

Cosmology/Astrophysics News



January 17, 2018

for Rose City Astronomers SIG

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

Science – December 1, 2017

- Cigar-shaped alien sweeps past Earth
 - <http://scim.ag/Oumuamua>
- Italian MICROSCOPE satellite measures gravity equivalence principle to one part in 10^{15}
 - <http://science.sciencemag.org/content/358/6367/1117>
- Wet blanket for theories of liquid water on Mars
 - <http://science.sciencemag.org/content/358/6367/1119>
- Spitzer Space Telescope helped characterize gravitational microlensing of a brown dwarf star
 - <https://www.sciencedaily.com/releases/2016/11/161115110909.htm>

Nature – December 7, 2017

- Exoplanets spin the same as their stars
 - <http://dx.doi.org/10.1038/s41550-017-0325-8>
- Recipe for Other Earths
 - <https://www.nature.com/articles/d41586-017-07844-y>
- A steamy proposal for Martian clays –
magma oceans, supercritical H₂O & CO₂ ...
 - <https://www.nature.com/articles/d41586-017-07661-3>
 - <https://www.nature.com/articles/nature24657>

Science – December 8, 2017

- NASA Space Debris Sensor (SDS) to study space junk the size of dust
 - <http://science.sciencemag.org/content/358/6368/1234>
- A precise measurement of the magnetic field in the corona of the black hole binary V404 Cygni – unexpectedly weak.. 460 gauss
 - <http://science.sciencemag.org/content/358/6368/1299>

Nature – December 14, 2017

- Stellar cannibalism in fits and starts – accretion around a white dwarf
 - <https://www.nature.com/articles/d41586-017-08286-2>
 - <http://www.nature.com/articles/nature24653>

Science – December 15, 2017

- No cosmology/astrophysics news this issue

Nature – December 21/28, 2017

- 8th planet found around Kepler-90, 2545 light years away
- GJ436b – a Neptune-sized planet orbits cool M dwarf star but orbit is perpendicular to star's spin
- Bacteria in Antarctic get energy by oxidizing trace gases... could this sustain life on other planets?
 - <https://www.nature.com/articles/d41586-017-07579-w>
- Martian water stored underground
 - <https://www.nature.com/articles/d41586-017-08670-y>
 - <http://www.nature.com/articles/nature25031>
- Blazar spectral variability as explained by a twisted inhomogeneous jet
 - <https://www.nature.com/articles/nature24623>
- A brief visit from a red and extremely elongated interstellar asteroid
 - <https://www.nature.com/articles/nature25020>

Science – December 22, 2017

- Southern sky map released – using Australian 1.3m SkyMapper telescope – found oldest star 13.6 billion years old
 - http://www.sciencemagazinedigital.org/sciencemagazine/22_december_2017?pg=23#pg23
- Saturn’s rings are solar system newcomers – less than about 200 million years old
 - <http://science.sciencemag.org/content/358/6370/1513>
- Cosmic convergence – neutron star collision fulfilled astrophysical predictions – breakthrough of the year
 - <http://science.sciencemag.org/content/358/6370/1520>
 - <http://science.sciencemag.org/content/358/6370/1559>
 - <http://science.sciencemag.org/content/358/6370/1556>
 - <http://science.sciencemag.org/content/358/6370/1565>
 - <http://science.sciencemag.org/content/358/6370/1570>
 - <http://science.sciencemag.org/content/358/6370/1574>
 - <http://science.sciencemag.org/content/358/6370/1579>
 - <http://science.sciencemag.org/content/358/6370/1583>

Nature – January 4, 2018

- Galaxy growth in a massive halo in the first billion years of cosmic history
 - <https://www.nature.com/articles/nature24629>
 - <https://www.sciencedaily.com/releases/2017/12/171207140717.htm>

Science – January 5, 2018

- In situ measurements of Saturn's ionosphere show that it is dynamic and interacts with the rings
 - <http://science.sciencemag.org/content/early/2017/12/08/science.aao4134>
- An excess of massive stars in the local 30 Doradus starburst
 - <https://arxiv.org/pdf/1801.03107.pdf>
 - <http://science.sciencemag.org/content/359/6371/69>

Nature – January 11, 2018

- Exoplanet Science 2.0 – how to study of life outside Earth
 - <https://www.nature.com/articles/d41586-018-00108-3>
- Core of a white dwarf star KIC08626021 has more oxygen and larger than predicted
 - <https://www.nature.com/articles/nature25136>
- Comet 41P/Tuttle rotation decreased rapidly 3/2017 to 5/2017 due to releasing gasses
 - <https://www.nature.com/articles/d41586-018-00008-6>
 - <https://www.nature.com/articles/nature25150>
- Rotation in [CII]-emitting gas in two galaxies at a redshift of 6.8
 - http://www.almaobservatory.org/wp-content/uploads/2018/01/ALMAz7_Nature.pdf
- Newly funded Arecibo finds neutron star producing repeating fast radio bursts from source FRB 121102
 - <https://www.nature.com/articles/nature25149>

Scientific American – January 2018

- Cosmic Messengers (neutron star merger)
 - <https://www.scientificamerican.com/article/better-instruments-give-scientists-a-new-way-to-study-the-cosmos/>
- Searching for the dark (matter - axions)
 - <https://www.scientificamerican.com/article/searching-for-the-dark-the-hunt-for-axions/>

Miscellaneous

- Lunar eclipse January 31, 2018
 - <https://www.timeanddate.com/eclipse/lunar/2018-january-31>