respectfully submitted: Your humble society secretary, Steve Hubbard

July Meeting of Skyscrapers Board of Directors

Monday July 17, 2017 @ 7:00PM at Seagrave Observatory

Present: Ian, Jeff, Jim Hendrickson, Francine, Conrad, Bob Horton, Tracey and Steve Siok

Steve explained that the main topic of the meeting was to address plans for a public event to view the partial eclipse from Seagrave Observatory on August 21st.

Ian shared the timing of the eclipse. Totality begins in Oregon at 10:15 PDT (1:15 EDT) and ends in South Carolina at 2:45 PM EDT. Totality lasts 1 hr and 30 minutes in the contiguous USA and that we should plan to have web feeds available during this time. Maximum partial eclipse at Seagrave is at 2:30 EDT.

It was agreed that: we should be open to the public from 1 - 4 PM and volunteers are expected to arrive at 12 noon. Skyscraper will be open even if the conditions are cloudy.

Jeff summarized the current roster of volunteers: Jeff Padell and his son, Jim Crawford, Bob Janus, Conrad Cardano, Tracy and probably Linda Bergemann.

Number of Scopes available: 3 H-alpha, 2 white light and a sun spotter (borrowed from Brown U)

Only as many scopes will be set up as there are active volunteers. No scope will be left unattended.

Live feed will be shown in the meeting hall. Jim Crawford will make arrangements. Jeff and COnrad will provide posters explaining the eclipse.

Volunteers will be needed to: 1 - Greet visitors and pass out viewing glasses and membership fliers 2 - Parking attendant.

Advertising for volunteers from Skyscrapers will be through the membership email list by Steve Hubbard.

Public Advertising: 1-Jim H will write a notice for the Skyscraper website.

2 - Jim and Tracy will create and post notices on Facebook and Twitter

3 - Kathy will send a notice to the Providence Journal

4 - Francine will notify the satellite newspapers

5 - Jim H will notify the TV newsrooms and weather people (Ch 10 and 12)

In preparation for the event, trustees are asked to repaint parking lines on the grass.

Handicapped parking will be available inside the inner wall, depending on where the telescopes are placed.

Pranvera Hyseni

Twenty Years Ago on Mars…

By Linda Hermans-Killiam

On July 4, 1997, NASA's Mars Pathfinder landed on the surface of Mars. It landed in an ancient flood plain that is now dry and covered with rocks. Pathfinder's mission was to study the Martian climate, atmosphere and geology. At the same time, the mission was also testing lots of new technologies.

For example, the Pathfinder mission tried a brand-new way of landing on Mars. After speeding into the Martian atmosphere, Pathfinder used a parachute to slow down and drift toward the surface of the Red Planet. Before landing, Pathfinder inflated huge airbags around itself. The spacecraft released its parachute and dropped to the ground, bouncing on its airbags about 15 times. After Pathfinder came to a stop, the airbags deflated.

Before Pathfinder, spacecraft had to use lots of fuel to slow down for a safe landing on another planet. Pathfinder's airbags allowed engineers to use and store less fuel for the landing. This made the mission less expensive. After seeing the successful Pathfinder landing, future missions used this airbag technique, too!

Pathfinder had two parts: a lander that stayed in one place, and a wheeled rover that could move around. The Pathfinder lander had special instruments to study Martian weather. These instruments measured air temperature, pressure and winds. The measurements helped us better understand the climate of Mars.

The lander also had a camera for taking images of the Martian landscape. The lander sent back more than 16,000 pictures of Mars. Its last signal was sent to Earth on Sept. 27, 1997. The Pathfinder lander was renamed the Carl Sagan Memorial Station. Carl Sagan was a well-known astronomer and science educator.

Pathfinder also carried the very first rover to Mars. This remotely-controlled rover was about the size of a microwave oven and was called Sojourner. It was named to honor Sojourner Truth, who fought for African-American and women's rights. Two days after Pathfinder landed, Sojourner rolled onto the surface of Mars. Sojourner gathered data on Martian rocks and soil. The rover also carried cameras. In the three months that Sojourner operated on Mars, the rover took more than 550 photos!

Pathfinder helped us learn how to better design missions to Mars. It gave us valuable new information on the Martian climate and surface. Together, these things helped lay the groundwork for future missions to Mars.

Learn more about the Sojourner rover at the NASA Space Place: https://spaceplace.nasa.gov/mars-sojourner

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This article is provided by NASA Space Place. With articles, activities, crafts, games, and lesson plans, NASA Space Place encourages everyone to get excited about science and technology. Visit spaceplace.nasa.gov to explore space and Earth science!

The Mars Pathfinder lander took this photo of its small rover, called Sojourner. Here, Sojourner is investigating a rock on Mars. Image credit: NASA/JPL-Caltech

The Sun, Moon & Planets in August

This table contains the ephemeris of the objects in the Solar System for each Saturday night in August 2017. All times are in Eastern Daylight (UTC-4). Ephemeris times are for Seagrave Observatory (41.845N, 71.590W).

Object	Date	RA	Dec	Const	Mag	Size	Elong	Phase(%)	Dist(S)	Dist(E)	Rise	Transit	Set
Sun	**5**	9 01.0	16 58.2	Cnc	-26.8	1892.0	-	-	-	1.01	05:44	12:52	19:58
	12	9 27.6	14 58.3	Leo	-26.8	1894.0	-	-	-	1.01	05:51	12:51	19:50
	19	9 53.8	12 46.5	Leo	-26.8	1896.3	-	-	-	1.01	05:58	12:49	19:40
	26	10 19.6	10 24.9	Leo	-26.8	1899.1	-	-	-	1.01	06:05	12:48	19:29
Moon	**5**	18 51.3	-20 06.6	Sgr	-12.5	1792.1	149° E	93	-	-	18:36	23:35	04:36
	12	0 46.5	-0 02.9	Cet	-12.4	1874.1	129° W	82	-	-	22:08	04:24	10:48
	19	7 19.6	18 13.8	Gem	-10.3	1947.3	37° W	10	-	-	03:25	10:52	18:16
	26	13 38.4	-6 08.8	Vir	-10.8	1839.1	53° E	20	-	-	11:06	16:47	22:22
Mercury	**5**	10 38.7	5 56.5	Sex	0.7	8.6	26° E	37	0.47	0.79	08:05	14:28	20:50
	12	10 46.3	3 43.8	Sex	1.2	9.7	22° E	24	0.45	0.70	07:52	14:07	20:21
	19	10 39.2	3 31.1	Sex	2.2	10.7	15° E	10	0.43	0.63	07:16	13:30	19:45
	26	10 19.3	5 46.2	Sex	3.8	10.9	5° E	1	0.39	0.62	06:20	12:43	19:06
Venus	**5**	6 21.8	21 58.1	Gem	-3.9	14.4	38° W	76	0.72	1.17	02:45	10:13	17:42
	12	6 57.1	21 47.1	Gem	-3.9	13.9	36° W	78	0.72	1.22	02:53	10:21	17:49
	19	7 32.4	21 07.0	Gem	-3.9	13.4	35° W	80	0.72	1.27	03:04	10:29	17:53
	26	8 07.6	19 57.9	Cnc	-3.9	12.9	33° W	82	0.72	1.31	03:17	10:36	17:55
Mars	**5**	8 50.9	18 49.7	Cnc	1.7	3.5	3° W	100	1.65	2.66	05:27	12:41	19:54
	12	9 09.0	17 34.9	Cnc	1.7	3.5	5° W	100	1.65	2.66	05:23	12:31	19:39
	19	9 26.9	16 14.4	Leo	1.7	3.5	7° W	100	1.65	2.65	05:19	12:22	19:24
	26	9 44.4	14 48.9	Leo	1.8	3.5	10° W	100	1.66	2.64	05:14	12:12	19:08
1 Ceres	**5**	6 46.8	24 12.4	Gem	8.9	0.4	32° W	99	2.66	3.47	02:59	10:36	18:14
	12	6 59.4	24 11.5	Gem	8.9	0.4	36° W	99	2.66	3.41	02:44	10:21	17:59
	19	7 11.8	24 07.8	Gem	8.9	0.4	40° W	98	2.65	3.35	02:29	10:06	17:44
	26	7 24.0	24 01.6	Gem	8.9	0.4	44° W	98	2.65	3.28	02:14	09:51	17:28
Jupiter	**5**	13 06.5	-5 48.3	Vir	-1.7	33.9	65° E	99	5.45	5.80	11:13	16:54	22:36
	12	13 10.4	-6 13.3	Vir	-1.7	33.3	59° E	99	5.45	5.90	10:51	16:31	22:10
	19	13 14.5	-6 39.9	Vir	-1.6	32.8	54° E	99	5.45	5.99	10:29	16:07	21:45
	26	13 19.0	-7 08.0	Vir	-1.6	32.4	48° E	100	5.45	6.07	10:08	15:44	21:21
Saturn	**5**	17 23.4	-21 55.5	Oph	0.3	17.6	129° E	100	10.06	9.39	16:32	21:10	01:48
	12	17 22.6	-21 56.1	Oph	0.3	17.5	122° E	100	10.06	9.49	16:04	20:42	01:20
	19	17 22.1	-21 56.9	Oph	0.3	17.3	115° E	100	10.06	9.59	15:36	20:14	00:52
	26	17 22.0	-21 58.1	Oph	0.4	17.1	108° E	100	10.06	9.70	15:08	19:46	00:24
Uranus	**5**	1 46.9	10 24.1	Psc	5.8	3.6	104° W	100	19.92	19.64	22:56	05:36	12:16
	12	1 46.8	10 23.3	Psc	5.8	3.6	111° W	100	19.92	19.53	22:29	05:09	11:48
	19	1 46.5	10 21.7	Psc	5.8	3.6	118° W	100	19.92	19.42	22:01	04:41	11:20
	26	1 46.1	10 19.2	Psc	5.7	3.6	125° W	100	19.92	19.32	21:33	04:13	10:52
Neptune	**5**	23 01.2	-7 17.0	Aqr	7.8	2.3	149° W	100	29.95	29.07	21:15	02:51	08:27
	12	23 00.6	-7 21.0	Aqr	7.8	2.4	156° W	100	29.95	29.02	20:47	02:23	07:58
	19	22 59.9	-7 25.2	Aqr	7.8	2.4	163° W	100	29.95	28.98	20:19	01:55	07:30
	26	22 59.3	-7 29.6	Aqr	7.8	2.4	170° W	100	29.95	28.95	19:47	01:22	06:57
Pluto	**5**	19 15.5	-21 34.4	Sgr	14.2	0.3	155° E	100	33.38	32.46	18:22	23:02	03:42
	12	19 14.9	-21 36.2	Sgr	14.2	0.3	148° E	100	33.39	32.52	17:54	22:34	03:13
	19	19 14.4	-21 38.0	Sgr	14.2	0.3	141° E	100	33.39	32.60	17:26	22:06	02:45
	26	19 13.9	-21 39.7	Sgr	14.2	0.3	134° E	100	33.39	32.68	16:58	21:38	02:17

Star Party Update
& Recent Happenings at Seagrve Observatory

June 10

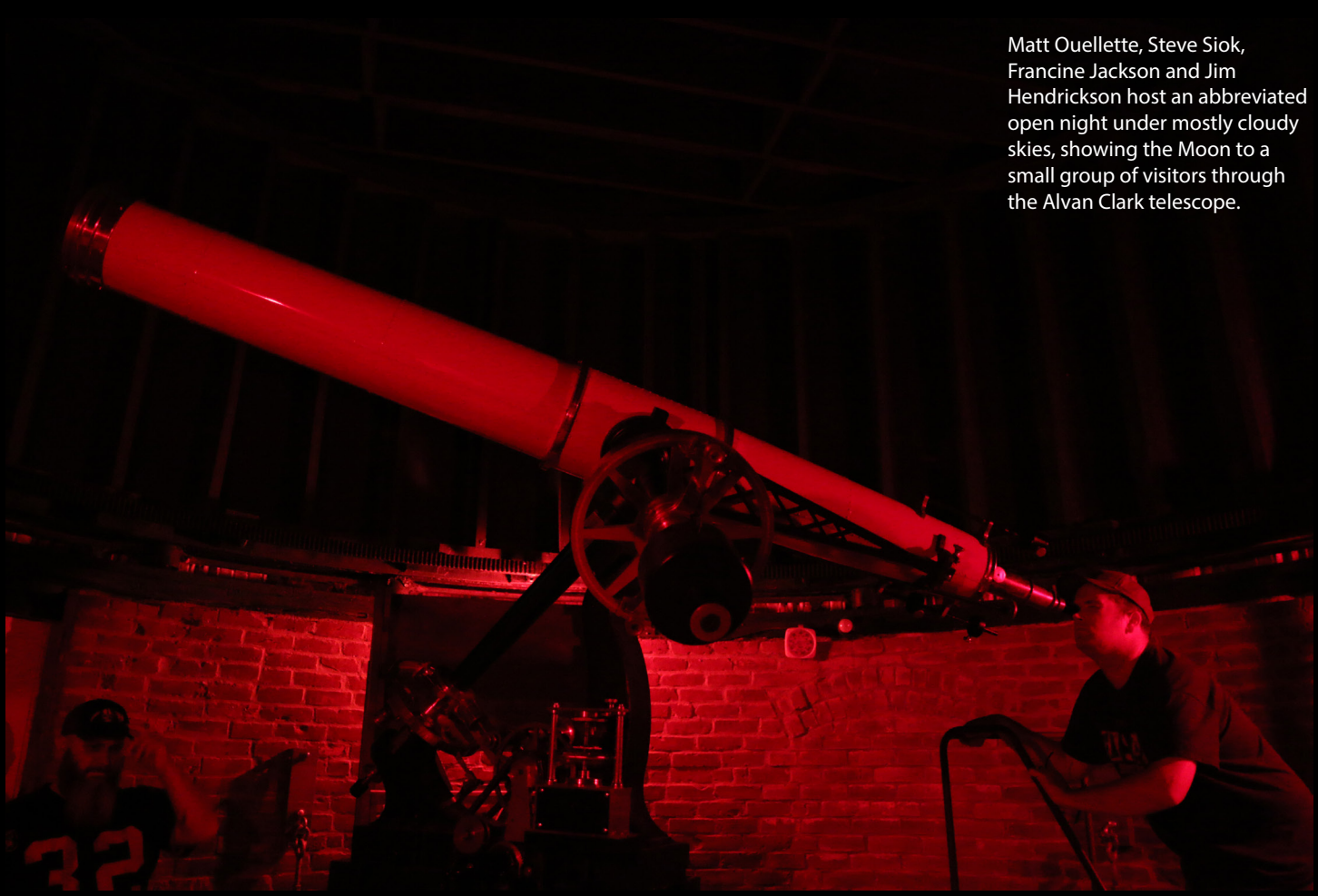
Matt Ouellette, Matt White, Steve Siok, Francine Jackson and Jim Hendrickson showed about a dozen visitors views of Jupiter, Saturn and the Moon.

June 21

Kent & Connie Cameron, Francine Jackson, Jim Hendrickson and Alan Spencer provide views of Jupiter and double stars through partly cloudy skies at the Rooftop at Providence G on the solstice. Afterwards, we were treated with fresh wood-fired pizza and drinks!

July 8

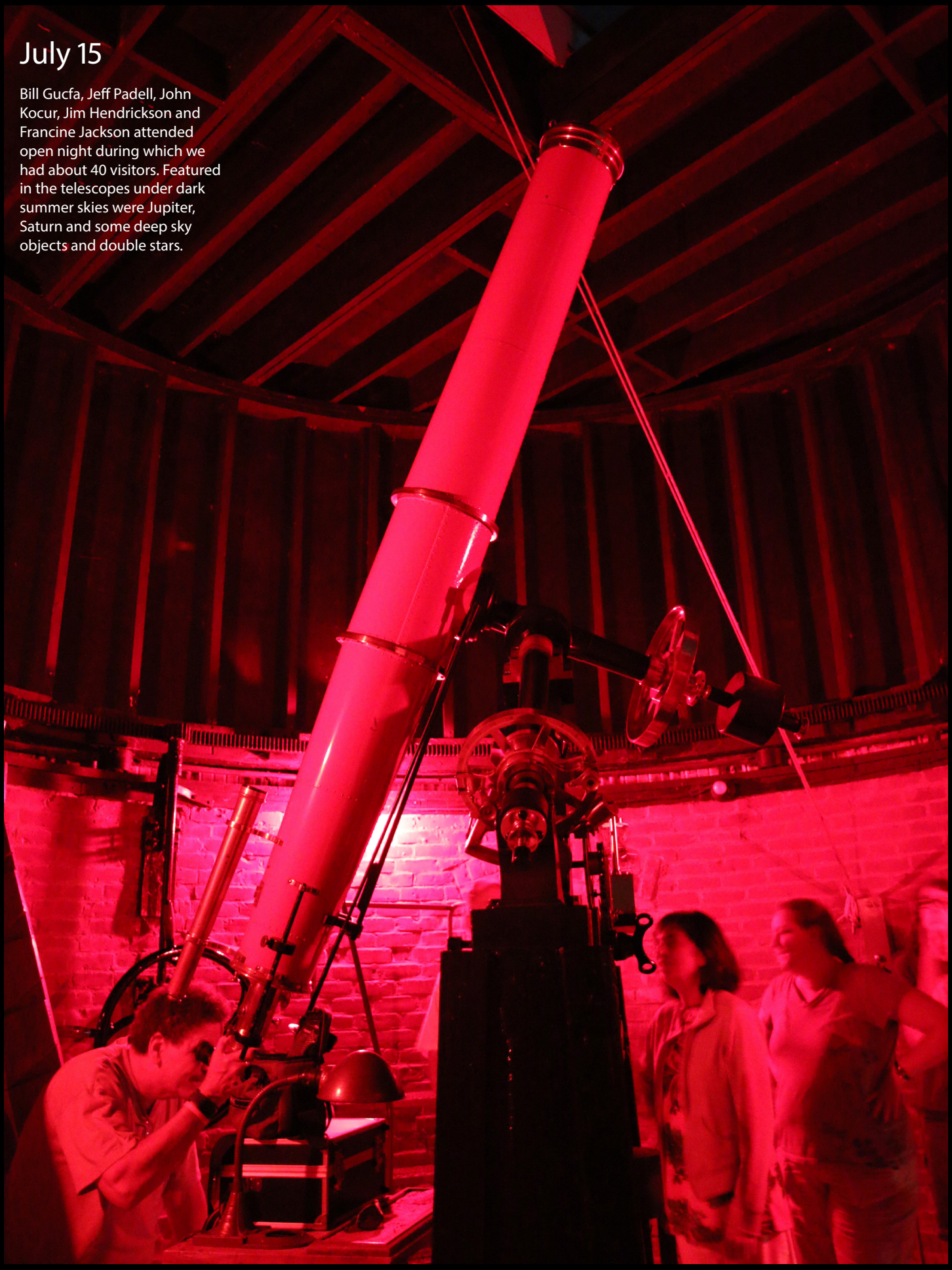
Margaret M. Jacoby Observatory open house 2017: Francine Jackson and Jim Hendrickson visit CCRI in Warwick to meet with John Owens on a hot, sunny Saturday afternoon. Some solar observing is done through a C8 set up outside of the observatory dome.



Matt Ouellette, Steve Siok, Francine Jackson and Jim Hendrickson host an abbreviated open night under mostly cloudy skies, showing the Moon to a small group of visitors through the Alvan Clark telescope.

July 15

Bill Gucfa, Jeff Padell, John Kocur, Jim Hendrickson and Francine Jackson attended open night during which we had about 40 visitors. Featured in the telescopes under dark summer skies were Jupiter, Saturn and some deep sky objects and double stars.

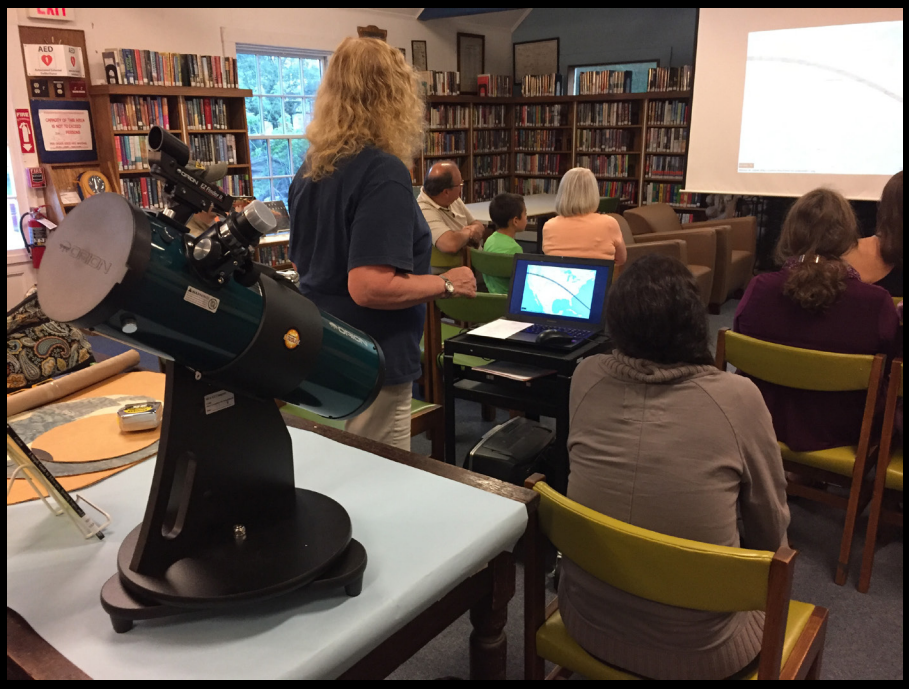


July 19

On Wednesday, July 19, the eve of the 2017 Stellafane Convention, Bob Horton brought his newly completed 6" f/6.5 Newtonian telescope to Seagrave Observatory to collimate and evaluate it before entering it in the optical competition. Francine Jackson and Jim Hendrickson were also in attendance. The telescope performed exceptionally well under the hazy skies, providing great view of Saturn and Epsilon Lyrae.

July 22

At the Stellafane Convention, Bob Horton's 6" f/6.5 telescope won first place in optics, master class.



July 26

Francine Jackson conducts a presentation about the upcoming solar eclipse at the Greene Public Library in Coventry. Greene is one of libraries participating in the Library Telescope Project. The Starblast telescope was taken out for lunar viewing after the presentation.

July 29

On Saturday member' night, Tracy Prell, Francine Jackson, Bob Horton, and Lloyd Merrill came to Seagrave to set up their own telescopes for observing of the Moon, Jupiter, Saturn, and many summer deep sky objects. About 5 members from the public came by early and were treated to very transparent skies.

In early July, Tom Thibault completed work on a new fence bordering the driveway to replace the line of trees that dies and had to be removed last year. The fence, along with the newly cleared trees along the center stone wall, gives Seagrave Observatory a refreshing new look with improved views.

AstroAssembly 2017 October 13 & 14

47 Peeptoad Road North Scituate, Rhode Island
www.theSkyscrapers.org/astroassembly2017

Highlighting Interesting Projects in Amateur Astronomy

Special Notes: Wear your eclipse T-shirt for a group picture sometime during the day!
Astrophoto contest will include special category for eclipse photos.

Friday Evening Talks & Stargazing
at Seagrave Observatory

If you would like to give a Friday Evening Talk, please contact Kathy Siok (kathys5@cox.net).

All day Saturday
at Seagrave Observatory

Poster Session, Swap Table (please bring your own table), Solar Viewing, Astrophotography Contest, Homemade Telescopes (bring yours!), Famous Astro Bake-off Contest!

10:00am **Eclipse Stories:** Individuals who traveled to the 2017 Solar Eclipse are invited to share a story about their experience.

12:00pm Lunch at the Skyscrapers Grill

1:15pm Amateur Telescope Making in South Africa by **Francis O'Reilly**, Springfield Telescope Makers

2:30pm Installation of APASS at Cerro Tololo Inter-American Observatory by **Alan Sliski,** ATMoB

3:45pm Imaging and Monitoring Variable Stars using CCD Imaging by **Stella Kafka**, AAVSO

Saturday Evening Program
at Scituate Senior Center, 1315 Chopmist Hill Road

5:15pm Reception & Antipasto Bar

6:00pm Evening Banquet: Italian-style dinner (pre-registration required) catered by Quik Stop

7:15pm Words of Welcome, Awards, Raffle Drawing

7:30pm The Discovery and Monitoring of the Disintegrating Planetoid WD 1157 by **Mario Motta**, AAVSO, ATMoB

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:** 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 in- tersection 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.

_____ Registrations x $25 each = $ _____

_____ Registrations (children under 12) Free _____

_____ Banquet Tickets x $25 each = $ _____

_____ Banquet Tickets (children under 12) x $10 each = $ _____

Total = $ _____

Name _____

Address _____

_____

Email _____

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

Linda Bergemann
41 Ross Hill Road
Charlestown, RI 02813-2605

Directions to Seagrave Memorial Observatory

www.theSkyscrapers.org

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