



ASTRAL PROJECTIONS

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Upcoming Events

March 5 - Observing Event – Members Only

Location: Island Beach State Park, Seaside Park

Time: 6:00pm to 12:00am

March 11 - Monthly Meeting

Location: Robert J. Novins Planetarium (Building 13)

Time: 7:00pm to 10:00pm.

Following the meeting there will be a presentation by Matthew McCue and John Endreson titled "How to Clean your Telescope's Mirrors and Lenses"

March 12 – Jakes Branch Star Party

Location: Jakes Branch County Park, Beachwood

Time: 7:00pm to 9:00pm

March 19- Cattus Island Administration Building

Location: 1198 Bandon Road, Toms River, NJ

Time: 7:00pm to 9:00pm

March 19- Spring Star Party

Location: Robert J. Novins Planetarium (Building 13)

Time: 7:30pm to 10:30pm

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

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

Recap

Cattus Island Star Party

On Saturday January 30, about forty people showed up and viewed a clear night sky through telescopes set up by John Endreson, Rosemarie Spedaliere, Sarah Waters, Vic Palmieri, and Matthew McCue. Some celestial objects of interest were the bright stars of the Winter Circle asterism, the Orion nebula (M42), the Pleiades open star cluster (M45), and the triple star 40 Eridani.



Photo courtesy of ASTRA's Facebook page

Monthly Meeting

On February 12th, Phil Zollner gave fantastic presentation on his trip to Lowell Observatory in Flagstaff, Arizona. During his presentation he showed pictures which included the newly restored 1896 Alvan Clark 24" refractor on Mars Hill. (pictured on the left) and the recently commissioned 4.3 meter Discovery Channel Telescope at Happy Jack. (pictured on the right).



Photos courtesy of Phil Zollner

New Newsletter Editor

We would like to congratulate Chris Savia to the appointment of Astral Projections newsletter editor. We wish him luck in his new position.

Sincerely, Co Editor Anthony Vicidomini and Co Editor Megan Vicidomini



The Closest New Stars To Earth

By Ethan Siegel

When you think about the new stars forming in the Milky Way, you probably think of the giant star-forming regions like the Orion Nebula, containing thousands of new stars with light so bright it's visible to the naked eye. At over 400 parsecs (1,300 light years) distant, it's one of the most spectacular sights in the night sky, and the vast majority of the light from galaxies originates from nebulae like this one. But its great luminosity and relative proximity makes it easy to overlook the fact that there are a slew of much closer star-forming regions than the Orion Nebula; they're just much, much fainter.

If you get a collapsing molecular cloud many hundreds of thousands (or more) times the mass of our sun, you'll get a nebula like Orion. But if your cloud is only a few thousand times the sun's mass, it's going to be much fainter. In most instances, the clumps of matter within will grow slowly, the neutral matter will block more light than it reflects or emits, and only a tiny fraction of the stars that form—the most massive, brightest ones—will be visible at all. Between just 400 and 500 light years away are the closest such regions to Earth: the molecular clouds in the constellations of Chamaeleon and Corona Australis. Along with the Lupus molecular clouds (about 600 light years distant), these dark, light-blocking patches are virtually unknown to most sky watchers in the northern hemisphere, as they're all southern hemisphere objects.

In visible light, these clouds appear predominantly as dark patches, obscuring and reddening the light of background stars. In the infrared, though, the gas glows brilliantly as it forms new stars inside. Combined near-infrared and visible light observations, such as those taken by the Hubble Space Telescope, can reveal the structure of the clouds as well as the young stars inside. In the Chameleon cloud, for example, there are between 200 and 300 new stars, including over 100 X-ray sources (between the Chamaeleon I and II clouds), approximately 50 T-Tauri stars and just a couple of massive, B-class stars. There's a third dark, molecular cloud (Chamaeleon III) that has not yet formed any stars at all.

While the majority of new stars form in large molecular clouds, the closest new stars form in much smaller, more abundant ones. As we reach out to the most distant quasars and galaxies in the universe, remember that there are still star-forming mysteries to be solved right here in our own backyard.



Image credit: NASA and ESA Hubble Space Telescope. Acknowledgements: Kevin Luhman (Pennsylvania State University), and Judy Schmidt, of the Chamaeleon cloud and a newly-forming star within it—HH 909A—emitting narrow streams of gas from its poles.

NASA Highlight

Information from www.nasa.gov/

NASA's James Webb Space Telescope Coming Together Over Next Two Years

The year 2015 marked big progress on NASA's James Webb Space Telescope and there are still a number of large milestones before the next generation telescope is launched in 2018. Recently, all of the 18 segments of the Webb telescope primary mirror segments were installed on the observatory's backplane at NASA's Goddard Space Flight Center in Greenbelt, Maryland. But that's just one component of the Webb. Over the next two years, more components of the Webb will be integrated onto the spacecraft and it will visit three more locations before launch.



*The full-scale James Webb Space Telescope model at South by Southwest in Austin.
Credits: NASA/Chris Gunn*

CELESTIAL EVENTS

Coordinated Universal Time (UTC)

March 8 - Jupiter at Opposition. March 9 - New Moon.
March 9 - Total Solar Eclipse.
March 20 - March Equinox.

March 23 - Full Moon.
March 23 - Penumbral Lunar Eclipse.

Source: <http://www.seasky.org/>. Readers can Google "Sea and Sky" if they want to get to this site.

ASTRA IBSP SPECIAL USE PERMIT

ASTRA has acquired a special use permit for 2016 that allows its members to use Island Beach State Park from dusk until dawn for astronomical observations. The New 2016 IBSP Observing Permit will be available upon request for ASTRA members who are in good standing "2016 paid dues".

This "Special Use Permit" is to be used for Astronomical Observing only! It is not to be used to enter the park for any other reason. If you're interested in obtaining a copy of this permit along with the rules of use information, please contact John Endreson at VP@astra-nj.org for more information.

2016 CALENDAR – (MARCH TO MAY)

March 5 - Observing Event – Members Only

Location: Island Beach State Park, Seaside Park, NJ
Time: 6:00pm to 12:00am

March 11 - Monthly Meeting

Location: Robert J. Novins Planetarium (Building 13)
Time: 7:00pm to 10:00pm
Following the meeting there will be a presentation by Matthew McCue and John Endreson titled "How to Clean your Telescope's Mirrors and Lenses"

March 12 – Jakes Branch Star Party

Location: Jakes Branch County Park, Beachwood NJ
Time: 7:00pm to 9:00pm

March 19 - Cattus Island Administration Building

Location: 1198 Bandon Road, Toms River, NJ
Time: 7:00pm to 9:00pm

March 19 – Spring Star Party

Location: Robert J. Novins Planetarium (Building 13)
Time: 7:30pm to 10:30pm

April 8 - Monthly Meeting

Location: Robert J. Novins Planetarium (Building 13)
Time: 7:00pm to 10:00pm

April 9 - Observing Event – Members Only

Location: Island Beach State Park, Seaside Park, NJ
Time: 6:00pm to 12:00am

April 16 – Jakes Branch Star Party

Location: Jakes Branch County Park, Beachwood
Time: 8:00pm to 10:00pm

April 30 - Star Party

Location: Ocean County Park, 800 Ocean Ave, Lakewood
Time: 8:00pm to 10:00pm

May 6 - Cloverdale Star Party

Location: Cloverdale County Park, Barnegat
Time: 8:30pm to 10:30pm

May 7 - Observing Event – Members Only

Location: TBA
Time: 6:00pm to 12:00am

May 13 - Monthly Meeting

Location: Robert J. Novins Planetarium (Building 13)
Time: 7:00pm to 10:00pm

May 14 – Astronomy Day

Location: Jakes Branch County Park, Beachwood
Time: 2:00pm to 5:00pm & 7:30pm to 10:00pm

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 John Endreson at Library-Loan@astra-nj.org or call him at 609-971-3331.



CLUB TELESCOPES

ASTRA has several different types of telescopes, telescope mounts, along with binoculars, eyepieces, and eyepiece filters for members to borrow. If any member is interested please checkout the website and contact John Endreson at telescope-loan@astra-nj.org or 609-971-3331

VOLUNTEER PRESENTERS

Members are invited to give presentations related to astronomy or space science at our monthly meetings in 2016. Please contact a club officer to make arrangements.

APRIL NEWSLETTER DEADLINE:

MARCH 25, 2016