



Monthly Notices of the Everglades Astronomical Society



Naples, FL
December 2012

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President's Message

I'll be away for the upcoming meeting, but I'm sure our vice President, Todd, will do a highly capable job of handling the meeting. The Christmas holiday is fast approaching; if you are considering a telescope purchase for a loved one, you may wish to read my telescope buying guide on our club website. Our newsletter editor, Jackie, did and she has been widely impressed by the capabilities of her new telescope.

Please send in your 2013 dues at your earliest convenience. The money provided allows the club to provide services to members such as our meeting place at the Norris Center.

Clear Skies,
President
Mike Usher

Dates for the "Fack"

Usually the best times to go out to the Fakahatchee Strand viewing site are moonless nights. Below is a list of upcoming Saturday nights that you will often find fellow club members out there enjoying the skies with you (weather permitting).

Date	Moonrise	Moonset
Dec. 8	1:50 a.m.	1:43 p.m.
Dec. 15	9:09 a.m.	8:29 p.m.

Sky Events

Dec 3 - Jupiter at Opposition
 Dec 6 - Last Quarter
 Dec. 6-19 - Geminids Meteor Shower
 Dec. 13 - New Moon
 Dec. 20 - First Quarter
 Nov. 27 - Conjunction of Venus and Saturn (morning sky)
 Dec. 28 - Full Moon

Next Meeting

Dec. 11, 2012
Time 7:00 – 9:00 pm
At the Norris Center, Cambridge Park

Member Quotes of the Month & Other Stuff

"I don't want diamonds. I want a bigger telescope."
Jackie Richards

But they never listen.

* * * * *

Email exchange (Mike Usher and Charlie Paul):

Mike to Charlie: "Jackie bought a 10" Meade Lightbridge from Meade. She also has a 10.5" cookie tin she is saving just for you!"

Charlie to Mike: "Thanks I can use the cookie tin."

Even men like their cookie tins.

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Rick Piper, during a great presentation at the last EAS meeting, gave us some history on the Society and showed us many photos, including one from a telescope-making project in which we saw a large hollow canister about ten feet long laying on the grass with two feet hanging out of one end. His wife came out with her camera, and Rick yelled out from within the canister, "What are you doing?" as if *she* was the one doing something strange.

Thanks, Rick, for sharing the history.



It Takes More Than Warm Porridge to Make a Goldilocks Zone

By Diane K. Fisher

The “Goldilocks Zone” describes the region of a solar system that is just the right distance from the star to make a cozy, comfy home for a life-supporting planet. It is a region that keeps the planet warm enough to have a liquid ocean, but not so warm that the ocean boils off into space. Obviously, Earth orbits the Sun in our solar system’s “Goldilocks Zone.”

But there are other conditions besides temperature that make our part of the solar system comfortable for life. Using infrared data from the Spitzer Space Telescope, along with theoretical models and archival observations, Rebecca Martin, a NASA Sagan Fellow from the University of Colorado in Boulder, and astronomer Mario Livio of the Space Telescope Science Institute in Baltimore, Maryland, have published a new study suggesting that our solar system and our place in it is special in at least one other way.

This fortunate “just right” condition involves Jupiter and its effect on the asteroid belt.

Many other solar systems discovered in the past decade have giant gas planets in very tight orbits around their stars. Only 19 out of 520 solar systems studied have Jupiter-like planets in orbits beyond what is known as the “snow line”—the distance from the star at which it is cool enough for water (and ammonia and methane) to condense into ice. Scientists believe our Jupiter formed a bit farther away from the Sun than it is now. Although the giant planet has moved a little closer to the Sun, it is still beyond the snow line.

So why do we care where Jupiter hangs out? Well, the gravity of Jupiter, with its mass of 318 Earths, has a profound effect on everything in its region, including the asteroid belt. The asteroid belt is a region between Mars and Jupiter where millions of mostly rocky objects (some water-bearing) orbit. They range in size from dwarf planet Ceres at more than 600 miles in diameter to grains of dust. In the early solar system, asteroids (along with comets) could have been partly responsible for delivering water to fill the ocean of a young Earth. They could have also brought organic molecules to Earth, from which life eventually evolved.

Jupiter’s gravity keeps the asteroids pretty much in their place in the asteroid belt, and doesn’t let them accrete to form another planet. If Jupiter had moved inward through the asteroid belt toward the Sun, it would have scattered the asteroids in all directions before Earth had time to form. And no asteroid belt means no impacts on Earth, no water delivery, and maybe no life-starting molecules either. Asteroids may

have also delivered such useful metals as gold, platinum, and iron to Earth’s crust.

But, if Jupiter had not migrated inward at all since it formed farther away from the Sun, the asteroid belt would be totally undisturbed and would be a lot more dense with asteroids than it is now. In that case, Earth would have been blasted with a lot more asteroid impacts, and life may have never had a chance to take root.

The infrared data from the Spitzer Space Telescope contributes in unexpected ways in revealing and supporting new ideas and theories about our universe. Read more about this study and other Spitzer contributions at spitzer.caltech.edu. Kids can learn about infrared light and enjoy solving Spitzer image puzzles at spaceplace.nasa.gov/spitzer-slyder.

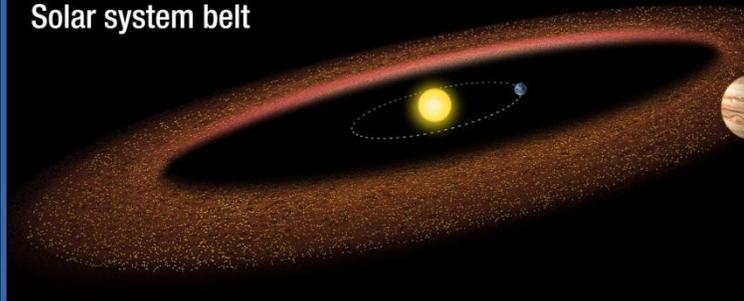
This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Three scenarios for asteroid-belt evolution

Disrupted belt



Solar system belt



Dense belt

