



ASTRAL PROJECTIONS

February 2012
Volume 23 Issue 2

Meeting Schedule

February 10th Meeting:
"Telescope Equipment Review"

Date: Friday, 2/10/2012

Time: 7:00 PM - 10:00 PM

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

March 9th Meeting: "Famous
Astronomers VII" by Bob Salvatore

Date: Friday, 3/9/2012

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:

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☞ REMINDERS ☞

ASTRA Dues are Due
Membership Application Form is Attached

Membership in the
Astronomical League
is separate and requires an
additional dues payment of
\$7.50
The Astronomical League Membership
Form is also attached.



Whats up this month?

January 2012

Celestial Events

7th: Full Moon (16:54 EDT)

10th: Zodiacal Light visible in W after evening twilight for next two weeks.

14th: Last Quarter Moon (12:04 EDT)

20th: 50th Anniversary of Friendship 7 Launch (John Glenn)

21st: New Moon (17:35 EDT).

29th: First Quarter Moon (20:21 EDT)

ASTRA Public Outreach & Star Parties Schedule for January

There are no star parties scheduled for February. Stay warm!

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)

Observing the Full Moon

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 Spedalieri,
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.



Question: When do many amateur astronomers leave their telescopes indoors?

Answer: the nights around the time of full Moon. After all, bright moonlight washes out faint galaxies and nebulae, and the Moon itself is too glaring to be observed . . . right?

If you heard yourself say this, it's time to take your telescope outside during the next full Moon and begin exploring a world largely overlooked by amateur astronomers. There are numerous fascinating features to observe during this or any phase when you aim your telescope far from the terminator (the dividing line between lunar day and night). The Moon *is* very bright when it's full. If your magnified view of the lunar surface is a bit too dazzling for comfortable observing, use a Moon filter to cut the brilliance without eliminating detail.

Because there are no shadows at full Moon, the dark and light areas you see are variations in the *albedo* (reflectivity) of different parts of the Moon. The biggest albedo difference is between the dark maria (the lunar "seas") and the light highlands. This is due to the compositions of the two surfaces. The maria are made of basaltic lava flows, much like those in Hawaii and Iceland. They contain iron, titanium and other dark metals. The highlands of the Moon are dominated by a bright, aluminum-rich rock called anorthosite. When you observe these light and dark regions, you're seeing rocks that resulted from fundamentally different processes of formation.

Continued on Page 5

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.

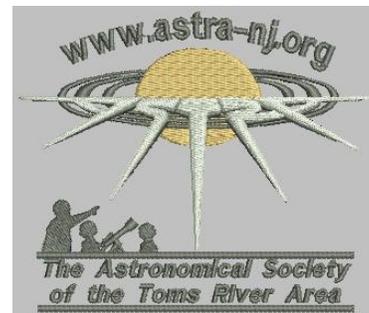
These telescopes are available for club members to borrow and use for a month or two at a time.

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

Moon (Continued from Page 3)

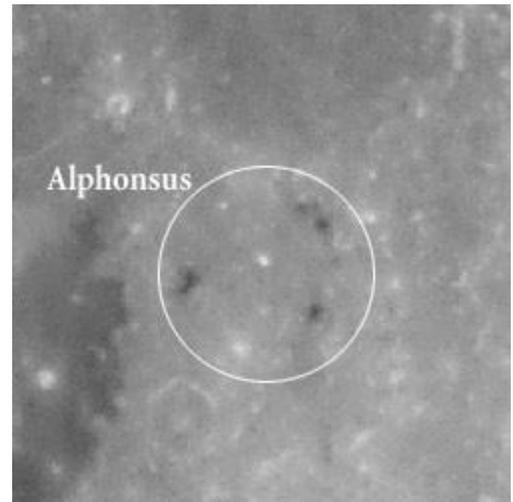
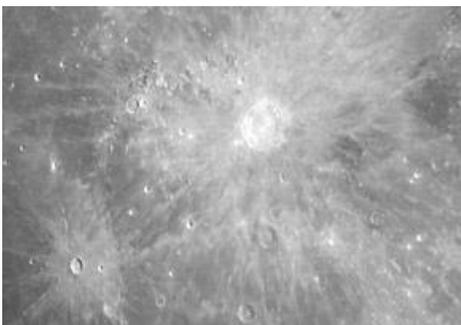


Hues, Patches, and Rays

If you look closely (even with your naked eye) at the maria, you can see that they're not all the same — Procellarum and Imbrium on the western half of the Moon are lighter than the majority of the lunar seas on the Moon's eastern hemisphere. A telescope shows the most conspicuous tonal contrast in mare darkness along the southern shoreline of Mare Serenitatis. The middle of the mare is lighter than the edges, which are noticeably darker. The difference is due to the age and composition of the lavas that comprise these two regions. The rocks found near the middle of Mare Serenitatis have 1–3 percent titanium oxide and are about 3.0 billion years old, while the dark border rocks contain less than 1 percent titanium oxide and are up to 500 million years older.

Spotting the dark volcanic patches in Alphonsus at full Moon is easier than finding Alphonsus itself. Click on the image to see a pair of comparison photos, then view this section of the Moon a day or two before full to get a sense of the region.

Another type of dark marking visible near full Moon are small patches of volcanic ash — great examples are observable on the floors of Alphonsus and Atlas. At the center of each dark spot is a small volcanic crater. Larger, less well-defined ash deposits are visible on the east side of Sinus Aestuum, northwest of the crater Sulpicius Gallus on the western edge of Mare Serenitatis, and at the Apollo 17 landing site on the eastern edge of Mare Serenitatis.

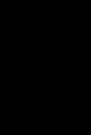
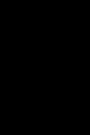
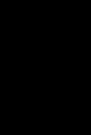
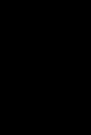
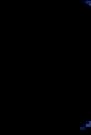
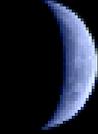


Rays are the most conspicuous bright deposits on the Moon. They're obvious because they contain bits of bright highland rocks excavated on impact from beneath the newly formed crater. When the Moon is full, the great crater Tycho is one of the most noticeable lunar features (see the photo on the previous page). It's circled by a gray halo extending out from the rim about one crater radius.

The great crater Copernicus, an outstanding sight when near the terminator, takes on a different appearance when the Sun nearly overhead. Kepler, another rayed crater, is visible to the lower left.

The rays of Tycho stream as much as 1,900 kilometers to the northeast. It's uncertain if the ray that crosses the center of Serenitatis is from Tycho. If so it's the longest ray on the Moon. Compare this with Copernicus's rays, which extend 1,200 km in all directions. Other bright ray systems are centered on the craters Proclus, Byrgius A, and Kepler. Less conspicuous rays extend from Aristarchus, Anaxagoras, and Langrenus — can you see all of them?

www.skyandtelescope.com

Moon Phases: February 2012						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1 	2 	3 	4 	5 
6 	7 Full 	8 	9 	10 	11 	12 
13 	14 	15 	16 	17 	18 	19 
20 	21 New 	22 	23 	24 	25 	26 
27 	28 	29 				



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.

New membership Annual dues are \$ 25.00 (January to December): (\$_____)

Telescope Fund Assessment required for all new members (\$5.00)
"Optional for returning members"

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

Prorated membership dues are \$ 15.00 from (July to December): (\$_____)

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

PLEASE MAKE CHECKS PAYABLE TO ASTRA.

New Members check box

NAME _____ PHONE () _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Please provide your E-mail address so you can receive a copy of our "Astral Projections" Newsletter.

E-MAIL ADDRESS _____

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



www.astroleague.org

ASTRA's Astronomical League Membership Form

What does the Astronomical League offer you, as a Member?

- A subscription to the Reflector, our quarterly, full-color newsletter.
- The Book Service through which you can buy astronomy-related books at a 10% discount.
(Does not apply to League Sales merchandise)
- Eligibility for all Astronomical League awards, both national and observing.
- Support an organization that promotes education, observing, research and communications.
- But the most important benefit is that you join a national organization of amateur astronomers. You become part of a group that promotes observing, research, and the love of the sky. You have the opportunity to earn awards for your observing skills and learn more about what other amateurs are doing through our national newsletter.

ASTRA's Astronomical League Dues are \$7.50 and must be paid to ASTRA.

"Cash or Check is acceptable"

Name: _____ Phone: (_____) _____ - _____

Address: _____

City: _____ State: _____ ZIP: _____

E-mail: _____

Send this application form with your dues payment to:

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