

D I S T A N T *L I G H T*

Rockland Astronomy Club Journal ~ April 2007

A NEW VIEW ON SATURN

DETAILS ON PAGE 3

SAVE THE DATES:

NEAF
APRIL 28, 29

NEAIC
APRIL 26, 27

DETAILS ON PAGE 4





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RAC MEMBERS ONLY: GET DISTANT LIGHT VIA EMAIL (requires Adobe Acrobat): send an email to Memberships@RocklandAstronomy.com

BECOME A RAC MEMBER Complete and mail the Membership Application Form below today.



International Dark Sky Association



OUR ADDRESS IS:
 Rockland Astronomy Club,
 225 Route 59, Suffern, NY 10901-5203

WHO WE ARE:
 Rockland Astronomy Club is a non-profit organization founded in 1958. We are dedicated to expanding public awareness of the Universe and to furthering an appreciation of astronomy and space science education. In 2005 the Rockland Astronomy Club received the prestigious PRIDE OF ROCKLAND award for our ongoing community involvement and pursuit of our mission.

RAC ANNUAL DINNER

Record Attendance for Annual Dinner!

On Saturday March 10th the Rockland Astronomy Club held it's 49th Annual Winter Dinner at Casa Mia Manor House in Blauvelt, N.Y.

By Frank Bifulco

A record 90 people attended the evening's festivities which included a cocktail hour, buffet dinner, and guest lecturer. As Rockland Astronomy Club has grown to become one of the largest astronomy clubs in the northeast, the attendance at the Winter Dinner has skyrocketed.

The highlight of this year's dinner was the talk given by returnee Linda Zimmerman, who spoke on "Astronomy X-Files: The Strange, The Weird, and the Unexplainable." Linda used slides and humorous anecdotes, little-known factoids of history, and paradoxes to explain how humans, throughout history, have attempted to explain their relationship to the cosmos and



various aspects of science. Needless to say, the subject and Linda's chosen topics of focus were very well-received by the attendees.

Next year will be the 50th Anniversary dinner and we look forward to breaking the magic "100 barrier", which is a level that RAC could only dream of a decade ago, let alone when the dinner was just a few club members gathering around a dinner table in the 1950's and 1960's. Suggestions for that dinner's theme are always welcome; contact me at specialevents@rocklandastronomy.com with any ideas for next year's dinner.

Thanks to all who attended the dinner and to the RAC Executive Committee for their continued financial and logistical support with the evening's activities. ★

RAC MEMBERSHIP APPLICATION

Club members receive this journal, enjoy special prices for annual subscriptions to S&T and ASTRONOMY magazines, discounts to club events and much more. Make checks payable to RAC and mail with this form to: Rockland Astronomy Club, Attn: Memberships, 225 Route 59, Suffern, New York 10901-5203.

Name _____
 Address _____
 City _____ State _____ Zip _____
 Home Phone () _____
 Email _____

Note: The Journal is sent to Members via email. For mailed hard copies, add \$18/year.

Membership Type	1 Year	2 Year (Save \$2)	3 Year (Save \$5)	5 Year (Save \$10)	Hard Copy (by US Mail)	Total
Family	\$30	\$58	\$85	\$140	+\$18/yr.	_____
Individual	\$20	\$38	\$55	\$90	+\$18/yr.	_____
Senior Citizen (65+)	\$15	\$28	\$40	\$65	+\$18/yr.	_____
High School Student	\$10	\$18	\$25	\$40	+\$18/yr.	_____
Grand Total						_____

COVER STORY

Never Seen Views of Saturn

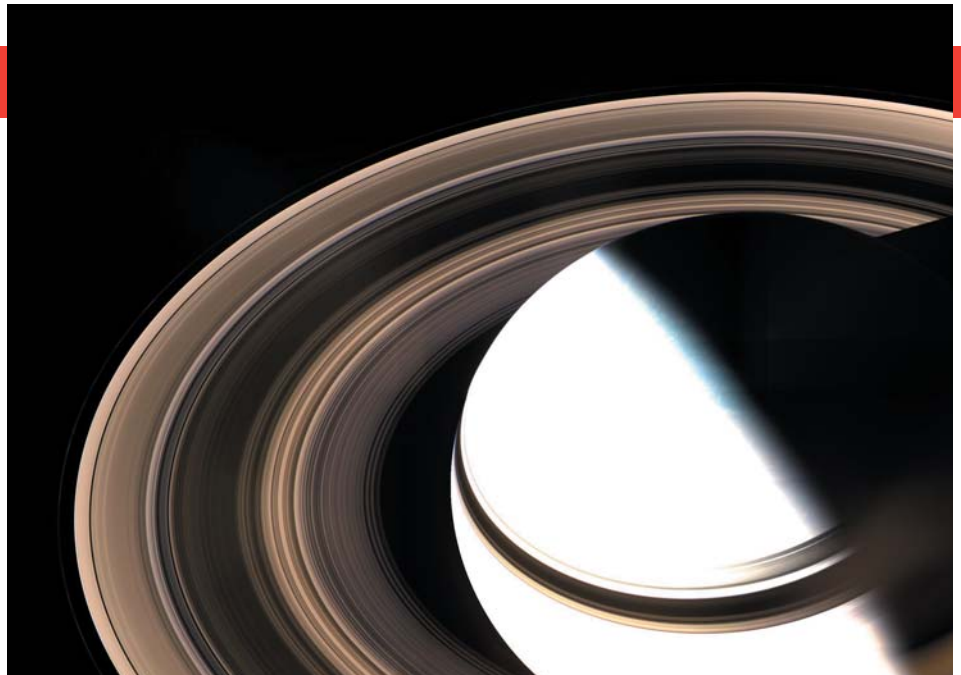
By Preston Dyches

Cassini Imaging Central
Laboratory for Operations

NASA's Cassini spacecraft has captured never-before-seen views of Saturn from perspectives high above and below the planet's rings. Over the last several months, the spacecraft has climbed to higher and higher inclinations, providing its cameras with glimpses of the planet and rings that have scientists gushing.

"Finally, here are the views that we've waited years for," said Dr. Carolyn Porco, Cassini imaging team leader at the Space Science Institute in Boulder, Colo. "Sailing high above Saturn and seeing the rings spread out beneath us like a giant, copper medallion is like exploring an alien world we've never seen before. It just doesn't look like the same place. It's so utterly breath-taking, it almost gives you vertigo."

The images taken over last two months are being released today



Taking in Saturn's rings in their entirety was the focus of this particular imaging sequence. Image credit: NASA/JPL/Space Science Institute

and include black and white and color mosaics, as well as a dramatic movie sequence showing the rings as they appeared to Cassini while it sped from south to north, rapidly crossing the ring plane. Also released is a playful view of the rings from high above, with the planet removed.

"Its so utterly breath-taking it almost gives you vertigo."

Cassini's highly inclined orbits around Saturn will be progressively lowered so that, by late June, three years after entering orbit -- the spacecraft will once more be orbiting in the ring plane.

The Cassini spacecraft, named after the Italian-French astronomer Giovanni Domenico Cassini, was

launched on October 15, 1997 and entered into orbit around Saturn on July 1, 2004.

The Cassini-Huygens mission is a cooperative project of NASA, the European Space Agency and the Italian Space Agency. The Jet Propulsion Laboratory, a division of the California Institute of Technology in Pasadena, manages the Cassini-Huygens mission for NASA's Science Mission Directorate, Washington. The Cassini orbiter and its two onboard cameras were designed, developed and assembled at JPL. The imaging team is based at the Space Science Institute, Boulder, Colo. ★

The new images and movie are available at: <http://www.nasa.gov/cassini>, <http://saturn.jpl.nasa.gov> and <http://ciclops.org>.



NEAF™ 2007!

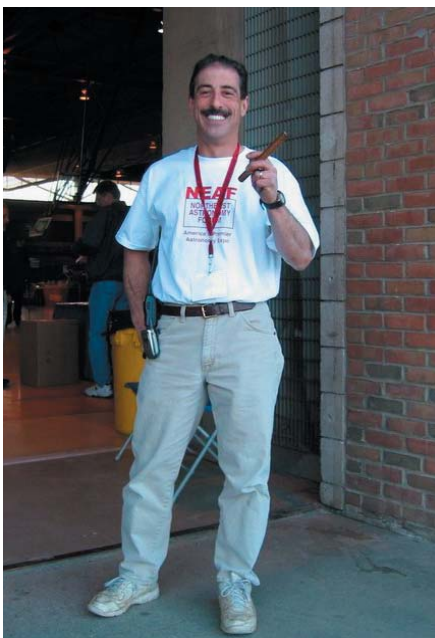
Without a dispute, NEAF is the greatest, largest and most exciting astronomy show on the face of the planet! This years NEAF has in store even more excitement and more surprises then before.

NEAIC April 26-27, 2007
NEAF April 28-29, 2007

By Alan Traino

This is a promotional message. It is filled with words like "BIGGEST" and "BEST" and maybe even "UNPRECEDENTED"

But those words aren't simply empty



promotional phrases for us. We have had a year of unprecedented growth, we are weeks away from opening the doors to our biggest show ever, we will have vendors and visitors here representing new sectors of the world and areas of interest. We have lots of surprises and wonderful new things to share with you. This show has come a long way in the last ten years. This is not the first time we've reported exciting growth or new interest from other parts of the world. When we've said such things in the past you've come to the show and experienced for yourself what we were talking about. You have not been disappointed, you've never felt like you were sucked into some empty promotional vacuum. You have left the shows with the same sense of excitement we had when we wrote these letters inviting your participation.

I've done a lot of traveling over the past year in America and Europe, and made many new contacts. We are now not only the largest astronomy trade show in the world, we are a world class event.

It seems we've been noticed. Based only on requests I've personally received, NEAF will be reviewed this year by a minimum of five print magazines and four websites. We have special guests and speakers representing three continents, a worldwide vendor presence, our projected attendance is tracking higher and we are finding creative ways to make best use of our available floor space because of all this. We are very excited and hope our enthusiasm is obvious – we want you to share it with us.

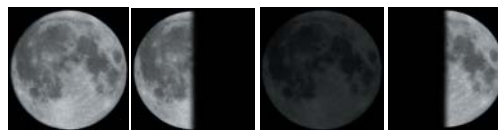
Expect to see booths from each CCD camera company worldwide, five different Dome manufacturers and all major Solar Filter companies -- national and international. Expect the unexpected! Scopes, mounts, cameras, eyepieces, filters, domes and all else imaginable for every conceivable technical aspect of astronomy. I'll take this last opportunity



to drive home the point that exectations will meet reality in what we have planned for you in this year's show.

So please join us for the biggest, best, most spectacular and worthwhile Spring NEAF show ever – you already know that when we use words like that we mean what we say.

See you there, and thanks for your continuing support over the past year.. ★



Full Apr 2 Last Qtr Apr 10 New Apr 17 First Qtr Apr 24

APRIL SKYDATA

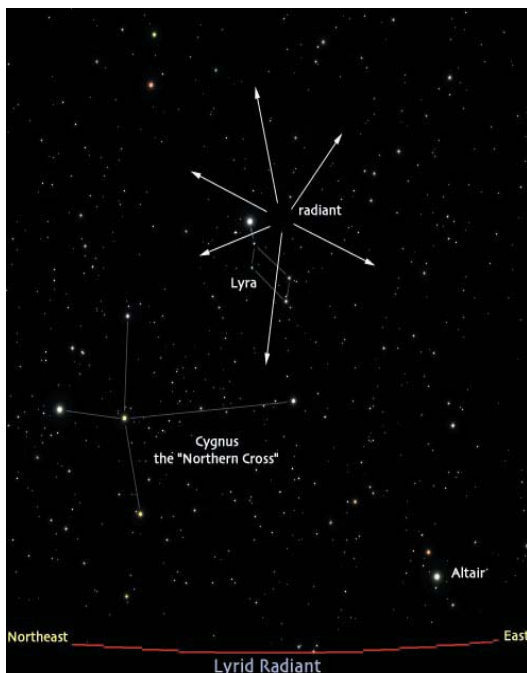
Highlights

- Apr 5 Jupiter stationary
- Apr 7 Antares 0.6° north of Moon
- Apr 8 Jupiter 6° north of Moon
- Apr 13 Mars 0.5° south of Moon
- Apr 16 Mercury 5° south of Moon
- Apr 19 Saturn stationary
- Apr 20 Venus 3° south of Moon
- Apr 21 Venus 7° north of Aldebaran
- Apr 21 **Lyrid meteors**
- Apr 25 Saturn 1.1° south of Moon

April's Lyrid Meteor Shower

April 21, Shower Peak at 4:00am
 Predicted Hourly Rate: 15

The Lyrids are visible through most of the night, with the radiant rising around 9 p.m. It is located high in the morning sky around 4:00 a.m., with an altitude of about 75 degrees. The map shows Cygnus, also known as the "Northern Cross", and Lyra. Although Cygnus is the more prominent and well-known of the two constellations, Lyra contains the bright star



Vega, which outshines all other stars in that area of the sky.

Recent estimates of the shower's normal hourly rate typically range between 8 and 15. Recent estimates have been 13.5 in 1969, 17 in 1974, and 13.1 in 1985. Interest in this meteor shower was very slow to develop. A storm of about 700 meteors per hour had been observed by numerous people in the eastern part of the United States during April 19-20, 1803, but no further attention was given to this shower until 1835. That year closely followed the discovery that the Leonids of November were an annual shower, and as astronomers struggled to identify other annual meteor showers, Dominique Francois Jean Arago (1786-1853) conjectured that April 22 might be a date of frequent meteor activity.

In 1867 Johann Gottfried Galle mathematically confirmed the link between comet Thatcher and the Lyrids and he successfully traced the history of the shower back to March 16, 687 BC. Observations of the Lyrids increased during the late 1860s and early 1870s, and, as has been the case with so many meteor showers. Aside from the abnormal activity of 1803, the maximum hourly rates have remained relatively consistent from year to year, though there have been other unexpected outbursts. Several observers have attempted to estimate the orbital period of this meteor stream from the visual observations. It was originally concluded from historical study of Lyrid activity that the stream possessed an orbital period of 27 years. Based on the activity observed in 1803 and 1850, it was later concluded that the Lyrids possessed an orbital period of 47 years, but his prediction of possible enhanced activity in 1897 was met by rates not exceeding 6 per hour. After an outburst in 1982, many researchers remarked that the period was about 60 years, based on the showers of 1803, 1922 and 1982. Unfortunately none of these suggested orbital periods fit the observations perfectly, and it might be possible that the Lyrid orbit contains several irregularly spaced knots of material that could make it impossible to arrive at an accurate period based on visual observations. ★

Prime Observing Window

Thursday Apr 12 through Saturday Apr 21

Sun & Moon Rise & Set Times

Date	Sunrise	Set	Moonrise	Set	Phase
April 2	05:39	18:21	18:36	05:25	Full
April 10	01:34	10:25	1:34	10:25	Last Qtr
April 17	05:15	18:37	05:01	19:20	New
April 24	05:05	18:44	11:19	01:40	First Qtr

Planetary

Visible Planets in the Night Sky

April 1

	Rise	Transit	Set	Mag
Mercury	04:53	10:30	16:07	0.0 mag
Venus	07:09	14:18	21:27	-4.0 mag
Mars	04:00	09:13	14:27	1.1 mag
Jupiter	23:51	16:32	09:14	-2.3 mag
Saturn	13:40	08:43	03:47	0.2 mag

April 15

	Rise	Transit	Set	Mag
Mercury	04:48	10:55	17:03	-0.5 mag
Venus	07:02	14:30	21:58	-4.1 mag
Mars	03:33	09:00	14:27	1.1 mag
Jupiter	22:55	15:36	08:18	-2.4 mag
Saturn	12:43	07:47	02:51	0.3 mag

April 30

	Rise	Transit	Set	Mag
Mercury	04:52	11:43	18:35	-1.9 mag
Venus	07:05	14:45	22:26	-4.1 mag
Mars	03:01	08:43	14:26	1.0 mag
Jupiter	21:52	14:34	07:17	-2.5 mag
Saturn	11:45	06:48	01:52	0.4 mag

The RAC Essentials

MONTHLY CALENDAR

**201-768-2238
or 845-47STARS**

Message Hotline: The latest information or last minute changes to club events.

Prime Observing

April 12 thru 21

- | | |
|--|--|
| Tue. April 10, 8pm | Advisory Committee Meeting
LHVCC, Suffern, N.Y. |
| Fri/Sat, April 13 & 14
Fri/Sat, April 20 & 21 | Observing at Wawayanda
(members night)* |
| Sat. April 21 | Joy of the Universe
At: Anthony Wayne Rec. Area |
| Sat, April 21 | Up all night Observing at Taghkanic
State Park (members night)* |

Thurs/Fri, April 26 & 27 Northeast Astro Imaging Conference
Rockland Com. College, Suffern, NY

Thurs/Fri, April 26 & 27 Northeast Astronomy Forum
Rockland Com. College, Suffern, NY

LOCATIONS

ADVISORY CMTE.

Clarkstown South Planetarium

31 Demarest Mill Rd,
West Nyack, NY

Rockland Community College

College Road, Suffern, NY

Lower Hudson Valley

Challenger Center

Rt. 59, Suffern, NY

Anthony Wayne

Recreation Area*

Exit 17, P.I.P., NY

Silvermine Ski Area*

Exit 18, P.I.P., NY

Wawayanda State Park*

973-853-4462,
Highland Lakes, NJ

Taghkanic State Park*

Taconic State Parkway,
Ancram, NY

- | |
|-----------------------------|
| Jose Alvira |
| Frank Bifulco |
| Jim Burnell |
| Mark Hettinger |
| Mies Hora |
| Rob Lyons |
| Keith Murdock |
| Al Nagler |
| Dr. Jack Rosen |
| Audry Salvatore |
| Len Salvatore |
| Ed Siemenn, <i>Chairman</i> |
| Bernie Sokolowski |
| Bill Thys |
| Alan Traino |

Life & Honorary Members

- | |
|-----------------------|
| Tom Massey (L) |
| Al Nagler (L) |
| Don Urban (L) |
| Dr. Saeed Safaie (H) |
| Andrew Warrington (H) |

*Special permits required to observe at these locations. Contact Frank Bifulco for permit info.

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Al Nagler