

Alternative Cosmology Group Newsletter - September 2005

Posted September 29, 2005

*** CCC-I Proceedings available at
<http://www.cosmology.info/2005conference/proceedings.htm> ***

Hot discoveries this month also! Take a look and think!

Survey of 4,000 Galaxies Finds "Downsizing" on a Cosmic Scale

A comprehensive survey of more than 4,000 elliptical and lenticular galaxies in 93 nearby galaxy clusters has found a curious case of galactic "downsizing."

Contrary to expectations, the largest, brightest galaxies in the census consist almost exclusively of very old stars, with much of their stellar populations having formed as long ago as 13 billion years. There appears to be very little recent star formation in these galaxies, nor is there strong evidence for recent ingestion of smaller, younger galaxies.

By contrast, the smaller, fainter galaxies studied by the NOAO Fundamental Plane Survey are significantly younger—their stars were formed as little as four billion years ago, according to new results from the survey team to be published in the September 10, 2005, *Astrophysical Journal*.

<http://www.noao.edu/outreach/press/pr05/pr0508.html>

Hubble Finds Mysterious Disk of Blue Stars Around Black Hole

Astronomers using NASA's Hubble Space Telescope have identified the source of a mysterious blue light surrounding a supermassive black hole in our neighboring Andromeda Galaxy (M31). Though the light has puzzled astronomers for more than a decade, the new discovery makes the story even more mysterious.

<http://hubblesite.org/newscenter/newsdesk/archive/releases/2005/26/full/>

A Cosmic Baby-Boom Large Population of Galaxies Found in the Young Universe with ESO's VLT

It is one of the major goals of observational cosmology to trace the way galaxies formed and evolved and to compare it to predictions from theoretical models. It is therefore essential to know as precisely as possible how many galaxies were present in the Universe at different epochs.

It now remains for astronomers to explain how one can create such a large population of galaxies, producing more stars than previously assumed, at a time when the Universe was about 10-20% of its current age.

http://www.eso.org/outreach/press-rel/pr-2005/pr-24-05_p2.html

Spitzer and Hubble Team Up to Find "Big Baby" Galaxies in the Newborn Universe

Two of NASA's Great Observatories, the Spitzer and Hubble Space Telescopes, have teamed up to "weigh" the stars in several very distant galaxies. One of these galaxies, among the most distant ever seen, appears to be unusually massive and mature for its place in the young universe. This comes as a surprise to astronomers because the earliest galaxies in the universe are commonly thought to have been much smaller agglomerations of stars that gradually merged together to build large majestic galaxies like our Milky Way.

<http://hubblesite.org/newscenter/newsdesk/archive/releases/2005/28/full/>

The mysteries above create huge space for the article below.

THE "BIG BANG" IS JUST RELIGION DISGUISED AS SCIENCE

<http://www.whatreallyhappened.com/bang.html>

Star Devours Companion

http://www.space.com/scienceastronomy/050919_mystery_monday.html

The Heartbeat of a Dying Star

In a stellar version of the walking dead, one near-corpse of a star jumpstarts the heartbeat of its close companion as the two spiral toward an eventual embrace that will destroy them both.

The intriguing setup involves two neutron stars, the collapsed remains of regular stars which are now so dense a teaspoonful would weigh billion tons or so on Earth. The stars are so massive that they curve space and time in ways astronomer think they can predict.

One of the stars spins on its axis hundreds of times every second, the other rotates once every 2.8 seconds. They dance around one another every 2.4 hours, travelling at a remarkably swift 0.1 percent of the speed of light.

A catastrophic fate awaits the pair. Meanwhile, researchers have been examining a strange heartbeat emanating from the scene.

http://www.space.com/scienceastronomy/pulsar_pair_040504.html

Huge Quake Cracks Star

Astronomers have found the first evidence of cracks in a neutron star's crust. The star cracked when it was rocked by the strongest "starquake" ever recorded, researchers said last week.

Last December, astronomers worldwide monitored the explosion that caused this starquake. The eruption was huge – in the first 200 milliseconds of the event the star released energy equivalent to what our Sun produces in 250,000 years. It was the brightest explosion ever detected outside of the Milky Way.

http://www.space.com/scienceastronomy/050927_star_cracked.html

Pulsar's "Fire Hose" Jet May Boost Understanding of Black Holes

A tendril of particles whipping around a pulsar at half the speed of light could help scientists gain a better understanding of the energetic jets spewing from pulsars and black holes.

Researchers using NASA's Chandra X-ray Observatory to study the Vela pulsar, a rotating neutron star in the Southern Hemisphere constellation Vela (the Sails), caught a series of images showing a jet writhing out from the main star at phenomenal speed.

http://www.space.com/scienceastronomy/firehose_jet_030702.html

Neutron Star Collisions Common, Study Suggests

Astronomers have discovered two neutron stars orbiting each other once every 2.4 hours and spiraling inward toward an eventual dramatic collision. The finding suggests such intense events are far more common than was thought.

http://www.space.com/scienceastronomy/neutron_stars_031203.html

Earliest meteorites provide new piece in planetary formation puzzle

Researchers trying to understand how the planets formed have uncovered a new clue by analysing meteorites that are older than the earth.

The research shows that the process which depleted planets and meteorites of so-called volatile elements such as zinc, lead and sodium, must have been one of the first things to happen in our nebula.

<http://www.spaceref.com/news/viewpr.html?pid=17860>

Diffuse Light in the Virgo Cluster

<http://astroweb.case.edu/hos/Virgo/>

Cassini Radar Images Show Dramatic Shoreline on Titan

<http://www.jpl.nasa.gov/news/news.cfm?release=2005-151>

Black hole without a home

http://www.esa.int/esaCP/SEMJUN7X9DE_index_0.html

Hubble Catches Scattered Light from the Boomerang Nebula

<http://hubblesite.org/newscenter/newsdesk/archive/releases/2005/25/image/a>

Star Death Beacon at the Edge of the Universe

Astronomers Find Farthest Known Gamma-Ray Burst with ESO VLT

An Italian team of astronomers has observed the afterglow of a Gamma-Ray Burst that is the farthest known ever. With a measured redshift of 6.3, the light from this very remote astronomical source has taken 12,700 million years to reach us. It is thus seen when the Universe was less than 900 million years old, or less than 7 percent its present age.

"This also means that it is among the intrinsically brightest Gamma-Ray Burst ever observed", said Guido Chincarini from INAF-Osservatorio Astronomico di Brera and University of Milano-Bicocca (Italy) and leader of a team that studied the object with ESO's Very Large Telescope. "Its luminosity is such that within a few minutes it must have released 300 times more energy than the Sun will release during its entire life of 10,000 million years."

<http://www.eso.org/outreach/press-rel/pr-2005/pr-22-05.html>

XMM-Newton probes formation of galaxy clusters

http://www.esa.int/esaCP/SEMDW5A5QCE_index_0.html