
April 2007

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<http://www.starastronomy.org>



April's Meeting

The next S*T*A*R club meeting will be 8 PM Thursday March 1, 2007 at King of Kings Lutheran Church, 250 Harmony Rd. in Middletown.

The speaker is Dr. Eric Lerner, and his topic is "Big Bang: Problems and Alternatives".

Editor's Note

Thanks to the two Steves and Randy for sending in material this month. Articles, as always, are most welcome.

Again, I will need to be handing off the Spectrogram sometime before the end of the year, so please step up and volunteer your services!

April Issue

The deadline for the next edition of the Spectrogram is Monday, April 30th. Please email any contributions to Daniel_handlin@hths.mcvsd.org. As always, any and all contributions are welcome!



*The Hubble Space Telescope
Image Courtesy NASA*

Calendar

Sep 7, 2006 - - Clif Ascraft -
"Restoring the Tuthill
Telescope"

5 Oct, 2006 - Dr. Kenneth
Kremer - "Exploring Mars and
the Search for Life"

2 Nov, 2006 - Dr. Sebastien
Lepine - "The Search for
Nearby Stars"

7 Dec, 2006 - Kevin Kilkenny -
"New Horizons' Journey to
Pluto"

4 Jan, 2007 - Daniel Kirby -
"Pirates of the Solar System
Caribbean"

1 Feb, 2007 - Gavin Warnes -
"Collimating your Telescope"

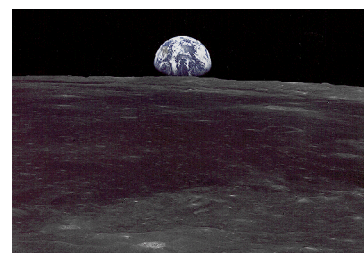
1 Mar, 2007 - David Britz -
"Motions of the Earth and
Moon"

5 Apr, 2007 - Dr. Eric Lerner-
"The Big Bang Never
Happened"

3 May, 2007 - TBD

7 Jun, 2007 - AGM Business
Meeting

Image Courtesy NASA





*The M8 Complex
Image courtesy CFHT*



*Earthrise from an Apollo spacecraft
Image courtesy NASA*

President's Column

By Steve Walters

April! Galaxy Season! The Virgo Cluster and thousands of faint fuzzy galaxies await you! Pick up your scope and get out there! The weather is warming up, the bugs have yet to arrive and the nights are still long. Clean up those dusty mirrors and smeared eyepieces and get ready for a wonderful spring and summer of observing! So get up and get out, there is no excuse!

April is also the month of NEAF (the Northeast Astronomy Forum) which will be held on April 28 and 29 (Sat and Sun). NEAF always sports new products with discounts and there are also some very interesting presentations going on. The two days prior to NEAF is the North East Astro Imaging Conference (NEAIC) so if you're thinking of getting into

imaging and can spare the time, it has a lot to offer. I'll be giving a presentation at NEAIC and will also be sitting as a vendor during both days of NEAF so look me up. If you want to ride with me, just give me a ring. You can get more info on NEAF and NEAIC at <http://www.rocklandastronomy.com/neaf.htm>

Last month, a small refractor was donated by Mr. Phil Halscheid of Woolwich Township, N.J. (South Jersey). I haven't had a chance to check it out but it will be at the meeting and I hope someone can take it home and give it some use. Thanks to Phil for this donation!

Our April program will be presented by Dr. Eric Lerner. He will speak on "The Big Bang: Problems and Alternatives". Eric is interested in alternative theories to the Big Bang and this should prove to be thought provoking and extend your knowledge of Cosmology. In May, Ed Carlos will be presenting "Weighing a Galaxy". Then, in June, we will have our usual business meeting.

See you out there! Clear Skies!

Steve...

March Meeting Notes

By Steve Fedor

The March 1, 2007 meeting of S*T*A*R Astronomy began at 8:04 pm. The meeting was attended by approximately 28 members and non-members. President Steve Walters began by welcoming first time attendees.

At 8:10 the evening's lecture began. This month S*T*A*R's own Dave Britz presented "Motions in Space and Time, or, Where the Heck Are We?"

Dave presented a wide variety of astronomical topics such as how big is space, consideration of multiple universes, Olber's paradox, cosmic expansion, the big bang, astronomical history, and of course the basics of lunar and planetary motion. The talk concluded at 9:02.

At this time the meeting recessed for coffee break and "scope and tell" This month Steve Walters brought his new Takahashi Epsilon 180 reflector and a collection of his astrophotography.

The meeting resumed at 9:50 with events and announcements.

Randy Walton – ASTRA will be hosting an equipment and book "show and tell." Also discussed was the effort to save the planetarium at OCC. Refer to savetheplanetarium.org for details.

A brief discussion of the state's plan to store explosives near the Coyle Field observing site was held. Naturally there were concerns about lighting.

Doug Berger presented the intervals of darkness and discussed the 2007 Messier Marathon.

Nancy McGuire presented "Objects of the Month" which were the total lunar eclipse on 3/3, M67 and Abell 1131. Nancy also proposed an informal observing night in a local place such as Burke Rd.

Gavin Warnes noted that the club's 25 inch Obsession will need a new home. Stephen Scaravella, the present caretaker, will be moving to Vt. sometime at the end of May. Stephen, thanks for the TLC the beast has received under your stewardship.

Randy Walton announced there were magazines and catalogs available at the meeting. Donations would be gratefully accepted.

Larry Campbell did a report with slides of the very successful star party held at the Village school in Holmdel. There were over 500 people in attendance. Larry thanked the numerous members who helped at the event.

SIG's:

ATM: Gordon Waite announced the Monday night grinding sessions would be moved to Tuesday night. The new night would perhaps begin on 3/6.

Outreach: Dennis O'Leary announced flyers are available for library distribution. Dennis urged all members to get the word out about S*T*A*R Astronomy Club.

Stephen Scaravella mentioned the pictures appearing at the NASA web site for the New Horizons Jupiter flyby. For more information see http://www.nasa.gov/mission_pages/newhorizons/main/index.html.

The 50/50 was not drawn. The meeting was adjourned. No observing took place afterwards due to cloudy skies.

Early Bird Gets the Worm

by Dr. Tony Phillips

We all know that birds eat worms. Every day, millions of birds eat millions of worms. It's going on all around you! But how often have you awakened in the morning, stalked out in the dewy grass, and actually seen a bird having breakfast? Even though we know it happens all the time, a bird gulping a worm is a rare sight.

Just like a black hole gulping a star...

Every day in the Universe, millions of stars fall into millions of black holes. And that's bad news for the stars. Black holes exert terrible tides, and stars that come too close are literally ripped apart as they fall into the gullet of the monster. A long burp of X-rays and ultraviolet radiation signals the meal for all to see.

Yet astronomers rarely catch a black hole in the act. "It's like the problem of the bird and the worm," says astronomer Christopher Martin of Caltech. "You have to be in the right place at the right time, looking in the right direction *and* paying attention."

A great place to look is deep in the cores of galaxies. Most galaxies have massive black holes sitting in their pinwheel centers, with dense swarms of stars all around. An occasional meal is inevitable.

A group of astronomers led by Suvi Gezari of Caltech recently surveyed more than 10,000 galactic cores—and they caught one! In a distant, unnamed elliptical galaxy, a star fell into a central black hole and "burped" a blast of ultraviolet radiation.

"We detected the blast using the Galaxy Evolution Explorer (GALEX), an ultraviolet space telescope," explains Gezari. Her team reported the observation in the December 2006 issue of *The Astrophysical Journal Letters*. "Other telescopes have seen black holes devouring stars before," she adds, "but this is the first time we have been able to watch the process from beginning to end."

The meal began about two years ago. After the initial blast, radiation diminished as the black hole slowly consumed the star. GALEX has monitored the process throughout. Additional data from the Chandra X-ray Observatory, the Canada-France-Hawaii Telescope and the Keck Telescope in Hawaii helped Gezari's team chronicle the event in multiple wavelengths

Studying the process in its entirety "helps us understand how black holes feed and grow in their host galaxies," notes Martin.

One down, millions to go.

"Now that we know we can observe these events with ultraviolet light," says Gezari, "we've got a new tool for finding more."

For more on this and other findings of GALEX, see www.galex.caltech.edu. For help explaining black holes to kids, visit The Space Place at spaceplace.nasa.gov.

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



Caption:
In this artist's concept, a giant black hole is caught devouring a star that ventured too close.

Save the Planetarium Fund

By Randy Walton

A new non-profit charity has been established to help save the Robert J. Novins Planetarium at Ocean County College, the only planetarium that was open to the public in central New Jersey. About 30,000 people per year visited the planetarium, and half were children mostly from Monmouth and Ocean County schools. This is your chance to pitch in.

Check out the website, <http://www.SaveThePlanetarium.org>, for all the latest information on the Fund Drive and how you can help!

We need donors and volunteers!
Be one of the people to get an
"I'm Helping to Save the Planetarium!" t-shirt.

Moon Phases



April Celestial Events

By J. Randolph Walton (Randy)

Day	Date	Time (EDT)	Event
Mon	2	13:15	Full Moon
		19:40	Moon Rise
		19:25	Sunset
Sat	7	00:30	Jupiter Rises
		04:25	Saturn Sets
		04:55	Mars Rises
		05:55	Mercury Rises
		06:35	Sunrise
		08:46	Moon Set
		19:30	Sunset
		22:40	Venus Sets
Tue	10	11:32	Moon Set
		14:04	Last Quarter Moon
Sat	14	00:00	Jupiter Rises
		03:50	Saturn Sets
		04:37	Mars Rises
		05:53	Mercury Rises
		06:24	Sunrise
		16:26	Moon Set
		19:37	Sunset
		22:00	Mars 0.5 Deg. S of Moon
		22:57	Venus Sets
Tue	17	06:07	Moon Rise
		07:36	New Moon
Sat	21	03:27	Saturn Sets
		04:25	Mars Rises

		05:54	Mercury Rises
		06:14	Sunrise
		09:03	Moon Rise
		19:44	Sunset
		23:10	Venus Sets
		23:33	Jupiter Rises
Sun	22	18:00	Lyrid meteors peak (ZHR 20)
		19:45	Sunset
Tue	24	02:36	First Quarter Moon
		02:04	Moon Set
Sat	28	03:05	Saturn Sets
		04:15	Mars Rises
		05:57	Mercury Rises
		06:04	Sunrise
		16:34	Moon Rise
		19:51	Sunset
		23:05	Jupiter Rises
		23:25	Venus Sets

League (AL), and the International Dark Sky Association (IDA).

Memberships: () Individual...\$25
() Family...\$35

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____

Email _____

Make checks payable to: STAR
Astronomy Society, Inc. and mail to P.O.
Box 863, Red Bank, NJ 07701

Are you a S*T*A*R Member?

S*T*A*R is the proud owner of a monstrous 25" Dobsonian Obsession reflector – which YOU can gain access to as a S*T*A*R member! Meetings are the first Thursday of each month, except July and August, at 8:00 PM at the King of Kings Lutheran Church, 250 Harmony Rd. in Middletown. Meeting generally consist of lectures and discussion by members or guest speakers on a variety of interesting astronomical topics. S*T*A*R is a member of United Astronomy Clubs of New Jersey (UACNJ), the Astronomical

In the Eyepiece

Here is a list of objects for this month. This is reproduced from www.skyhound.com with the kind permission of its creator and author of SkyTools Greg Crinklaw.

Object(s)	Class	Con	RA	Dec	Mag
Y CVn	Variable Star	Canes Venatici	12h45m07.8s	+45°26'25"	4.9
Black Eye	Galaxy	Coma Berenices	12h56m43.9s	+21°41'00"	9.3
Sombrero	Galaxy	Virgo	12h39m59.3s	-11°37'22"	9.1
Focus On Downtown Virgo & the M87 Jet!	Galaxy Cluster	Virgo	12h26m12.2s	+12°56'45"	9+
M 106	Galaxy	Canes Venatici	12h18m57.5s	+47°18'14"	9.1
M 108	Galaxy	Ursa Major	11h11m31.3s	+55°40'31"	10.9
M65	Galaxy	Leo	11h18m55.8s	+13°05'32"	10.2
M 66	Galaxy	Leo	11h20m15.1s	+12°59'22"	9.6
Owl	Planetary Nebula	Ursa Major	11h14m46.1s	+55°01'07"	12.0
NGC 4631 (The Whale)	Galaxy	Canes Venatici	12h42m07.8s	+32°32'27"	9.7
NGC 4656	Galaxy	Canes Venatici	12h43m58.2s	+32°10'09"	11.4
NGC 4244	Galaxy	Canes Venatici	12h17m29.5s	+37°48'26"	10.8
NGC 4013	Galaxy	Ursa Major	11h58m31.5s	+43°56'51"	12.3
NGC 4762	Galaxy	Virgo	12h52m55.9s	+11°13'57"	11.3
NGC 4236	Galaxy	Draco	12h16m41.8s	+69°28'10"	10.1
Hickson 61	Galaxy Group	Coma Berenices	12h12m23.9s	+29°10'40"	11.1
NGC 3607	Galaxy	Leo	11h16m54.8s	+18°03'06"	10.9
Focus On Gliese 433.1	White Dwarf Star	Ursa Major	11h37m05.1s	+29°47'58"	12.5
Antennae/Ring Tail	Galaxy	Corvus	12h01m52.8s	-18°51'54"	10.9
NGC 4490	Galaxy	Canes Venatici	12h30m36.7s	+41°38'27"	10.1
NGC 4361	Planetary Nebula	Corvus	12h24m30.8s	-18°47'05"	10.3
NGC 4027	Galaxy	Corvus	11h59m30.1s	-19°16'05"	11.7

NGC 4094	Galaxy	Corvus	12h05m53.9s	-14°31'36"	12.7
NGC 4782 & 4783	Galaxy	Corvus	12h54m35.8s	-12°34'06"	12.4
NGC 4462	Galaxy	Corvus	12h29m21.2s	-23°09'59"	12.8
NGC 3987	Galaxy	Leo	11h57m20.9s	+25°11'42"	13.8
Siamese Twins	Interacting Galaxy Pair	Virgo	12h36m34.4s	+11°14'18"	11.7+12.1
NGC 3628	Galaxy	Leo	11h20m16.9s	+13°35'14"	10.3
NGC 4565	Galaxy	Coma Berenices	12h36m21.1s	+25°59'13"	10.6
Abell Galaxy Cluster 1631	Galaxy	Corvus	12h52m52.6s	-15°24'47"	13.3
Palomar 4	Globular Cluster	Leo	11h29m16.0s	-01°57'51"	14.2
Abell 35	Planetary Nebula	Hydra	12h53m34.2s	-22°52'17"	12.0