



ASTRAL PROJECTIONS

February 2011
Volume 22 Issue 2

Meeting Schedule

February 11th Meeting:

Awards Presentation + Public
Star Party

Date: Friday, 2/11/2011

Time: 7:00 PM - 10:00 PM

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

March 11th Meeting:

"Open General Meeting" +
Public Star Party

Date: Friday, 3/11/2011

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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What's that bright star? It's the planet Jupiter!

Do you see a bright "star" adorning the southwest sky on these February evenings? You're really seeing a planet, Jupiter. It's the first star-like object to pop out after sunset.

Don't mistake the second-brightest point of light in the evening sky for Jupiter. That's the star Sirius, shining in the southeast sky at dusk and nightfall. If you're familiar with the constellation Orion, you can verify that it's Sirius because the three stars of Orion's Belt always point to this glorious star. Jupiter sets in the west at early to mid evening, whereas Sirius sets in the southwest in the wee hours after midnight.

Jupiter is the biggest planet in our solar system, and it's central to its own system of 63 orbiting moons. February 2011 will be your last full month to see this giant planet in the evening sky. It'll fade into the glare of sunset by late March.



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Winter Observing

Winter is a tricky season for amateur astronomers. There are more hours of darkness, calling out to the star-lover to leave his warm house for a peek. But the clearer the winter evening, the colder it is. Cloud cover traps some of Earth's heat near the surface, but clear nights allow every little bit of warmth to radiate away into space. So if you want to observe on a crystal clear winter night, be prepared to plan ahead.

First of all, make preparations before you are ready to head out the door. If you are observing at home and don't have your own observatory, make sure the spot you want to put your telescope was already shoveled in the daylight when it was warmer and you could see what you were doing. Know what you want to observe before you get outside. On warm summer nights it's fine to star hop and let your eyes wander around the heavens, but that kind of leisurely entertainment is a lot less fun when it's 5 degrees outside.

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Do a little research to see what is in the sky tonight. What planets will be out? Are any comets or asteroids visible? Which deep-sky objects did you want to bag tonight? Make a list and a plan - map it out as you would a route for running errands. Hit what you want and move on to the next closest object.

Prep your telescope as best you can before you are outside. Only bring out what you need so you don't spend precious time fumbling through extra filters and eyepieces. Pick one or two eyepieces, put them in, leave the protective lens caps inside and set the telescope out in your pre-designated spot. Then head back inside for a while.

Your telescope needs time to cool down to the outside surroundings. When it is first placed outside it will radiate heat and make the air "wavy," reducing the quality of your observing conditions. For this same reason a space heater is not a great idea. If it's close enough to warm you then it's probably close enough to create the "wavy" conditions in the surrounding air, which will make anything through your telescope appear blurry and wavering.

The Winter Constellations,

Orion, Taurus, Gemini, Aries, Auriga, Canis Minor and Canis Major. We also have Leo and Virgo making an early morning appearance with their multitude of galaxies. Orion, Taurus and Gemini dominate the south eastern sky. Auriga is almost overhead with its bright star the yellow giant Capella. Leo doesn't rise until the early hours in February but its shape is unmistakable. Cancer is faint and lies between Gemini and Leo. Canis Major dominated by Sirius, the brightest star in the Sky, can be found by following leftwards the three stars of Orion's belt.

Deep Sky Objects

Canis Major

M41 lies just south of Sirius and is a loose cluster comprising of approximately 80 stars.

Orion

The most well known deep sky feature is undoubtedly M42, The Great Nebula, this forms part of Orion's sword. At the centre of the nebula is the famous Trapezium star group, comprising four bright stars and two much fainter stars, have a look for them next time you observe! The M78 nebula lies just north east of Alnitak; the left-hand star of Orion's Belt.

NGC 1973, 1975 and 1977 are a triple nebula grouping located above M42.

Taurus

This constellation holds three very well known deep sky objects, two open star clusters and one nebula. The open star clusters are M45 "The Pleiades" and "The Hyades" although this is not included in Messier's Catalogue. The nebula is M1 "The Crab" although this is purely a telescopic object.

Auriga

M36, M37 and M38 are all Open Star Clusters, M37 is the largest of the three followed by M38 and then M36. M36 can be seen with binoculars; M37 is a very rich cluster and is easily visible with binoculars. M38 is fairly dim and requires a telescope to observe it in any kind of detail.

Gemini

This constellation contains the open cluster M35. The other interesting deep sky object is NGC 2392, the Eskimo Nebula; this object has a magnitude of 10 and is therefore visible in small telescopes.

Cancer

This constellation contains two bright Open Clusters, M67 and M44. M67 is a binocular object; M44 (The Beehive) is visible to the naked eye.

Leo

Leo contains several galaxies of interest but you will have to wait well into the early hours to catch a glimpse of them. M65 and M66 can be seen in the same low power eyepiece and arguably can be seen in binoculars. M95, M96 and M105 are a little fainter and require a small telescope.

Good luck and stay warm!

Whats up this month?

February 2011 Celestial Events

1st Dawn: Just before sunrise, with binoculars you may be able to see Mercury below a very thin crescent Moon far to Venus's lower left.

2nd New Moon (9:31 pm EST)

3rd- 18th Predawn: Venus passes through northern Sagittarius experiencing close encounters with several bright stars and deep sky objects.

3rd Evening: Europa transits Jupiter's face from (8:28 to 11:12 pm EST), and its shadow follows almost 2 hours behind.

6th Evening: Jupiter is about 6 deg. upper left of the crescent Moon.

9th Evening or Night: Algol is at minimum brightness for roughly 2 hours centered on 7:07 pm EST.

11th First-Quarter Moon (2:18 am EST)

18th Full Moon (3:36 am EST)

20th-21st Night through Dawn: Saturn and Spica form an equilateral triangle with the Moon.

24th Last-Quarter Moon (6:26 pm EST)

25th Dawn: Bright, ruddy Antares is just a few degrees to the right of the Moon.

28th Dawn: Venus is lower left of the Moon.

ASTRA Public Outreach & Star Parties Schedule for February

NO Public Outreach or Star Parties are planned for February.



Call the ASTRA Hotline 609-971-3331 or check the online message board on the date of the star party for up to date information on these events.



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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) or the ASTRA Hotline 609-971-3331 and leave a message.

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 or the ASTRA Hotline 609-971-3331 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,
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Check us out on Facebook, search groups for (ASTRA Astronomy) and look for our logo.



“Jupiter” continued from page 1

So look for Jupiter at early evening, and expect it to be big and bright! It sets around 9 p.m. in early February and 8 p.m. by the end of the month.

Throughout February 2011 Jupiter will be becoming a bit fainter each day as Earth flies ahead in our smaller, faster orbit around the sun. But Jupiter will remain a wonderful object to see in our sky, even as we fly ahead of it. Just remember ... Jupiter is far brighter than any star. It's in the southwest as darkness falls in February. You can't miss it!

If you missed the gorgeous pairing of the waxing crescent moon and Jupiter in January, you'll get another chance in early February. Be sure to watch the shining duo adorning the evening sky on February 5, 6 and 7.



Jupiter and its 4 Galilean moons as seen through binoculars or small telescope.



ASTRA is recognized as having one of the best public outreach programs in the country as recognized by Astronomy magazines “Out of this World” public outreach program. For more information go to <http://nightsky.jpl.nasa.gov> or contact Ro Spedaliere (Treasurer@astra-nj.org) or the ASTRA Hotline 609-971-3331

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 webmaster@astra-nj.org or call the ASTRA Hotline 609-971-3331

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 Call the ASTRA Hotline at 609-971-3331.

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.

Call the ASTRA Hotline at 609-971-3331
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



ASTRA Membership Application Form

Thank you for your interest in the Astronomical Society of the Toms River Area. Please read carefully and fill in the appropriate information below.

ASTRA reserve the right to deny admission or revoke the membership of individuals convicted of a sex offense.

Returning members Annual dues- \$ 25.00 from (January to December): (\$_____)

New membership- \$ 30.00 from (January to December):

New membership- \$ 20.00 from (July to December): (\$_____)

Telescope fund assessment of (\$ 5.00) a *one-time* assessment

“required of all new members” optional for returning members) (\$ 5.00)

TOTAL AMOUNT PAID (as determined by the above schedule): (\$_____)

PLEASE MAKE CHECKS PAYABLE TO ASTRA.

NAME _____ **PHONE ()** _____

ADDRESS _____

CITY _____ **STATE** _____ **ZIP** _____

Check here if you wish to receive a paper copy of our Newsletter.

Check here if you wish to receive an e-mail copy of our Newsletter.

E-MAIL ADDRESS (if applicable) _____

By filing this application with ASTRA, you are indicating that you have not been convicted, adjudicated delinquent or found not guilty by reason of insanity of a sex offense.

I declare that to the best of my knowledge all particulars supplied by me are correct and complete.

APPLICANT SIGNATURE _____

Send this application form with your dues payment to:

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