

The Skyscraper

Vol. 35 No. 10

October 2008

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

AstroAssembly 2008 Schedule of Events

Friday, October 3

-
- 6:30pm Refreshments
-
- 8:00pm Short Talks
John Kocur: Astro-
photography Image
Processing Demonstration
John Briggs: New Infor-
mation about a Famous
Lens: Surprising Facts
about the Yerkes 40-inch
Refractor
Dave Huestis: Historical
Images from the Charles
Smiley Slide Collection
-
- 10:00pm Observing at Seagrave
Observatory

Saturday, October 4

-
- 9:00am Registration
-
- 10:30am **Gerry Dyck**
Three Views of the Planets
-
- 12:15pm Lunch
-
- 1:15pm **James L. Dickson**
Mars: Not As Dead as We
Once Thought
-
- 2:30pm **Allen Hall & Dick Parker**
Tips & Techniques Used
in the Design & Construc-
tion of Twin 16" Cassegrain
Telescopes
-
- 3:45pm **Dr. Savvas Koushiappas**
The Probes of Modern
Cosmology: Searching for
the Constituents of the
Universe

Saturday Evening Program

-
- 5:30pm Reception
-
- 6:30pm Buffet Dinner
-
- 7:30pm Welcome/Raffle
-
- 8:15pm **Prof. Alan Marscher**
Jets from Black Holes in
Active Galactic Nuclei

AstroAssembly 2008 Friday & Saturday, October 3 & 4 at Seagrave Memorial Observatory & North Scituate Community Center

A Skyscrapers tradition for 56 years, AstroAssembly is our biggest and most anticipated event of the year. Friday night features refreshments and short talks by members. All day Saturday we have talks from members and guest speakers from local universities, socializing with fellow members and visiting members from local astronomical societies, on-site

vendors, swap tables, raffle, and door prizes. The keynote program follows the catered buffet dinner at the North Scituate Community Center and this year features Professor Alan Marscher from Boston University, who will give a presentation about galactic black holes and includes a musical performance.

October 2008

3

Friday

6:30 pm **AstroAssembly Friday Night**
Seagrave Memorial Observatory

4

Saturday

9:00 am **AstroAssembly**
Seagrave Memorial Observatory & North Scituate
Community Center

11

Saturday

8:00 pm **Public Observing Night**
Seagrave Memorial Observatory, weather permitting

18

Saturday

8:00 pm **Public Observing Night**
Seagrave Memorial Observatory, weather permitting

25

Saturday

8:00 pm **Public Observing Night**
Seagrave Memorial Observatory, weather permitting



President's Message

Glenn Jackson

AstroAssembly is here. Friday October 3rd and Saturday October 4th. If you haven't made your reservations yet the time is getting very short. Kathy Siok has a great program laid out for the enjoyment of all. If you have never attended an AstroAssembly I would like to encourage you to participate this year. The speakers sound promising, the vendors will have just what you are looking for, and the Trustees will be flipping great burgers. Past AstroAssemblies have always proven to be a great way to spend an autumn afternoon, listening to a few speakers and enjoying the company of friends new and old. If you are feeling lucky there will be great door prizes and raffle prizes.

In the past the large percentage of attendees at AstroAssembly are our friends and astronomers from neighboring astronomy clubs throughout New England. We thank them for their support. Our AstroAssembly is

the largest money marker of the year and provides the necessary funds to maintain our observatory, our property and our outreach programs.

Our organization is only as strong as its membership. Every month time and effort is put in to securing top-notch speakers for all to enjoy. Other members help with the business end of the organization by paying the bills and filing necessary state and federal forms. The trustees spend a lot of time maintaining the buildings, grounds, and telescopes. Kathy Siok has called on many to help put together this AstroAssembly. And Jim Hendrickson spends a lot of time putting out this newsletter and maintaining the "Best" website. My question is what have you done to help support Skyscrapers? I encourage you to attend AstroAssembly 2008 to show your support for the organization and all of the people that make Skyscrapers the outstanding Astronomical Society that it is. Hope to see you there.

October Meteor Showers

Dave Huestis

Though the peak activity of the Perseid meteor shower back on the morning of August 12 was clouded out, I hope you took advantage of the clear skies the following morning to catch a few shooting stars.

From 3:00 until 4:00 am, with some slightly hazy but clear skies, I counted 14 Perseids and one sporadic (not associated with the Perseid shower). Many were yellow in color and at least as bright as the brighter stars that were visible. And quite a few left dust trails as they disintegrated in our atmosphere. Not bad for the day after peak. The one day past peak number of 15 is what one would expect of the Perseids. Fortunately the activity was sufficient to prevent me from falling asleep!

October provides us with both a minor and a major meteor shower to satisfy the shooting star enthusiasts among us.

On the evening of October 8 keep your eyes toward the northern sky for

a few shooting stars of the Draconid meteor shower. The meteors will appear to radiate from the constellation Draco. Locate the Big Dipper (Ursa Major) and you'll be looking in the right direction.

The Draconids are a minor shower, so expect no more than ten meteors per hour. Also, the just past first quarter Moon will be somewhat of a hindrance until it sets around midnight. However, it will traverse a low arc across your sky to the south, and you'll be looking in the opposite direction. Try to block out the Moon's direct light with a building. The Draconids are fairly slow moving meteors, hitting our atmosphere at only 12.5 miles per second.

Our second meteor shower of October is a major display of shooting stars, the Orionids. On the night of October 20-21, these remnants of Halley's Comet intercept the Earth's orbit nearly head-on at 41.6 miles per second. These fast meteors appear



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.

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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 by October 15 to Jim Hendrickson, 1 Sunflower Circle, North Providence, RI 02911 or email to jim@distantgalaxy.com.

Email subscriptions

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

to radiate from Orion, the mighty hunter.

This meteor shower is often best observed between midnight and dawn, but the last quarter Moon will rise around midnight in neighboring constellation Gemini, and will therefore reduce the number of meteors that could be seen under better conditions. You'll want to train your gaze at an area of sky well away from the bright Moon's influence.

One could begin to observe before moon rise, but Orion completely rises above the east-south-east horizon about the same time the Moon does in the east-north-east, so the moonlight is going to be the controlling factor here. As Orion rises higher into the sky, so will the Moon. At approximately 3:30 am Orion will be due south of your location and about halfway up off the southern horizon. Typically the Orionids produce about 15-20 yellow and green meteors per hour during peak, but with the interfering moonlight a keen-eyed observer may see about a dozen. They are also noted for producing fireballs that create persistent dust trains high in the atmosphere. You may get lucky and see a few of the brighter meteors as they disintegrate.

With the Moon in the vicinity of Orion, it will be a challenge to try to block its moonlight without losing sight of some of the meteors. Still, if the weather cooperates I would give the Orionids a try. The next few meteor showers will occur under much cooler temperatures.

When you are not meteor observing there are two local observatories you can visit to explore the beauty of the universe. Ladd Observatory, on the corner of Hope Street and Doyle Avenue on Providence's East Side, is open every clear Tuesday night. Admission is free. More information, including open times and directions, can be found at Ladd's website: www.brown.edu/ladd.

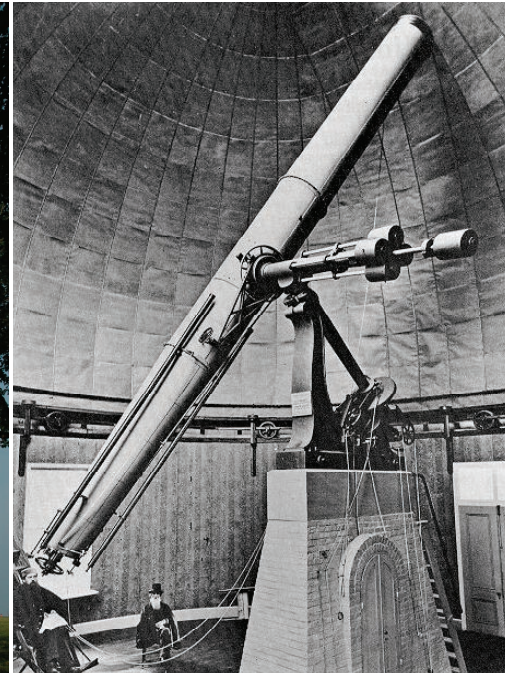
Seagrave Observatory, home of Skyscrapers, Inc., The Amateur Astronomical Society of Rhode Island, is open to the public every clear Saturday night (except October 4). Admission is also free. Check our web site at www.theskyscrapers.org for further information, and always keep your eyes to the skies.

**Trip to
Washington, D.C.**
October 25 -26, 2008
























National Air & Space
Museum • U.S. Naval
Observatory • Historic Sites
and Monuments

Estimated Cost is about
\$300 per person, excluding
meals.

For more information,
please e-mail
Robert_Horton@brown.edu



October 2008 Celestial Events

	1	12:00am	Moon 5° S of Mars
	1	10:00pm	Moon 5° S of Venus
	4	7:00pm	Moon 0.1° S of Antares
	5	7:00am	Moon at apogee
	6	5:00pm	Mercury at inferior conjunction
	7	3:00am	Moon 2° S of Jupiter
	7	5:04am	First Quarter Moon
	8	evening	Draconid meteor shower peaks
	10	6:00am	Moon 0.9° N of Neptune
	10	4:00pm	Moon at apogee
	12	12:00pm	Moon 4° N of Uranus
	14	4:02pm	Full Moon
	17	2:00am	Moon at perigee
	21	morning	Orionid meteor shower peaks
	21	7:55pm	Last Quarter Moon
	22	6:00am	Mercury at greatest western elongation (18°)
	25	3:00am	Moon 5° S of Saturn
	26	9:00am	Venus 3° N of Antares
	27	6:00pm	Moon 7° S of Mercury
	28	7:14pm	New Moon
	29	10:00pm	4 Vesta at opposition
	30	4:00pm	Mercury 4° N of Spica
	31	2:00pm	Moon 0.06° N of Antares

Extreme Starburst

by Dr. Tony Phillips



A star is born. A star is born. A star is born.

Repeat that phrase 4000 times and you start to get an idea what life is like in distant galaxy J100054+023436.

Astronomers using NASA's Spitzer Space Telescope and ground-based observatories have found that the galaxy gives birth to as many as 4000 stars a year. For comparison, in the same period of time the Milky Way produces only about 10. This makes J100054+023436 an extreme starburst galaxy.

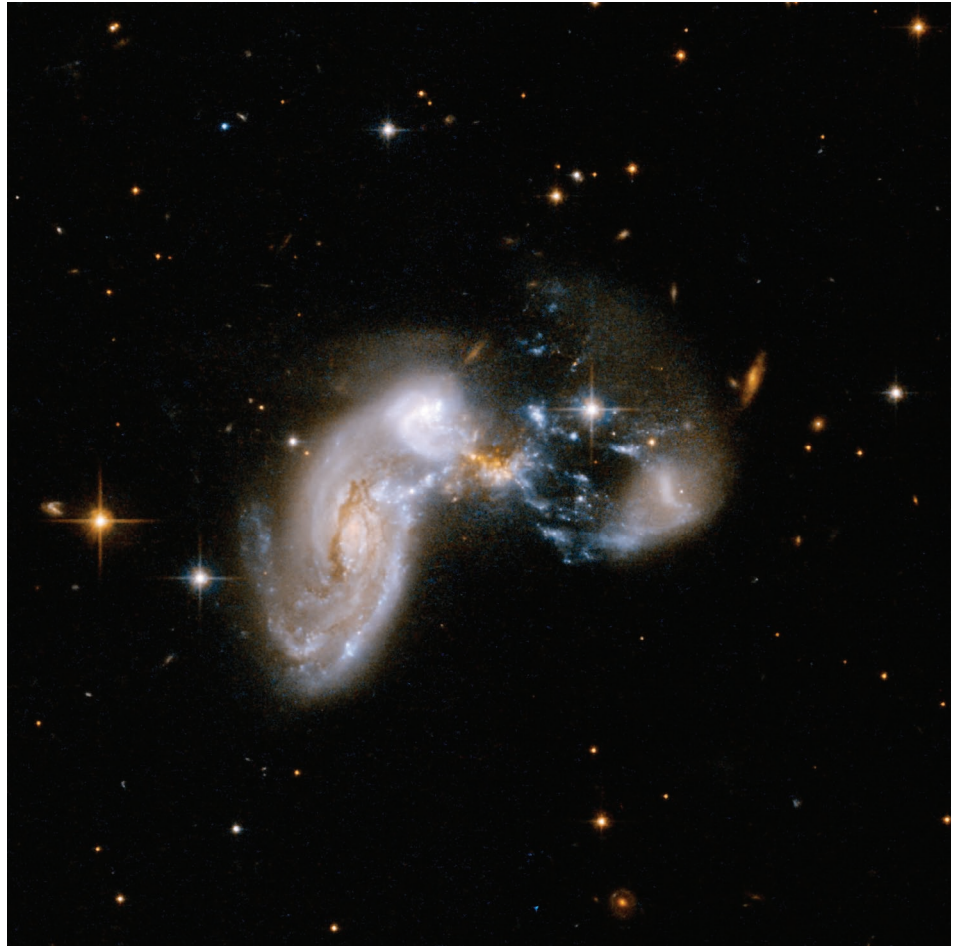
"We call it the 'Baby Boom galaxy,'" says Peter Capak of NASA's Spitzer Science Center at the California Institute of Technology in Pasadena, CA. "It is undergoing a major baby boom, producing most of its stars all at once. If our human population was produced in a similar boom, then almost all people alive today would be the same age."

Capak is lead author of a paper entitled "Spectroscopic Confirmation of an Extreme Starburst at Redshift 4.547" detailing the discovery in the July 10th issue of *Astrophysical Journal Letters*.

The galaxy appears to be a merger, a "train wreck" of two or more galaxies crashing together. The crash is what produces the baby boom. Clouds of interstellar gas within the two galaxies press against one another and collapse to form stars, dozens to hundreds at a time.

This isn't the first time astronomers have witnessed a galaxy producing so many stars. "There are some other extreme starburst galaxies in the local universe," says Capak. But the Baby Boom galaxy is special because it is not local. It lies about 12.3 billion light years from Earth, which means we are seeing it as it was 12.3 billion years ago. The universe itself is no older than 14 billion years, so this galaxy is just a youngster (Capak likens it to a 6-year-old human) previously thought to be incapable of such rapid-fire star production.

The Baby Boom galaxy poses a chal-



The "Baby Boom" galaxy loosely resembles the galaxy shown here, called Zw II 96, in this Hubble Space Telescope image. This galaxy is only 500 million light-years away, while the Baby Boom galaxy is 12.3 billion light-years away.

lenge to the Hierarchical Model of galaxy evolution favored by many astronomers. According to the Hierarchical Model, galaxies grow by merging; Add two small galaxies together, and you get a bigger galaxy. In the early years of the universe, all galaxies were small, and they produced correspondingly small bursts of star formation when they merged. "Yet in J100054+023436, we see an extreme starburst. The merging galaxies must be pretty large."

Capak and colleagues are busy looking for more Baby Boomers "to see if this is a one-off case or a common

occurrence." The theory of evolution of galaxies hangs in the balance.

Meanwhile... A star is born. A star is born. A star is born.

See more breathtaking Spitzer images at www.spitzer.caltech.edu/Media/mediainages. Kids can play the new Spitzer "Sign Here!" game at spaceplace.nasa.gov/en/kids/spitzer/signs.

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



Smiley with 4-inch f/1 Schmidt camera and 12-inch F/3.5 Schwarzschild camera at eclipse site in Araxa Brazil for May 20, 1947 total solar eclipse - which was clouded out.

Treasurer's Report

4/1/2008 through 9/29/2008

Jim Crawford

INFLOWS

AstroT-shirt 2007	30.00
75th Anniversary Bookincome	360.00
Other cookoutinc	405.00
Other donation	365.50
Dues	
Contributing	125.00
Family	700.00
Junior	10.00
Regular	1900.00
Senior	320.00
TOTAL dues	3055.00
Interest Inc	130.75
Magincome	
Astronomymaginc	306.00
Skytelmagincome	296.55
TOTAL Magincome	602.55
Magsales	8.80
Starparty	560.00
TOTAL INFLOWS	5518.09

OUTFLOWS

Astronomy Day	30.12
Charity	25.00
Clarkproject	513.50
Collation	215.41
Cookoutexp	677.08
Corporationfee	20.00
Membersubscriptions	
Astronomymagexp	306.00
Skytelexp	296.55
TOTAL Membersubscriptions	602.55
Postage and Delivery	186.35
Presidents Fund	60.16
Trustexp	760.33
Utilities, Electric	75.34
TOTAL OUTFLOWS	3165.84

OVERALL TOTAL	2352.25
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Checking Acct:	4867.60
Capital One Savings:	15977.80

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