The Morris Museum Astronomical Society

The Heavenly Herald

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Member of

MORRIS MUSEUM

President's Message...

ASTRO 2008 was successful with a museum attendance of over 400 people visiting. It seemed like the majority of attendees were young children who also enjoyed the inflatable planetarium and craft sessions. Unfortunately, we had very few people at our speaker presentations which were aimed at a somewhat older audience. The weather was not suitable for observing, so our 'scopes were idle all day and we did not return for evening observing.

This month's meeting will be a little out of our regular pattern. We have invited Cub Scout Pack 177 to join our members for an evening to learn about the "Tools For Astronomy" presented by our own Joe Molnar. If weather permits, we will have our 8" Celestron set up for night sky observing. The use of a planisphere will be demonstrated as a valuable tool to locate objects in the sky. We will also demonstrate the use of Bernham Handbooks and sky maps. The discussion will cover the three basic types of amateur telescopes as well as the use of various eyepieces, explaining how they work and how they are selected.

Please note that we have two extension observing events scheduled for the same week as our meeting. If you have a telescope to bring or would just like to help out, please contact Ron Russo who is planning these events. We can always use all the help we can get.

Ted Barker, President

THIS MONTH'S MEETING

"Tools For Astronomy"
Joe Molnar

Thursday, April 10, 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 - April 2008

This month, Saturn and Venus are still the main planets visible in small telescopes.

Mars is growing smaller, and detail is difficult, if at all possible, to see on it's surface. Mars is a good object to view with the unaided eye or binoculars as it now shines at magnitude 1.0 with an apparent size of 6 arc-seconds. Mars can be followed as is moves diagonally across Gemini the Twins. It will be very close to the waxing crescent Moon on the evening of April 11.

Saturn will shine at 0.4 magnitude, about 2.5 times brighter than Regulus which will be about 2 degrees west of Saturn. On April 15th, a gibbous Moon appears below Saturn.

Jupiter is rising at about 3 a.m. on April 1st and about 2 hours earlier by the end of the month. During this period, Jupiter will grow from an apparent diameter 37 arc-sec to 41 arc-sec and shines at magnitude –2.2 .

The Lyrid meteor shower will peak near midnight on the night of April 21/22, but the Moon may interfere.

On April 8th, look for a 3-day-old Moon to occult several faint stars in the Pleiades.

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

Tracking Wildlife from Space

by Patrick Barry

It's 10 o'clock, and do you know where your Oriental Honey Buzzard is?

Tracking the whereabouts of birds and other migrating wildlife across thousands of miles of land, air, and sea is no easy feat. Yet to protect the habitats of endangered species, scientists need to know where these roving animals go during their seasonal travels.

Rather than chasing these animals around the globe, a growing number of scientists are leveraging the bird's-eye view of orbiting satellites to easily monitor animals' movements anywhere in the world.

The system piggybacks on weather satellites called Polar Operational Environmental Satellites, which are operated by the National Oceanic and Atmospheric Administration (NOAA), as well as a European satellite called MetOp. Sensors aboard these satellites pick up signals beamed from portable transmitters on the Earth's surface, 850 kilometers below. NOAA began the project—called Argos—in cooperation with NASA and the French space agency (CNES) in 1974. At that time, scientists placed these transmitters primarily on buoys and balloons to study the oceans and atmosphere. As electronics shrank and new satellites' sensors became more sensitive, the transmitters became small and light enough by the 1990s that scientists could mount them safely on animals. Yes, even on birds like the Oriental Honey Buzzard.

“Scientists just never had the capability of doing this before,” says Christopher O'Connors, Program Manager for Argos at NOAA.

Today, transmitters weigh as little as 1/20th of a pound and require a fraction of a watt of power. The satellites can detect these feeble signals in part because the transmitters broadcast at frequencies between 401 and 403 MHz, a part of the spectrum reserved for environmental uses. That way there's very little interference from other sources of radio noise.

“Argos is being used more and more for animal tracking,” O’Connors says. More than 17,000 transmitters are currently being tracked by Argos, and almost 4,000 of them are on wildlife. “The animal research has been the most interesting area in terms of innovative science.”

For example, researchers in Japan used Argos to track endangered Grey-faced Buzzards and Oriental Honey Buzzards for thousands of kilometers along the birds' migrations through Japan and Southeast Asia. Scientists have also mapped the movements of loggerhead sea turtles off the west coast of Africa. Other studies have documented migrations of wood storks, Malaysian elephants, porcupine caribou, right whales, and walruses, to name a few.

Argos data is available online at www.argos-system.org, so every evening, scientists can check the whereabouts of all their herds, schools, and flocks. Kids can learn about some of these endangered species and play a memory game with them at spaceplace.nasa.gov/en/kids/poes_tracking.

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

See Illustration on Next Page

Events and Information

The Moon this Month

April 2008	
Last Quarter	28
New Moon	5
First Quarter	12
Full Moon	20

Internet Links To Visit

nasa.gov

space.com

spaceweather.com

skyandtelescope.com

astronomy.com

kidsastronomy.com

nso.edu

uacnj.org

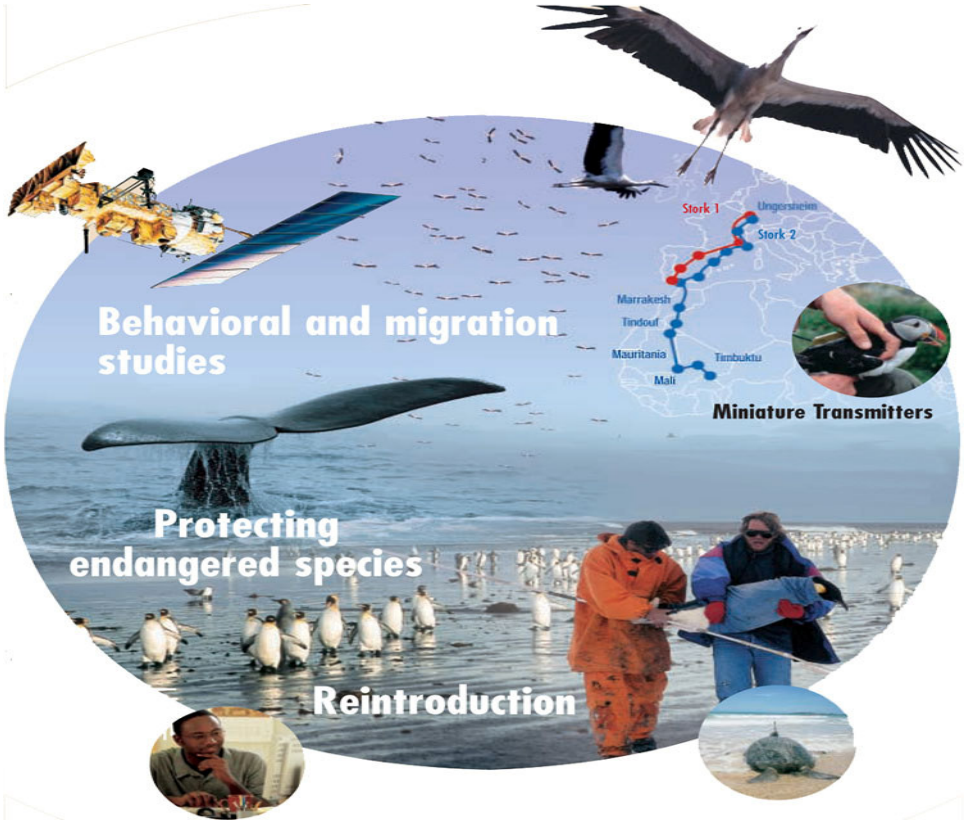
astronomylinks.com

enchantedlearning.com/subjects/astronomy/

heavens-above.com

http://spaceplace.nasa.gov

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



The ARGOS program tracks the whereabouts of endangered migrating animals via miniature transmitters on the animals and the POES satellites in orbit.

Upcoming MMAS Events

Wednesday, April 9,2008: Extension Observing at Chatham HS

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 2008 membership drive.
Please Send Payment to:

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