The Morris Museum Astronomical Society

The Heavenly Herald

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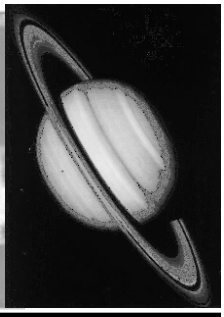

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Member of

MORRIS MUSEUM

President's Message...

This year we will hold our Astronomy Day - ASTRO 2008 - on March 8th. We have three speakers with exciting topics scheduled for the day. We also have several demonstrations lined up as well as telescope displays and videos. Hopefully, the skies will be clear and we will be able to do some solar observing as well observe Mars and Saturn in the evening. If you are a member of MMAS, be sure to attend to give us a hand. If you are not a member, be sure to come to see and learn about the wonders of astronomy that are available to us even in New Jersey.

Less than a week after ASTRO 2008, at our meeting, we will have a special presentation by Dr. Andrew J. Gerrard, NJIT Associate Professor of Physics, Center for Solar—Terrestrial Physics. Dr. Gerrard will tell us about a joint project which is planned for the UACNJ observatory at Jenny Jump State Forest. The project includes a 48 inch telescope, magnetometer, and solar radio telescope to be installed and operated by NJIT's Center for Solar-Terrestrial Research and is funded by the National Science Foundation. UACNJ members will also have the opportunity to access the facilities and data for research and public observing. This has some exciting possibilities for UACNJ and MMAS.

Ted Barker, President

THIS MONTH'S MEETING

NJIT Fielding Instrumentation at Jenny Jump

Andrew J. Gerrard, Ph.D.

Thursday, March 13, 2008 at 7:30 P.M.
Held at the Morris Museum.

Monthly Meetings are the second Thursday of each month at 7:30 P.M. During July & August be sure to check the web site for our summer schedule of events.

Look To The Sky - March 2008

Mars is still visible, high in the sky this month. It will appear at magnitude 0.2 , due north of Betelgeuse on March 1st. By the end of the month it will fade to magnitude 0.8 . On the 14th it will be adjacent to the first quarter Moon.

The apparent diameter of Mars will start March at 9 arc-seconds and decrease to 7 arc-seconds at the month's close. An 8'"or 10" will still show some detail on the surface but the detail will fade as the month ends.

For Mars, look to the south in early evening and to the east for Saturn.

Saturn is in Leo and will be visible all night. Since it reached opposition on February 24, Saturn is only beginning to move further away from Earth and will be brighter than Regulas which is only a few degrees to the west.

Through a telescope, your view of Saturn will be beautiful as usual. Saturn spans 20 arc-seconds and it's rings span 45 arc-seconds—always a great view.

Jupiter will rise at 4:00 A.M. on the 1st, and 90 minutes earlier by the end of March.

Venus and Mercury are 2 degrees apart in the predawn sky on March 1st.

Your feedback is needed.
What would you like to see in the Heavenly Herald?
Send comments to

TedBarker@att.net

Article submissions for future issues.
Please send to
TedBarker@att.net

Hands On Observing

Observing sessions at Jenny Jump always depend on the weather and a certified scope observer's availability. Session notifications will go out via email, usually no earlier than the day before. Based on the response, plans will be made for qualifications and/or observing. In order to have a high quality experience, the number of participants may sometimes have to be limited.

Please send an email to Eric at **ericleonard@lucent.com** with your contact information, and whether you'd like to be certified on the 16" telescope. Eric will then provide additional information, and add you to his email list.

NASA Space Place

Spaceplace.nasa.gov

Invisible Spiral Arms

by Patrick Barry

At one time or another, we've all stared at beautiful images of spiral galaxies, daydreaming about the billions of stars and countless worlds they contain. What mysteries—and even life forms—must lurk within those vast disks?

Now consider this: many of the galaxies you've seen are actually much larger than they appear. NASA's Galaxy Evolution Explorer, a space telescope that "sees" invisible, ultraviolet light, has revealed that roughly 20 percent of nearby galaxies have spiral arms that extend far beyond the galaxies' apparent edges. Some of these galaxies are more than three times larger than they appear in images taken by ordinary visible-light telescopes.

"Astronomers have been observing some of these galaxies for many, many years, and all that time, there was a whole side to these galaxies that they simply couldn't see," says Patrick Morrissey, an astronomer at Caltech in Pasadena, California, who collaborates at JPL.

The extended arms of these galaxies are too dim in visible light for most telescopes to detect, but they emit a greater amount of UV light. Also, the cosmic background is much darker at UV wavelengths than it is for visible light. "Because the sky is essentially black in the UV, far-UV enables you to see these very faint arms around the outsides of galaxies," Morrissey explains.

These "invisible arms" are made of mostly young stars shining brightly at UV wavelengths. Why UV? Because the stars are so hot. Young stars burn their nuclear fuel with impetuous speed, making them hotter and bluer than older, cooler stars such as the sun. (Think of a candle: blue flames are hotter than red ones.) Ultraviolet is a sort of "ultra-blue" that reveals the youngest, hottest stars of all.

"That's the basic idea behind the Galaxy Evolution Explorer in the first place. By observing the UV glow of young stars, we can see where star formation is active," Morrissey says.

The discovery of these extended arms provides fresh clues for scientists about how some galaxies form and evolve, a hot question right now in astronomy. For example, a burst of star formation so far from the galaxies' denser centers may have started because of the gravity of neighboring galaxies that passed too close. But in many cases, the neighboring galaxies have not themselves sprouted extended arms, an observation that remains to be explained. The Galaxy Evolution Explorer reveals one mystery after another!

"How much else is out there that we don't know about?" Morrissey asks. "It makes you wonder."

Spread the wonder by seeing for yourself some of these UV images at www.galex.caltech.edu. Also, Chris Martin, principle scientist for Galaxy Evolution Explorer —or rather his cartoon alter-ego—gives kids a great introduction to ultraviolet astronomy at spaceplace.nasa.gov/en/kids/live#martin.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Please see the illustration on the following page

Events and Information

The Moon this Month

March	2008
Last Quarter	29
New Moon	7
First Quarter	14
Full Moon	21

Internet Links To Visit

nasa.gov

space.com

spaceweather.com

skyandtelescope.com

astronomy.com

kidsastronomy.com

nso.edu

uacnj.org

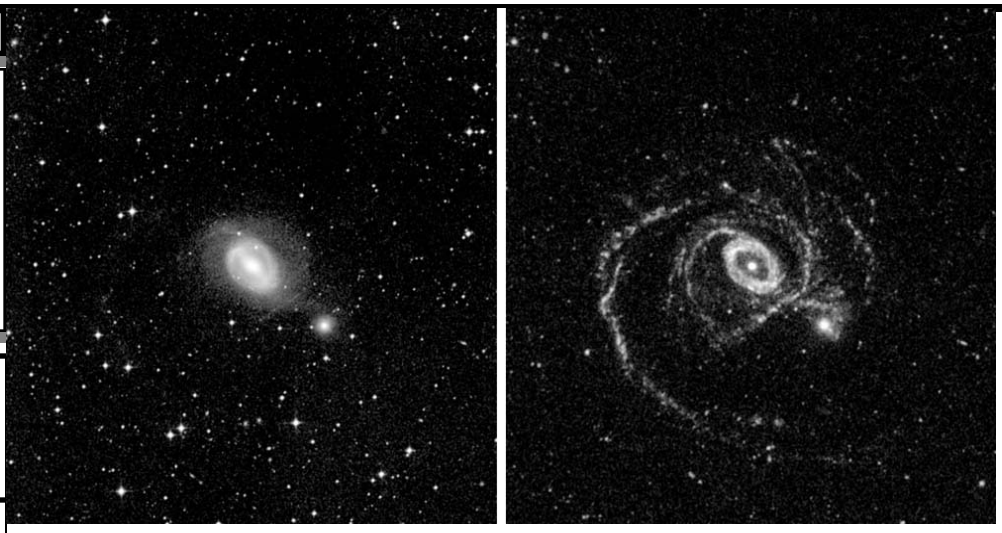
astronomylinks.com

enchantedlearning.com/subjects/astronomy/

heavens-above.com

http://spaceplace.nasa.gov

And don't forget our site
http://mmastrosociety.tripod.com



Galaxy NGC 1512 is represented in both images. The visible light image on the left shows the glow of older stars, while the Galaxy Evolution Explorer ultraviolet image on the right shows the ring and long, spiral arms, tracing primarily younger stars. (Credit: NASA/JPL-Caltech/DSS/GALEX).

Upcoming MMAS Events

Friday. February 29, 2008: Extension observing at church in Randolph

Saturday, March 8, 2008: MMAS ASTRO DAY 2008

Friday, April 11, 2008: Extension Observing at Hughes School

Thursday, May 8, 2008: Family Stargazing Night

Interested in joining the Morris Museum Astronomical Society?
It's really easy. Club dues started in January for our 2007 membership drive.
Please Send Payment to:

Morris Museum
MMAS—Membership
6 Normandy Heights Road
Morristown, NJ 07960