



Monthly Notices of the Everglades Astronomical Society



Naples, FL
July 2009

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Presidents Message

Those of us who have tried to view from the FAK this past month have not done well. On July 11th went we out it was raining where at the site. As most of you know, I am a diehard as far as making the viewing trip. I do this because at least 50 to 70 percent of the time the sky clears, and we get to view the summer milky way.

One of our club members is making the ultimate trip. Bob Gurnitz is going to China this month to view the eclipse. We wish clear skies for him.

This month we will have our regular summer coffee get together at the Books-a-Million, bring a good topic to discuss. This is the old Books a Million across the street from the Coastland Mall, we start at 7:30 on the 23rd. Hope to see some of you at the FAK on July 18th and August 15 & 22nd.

Charlie Paul
Coo President
Viewing coordinator

Astronomical Trivia Question of the Month

How many chemical elements are named after planets?

- 1
- 2
- 3
- 7

Answer on next page.

Next Meeting

July 23, 2009
Time 7:30 – 9 pm
At Books-A-Million

Sky Events

July 15 – 3rd Quarter Moon
July 22 – New Moon
July 28 – 1st Quarter Moon
Aug 2 – Mercury 0.5 degree from Regulus
Aug 6 – Full Moon
Aug 11- Perseid Meteor shower begins
Aug 13 – 3rd Quarter Moon

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
July 18	5:09 PM	
August 15	2:33 AM	



SARSAT to the Rescue

If a plane crashes in the woods and nobody hears it, does it make a sound? Never mind contemplating this scenario as a philosophical riddle. This can be a real life or death question. And the answer most of the time is that, even if no people are nearby, something is indeed listening high above. That something is a network of satellites orbiting about 450 miles overhead. The “sound” they hear isn’t the crash itself, but a distress signal from a radio beacon carried by many modern ships, aircraft, and even individual people venturing into remote wildernesses. In the last 25 years, more than 25,000 lives have been saved using the satellite response system called Search and Rescue Satellite-aided Tracking (SARSAT).

So what are these life-saving superhero satellites? Why they are mild-mannered weather satellites. “These satellites do double duty,” says Mickey Fitzmaurice, a National Oceanic and Atmospheric Administration (NOAA) systems engineer for SARSAT. “Their primary purpose is to gather continuous weather data, of course. But while they’re up there, they might as well be listening for distress signals too.” In February, NASA launched the newest of these Polar-orbiting Operational Environmental Satellites (or POES) into orbit. This new satellite, called N-Prime at launch and now dubbed NOAA-19, prevents a gap in this satellite network as another, aging NOAA satellite reached the end of its operational life. “The launch of N-Prime was a big deal for us,” Fitzmaurice says. With N-Prime/NOAA-19 in place, there are now six satellites in this network. Amongst them, they pass over every place on Earth, on average, about once an hour. To pinpoint the location of an injured explorer, a sinking ship, or a downed plane, POES use the same Doppler effect that causes a car horn to sound higher-pitched when the car is moving toward you than it sounds after it passes by.

In a similar way, POES “hear” a higher frequency when they’re moving toward the source of the distress signal, and a lower frequency when they’ve already passed overhead. It takes only three distress-signal bursts — each about 50 seconds apart — to determine the source’s location. Complementing the POES are the Geostationary Operational Environmental Satellites (GOES), which, besides providing weather data, continuously monitor the Western Hemisphere for distress signals. Since their geostationary orbit leaves them motionless with respect to Earth below, there is no Doppler effect to pinpoint location. However, they do provide near instantaneous notification of distress signals.

In the future, the network will be expanded by putting receivers on new Global Positioning System (GPS) satellites, Fitzmaurice says. “We want to be able to locate you after just one burst.” With GPS, GOES will also be able to provide the location of the transmitter.

Philosophers beware: SARSAT is making “silent crashes” a thing of the past.

Download a two-page summary of NOAA-19 at www.osd.noaa.gov/POES/NOAA-NP_Fact_Sheet.pdf. The Space Place gives kids a chance to rescue stranded skiers using their emergency rescue beacons. The Wild Weather Adventure game awaits them at www.spaceplace.nasa.gov/en/kids/goes/wwa.

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NOAA's polar-orbiting and geostationary satellites, along with Russia's Cospas spacecraft, are part of the sophisticated, international Search and Rescue Satellite-Aided Tracking System.

Answer to Trivia Question

Answer is c - Mercury, Uranium, and Neptunium. In addition, there are a few elements named after other solar system bodies, Cerium (Ceres), Plutonium, Palladium (Pallas), and Helium (from Helios, the Sun).

The association of the planet Mercury with the element goes back to the middle ages and has its roots in Alchemy. Most of the others were recently discovered elements named after recently discovered solar system bodies and planets. Helium was discovered as a bright yellow line in the spectrum of the Sun's chromosphere.