



# ASTRAL PROJECTIONS

June 2011  
Volume 22 Issue 6

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## Meeting Schedule

### June 10<sup>th</sup> Meeting:

"Telescope Equipment Show  
& Tell" Presented by All  
Members

Date: Friday, 6/10/2011

Time: 7:00 PM - 10:00 PM

Location: Robert J. Novins  
Planetarium, College Drive,  
Ocean County College, Toms  
River, NJ 08754

**July 8<sup>th</sup> Meeting:** "History of  
Telescopes" Presented by Bob  
Salvatore

Date: Friday, 7/8/2011

Time: 7:00 PM - 10:00 PM

Location: Robert J. Novins  
Planetarium, College Drive,  
Ocean County College, Toms  
River, NJ 08754

### A look inside this issue:

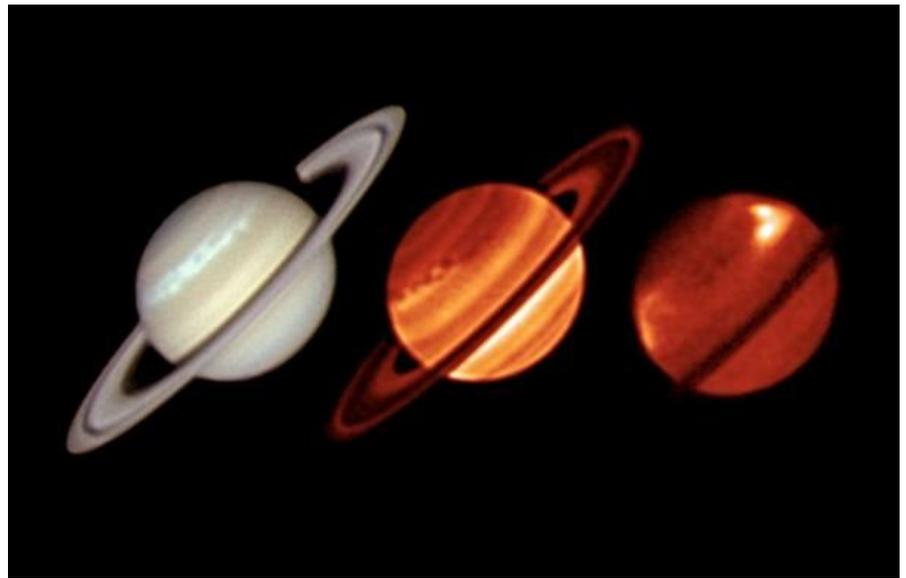
What's up this month? Page 2

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Club Telescopes. Page 4

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## Studying Saturn's Super Storm



*Three views of Saturn's northern storm. ESO/University of Oxford/L. N. Fletcher/T. Barry*

First seen by amateur astronomers back in December, the powerful seasonal storm that has since bloomed into a planet-wrapping swath of churning clouds has gotten some scrutiny by Cassini and the European Southern Observatory's Very Large Telescope array situated high in the Chilean desert.

The image above shows three views of Saturn acquired on January 19: one by amateur astronomer Trevor Barry taken in visible light and the next two by the VLT's infrared VISIR instrument – one taken in wavelengths sensitive to lower atmospheric structures one sensitive to higher-altitude features.

While the storm band can be clearly distinguished in the visible-light image, it's the infrared images that really intrigue scientists. Bright areas can be seen along the path of the storm, especially in the higher-altitude image, marking large areas of upwelling warmer air that have risen from deep within Saturn's atmosphere.

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# Whats up this month?

## ASTRA Public Outreach & Star Parties Schedule for May/June

### OCC Spring Star Watch

Members of ASTRA will setup their telescopes on the campus of Ocean County College and share the wonderful views of the planets and stars with the public.

Date: Friday, 6/4/2011

Time: 8:00 PM - 10:30 PM

Location: Robert J. Novins Planetarium, College Drive,  
Toms River, NJ 08754

### Lighthouse #1 Star Party

This is a private star party for ASTRA members and Earthwatch/Drexel students only.

Date: Friday, 6/17/2011

Time: 6:00 PM - 11:00 PM

Location: The Lighthouse Center, 7th Street & Navajo Dr,  
Waretown, NJ 08758

**Check the online message board on the date of the star party for up to date information on these events.**

### June 2011 Celestial Events

**1<sup>st</sup>:** New Moon (5:03 pm EDT)

**1<sup>st</sup> Dawn:** With binoculars, observers can see Venus, Jupiter, Mercury, and faint Mars shortly before sunrise.

**8<sup>th</sup>:** First Quarter Moon (10:11 pm EDT)

**9<sup>th</sup>:** Lunar Straight Wall visible (10:00 pm EDT). The Straight Wall is a fault line on the surface of the moon containing cliffs that are approximately 1,000 feet high.

**10<sup>th</sup>:** Double Shadow Transit on Jupiter (5:25 am EDT). Two of Jupiter's moons will cast a double shadow on Jupiter's disk.

**15<sup>th</sup>:** Full Moon (4:14 pm EDT)

**21<sup>st</sup>:** Summer Solstice

**23<sup>rd</sup>:** Last-Quarter Moon (7:48 pm EDT)

**26<sup>th</sup>:** Double Shadow Transit on Jupiter (4:03 pm EDT). Two of Jupiter's moons will again cast a double shadow on Jupiter's disk.



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# Studying Saturn's Super Storm

(Continued from Page 1)

## Astronomical Items for Sale, or Help Wanted Advertisements:

If you have an item to Sell, or need help with an astronomical problem (a question, or Telescope setup) contact the President [President@astra-nj.org](mailto:President@astra-nj.org) to announce it at a meeting and send the advertisement to the newsletter (See Newsletter below).

**Newsletter:** E-mail material (Meeting reports, Observing reports) to [Newsletter@astra-nj.org](mailto:Newsletter@astra-nj.org)

## EXECUTIVE BOARD

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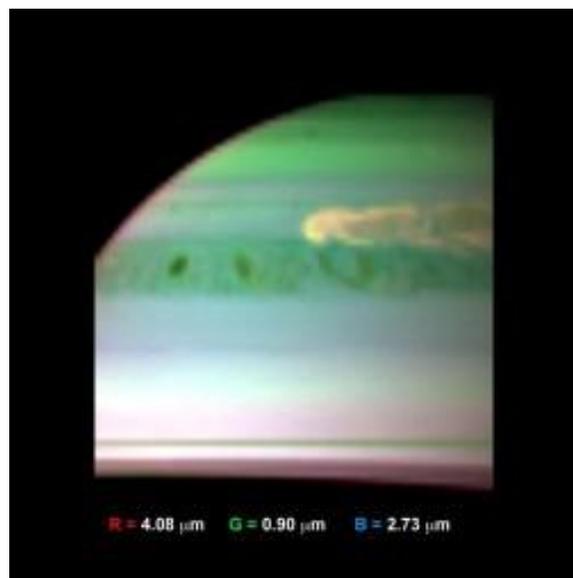
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Check us out on Facebook, search groups for ( ASTRA Astronomy ) and look for our logo.



Normally relatively stable, Saturn's atmosphere exhibits powerful storms like this only when moving into its warmer summer season about every 29 years. This is only the sixth such storm documented since 1876, and the first to be studied both in thermal infrared and by orbiting spacecraft.



Cassini image showing dredged-up ammonia crystals in the storm.  
NASA/JPL/Univ. of Arizona.

The initial vortex of the storm was about 5,000 km (3,000 miles) wide and took researchers and astronomers by surprise with its strength, size and scale.

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The origins of Saturn's storm may be similar to those of a thunderstorm here on Earth; warm, moist air rises into the cooler atmosphere as a convective plume, generating thick clouds and turbulent winds. On Saturn this mass of warmer air punched through the stratosphere, interacting with the circulating winds and creating temperature variations that further affect atmospheric movement.

The temperature variations show up in the infrared images as bright "stratospheric beacons". Such features have never been seen before, so researchers are not yet sure if they are commonly found in these kinds of seasonal storms.

A separate analysis using Cassini's visual and infrared mapping spectrometer confirmed the storm is very violent, dredging up larger atmospheric particles and churning up ammonia from deep in the atmosphere. Other Cassini scientists are studying the evolving storm and a more extensive picture will emerge soon.

(<http://www.universetoday.com/85819/studying-saturns-super-storm/>)

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## ASTRA Library of Books & DVD's

The following books and DVD's are available to borrow for one month at a time. Request for these items must be made prior to our regular meeting and returned the following meeting. Please e-mail your request for these items to John Endreson at [President@astra-nj.org](mailto:President@astra-nj.org)

### BOOKS

1) **The National Air and Space Museum**  
Second Edition by C.D.B. Bryan

2) **Milestones of Aviation** Smithsonian  
Institution National Air and Space  
Museum

3) **New Atlas of the Moon** by Serge  
Brunier (Author), Thierry Legault  
(Photographer).

4) **Encyclopedia of space** by National  
Geographic

5) **The Real Mars** by Michael Hanion

### DVD's

1) **Parts 1&2 Understanding the  
Universe What's New in Astronomy  
2003** Taught by: Professor Alex  
Filippenko. Each part has 8 lectures, 45  
minutes per lecture.

2) **Parts 1 to 5 Understanding the  
Universe An Introduction to Astronomy**  
Taught by: Professor Alex Filippenko each  
part has 8 lectures, 45 minutes per lecture.

### 3) **COSMOS**

In his "ship of the imagination," Carl  
Sagan guides us to the farthest reaches of  
space and takes us back into the history of  
scientific inquiry in the course of 13  
fascinating hours.

For a complete list of books and DVD's,  
visit our website or e-mail John Endreson  
at [President@astra-nj.org](mailto:President@astra-nj.org)

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## Club Telescopes



A.S.T.R.A. owns four small telescopes

6-inch Dobsonian

8-inch Dobsonian

80mm Celestron Refractor

120mm EQ AstroView Refractor.

These telescopes are available for club members to borrow and use  
for a month or two at a time.

## Wanted!

No longer used telescopes, Telescope parts,  
and accessories.

E-mail John Endreson at [President@astra-nj.org](mailto:President@astra-nj.org)  
We will come and pick-up your used equipment.

## ASTRA-WEAR: For Embroidered and/or Printed items With the ASTRA Logo



You can see some samples at ASTRA meetings. To order by mail:  
Shelter Cove Embroidery Co. 1333 Bay Ave Toms River, NJ  
08753 call 732-506-7700 or E-mail [astra-wear@estitches.com](mailto:astra-wear@estitches.com)