



ASTRAL PROJECTIONS

November 2014
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Upcoming Events

Monthly Meeting on Friday, November 14th

The next meeting will be held at the [Robert J. Novins Planetarium](#) located on the Ocean County College campus (Bldg. 13 next to parking lot 2) from 7pm to 10pm.

Bill Edelen will present a "Solar Update"

Star Party on Saturday, November 29th

Join us as we set up our telescopes and observe the universe from 5:00pm to 8:00pm at [Jakes Branch County Park, 1054 Sunset Road, Beachwood NJ](#)

Winter Star Watch on Saturday, November 29th

Join us as we set up our telescopes and observe the universe from 7pm to 11pm at the [Robert J. Novins Planetarium](#) located on the Ocean County College campus (Bldg. 13 next to parking lot 2)

A.S.T.R.A.
Robert J. Novins Planetarium
Ocean County College
P.O. Box 2001
Toms River NJ 08754-2001

EVENT CANCELLATIONS

Two hours before the event start time please check out the ASTRA Message Board at <http://forum.astra-nj.org/viewforum.php?f=4> or call the ASTRA Hotline: 609-971-3331

Recap



October Meeting:

ASTRA members enjoyed the Ocean County College's planetarium show "Wonders of the Seasonal Sky" presented by Phil Zollner. The presentation included the current night sky, constellations and their mythology.

ELECTIONS FOR 2015 OFFICERS

Nominations for ASTRA officers will be held at the meeting on November 14.

CLUB TELESCOPES:

- A.S.T.R.A. owns seven small telescopes
- 6-inch Dobsonian (needs repairs)
 - 8-inch Dobsonian
 - 80mm Celestron Refractor
 - 120mm EQ AstroView Refractor.
 - Lunt 35mm H-Alpha solar scope
 - 8-inch Celestron NexStar 8i SE
 - 60mm Meade EQ refractor

These telescopes are available for club members to borrow and use for a month or two at a time. Contact John Endreson at Telescope_Loan@astra-nj.org to borrow a telescope

CELESTIAL EVENTS FOR NOVEMBER 2014

November 5, 6 - Taurids Meteor Shower.

November 6 - Full Moon. This phase occurs at 22:23 UTC.

November 17, 18 - Leonids Meteor Shower.

November 22 - New Moon. This phase occurs at 12:32 UTC.

Source: <http://www.seasky.org/>

ASTRONOMICAL HELP OR ITEMS FOR SALE

If you have an astronomical item to sell, or need help with an astronomical problem (a question, or telescope setup) contact the President President@astra-nj.org to announce it at a meeting. To advertise in our monthly newsletter please send all information to astra.newsletter@gmail.com

ASTRA LIBRARY OF BOOKS AND DVDS:

Many books and DVDs are available for loan from the ASTRA Library for a one month period. A list of these items is available on the ASTRA website. Request for these items must be made prior to our regular meeting and returned by the following meeting. Please e-mail your request for these items to our Librarian Barbara Novick at Library-Loan@astra-nj.org or call her at 732-840-3111.

ASTRONOMICAL LEAGUE MEMBER SOCIETY

Astronomical League National Headquarters, 9201 Ward Parkway; Suite 100, Kansas City, MO 64114

1-816-333-7759 or www.astroleague.org

The REFLECTOR is published in March, June, September and December. If you do not receive your copy of the REFLECTOR magazine, contact Astronomical League Coordinator (Alcor) Ro Spedaliere (Treasurer@astra-nj.org)



Where Does the Sun's Energy Come From?

<http://spaceplace.nasa.gov>

Every 1.5 millionths of a second, the sun releases more energy than all humans consume in an entire year. Without the sun there would be no light, no warmth, and no life.

Its heat influences the environments of all the planets, dwarf planets, moons, asteroids, and comets in our solar system.

How does a big ball of hydrogen create all that heat? The short answer is that it is big. If it were smaller, it would be just be a sphere of hydrogen, like Jupiter.

But the sun is much bigger than Jupiter. It would take 433,333 Jupiters to fill it up!

That's a lot of hydrogen. That means it's held together by a whole lot of gravity. And THAT means there is a whole lot of pressure inside of it.

In fact, the pressure is so intense, and the density so great, that the hydrogen atoms collide with enough force that they literally meld into a new element—helium.

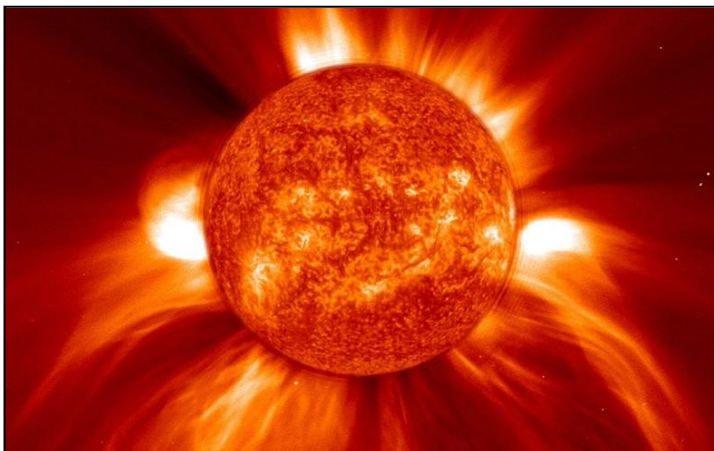
This process—called nuclear fusion—releases energy while creating a chain reaction that allows it to occur over and over and over again.

That energy builds up. It gets as hot as 15 million degrees Fahrenheit in the sun's core. The energy travels outward through a large area called the convective zone. Then it travels onward to the photosphere, where it emits heat, charged particles, and light.

That heat powers the chemical reactions that make life possible on Earth, allows gases and liquids to exist on many planets and moons, and causes icy comets to form fiery halos.

Those particles create a 'solar wind' that pushes against the fabric of interstellar space billions of miles away.

And that light travels far out into the cosmos—just one star among billions and billions. Not too bad for a big ball of gas, no?



*Image from NASA's Space Place Gallery
Composite Image from the SOHO spacecraft*

NASA Highlights

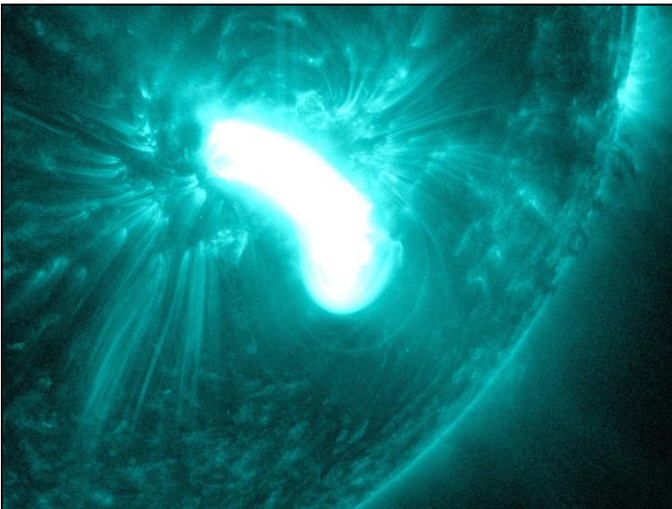
Information from www.nasa.gov/



Comet Siding Spring Mars Flyby

On Sunday, Oct. 19, Comet C/2013 A1, also known as comet Siding Spring, will pass within about 87,000 miles (139,500 kilometers) of the Red Planet -- less than half the distance between Earth and our moon and less than one-tenth the distance of any known comet flyby of Earth

Image Credit: NASA/JPL-Caltech



One Giant Sunspot, 5 Substantial Flares

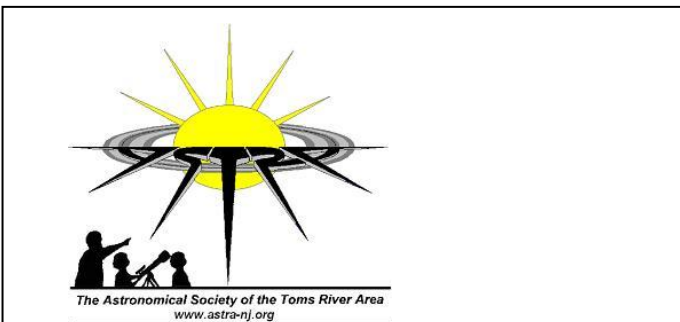
An X-class flare erupted from the sun on Oct. 25, 2014, as seen as a bright flash of light in this image from NASA's SDO. The image shows extreme ultraviolet light in the 131-angstrom wavelength, which highlights the intensely hot material in a flare and which is typically colorized in teal.

Image Credit: NASA/SDO

**DECEMBER NEWSLETTER DEADLINE:
NOVEMBER 21, 2014**

2014 Calendar

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|--------|--|
| Nov 14 | <u><i>ASTRA Meeting (7pm – 10pm)</i></u>
"Solar Update" by Bill Edelen |
| Nov 29 | <u><i>Winter Star Watch (7pm -11pm)</i></u>
Public star party at OCC
(Moon 1 st Qtr)
<u><i>Star Party (5pm – 8pm)</i></u>
Public star party at Jakes Branch |
| Dec 12 | <u><i>ASTRA Meeting (7pm – 10pm)</i></u>
Awards, Open Meeting, Elections |
| Dec 27 | <u><i>Star Party (5pm – 8pm)</i></u>
Public star party at Jakes Branch |



ASTRA-WEAR – 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. Order form is on the ASTRA website.