

The Skyscraper

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The monthly publication of



**Amateur Astronomical Society
of Rhode Island**

47 Peepthead Road
North Scituate, RI 02857

www.theskyscrapers.org

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See back page for directions to
Seagrave Observatory.

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Please submit items for the newsletter
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The Skyscraper

September 2007

September Meeting with Caleb Fassett

FRIDAY, SEPTEMBER 7TH AT SEAGRAVE OBSERVATORY

**THE EVOLUTION OF THE MARTIAN SURFACE ENVIRONMENT OVER TIME: THE
ROLE OF WATER AND ICE**

Caleb Fassett, Graduate Student Researcher at Brown University will
give a presentation titled "The evolution of the Martian surface environment
over time: the role of water and ice."

Caleb will be talking generally about how we use remote tools such
as orbiting instruments to understand the geology of Mars. Of particular
interest is how ice and water have played a significant roles in eroding and
altering the surface of Mars, highlighting his recent work with Jim Head at
Brown University, and what current missions are revealing.

Register now for AstroAssembly 2007

Please join us on Friday September 28th and Saturday September 29th
for AstroAssembly 2007, celebrating our 75th Anniversary year. Featured
speakers include Gerry Dyck, Dave Huestis, Greg Shanos, Don Rethke,
Todd Kozikowski, Jan Herman, Mike Mattei, and keynote speaker Peter
Schultz.

SEPTEMBER 2007

7

FRIDAY

7:30PM

September Meeting
Seagrave Observatory

8

SATURDAY

8:00PM

Public Observing Night
Seagrave Observatory,
weather permitting

15

THURSDAY

8:00PM

Public Observing Night
Seagrave Observatory,
weather permitting

22

SATURDAY

8:00PM

Public Observing Night
Seagrave Observatory,
weather permitting

28

FRIDAY

6:30PM

**AstroAssembly Friday
Night Talks**
Seagrave Observatory

29

SATURDAY

9:00AM

AstroAssembly
Seagrave Observatory

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President's Message

Glenn Jackson, President

August, what a great astronomical month. The month started with a great speaker Dr. Jim Jackson, probably a long lost relative of mine. Dr. Jackson's talk on the Galactic Ring Survey and demonstrations were very entertaining and informative.

The Stellafane Convention was one of the best observing weekends that I have spent since visiting New Mexico. The skies were fantastic. The Milky Way was visible from horizon to horizon, with the North American Nebula visible naked eye. Of course we were treated with the Perseid Meteor shower all evening Friday and Saturday. Stellafane is always a good place to meet old friends and make new friends. I had the opportunity to visit with old friends from Connecticut as well as the Veil Nebula, Dumbbell Nebula, NGC 457, the Owl Cluster and many of the common Messier Objects. I also had the opportunity to meet some new friends The Swan Nebula and Stephen's Quintet. I also spent some time with my first love M 13. Spectacular! In all 18 members of Skyscrapers had a great observing weekend.

Speaking of old friends, John Briggs a long time member of Skyscrapers, provided an outstanding workshop on Spectroscopy and Understanding Light Spectrums. John had numerous educational demonstrations that were enjoyed by all. John also treated us with his 1875 5" Alvan Clark refractor that was originally located at Abbot Academy in Andover

Mass. John also educated all of us on our own John Browning Solar Spectroscope which was probably made between the 1870's and 1890's at a cost of "42 pounds 10 shillings". This hidden treasure was one of Frank Seagrave's instruments that he used on our 8¼" 1878 Alvan Clark telescope.

I traveled to Pennsylvania where the Lunar Eclipse of August 28th was visible for 37 minutes longer than in Rhode Island. The moon, one of my old friends, was awe inspiring as usual. I tried my hand at some astrophotography, especially looking for the color "Turquoise" in addition to the expected orange red color expected. The skies were spectacular and the eclipse was once again an enjoyed experience. I hope you had the opportunity to watch the eclipse also.

Next month brings us our annual AstroAssembly. Kathy Siok has a great line up of speakers and activities. This is a great time to meet old astronomical friends and to make new friends. Your support for this event will be greatly appreciated. This is "OUR" event of the year. Come support your club. I hope to see you there.

Have you paid your dues for the current year?? Our membership now stands at 84 paid members. That is only 67% of the paid membership for last year.



Cosmic Cockroaches

By Dr. Tony Phillips

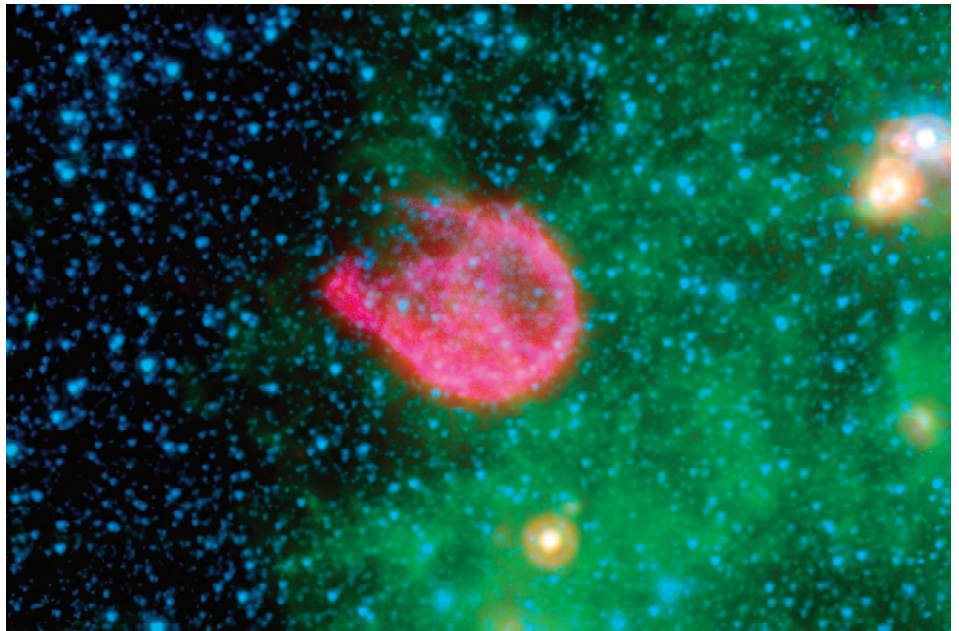
Cockroaches are supposed to be tough, able to survive anything from a good stomping to a nuclear blast. But roaches are wimps compared to a little molecule that has recently caught the eye of biologists and astronomers – the polycyclic aromatic hydrocarbon.

Polycyclic aromatic hydrocarbons (PAHs for short) are ring-shaped molecules made of carbon and hydrogen. “They’re all around us,” says Achim Tappe of the Harvard Center for Astrophysics. “PAHs are present in mineral oils, coal, tar, tobacco smoke and automobile exhaust.” Aromatic, ring-shaped molecules structurally akin to PAHs are found in DNA itself!

That’s why Tappe’s recent discovery may be so important. “PAHs are so tough, they can survive a supernova.”

The story begins a few thousand years ago when a massive star in the Large Magellanic Cloud exploded, blasting nearby star systems and interstellar clouds with hot gas and deadly radiation. The expanding shell, still visible from Earth after all these years and catalogued by astronomers as “N132D,” spans 80 light years and has swept up some 600 Suns worth of mass.

Last year “we observed N132D using NASA’s Spitzer Space Telescope,” says Tappe. Spitzer is an infrared (IR) telescope, and it has a spectrometer onboard sensitive to the IR emissions of PAHs. One look at N132D revealed “PAHs all around the supernova’s expanding shell. They appear to be



Using the IR spectrometer on the Spitzer Space Telescope, scientists found organic molecules in supernova remnant N132D.

swept up by a shock wave of 8 million degree gas. This is causing some damage to the molecules, but many of the PAHs are surviving.”

Astronomers have long known that PAHs are abundant not only on Earth but throughout the cosmos – they’ve been found in comet dust, meteorites and many cold interstellar clouds – but who knew they were so tough? “This is our first evidence that PAHs can withstand a supernova blast,” he says.

Their ability to survive may be key to life on Earth. Many astronomers are convinced that a supernova exploded in our corner of the galaxy 4-to-5 billion years ago just as the so-

lar system was coalescing from primitive interstellar gas. In one scenario of life’s origins, PAHs survived and made their way to our planet. It turns out that stacks of PAHs can form in water – think, primordial seas – and provide a scaffold for nucleic acids with architectural properties akin to RNA and DNA. PAHs may be just tough enough for genesis.

Cockroaches, eat your hearts out.

Find out about other Spitzer discoveries at www.spitzer.caltech.edu.

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



From the Archives

Dave Huestis, Historian

Even before the 75th anniversary committee ever met, I had already begun to plan for the 75th anniversary (May 5, 2007) celebration of Skyscrapers.

One of the ideas was to reproduce the minutes from every meeting for the first year of the society's existence (May 1932 - April 1933), so current members could get a sense of how Skyscrapers formed and how quickly it evolved.

So, starting with the May 2007 issue of The

Skyscraper, our webmaster and newsletter editor Jim Hendrickson began to publish scanned images of the monthly meeting minutes for the first year of our great society.

Once you've read the minutes from the first year I suggest you begin to read "A Quarter Century of Skyscraping," a summary of the first 25 years of Skyscrapers history. You can find a copy of this book, published in 1957, on our web site.

Meeting Sept. 6th. Tuesday. 7:50.

Rev. Crawford spoke on Club Purposes.
 Speakers 2 English Astronomers,
 Dr. W.H. Stevenson, an expert on telescopes.
 Mr. Peck, F.B.A.S.
 Dr. ? Peek?

Prof. Smiley spoke on eclipse expedition to Camp Katahdin. He said that everything was fine but the weather. The Polish astronomers cooperating with the Brown party had good success. They were invited to the 1937 eclipse at the Galapagos Islands.

Mr. Huddy spoke on radio experiences. Signals were taken from R.I. 2:30 to 5:30. The Sun has an effect on the height of the radio ceiling. The ceiling jumps up at night. It should have happened very suddenly during eclipse and it did. The signals were weaker and erratic as eclipse came.

Dr. W.H. Stevenson on "Eclipse Illusion".

1738-1852 Herschel. He was a music teacher for whom astronomy was a hobby. Did wonderful research on Structure of Universe. He had one child, John who had 12 children, 3 of whom are still alive. They live in the old house. His instruments are still preserved. He discovered Uranus in one of his mirrors. Due to his skill in fashioning mirrors. He made them for his living, as he had only a small pension from the King. He made 6 and 1/2 inch and 9 inch telescopes still found in Europe today. He made an 18" for himself and a 48" from the King's grant. 1787-1789. Still reckoned large today. The 40" is reckoned large for the U.S. Naval Observatory. All Herschel's telescopes are mounted to move up and down and not sideways. Tremendous disadvantage. Swept and charted sky. He spoke down a 50 foot speaking tube to his sister Caroline.

He used the 20 inch telescope the most. It had a wooden octagonal tube. The eye piece at the side. Mirrors not exceeded today. Some of the best mirrors have been made by amateurs.

Magnifying powers.
 It is said that Herschel exaggerated the powers of his eye pieces which are unfortunately lost. But they were found by the speaker and proved correct. Single lenses made by himself, 4/5 inch diameter made in 1735. At last Herschel married a rich wife and had plenty of money. He measured Uranus. He recognized the exaggeration due to radiat on. He measured it by measuring discs of paper with his eye.

The Club was shown eclipse pictures of Jan. 1925. The moon looked intensely black. Not really. An illusion caused by the bright corona.

Dr. Peek on Cooperative Work.
 Peek?
 Director of Mars Section of British Astronomical Association.

The British professionals are often told things by the amateurs.
 Three observers 50 miles apart can help each other, admirably.
 Jupiter's atmosphere.
 9 hours, 50 minutes, different parts.
 9 hours, 55 minutes, " " "
 Try to track down currents. Observe as many transits of spots across center meridian as possible.
 1000-1200-1500 transits observed. Chart made. Could predict where spots on atmosphere would be.

August Meeting Notes

Nichole Mechnig, Secretary

August 3, 2007, Seagrave Observatory

The meeting was called to order by President Glenn Jackson at 7:37 PM. Glenn introduced the featured speaker for the evening. Dr. Jim Jackson from Boston University. His presentation "How Stars are Born" was divided into four sections: Step 1# Cloud collapses, Step 2# Proto Star, Step 3# Disk forms, Step 4# planets form. Dr. Jackson's talk was highlighted by several rotational demonstrations and models. The presentation was well received by all members.

Secretary's Report: Accepted as published in the last issue of The Skyscraper Newsletter

Treasures Report: Accepted as published in the last issue of The Skyscraper Newsletter

1st Vice President: September 7th Speaker Caleb Fassett Brown University "Planetary Geology" • September 28/29th AstroAssembly • November 2nd Dave Huestis "Charles Smiley / Skyscrapers Solar Expeditions"

2n Vice President: AstroAssembly moving forward • 3 Speakers are Confirmed • Need Volunteers for Friday and Saturday • OUR members should attend • Banquet to be held at Smithfield Sportsman's Club • Dave Huestis will present "Proclamation"

Historian: 75th Book in progress target date AstroAssembly

Librarian: New Addition: Early Career of Alvin Clark Antique Telescope Society

Star Party Coordinator: Ted Ferneza stepping down to return to college • Need a volunteer to replace • Next scheduled Star Party Oct 19th "Women's Wilderness Weekend"

Trustees Report: Work parties to be scheduled for Astro Assembly preparation • 12 and 16 inch Telescopes are having problems

New Business: No New Members • Joe Sarandrea would like to schedule the following trips for Skyscrapers: Hartness House Weekend, Trip to American Stonehenge, Hayden Planetarium NY,

Bay Queen cruise night • Joe Sarandrea nominated Dolores Rinaldi as Movie Night Coordinator

Old Business: Motion TABLED to purchase replacement lamp for LCD projector • Motion APPROVED to provide \$450 for bug exterminator • Al Hall previously made a motion to provide a subscription to Sky and Telescope and a one year membership to winner of Science fair. NO ACTION TAKEN • Hotline in effect set up by Chris Chapman • Yahoo Discussion group up and running set up by Bob Napier and Tracey Haley • Dolores Rinaldi still looking for help with Hospitality

Presidential Announcements: Moment of silence for the passing of Joel Cohen's mother • Movie Night August 17th "Mars Rover the Ultimate Journey" • E-Board meeting August 30th 7:30 PM all invited • August 18th Spectroscopy Workshop with John Briggs starts at 4PM • Black Forest Star Party in Pennsylvania September 14-16 • Meeting Adjourned at 9:57 PM

MINUTES SKYSCRAPER E-BOARD JULY 26TH, 2007

In attendance: Glenn Jackson, Kathy Siok, Dolores Rinaldi, Bob Forgiel, Jim Brenek, Rick Arnold, Chris Chapman, Bob Napier, Tom Barbish, Jim Hendrickson, Dave Huestis and Nichole Mechnig.

Meet was called to order at 7:39 PM by Glenn Jackson

Bob Napier: Proposal to create a Yahoo account for an open forum and discussion about astronomical events and ideas. 3-moderators for the discussion would be needed. Glenn Jackson asked that Bob Napier and Tracey Haley be 2 of the 3 moderators. • Forum would be limited to Skyscraper members only • No fee to create this forum • Link from our web site would be desirable • The name would be "Skyscrapers Amateur Astronomical Society of Rhode Island" • E-Board members in attendance voted Yes

Chris Chapman: Chris would like to

set up a free service information telephone number provided by AOL to have up to date messages about Seagrave Memorial Observatory. • E-Board members in attendance voted Yes

Kathy Siok: Kathy provide an Astro Assembly update • Pamphlet prepared for Stellafane • Still looking for two speakers for Saturday • Sportsman Club is rented for Saturday Sept 29th • 75th slide show to be presented Friday night/ Saturday morning • Possible commemorated T-Shirts • State Proclamation to be read by Dave Huestis • Tracey Haley needs to check on parking with the neighbors • Need multiple volunteers for Friday and Saturday see sign up sheet

Dolores Rinaldi: Public Access TV program proposal has been canceled.

Jim Crawford: Money market account put on hold. Jim was not at the meeting with necessary details.

General Information: Need a co-chairperson for hospitality. • Ted Frenza is stepping down as Star Party Coordinator, need someone to volunteer. • Women's Wilderness Weekend is the next scheduled star party. • Glenn accepted Ted's resignation and wished him the best with his new adventure.

Meeting Adjourned at 8:50 PM

Minutes submitted by Nichole Mechnig



On Saturday, August 18 John Briggs paid us a visit to give a demonstration in spectroscopy, show us some of his antique telescopes, and also to demonstrate our own Browning spectroscope (bottom). Photos by Dave Huestis.

Treasurer's Report

1/1/2007 - 8/20/2007

Jim Crawford, Treasurer

INFLOWS	
Anniversaryinc	2016.00
cookoutinc	442.00
Collationdonation	41.00
Other donation	170.00
TOTAL donation	211.00
Dues:	
Contributing	1041.00
Family	970.00
Junior	10.00
Regular	1160.00
Senior	130.00
Other dues	240.00
TOTAL dues	3551.00
Interest Inc	24.70
Magincome	
Astronomymaginc	332.00
skytelmagincome	329.50
TOTAL magincome	661.50
magsales	687.12
Starparty	212.00
TOTAL INFLOWS	7805.32
OUTFLOWS	
Uncategorized	38.50
Anniversaryexp	2270.12
Auto:	
Fuel	20.00
TOTAL Auto	20.00
Clarkproject	300.00
clubsubscription	32.95
collation	348.37
Cookoutexp	650.00
Corporationfee	30.00
Discretionary	100.00
Meals & Entertn	100.00
membersubscriptions:	
Astronomymagexp	238.00
Skytelexp	305.54
Other membersubscriptions	126.95
TOTAL membersubscriptions	670.49
Misc	94.60
Portajohn	65.00
Postage and Delivery	49.43
Stevebellfunction	99.59
Trusteexp	833.51
Utilities:	
Electric	86.73
Propane	423.15
TOTAL Utilities	509.88
TOTAL OUTFLOWS	6212.44
OVERALL TOTAL	1592.88



SKYSCRAPERS INCORPORATED PRESENTS

ASTROASSEMBLY 2007

Friday, September 28 & Saturday, September 29

at Seagrave Memorial Observatory

FRIDAY EVENING will feature informal talks from local amateur astronomers starting at 8pm and observing, weather permitting. Presently scheduled are Skyscrapers members **Gerry Dyck**, **Dave Huestis**, and **Greg Shanos**.

SATURDAY'S FESTIVITIES will begin with registration starting at 9am and a fascinating talk at 11am by **Donald Rethke**, a retired engineer who worked to develop technological advances for safe space travel. His stage name is "Dr. Flush" and he plans to give a lively and humorous presentation about the astronauts' space suits. At 1:30pm **Todd Kozikowski** will give a presentation called "My Year-long Project Converting a Dobsonian into a Next Generation Robotic Telescope," and at 2:40pm **Jan Herman** of the US Naval Observatory will give a talk about Leopold Trouvelot's contributions to astronomy, particularly his career as an astronomical artist and illustrator. Finally at 3:45pm, **Mike Mattei** (AAVSO and ALPO) will present a nova searching program he developed that covers the Milky Way from Scutum to Gemini. And be sure not to miss a special 75th Edition Astro-quiz that will really get you "observing" during this special day.



SATURDAY EVENING will begin with our banquet and it's usual hospitality followed by well-known **Dr. Peter Schultz**, director of the NASA/North Eastern Planetary Data Center at Brown University. His topic is "The Moon: Dead or Alive!" – a new project and opportunity for amateur and professional astronomers to collaborate.

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

BUFFET DINNER MENU

Wine & Cheese Reception
 Fruit Tray
 Salad/Antipasto Tray
 Roast Turkey
 Italian Pork w/spinach
 Shells w/ sauce
 Vegetables
 Rolls & Butter
 Pastry & Coffee
 Menu subject to change

Serving at 6:30pm
 In new location

Smithfield
Sportsman's Club

Name _____

Address _____

Email _____

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

Kathy Siok
 AstroAssembly Registrar
 86 Spring Road
 North Kingstown, RI 02852

Registrations at \$17.00 each Total \$ _____

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

Total \$ _____

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

Directions to Seagrave Memorial Observatory

From the Providence area:

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

From Coventry/West Warwick area:

Take Rt. 116 North. Peeptoad Road is the first left after crossing Rt. 101.

From Southern Rhode Island:

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

From Northern Rhode Island:

Take Rt. 116 South. Follow Rt. 116 thru Greenville. Turn left at Knight's Farm intersection (Rt. 116 turns left) and follow Rt. 116. Watch for Peeptoad Road on the right.

From Connecticut:

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

From Massachusetts:

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



47 PEEPTOAD ROAD
NORTH SCITUATE, RI 02857