



Cosmology/Astrophysics News

September 17, 2014
for Rose City Astronomers SIG

<http://101iq.com/RCA>

Science – July 18, 2014

- No cosmology news this issue

Nature – July 24, 2014

- Frost forms Mars gullies
 - Carbon dioxide frost appearing and disappearing (not water) is responsible for gullies growing per high resolution images
 - <http://doi.org/trx>
 - <http://www.nature.com/news/mars-slow-to-yield-its-secrets-1.15604>
- Jet acceleration of the fast molecular outflows in the Seyfert galaxy IC 5063
 - <http://www.nature.com/nature/journal/v511/n7510/full/nature13520.html>

Science – July 25, 2014

- Road hazards threaten rover
 - To limit wheel damage from sharp rocks, the Curiosity Mars rover detours into sandy valleys
 - <http://news.sciencemag.org/space/2014/07/road-hazards-threaten-rover>
- Stellar activity masquerading as planets in the habitable zone of the M dwarf Gliese 581
 - <http://www.sciencemag.org/content/345/6195/440.abstract>

Nature – July 31, 2014

- Giant Magellan telescope gets boos from Brazil
 - <http://go.nature.com/k3tsgv>
- “POLSA” Polish Space Agency to be created.
- Long drive on Mars
 - Opportunity rover has clocked more the 40km setting record
- Spitzer Space telescope gets 2 more years
- Hawaii’s 30 meter telescope clears legal hurdles.. Construction can start...
- Velocity anti-correlation of diametrically opposed galaxy satellites in the low-redshift Universe
 - <http://www.nature.com/nature/journal/v511/n7511/full/nature13481.html>
- Misaligned protoplanetary disks in a young binary star system
 - <http://www.nature.com/nature/journal/v511/n7511/full/nature13521.html>

Scientific American – August 2014

- Rendezvous with a Comet
 - <http://www.scientificamerican.com/article/spacecraft-arrives-at-comet-after-10-year-journey-infographic/>
- The Black Hole at the Beginning of Time
 - Our universe might be the surface of a 4 dimensional black hole...
 - <http://www.scientificamerican.com/article/the-black-hole-that-birtherd-the-big-bang/>

Science – August 1, 2014

- Comet catcher (ESA Rosetta to land on comet)
 - <http://www.sciencemag.org/content/345/6196/502.summary?sid=f10846bc-5820-4a46-8ffc-8676e8f85c61>
- The beat of young stars
 - Pulsations from young stars provide a new chronometer for stellar evolution
 - <http://www.sciencemag.org/content/345/6196/514.summary>
 - <http://arxiv.org/abs/1407.4928>
- Fermi establishes classical novae as a distinct class of gamma-ray sources
 - <http://arxiv.org/abs/1408.0735>

Nature – August 7, 2014

- Binary star to spill celestial secrets
 - Binary stars in η Carinae system about to nearly collide in southern hemisphere constellation Carina.
 - <http://www.nature.com/news/binary-star-to-spill-celestial-secrets-1.15672>
- Portrait of a doomed star
 - Trying to know how to find progenitors of supernovae
 - <http://www.nature.com/nature/journal/v512/n7512/full/512034a.html>
 - <http://www.nature.com/nature/journal/v512/n7512/full/nature13615.html>

Science – August 8, 2014

- Probing the solar system's prenatal history
 - How dust and gas clouds turn into stars and planets...
 - <http://www.sciencemag.org/content/345/6197/620.summary>
- Stellar origin of the ^{182}Hf cosmochronometer and the presolar history of solar system matter
 - Isotopes of Hafnium used to date solar formation
 - <http://arxiv.org/abs/1408.2050>

Nature - August 14, 2014

- Another super-Earth found
 - Planet larger than Earth, smaller than Neptune found in habitable zone of star Gliese 832.
- Atmospheric blurring has a new enemy
 - System developed to compensate for atmosphere letting 1-3m telescopes see down to 0.12-0.15 arc seconds resolution
 - <http://www.nature.com/nature/journal/v512/n7513/full/512144a.html>
- Cohesive forces prevent the rotational breakup of rubble-pile asteroid (29075)1950DA
 - <http://www.nature.com/nature/journal/v512/n7513/full/nature13632.html>
- The tidal-rotational shape of the Moon and evidence for polar wander
 - <http://www.nature.com/nature/journal/v512/n7513/full/nature13639.html>

Science – August 15, 2014

- Evidence for interstellar origin of seven dust particles collected by the Stardust spacecraft
 - <http://www.sciencemag.org/content/345/6198/786.abstract>
- Pseudo-three-dimensional maps of diffuse interstellar band at 862nm
 - <http://www.sciencemag.org/content/345/6198/791.abstract>

Nature – August 21, 2014

- Interacting supernovae from photoionization-confined shells around red supergiant stars
 - <http://www.nature.com/nature/journal/v512/n7514/full/nature13522.html>

Science – August 22, 2014

- Imprint of an ancient conflagration
 - Evidence is found for the massive stars that populated the early universe
 - <http://www.sciencemag.org/content/345/6199/868.summary>
 - <http://www.sciencemag.org/content/345/6199/912.short>

Nature – August 28, 2014

- Supernova seen through gamma ray eyes
 - Sudden energy comes from thermonuclear fusion
 - <http://www.nature.com/nature/journal/v512/n7515/full/512375a.html>
 - <http://www.nature.com/nature/journal/v512/n7515/full/nature13672.html>
- What makes the Sun shine
 - Measuring neutrinos from the sun
 - <http://www.nature.com/nature/journal/v512/n7515/full/512378a.html>
 - <http://www.nature.com/nature/journal/v512/n7515/full/nature13702.html>

Science – August 29, 2014

- Supernova breaks the mold
 - Every type Ia supernova may not be the same
 - <http://www.sciencemag.org/content/345/6200/993.summary?rss=1>
- One good cosmic measure
 - Radio-wave interferometry used to accurately measure distances in the Pleiades cluster $\sim 136.2 \pm 1.2$ parsecs
 - <http://www.sciencemag.org/content/345/6200/1001.figures-only>
 - <http://arxiv.org/ftp/arxiv/papers/1408/1408.6544.pdf>
- Large impacts around a solar-analog star in the era of terrestrial planet formation
 - <http://www.sciencemag.org/content/345/6200/1032>

Nature – September 4, 2014

- Meet the Laniakea supercluster
 - Our local supercluster mapped
 - <http://www.nature.com/nature/journal/v513/n7516/full/nature13674.html>
 - <http://www.nature.com/nature/journal/v513/n7516/full/nature13674.html>
- A 400-solar-mass black hole in the galaxy M82
 - <http://www.nature.com/nature/journal/v513/n7516/full/nature13710.html>

Science – September 5, 2014

- Early Nickel-56 decay gamma rays from SN2014J suggest an unusual explosion
 - <http://www.sciencemag.org/content/345/6201/1162.figures-only>

Nature – September 11, 2014

- Plate tectonics found on Europa
 - <http://www.nature.com/news/plate-tectonics-found-on-europa-1.15851>
- NASA to send 3D printer into space
 - <http://www.nature.com/news/nasa-to-send-3d-printer-into-space-1.15884>
- Quasar complexity simplified
 - <http://www.nature.com/nature/journal/v513/n7517/full/513181a.html>
 - Analysis of 20,000 mass-accreting supermassive black holes, known as quasars, shows that most of their properties can be explained by two quantities: Eddington ratio and width.
 - <http://www.nature.com/nature/journal/v513/n7517/full/nature13712.html>