



Monthly Notices of the Everglades Astronomical Society



Naples, FL
December 2009

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President's Message

I hope our new meeting day is working out for everyone. I know some problems will arise, but our choices are limited.

My Saturday night commitments end on December 5th so I'll be at the Fakahatchee a lot more. The bino-chair will be there with me. Please come use it! It's complete with a laser sight now. Join us December 12th and December 19th. Contact Charlie Paul, our observation coordinator for more information.

What do you think about a lunar night? We could meet at Cambier Park and study the moon. I don't feel confident in giving a lunar program, so what if we study it together? I could bring 3 or 4 extra scopes, tables, lunar maps etc. I'd still like someone to give a program on it, but no one has stepped up. Maybe the lunar night will show some interest. It's in town with bathrooms near – what do you think?

Charlie reports a great night last month at the Fakahatchee, November 14th approximately 6 scopes and 10 people enjoyed a crisp evening. Several nice meteors were reported.

On Saturday the 9th of January from 10am to 4pm we will attend "Art in the Park" once again. We continue to let people know we exist in hopes they will join us.

This month's meeting will be on Bob Gurnitz trip to China to observe the solar eclipse, we'll see you there on Tuesday, December 8th @ 7:00pm at the Norris Center, 8th & 8th.

Good skies – clean glass.
Co-President
Rick Piper

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 12 | 4:30AM | |
| Dec 19 | | 8:33PM |

Sky Events

Dec 2 – Full Moon
Dec 9 – 3rd Quarter
Dec 13 - Geminid Meteor Shower
Dec 16 – New Moon
Dec 21 – Winter Solstice
Dec 24 – 1st Quarter
Dec 31 – Full Moon (Blue Moon)

Next Meeting

December 10, 2009
Time 7:00 – 9 pm
At the Norris Center

Astronomical Trivia Question of the Month

From Alpha Centauri constellations look pretty much the same as they do on Earth –but which one would the Sun appear in?

- Cassiopeia
- Ursa Major
- Orion
- Centaurus

Answer on next page.



A Cosmic Crash

by Patrick Barry and Dr. Tony Phillips

Two small planets hurtle toward each other at 22,000 miles per hour. They're on a collision course. With unimaginable force, they smash into each other in a flash of light, blasting streams of molten rock far out into space.

This cataclysmic scene has happened countless times in countless solar systems. In fact, scientists think that such collisions could have created Earth's moon, tilted Uranus on its side, set Venus spinning backward, and sheared the crust off Mercury.

But witnessing such a short-lived collision while pointing your telescope in just the right direction would be a tremendous stroke of luck. Well, astronomers using NASA's Spitzer space telescope recently got lucky.

"It's unusual to catch such a collision in the act, that's for sure," said Geoffrey Bryden, A cosmic Crashspitzer_ an astronomer specializing in extrasolar planet formation at NASA's Jet Propulsion Laboratory and a member of the science team that made the discovery.

When Bryden and his colleagues pointed Spitzer at a star 100 light-years away called HD 172555, they noticed something strange. Patterns in the spectrum of light coming from nearby the star showed distinctive signs of silicon monoxide gas — huge amounts of it — as well as a kind of volcanic rock called tektite.

It was like discovering the wreckage from a cosmic car crash. The silicon monoxide was produced as the high-speed collision literally vaporized huge volumes of rock, which is made largely of silicon and oxygen. The impact also blasted molten lava far out into space, where it later cooled to form chunks of tektite.

Based on the amount of silicon monoxide and tektites, Bryden's team calculated that the colliding planetary bodies must have had a combined mass more than twice that of Earth's moon. The collision probably happened between 1,000 and 100,000 years ago — a blink of an eye in cosmic terms.

The scientists used the Spitzer space telescope because, unlike normal telescopes, Spitzer detects light at invisible, infrared wavelengths.

"Spitzer wavelengths are the best wavelengths to identify types of rock," Bryden says. "You can pin down which type of rock, dust, or gas you're looking at."

Bryden says the discovery provides further evidence that planet-altering collisions are more common in other star systems than people once thought. The "crash-bang" processes at work in our own solar system may indeed be universal. If so, Spitzer has a front row seat on a truly smashing show.

See Spitzer Space Telescope's brand new Web site at <http://spitzer.caltech.edu/>. Kids can learn about infrared light and see beautiful Spitzer images by playing the new Spitzer Concentration game at <http://spaceplace.jpl.nasa.gov/en/kids/spitzer/concentration>.

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Artist's rendering of cosmic collision involving two objects whose combined mass was at least twice that of our Moon. Discovered using the Spitzer Space Telescope in the planetary system of a star called HD 172555 100 light-years away.

Answer to Trivia Question

Traveling towards Alpha Centauri, one must move in the direction of Centaurus while keeping the Sun behind you all the way of course; therefore the sun would appear in the sky directly opposite Centaurus – in Cassiopeia. From Alpha Centauri our Sun would cause the “w” of Cassiopeia to have an extra stroke. A few of the very closest stars would also change position; Sirius would be in Orion, for example, and just a little bit dimmer although still the brightest in the sky.