

ASTRAL PROJECTIONS

October 2011
Volume 22 Issue 10

Meeting Schedule

October 14th Meeting:

"Astronomy Software & Star Charts & Nominations for All Club Officers" Presented by John Endreson

Date: Friday, 10/14/2011

Time: 7:00 PM - 10:00 PM

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

November 11th Meeting: "Open General Meeting"

Date: Friday, 11/11/2011

Time: 7:00 PM - 10:00 PM

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



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From the Comfort of Home, Web Users May Have Found New Planets



This is an artist's rendition of a planet transiting in front of the star. The more distant planet has not yet been detected, but most stars with low mass planets have additional planets. (Credit: Image courtesy of Yale University)

Since the online citizen science project Planet Hunters launched last December, 40,000 web users from around the world have been helping professional astronomers analyze the light from 150,000 stars in the hopes of discovering Earth-like planets orbiting around them.

Users analyze real scientific data collected by NASA's Kepler mission, which has been searching for planets beyond our own solar system -- called exoplanets -- since its launch in March 2009.

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Whats up this month?

October 2011

Celestial Events

1st: Mars passes in front of the Beehive Cluster (M44) in Cancer.

3rd: First Quarter Moon (11:16 PM).

8th: Second Annual Observe the Moon Night.

9th: Draconid meteor shower peaks.

11th: Full Moon (10:07 PM).

19th: Last Quarter Moon (11:31 PM).

21st: Orionid meteor shower peaks.

26th: New Moon (3:56 PM).

28th: Moon occults Mercury.

29th: Jupiter reaches opposition and peak visibility.

31st: 75th Anniversary of first successful rocket engine test in Pasadena, California, JPL's beginnings (1936).

ASTRA Public Outreach & Star Parties Schedule for October

OCC Fall Star Watch

Members of ASTRA will setup their telescopes to share.

Date: Saturday, 10/1/2011

Time: 7:00 PM - 10:00 PM

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

Jakes Branch Campout

A campout for registered visitors. ASTRA members will supply telescopes to use for observing.

Date: Saturday, 10/15/2011

Time: 6:00 PM - 11:00 PM

Location: Jakes Branch County Park, Double Trouble Rd, Beachwood, NJ 08722

Jakes Branch

Date: Saturday, 10/29/2011

Time: 6:00 PM - 10:00 PM

Location: Jakes Branch County Park, Double Trouble Rd, Beachwood, NJ 08722

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



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)

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 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

EXECUTIVE BOARD

President – John Endreson,
President@astra-nj.org;

Vice President-Secretary – Bob Salvatore, VP@astra-nj.org;

Treasurer - Ro Spedaliere,
Treasurer@astra-nj.org;

Newsletter Editor – Maria Class,
Newsletter@astra-nj.org;

Webmaster – Donald Durett,
Webmaster@astra-nj.org.

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



Now astronomers at Yale University have announced the discovery of the first two potential exoplanets discovered by Planet Hunters users in a new study to be published in the *Monthly Notices of the Royal Astronomical Society*.

"This is the first time that the public has used data from a NASA space mission to detect possible planets orbiting other stars," said Yale astronomer and exoplanet expert Debra Fischer, who helped launch the Planet Hunters project.

The candidate planets orbit their host stars with periods ranging from 10 to 50 days -- much shorter than the 365 days it takes Earth to orbit the Sun -- and have radii that range in size from two-and-a-half to eight times Earth's radius. Despite those differences, one of the two candidates could be a rocky planet similar to the size of Earth (as opposed to a giant gas planet like Jupiter), although they aren't in the so-called "habitable zone" where liquid water, and therefore life as we know it, could exist.

Next, the Planet Hunters team -- a collaboration between astronomers at Yale, the University of Oxford and the Adler Planetarium in Chicago -- used the Keck Observatory in Hawaii to analyze the host stars. "I think there's a 95 percent chance or greater that these are bona fide planets," Fischer said.

The Kepler team has already announced the discovery of 1200 exoplanet candidates and will follow up on the highest potential ones with further analysis, but they had discarded the two found by Planet Hunters users for various technical reasons that led them to believe they weren't promising candidates.

"These three candidates might have gone undetected without Planet Hunters and its citizen scientists," said Meg Schwamb, a Yale researcher and Planet Hunters co-founder. "Obviously Planet Hunters doesn't replace the analysis being done by the Kepler team. But it has proven itself to be a valuable tool in the search for other worlds."

Users found the two candidates in the first month of Planet Hunters operations using data the Kepler mission made publicly available. The Planet Hunters team sent the top 10 candidates found by the citizen scientists to the Kepler team, who analyzed the data and determined that two of the 10 met their criteria for being classified as planet candidates. The two candidates were flagged as potential planets by several dozen different Planet Hunters users, as the same data are analyzed by more than one user.

"Scientists on the Kepler team obtained the data, but the public helped finance the project with their tax dollars," Fischer said. "It's only right that this data has been pushed back into the public domain, not just as scientifically digested results but in a form where the public can actively participate in the hunt. The space program is a national treasure -- a monument to America's curiosity about the Universe. It is such an exciting time to be alive and to see these incredible discoveries being made."

Planet Hunters users are now sifting through the next 90 days of Kepler data in the hopes of adding to the count. "This is what we found after just a preliminary glance through the first round of Kepler data," Fischer said. "There's no doubt that, with each new round of data, there will be more discoveries to come."

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

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

Club Telescopes



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

6-inch Dobsonian

8-inch Dobsonian

80mm Celestron Refractor

120mm EQ AstroView Refractor.

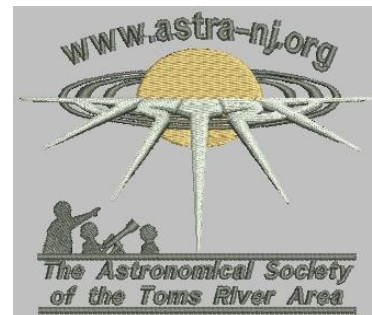
These telescopes are available for club members to borrow and use for a month or two at a time.

Wanted!

No longer used telescopes, Telescope parts, and accessories.

E-mail John Endreson at President@astra-nj.org
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



The Astronomical Society of the Toms River Area

ELECTIONS

- a. Election of officers shall take place at the December meeting.
- b. Nominations for all offices shall be accepted by the October Meeting. **Members can self-nominate or nominate someone that has agreed to serve if elected.** Nominations and acceptance can be done at the regular meeting or in writing. The written self-nomination or acceptance must reach the club Officers by the October meeting. The Newsletter Editor shall mail ballots by the November meeting, at the direction of the Vice President-Secretary.
- c. Individual members shall have one vote. A plurality shall be sufficient to elect.

Section 6. TERM OF OFFICERS

Office shall be effective on January 1 for a term of one year or until a successor is elected.

Section 7. REMOVAL FROM OFFICE

If an officer is not performing his or her official duties or is subverting the aims of A.S.T.R.A., a member or the Executive Board can request that the officer be removed from office. The Executive Board (less the officer in question) will investigate the matter and a recommendation will be made to the membership. The membership will vote on any recommendation for removal (by mail), and a majority shall be sufficient for the removal. A special election will be held to fill the remainder of the term of that office. If the remainder of the term is 3 months or less, one of the other officers can act in that position until the regular elections.

The officers of the organization shall be the President, the Vice President-Secretary, and the Treasurer.

The Officers shall be elected, and no person may hold more than one elected office concurrently.

- a. **The President** shall be the primary point of contact for the organization, speak for the organization in all official matters and preside over all meetings.

b. **The Vice President-Secretary** shall:

- 1) Assume the responsibilities of the President in the President's absence.
- 2) Make a record of any formal actions taken by the organization.
- 3) Coordinate with the Newsletter Editor in mailing appropriate club business.
- 4) Perform as the ALCor (Astronomical League Correspondent). The ALCor communicates with the Astronomical League (AL) and periodically furnishes the AL with copies of our membership list.
- 5) Keep track of telescope equipment loans.
- 6) Keep the official version of the Bylaws and Policy documents.

c. **The Treasurer** shall be the club membership chairperson, shall maintain the club treasury, shall collect club dues, and shall expend funds as directed. Recurring expenditures normal to the operation of the organization are authorized. The Treasurer shall provide a written report of the years expenditures, which shall be included in the Newsletter, published within the first calendar quarter. Separate accounting will be maintained for the Telescope Fund and it will not be used for general club operations without a vote at a regular meeting.

If you wish to self-nominate please contact the club officers at:

President: John Endreson (President@astra-nj.org)

Vice President: /Secretary: Bob Salvatore (VP@astra-nj.org)

Treasurer: R. Spedaliere (Treasurer@astra-nj.org)

Or submit your nominees by mailing to the address below:

**Robert J. Novins Planetarium
ATTN: ASTRA
Ocean County College
Toms River NJ 08754-2001**

Group Purchase of Royal Astronomical Society Items

The ASTRA astronomy club is taking orders to try to make a bulk purchase of the Royal Astronomical Society of Canada (RASC) Observer's Handbook and Calendar for the coming year at a discount. The RASC has just set the prices. We will collect the discount price, which includes shipping and handling to ASTRA. If we do not meet the minimum order for discount, the money collected will be refunded.

The *Observer's Handbook* is a 320+ page guide published annually. The sections in the *Observer's Handbook* are of two kinds: **Sections dealing with astronomical events** that occur during the year, e.g. times of sunrise, sunset, moonrise, moonset, eclipses, meteor showers, star occultations by the Moon and by asteroids and a section called "The Sky Month By Month"; and **Sections dealing with astronomical data** and information that does not change from year to year

The *Observer's Calendar* has an astronomical photo for each month, times of sunrise, sunset, moonrise, moonset, phases of the moon, and the most important astronomical events that occur during the year.

| Item | Reg. Price & Shipping | Disc. Price & Shipping |
|---------------------|-----------------------|------------------------|
| Observer's Handbook | \$34.95 | \$24.00 |
| Observer's Calendar | \$24.95 | \$17.00 |

| |
|-----------------------|
| Name: |
| Phone: () |
| Member of which club: |

| Qty. | Item | Price each | Sub-Total |
|--------------|------|------------|-----------|
| | | \$ | \$ |
| | | \$ | \$ |
| Total | | | \$ |

Please use this form to list what you want, make a check out to ASTRA, and give it to Randy Walton at an astronomy club meeting, or mail it to ASTRA c/o Robert J. Novins Planetarium, Ocean County College, P.O. Box 2001, Toms River NJ 08754-2001 to arrive by Oct. 14, 2011. Items will need to be picked up from Randy Walton at a club meeting, hopefully in November.