



Monthly Notices of the Everglades Astronomical Society



Naples, FL
August 2011

President: Michael Usher; **Vice President:** Todd Strackbein; **Secretary:** Todd Strackbein;
Treasurer: Bob Gurnitz; **Newsletter Editor:** Frank Ligas (EAS.Naples.NewsLetter@gmail.com);
Fak Coordinator: Charlie Paul -- for information on viewing (cpaul651@earthlink.net , 239-410-8192)
Webmaster: Martin Zombeck (mvz@alum.mit.edu)

Home Page: <http://gator.naples.net/clubs/eas>

President's Message:

It's been a long hot summer and we still have months to go before our first cold front here in Naples. Hopefully our members up north have been able to protect themselves from the heat wave. We still have a few brave adventurers that travel to the Fak each month to see the glorious summer Milky Way.

September is just around the corner, and every September brings a flurry of activity to our club as that is the month our members can sign up for the Winter Star Party. For those new to the club that don't know - the Winter Star Party is an annual gathering in the keys for astronomers nationwide for a week in February. You'll hear more about it next month I'm sure.

Clear Skies,
Mike Usher, President
(239) 643-6017

Dates for the "Fak":

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).

| Fak Dates | Sun Set | Moonrise | Moonset |
|-----------|---------|----------|---------|
| Aug 20 | 7:59pm | 11:55pm | 1:47pm |
| Aug 27 | 7:52pm | 5:25am | 6:43pm |

Next Meeting: (*Bring a friend!*)

August 9th, 2011
Time 7:00 – 9 pm
At the Books-A-Million, across the street from the Coastland Mall

Sky Events:

Aug 6 -- New Moon
Aug 13 -- First Quarter Moon
Aug 21 -- Full Moon
Aug 28 -- Last Quarter Moon

Eclipse Dates:

November 25: Partial eclipse of the Sun This eclipse will not be visible from North America. The eclipse will be visible from Antarctica, southern Africa, southern India, and New Zealand.

Meteor Showers:

Name: **Perseids**
Activity Period: **Aug 9-17**
Maximum: **Aug 12-13**

Astronomical Trivia Question of the Month:

What is the smallest modern constellation?

- Hydra
- Taurus
- Crux
- Leo

**Answer on next page.*



New GOES-R to Give More Tornado Warning Time
by Dauna Coulter and Dr. Tony Phillips

So far this spring, more than 1,400 tornadoes have struck the U.S. Some of them have cut jaw-dropping trails of destruction across the countryside and, tragically, across inhabited communities, too. Hundreds of lives have been lost in the onslaught.

Throughout the season, the National Weather Service has routinely issued tornado alerts. In the case of the Alabama tornadoes of April 27th, forecasters warned of severe weather five full days before the twisters struck. Because they couldn't say precisely where the twisters would strike, however, many of their warnings went unheeded.

"If people get a hurricane warning, they often evacuate the area," notes NOAA's Steve Goodman. "But we react differently to tornado warnings."

Perhaps it's because tornadoes are smaller than hurricanes, and the odds of a direct hit seem so remote. Recent pictures from Tuscaloosa, Alabama, and Joplin, Missouri, however, show the perils of playing those odds. Goodman believes that more precise warnings could save lives.

To fine-tune tornado warnings, NOAA will soon launch the first in a series of next-generation weather satellites – GOES-R (Geostationary Operational Environmental Satellites-R series). The spacecraft is brimming with advanced sensors for measuring key ingredients of severe weather including winds, cloud growth, and lightning.

"GOES-R will be the first geostationary spacecraft to carry a lightning sensor," says Goodman, the GOES-R Program Senior Scientist. "Studies show that sudden changes in the total lightning activity correlate with storm intensity—and with tornadoes."

The lightning mapper will detect and map not only cloud-to-ground lightning, but also bolts within and between clouds. The kind of cloud-to-ground lightning we see from our front yards accounts for only 15-20 percent of total lightning. To get a clear idea of a storm's intensity, meteorologists need to know about all the lightning—a view GOES-R can provide.

All by itself, the lightning mapper will provide 7 minutes more lead time in tornado warnings, according to Goodman. GOES-R's state-of-the-art instruments will also improve long-range forecasts.

"The satellite's Advanced Baseline Imager (ABI), for instance, will provide a much clearer picture of clouds," says NOAA research meteorologist Tim Schmit. Compared to lesser instruments already in orbit, ABI can better detect super-cold "overshooting tops," evidence of enormous energy and upward velocity that correlate with subsequent severe weather.

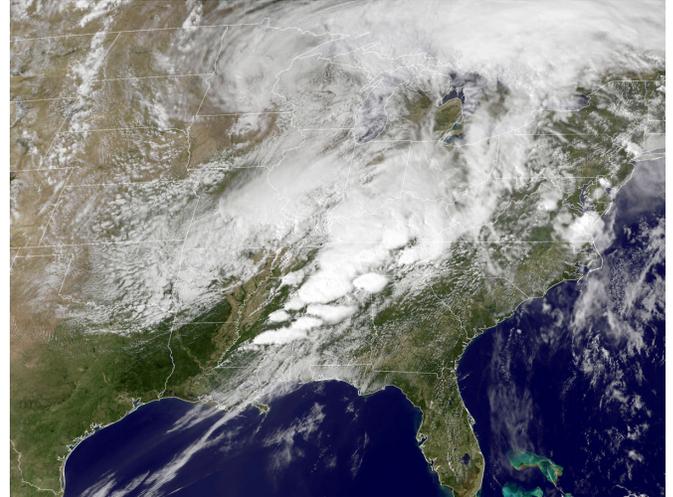
"Accurate advanced notice of high-risk tornadic conditions can cue officials to close schools and

businesses even before tornadoes are actually detected," says Schmit.

Forecasters doubt tornadoes can ever be predicted with 100% accuracy. The twisters are just too capricious. GOES-R, however, is a step in the right direction.

Find out more about GOES-R's unprecedented capabilities at <http://www.goes-r.gov>. Young people can learn more about tornadoes and all kinds of other weather at <http://scijinks.gov>.

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



Caption:

This GOES image shows the storms that spurred the intense April 27 tornado outbreak in the southern U.S. Animation showing the development of weather can be seen at <http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=50347>

Answer to the trivia question:

The answer is **C**.

Crux is the smallest of the 88 modern constellations, but is one of the most distinctive. Its name is Latin for cross, and it is dominated by a cross-shaped asterism that is commonly known as the Southern Cross.

<http://en.wikipedia.org/wiki/Crux>

Links of the Month:

1. <http://www.spaceweather.com>
2. <http://www.youtube.com/watch?v=L30LZZ96710&feature=fvst>
3. <http://www.space.com/12481-top-space-photos-week-july-30-2011.html>

Items for Sale

<http://naples.net/clubs/eas/sales.html>

Handbook of Space Astronomy and Astrophysics -
Paperback; 782 pages; 338 B&W illustrations; 247
tables. 40% off list price for astronomy club members. A
comprehensive compilation of the facts and figures
relevant to astronomy and astrophysics. This handbook
contains the most frequently used information in modern
astronomy and astrophysics, and will be an essential
reference for advanced amateur astronomers, university
students, graduate students, researchers and
professionals working in astronomy and the space
sciences. For more information and to purchase the
handbook go to:

http://www.astrohandbook.com/astrohandbook_clubs.html

Martin Zombeck, mvz@alum.mit.ed, Club Affiliation:
EAS; date posted: 23 November 2010.

2011 Membership Dues:

For the bargain price of only **\$20.⁰⁰ per family**, all this can be yours for the coming year!

- ✓ Meet with your fellow astronomy enthusiasts at least 10 times a year.
- ✓ Many opportunities to freeze/sweat/get bitten by mosquitoes in the Fakahatchee Strand.
- ✓ View planets, nebulae and many other celestial objects.

Don't miss out! Fill out this form (please print plainly) and send it with your \$20 check, payable to:

Everglades Astronomical Society

P.O. Box 1868

Marco Island, Florida 34146

Name: _____
Address: _____
Phone: _____
Email: _____