



# Monthly Notices of the Everglades Astronomical Society



Naples, FL  
March 2013

**Officers:** **President:** Michael Usher; **VP/Secretary:** Todd Strackbein; **Treasurer:** Bob Gurnitz  
**Newsletter Editor:** Jackie Richards ([jmrichards2005@yahoo.com](mailto:jmrichards2005@yahoo.com))  
**Home Page:** <http://naples.net/clubs/eas> **Webmaster:** Martin Zombeck ([mvz@alum.mit.edu](mailto:mvz@alum.mit.edu))  
**Fack Coordinator & information on viewing:** Charlie Paul ([cpaul651@earthlink.net](mailto:cpaul651@earthlink.net)) 410-8192

## President's Message

It's getting on towards spring and the warmer weather (what warmer than this?). Spring is when we hold the Annual Picnic at the Fack. This year is something a little special as we now have restroom facilities out there thanks to our amazing newsletter editor, Jackie Richards. I hope to get many more club members to come out and visit us. We'll see if we can set a date for the picnic at the upcoming meeting - before too many of our winter members go home.

On Tuesday, March 12<sup>th</sup>, Ted Wolfe will speak at the Everglades Astronomical Society meeting. He will show his recent color space images taken over the past 18 months, discuss a new telescope he has acquired, and share an experience he had this summer leading a group to determine if Thomas Jefferson knew Messier.

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
Mar. 9	4:56 a.m.	4:41 p.m.
Apr. 6	3:35 a.m.	3:32 p.m.

## Sky Events

Mar. 4 - Last quarter  
Mar. 9 - Comet PANSTARRS (C/2011 L4) at perihelion  
Mar. 11 - New moon  
Mar. 19 - First quarter  
Mar. 27 - Full moon

## Next Meeting

March 12, 2013  
Time 7:00 – 9:00 pm  
At the Norris Center, Cambridge Park

## The Winter Star Party

By Jackie Richards

If you weren't at the Winter Star Party (WSP) this year, you missed the perfect week to be there. There were clear skies just about every night and it was dark enough for one to get lost. In attendance from the Everglades Astronomical Society were Bob Frances, Bob Gurnitz, Charlie Paul, Jackie Richards, Rick Piper, Eric Uthus and Mary Ann Wallace.

On the first night, viewers were treated to a bright meteor show. "We were all looking up following the ISP as it was going by when the meteor came from the north going south. It was the brightest I have ever seen, and it did end up exploding with a bright flash," as described by Charlie Paul.



Club Members at the WSP from left to right: Eric Uthus, Charlie Paul, Bob Frances, Bob Gurnitz, Jackie Richards and Rick Piper.



Mary Ann Wallace at the WSP sporting her new Explore Scientific ED127 – 5" Refractor.

Bob Gurnitz was busy imaging the night sky at the WSP. His photo of M81, M82 and NGC 3077 is shown below and was created with the assistance of his 14-year old grandson, Jakob Coray, of Arlington, VA. Bob has also provided below a list of objects from his photos with definitions.



M81, M82, NGC 3077, 80 mm Celestron ED, CG-5 Mount, Canon Rebel XT (modified), 1 image at 30 sec., 1 image at 60 sec., 5 at 180 sec., dark corrected and stacked

One of the many objects and constellations we viewed was Crux (also known as the Southern Cross), which is a cross-shaped asterism that both rises and sets in the south, making it visible just above the southern horizon for a short time each night and making it difficult for us to see in Naples. It is this constellation that inspired the lyrics for the Crosby, Stills & Nash song, Southern Cross, back in the 80's.

Camping was quite an experience and I would highly recommend it. Once it's dark, you're ready to view the sky, and when you're too tired to stay awake, your home away from home is just steps away.

## WHAT EXPLODED OVER RUSSIA?

By Dr. Tony Phillips

When the sun rose over Russia's Ural Mountains on Friday, Feb. 15th, many residents of nearby Chelyabinsk already knew that a space rock was coming. Later that day, an asteroid named 2012 DA14 would pass by Earth only 17,200 miles above Indonesia. There was no danger of a collision, NASA assured the public.

Maybe that's why, when the morning sky lit up with a second sun and a shock wave shattered windows in hundreds of buildings around Chelyabinsk, only a few people picking themselves off the ground figured it out right away. This was not a crashing plane or a rocket attack.

"It was a meteor strike--the most powerful since the Tunguska event of 1908," says Bill Cooke of NASA's Meteoroid Environment Office.

In a coincidence that still has NASA experts shaking their heads, a small asteroid completely unrelated to 2012 DA14 struck Earth only hours before the publicized event. The impactor flew out of the blue, literally from the direction of the sun where no telescope could see it, and took everyone by surprise.

"These are rare events and it is incredible to see them happening on the same day," says Paul Chodas of NASA's near-Earth Object Program at JPL.

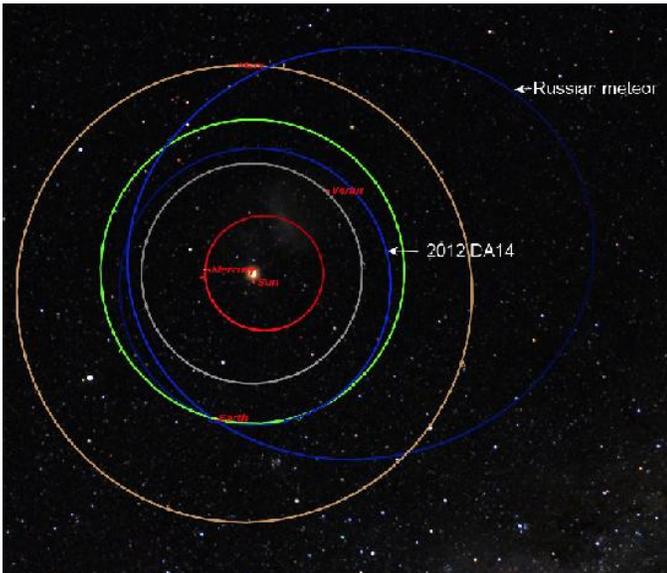
Researchers have since pieced together what happened. The most telling information came from a network of infrasound sensors operated by the Comprehensive Test Ban Treaty Organization (CTBTO). Their purpose is to monitor nuclear explosions.

Infrasound is a type of very low-frequency sound wave that only elephants and a few other animals can hear. It turns out that meteors entering Earth's atmosphere cause ripples of infrasound to spread through the air of our planet. By analyzing infrasound records, it is possible to learn how long a meteor was in the air, which direction it traveled, and how much energy it unleashed.

The Russian meteor's infrasound signal was the strongest ever detected by the CTBTO network. The furthest station to record the sub-audible sound was 15,000 km away in Antarctica.

Based on the trajectory of the fireball, analysts have also plotted its orbit. "It came from the asteroid belt, about 2.5 times farther from the sun than Earth," says Cooke.

Comparing the orbit of the Russian meteor to that of 2012 DA14, Cooke has shown that there is no connection between the two. "These are independent objects," he says. "The fact that they reached Earth on the same day, one just a little closer than the other, appears to be a complete coincidence."



Infrasound records confirm that the meteor entered the atmosphere at a shallow angle of about 20 degrees and lasted more than 30 seconds before it exploded. The loud report, which was heard and felt for hundreds of miles, marked the beginning of a scientific scavenger hunt. Thousands of fragments of the meteor are now scattered across the Ural countryside, and a small fraction have already been found.

Preliminary reports, mainly communicated through the media, suggest that the asteroid was made mostly of stone with a bit of iron--"in other words, a typical asteroid from beyond the orbit of Mars," says Cooke. "There are millions more just like it."

And that is something to think about as the cleanup in Chelyabinsk continues.

**For full article:**

[http://science.nasa.gov/science-news/science-at-nasa/2013/26feb\\_russianmeteor/](http://science.nasa.gov/science-news/science-at-nasa/2013/26feb_russianmeteor/)