

Asteroid Lutetia, taken by the ESA's Rosetta Probe  
With this latest pass complete, Rosetta is now heading out to its meeting with the Comet  
Churyumov-Gerasimenko, set for the May of 2014.

**Longmont Astronomy Society Newsletter**  
**August 2010**

### **From the President:**

Our next meeting is on Thursday evening, August 19<sup>th</sup>, at the IHOP Restaurant, 2040 Ken Pratt Blvd, Longmont, CO. Please join us for dinner around 6 pm. The meeting will begin at 7 pm. The speaker this month is Dr. Alan Kiplinger, solar physicist at the Center for Integrated Plasma Studies, University of Colorado. He will talk about solar research and his trip to the Dutch Open Solar Telescope which is on the island of La Palma, the most north-westerly of the Canary Islands.

Mike Hotka will make a short presentation about light pollution and the Astronomical League's Dark Advocate Club. Mike works at Ball Aerospace in Boulder and is an astronomy instructor at the Westminster campus of the Front Range Community College.

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Following the presentations will be a business meeting with treasurer report by Michael Fellows and an update on the All Sky Camera project.

The speaker next month will be Bill Tshumy who will make a presentation titled "Escape from Plato's Cave: The Milky Way and the Galactic Coordinate System".

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### **In the sky this month:**

Meteor Showers: gotta love the Perseids, already showing some long trails last weekend and peaking on the morning of August 12-13. If it's clear, I'll be watching from the top deck of the Vision of the Seas off between Denmark and Norway. Radiant in the NE below Cassiopeia, from midnight until dawn in a moonless sky.

The Alpha Aurigid shower is a minor one, peaking on September 1 with a lot of Moon and 6 meteors an hour. This one delivered 130/hr in 2007, so there's always hope....

#### Planets

Mercury: far side of the Sun, but greatest elongation is only another month.

Venus: heading for the horizon in the low west but still bright.

Mars: pretty dim, but we're gaining and it will look good the end of next year.

Jupiter: dominating the night sky and rising around sunset.

Saturn: very low at sunset and hard to find amongst the peaks, disappearing the first week of September.

#### Interesting Stars/Galaxies

#### **Astronomy mag's Targets for August 5-12, 2010**

**Naked eye:** Constellation Corona Borealis

**Small telescope:** globular cluster M9

**8-inch or larger telescope:** Lobster Nebula

#### **Club Calendar:**

meetings: Thursday - August 19, 7 PM at the IHOP

Thursday - September 16, 7 PM at the IHOP

**Internet Resources:**

Nice news on magnetic field collapses and “spacequakes”. Read the stuff, look at the graphs, see the video at [http://science.nasa.gov/science-news/science-at-nasa/2010/27jul\\_spacequakes/](http://science.nasa.gov/science-news/science-at-nasa/2010/27jul_spacequakes/)

**This month’s field trip:** with any luck, the northern lights above the Arctic Circle! CME, CME, CME... and hopefully all that talk about the BIG volcano that goes off 6 months after the little one will be off.

**Upcoming Space Missions:**

Cover Story: Asteroid Lutetia has been revealed as a battered world of many craters. The European Space Agency's (ESA) Rosetta mission has returned the first close-up images of the asteroid showing it is probably a primitive survivor from the violent birth of the solar system.

The July 10 flyby was a spectacular success with Rosetta performing faultlessly. Closest approach took place at a distance of 1,965 miles (3,162 kilometers).

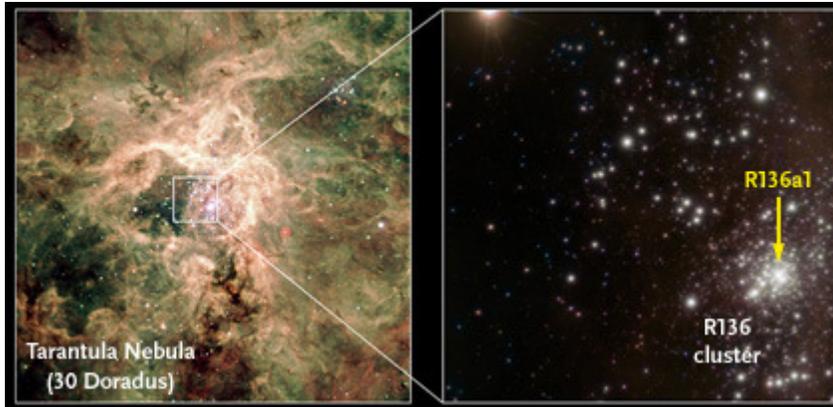
The images show that Lutetia is heavily cratered, having suffered many impacts during its 4.5 billion years of existence. As Rosetta drew close, a giant bowl-shaped depression stretching across much of the asteroid rotated into view. The images confirm that Lutetia is an elongated body, with its longest side around 81 miles (130 km).

**This month’s News of Note:**

## **R136a1: New Heavyweight Champion?**

We've recently had a stretch of hot summer weather in Boston that's left everyone a little withered. But imagine the kind of scorches we'd endure if our planet orbited a star 265 times more massive than the Sun, with 9 million times its brightness and a surface temperature of 95,000°F (53,000 K). Pass the sunscreen! (Back-of-the-envelope calculation: Earth would be heated to 15,000 K, meaning vaporized.)

A star like this is so massive that it flies in the face of what astronomers believed even possible. They've assumed no single star could exceed about 150 Suns, because larger ones would generate so much energy they'd blow apart.



R136 is a cluster of roughly 100,000 young, massive stars in the Tarantula Nebula, located 165 000 light-years away in the Large Magellanic Cloud.

*ESO / P. Crowther / C. J. Evans*

Yet observers led by Paul Crowther (University of Sheffield, England) have found not just one such behemoth but several. They're embedded in two young clusters in the southern sky: [NGC 3603](#), located some 20,000 light-years away in the Milky Way's Carina arm; and [R136](#), the star-dense heart of the Tarantula Nebula in the Large Magellanic Cloud.

### **Humor Dept:**

Why set at home freezing in December? You could be taking a cruise in the Caribbean and doing astronomy at the same time. Watch the Geminid meteor shower, then an eclipse from near the Yucatan. Check out the info at [http://www.insightcruises.com/top\\_g/st01\\_top.html](http://www.insightcruises.com/top_g/st01_top.html) Price is \$1275 + the cruise (roughly another grand) + airfare. A couple days at Cape Kennedy with a guided tour for another couple of hundred and you're all set! Personally, I think this is kinda pricey....