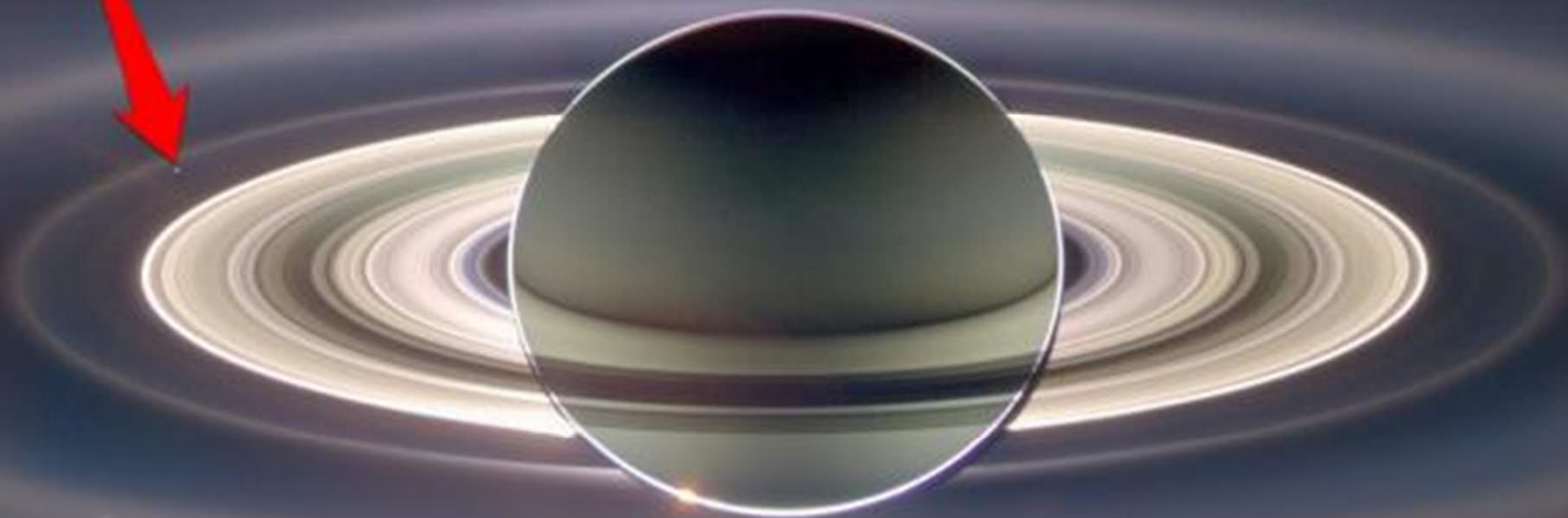


Cosmology/Astrophysics News

Earth



October 18, 2017

for Rose City Astronomers SIG

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

Science – September 15, 2017

- Observation of coherent elastic neutrino-nucleus scattering
 - <http://science.sciencemag.org/content/357/6356/1098>
 - <http://science.sciencemag.org/content/early/2017/08/02/science.aao0990>

Nature – September 21, 2017

- A binary main-belt comet – asteroid shows comet-like activity
 - <https://www.centauri-dreams.org/?p=38542>
 - <http://www.nature.com/nature/journal/v549/n7672/full/nature23892.html>
 - <https://www.youtube.com/watch?v=QhAaYOvZZo0>
- Cassini crashed into Saturn Sept 15
 - <https://www.nature.com/polopoly fs/1.22619.1505991653!/menu/main/topColumns/topLeftColumn/pdf/nature.2017.22619.pdf?origin=ppub>

Science – September 22, 2017

- A fiery finish to Cassini's long run at Saturn
 - <http://science.sciencemag.org/content/357/6357/1219>
- A substantial directional anisotropy is observed for ultrahigh energy cosmic rays ($> 8 \times 10^{18}$ eV)
 - <http://science.sciencemag.org/content/357/6357/1240>
 - <http://science.sciencemag.org/content/357/6357/1266>

Nature – September 28, 2017

- Most-energetic cosmic rays originate outside Milky Way
 - <https://www.nature.com/news/high-energy-cosmic-rays-come-from-outside-our-galaxy-1.22655>
- The close environments of accreting massive black holes are shaped by radiative feedback
 - <http://www.nature.com/nature/journal/v549/n7673/full/nature23906.html>
- Magnesium isotope evidence that accretional vapor loss shapes planetary compositions
 - <http://www.nature.com/nature/journal/v549/n7673/full/nature23899.html>

Science – September 29, 2017

- Microwave background teams mull a grand unification
 - looking at polarized microwaves for patterns
 - <http://science.sciencemag.org/content/357/6358/1339>
- Supersonic gas streams enhance the formation of massive black holes in the early universe
 - <http://science.sciencemag.org/content/357/6358/1375>

Nature – October 5, 2017

- Martian thaw of methane may have led to temporary lakes of water
 - <http://www.nature.com/articles/ngeo3033>
- More gravitational waves found – pinpointing location with 3 detectors: LIGO & Virgo
 - <https://www.nature.com/news/european-detector-spots-its-first-gravitational-wave-1.22690>
- Hawaii 30 Meter telescope granted construction permit, but appeal has been filed
- Nobel prize in Physics to Barry Barish, Rainer Weiss & Kip Thorne for detecting gravitational waves
 - <https://www.nature.com/news/gravitational-wave-detection-wins-physics-nobel-1.22737>

Science – October 6, 2017

- European Virgo detector sees gravitational waves
 - <http://www.sciencemag.org/news/2017/09/trio-detectors-homes-black-hole-sources-gravitational-waves>
- 30 meter telescope permit
 - <http://www.sciencemag.org/news/2017/07/after-contentious-hearings-stalled-hawaiian-telescope-might-have-new-life>
- Trio surfs gravitational waves to Nobel glory
 - <http://science.sciencemag.org/content/358/6359/17>
- Proton radius revisited
 - <http://science.sciencemag.org/content/358/6359/39>
 - <http://science.sciencemag.org/content/358/6359/79>

Nature – October 12, 2017

- Nanoflares may account for sun's high corona temperature
 - <https://www.newscientist.com/article/2149671-nanoflares-in-the-suns-plasma-may-cause-its-scalding-atmosphere/>
 - <http://www.nature.com/articles/s41550-017-0269-z>
- Ring detected around a dwarf planet Haumea
 - <http://www.nature.com/nature/journal/v550/n7675/full/550197a.html>
 - <http://www.nature.com/nature/journal/v550/n7675/full/nature24051.html>

Scientific American – October 2017

- The Neutrino Puzzle – using DUNE detector to get clues about why neutrinos have mass
 - <https://www.scientificamerican.com/article/the-neutrino-puzzle/>
- Cassini at Saturn
 - <https://www.scientificamerican.com/article/cassini-at-saturn-a-retrospective/>

Miscellaneous

- Two neutron stars collide and emit detected gravitational waves, correspond to an observed kilonova and gamma ray burst (Aug 17, 2017) in NGC4993

– <http://www.sciencemag.org/news/2017/10/merging-neutron-stars-generate-gravitational-waves-and-celestial-light-show>

– Video: https://www.youtube.com/watch?v=e_uIOKfv710