

Alternative Cosmology Group Newsletter - August 2005

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Hot discoveries this month! The Earth's inner core rotates faster than its crust. Mysterious energy source within the Enceladus. Two moonlets on circular orbits near elliptical faster rotating central body - 87 Sylvia asteroid.

"One of the most fascinating aspects of Enceladus is that it is so very small as icy moons go, but so very geophysically active. It's hard for a body as small as Enceladus to hold onto the heat necessary to drive such large-scale geophysical phenomena, but it has done just that," said Dr. Bob Brown. Brown is a team leader for the visual and infrared mapping spectrometer at the University of Arizona, Tucson. "Enceladus and its incredible geology is a marvelous puzzle for us to figure out," he added.

Adding to the already mounting evidence for an active body is the correlation of results from multiple instruments. Cassini's cameras provided detailed images of the south polar cap, in which the tiger stripe fractures were found to be among the hottest features.

The timing of the craft's ion and neutral mass spectrometer and the cosmic dust analyzer observations seems to indicate the vapor and fine material are originating from the "hot" polar cap region. These data also indicate the production of water vapor and ejection of fine material are connected, as they are in a comet. This suggests that vapor and dust-sized icy material are coming from the tiger stripes.

Enceladus is on a short list of bodies in our solar system where scientists have found internal activity. The others are the volcanoes on Jupiter's moon Io and geysers on Neptune's moon Triton.

Data for these measurements were taken during Cassini's closest flyby on July 14, 2005. The spacecraft came within 109 miles of the surface of Enceladus. Enceladus is 314 miles across and has the most reflective surface in the solar system. "

<http://www.spaceref.com/news/viewpr.html?pid=17683>

Galaxies are larger than we know.

"Like archaeologists unearthing a 'lost city,' astronomers using the 8-meter Gemini South telescope have revealed that the galaxy NGC 300 has a large, faint extended disk made of ancient stars, enlarging the known diameter of the galaxy by a factor of two or more. The finding also implies that our own Milky Way Galaxy could be much larger than current textbooks say. Scientists will also need to explain the mystery of how galaxies like NGC 300 can form with stars so far from their centers."

<http://www.gemini.edu/index.php?option=content&task=view&id=144>

Triple asteroidal system 87 Sylvia discovered.

"Sylvia's moons are considerably smaller, orbiting in nearly circular orbits and in the same plane and direction. The closest and newly discovered moonlet, orbiting about 710 km from Sylvia, is Remus, a body only 7 km across and circling Sylvia every 33 hours. The second,

Romulus, orbits at about 1360 km in 87.6 hours and measures about 18 km across.

The asteroid 87 Sylvia is one of the largest known from the asteroid main belt, and is located about 3.5 times further away from the Sun than the Earth, between the orbits of Mars and Jupiter. The wealth of details provided by the NACO images show that 87 Sylvia is shaped like a lumpy potato, measuring 380 x 260 x 230 km (see ESO PR Photo 25a/05). It is spinning at a rapid rate, once every 5 hours and 11 minutes.

The observations of the moonlets' orbits allow the astronomers to precisely calculate the mass and density of Sylvia. With a density only 20% higher than the density of water, it is likely composed of water ice and rubble from a primordial asteroid. "It could be up to 60 percent empty space," said co-discoverer Daniel Hestroffer (Observatoire de Paris, France)."

<http://www.eso.org/outreach/press-rel/pr-2005/pr-21-05.html>

"An international team of astronomers led by Dr. William Merline of the Boulder office of Southwest Research Institute (SwRI) released the first-ever images of a large, double asteroid. Each asteroid in the pair is the size of a large city (about 85 kilometers across), separated by about 160 kilometers, mutually orbiting the vacant point of interplanetary space that lies midway between them."

http://www.imcce.fr/page.php?nav=en/observateur/campagnes_obs/antiopie

Circular orbits of moonlets around faster rotating potato shaped 87 Sylvia! The parts of the double asteroid Antiope move around what is seen as empty space? The motions of these asteroids suggest deep problem with the current understanding of gravity. If gravity as we know it can't handle few rocks, then what can be said for the rest of the universe?

Galactic survey reveals a new look for the Milky Way

"The new study provides the best estimates for the size and orientation of the bar, which are far different from previous estimates. It shows a bar, consisting of relatively old and red stars, spanning the center of the galaxy roughly 27,000 light years in length -- 7,000 light years longer than previously believed. It also shows that the bar is oriented at about a 45-degree angle relative to a line joining the sun and the center of the galaxy."

<http://www.spaceref.com/news/viewpr.html?pid=17634>

Omnipresent spirals

Spirals in Nature: The Magical Number behind Hurricanes and Galaxies

http://www.space.com/scienceastronomy/perfect_spirals_030917.html

A Swarm of Martian Dust Devils

http://www.nasawatch.com/archives/2005/08/a_swarm_of_mart.html

Scientists confirm super-rotation of Earth's inner core

"In general, they found that waves passing through the inner core arrived noticeably earlier the more the earthquakes were separated in time. Interpreting this in terms of the known variability of wave speeds, they concluded that material which permits seismic waves to travel faster through the Earth had moved into the path taken by waves traveling through the inner core. They calculated that this movement is caused by the core rotating approximately 0.3-0.5 degrees faster than the rest of the Earth. In addition, the change in the shape of the seismic waves is apparently caused, as Richards describes it, by inhomogeneity or "lumpiness" of the inner core, which has a varying influence on seismic waves produced years apart.

"For decades, people thought of the Earth's interior as changing very slowly over millions of years," said Richards, Mellon Professor of the Natural Sciences at Columbia. "This shows that we live on a remarkably dynamic planet. It also underscores the fact that we know more about the moon than about what's beneath our feet. Now we need to understand what is driving these changes."

<http://www.spaceref.com/news/viewpr.html?pid=17675>

The Earth is an enigmatic piece of the great puzzle called universe. You may see the expanding Earth controversy.

<http://www.geocities.com/CapeCanaveral/Launchpad/8098/2.htm>

<http://www.dino.or.jp/hoshino/expanding.html>

<http://www.vspub.com/books/earth/bk-GloEduTecExpEar.html>

<http://www.grisda.org/origins/15053.htm>

Discovery of 'young' material in meteorites defies linear theory of solar system's origin

<http://www.news.utoronto.ca/bin6/050818-1567.asp>

Recommended books

Theories of the Earth and Universe: A History of Dogma in the Earth Sciences by S. Warren Carey

http://www.amazon.com/exec/obidos/tg/detail/-/0804713642/qid=1124995396/sr=1-1/ref=sr_1_1/104-5675337-1220742?v=glance&s=books

The Big Bang Never Happened : A Startling Refutation of the Dominant Theory of the Origin of the Universe by Eric Lerner

http://www.amazon.com/exec/obidos/tg/detail/-/067974049X/ref=pd_sim_b_2/103-3531912-1651803?%5Fencoding=UTF8&v=glance

Discovery of Cosmic Fractals by Yuriy Baryshev, Pekka Teerikorpi

http://www.amazon.com/exec/obidos/tg/detail/-/9810248725/qid=1124995771/sr=1-1/ref=sr_1_1/104-5675337-1220742?v=glance&s=books