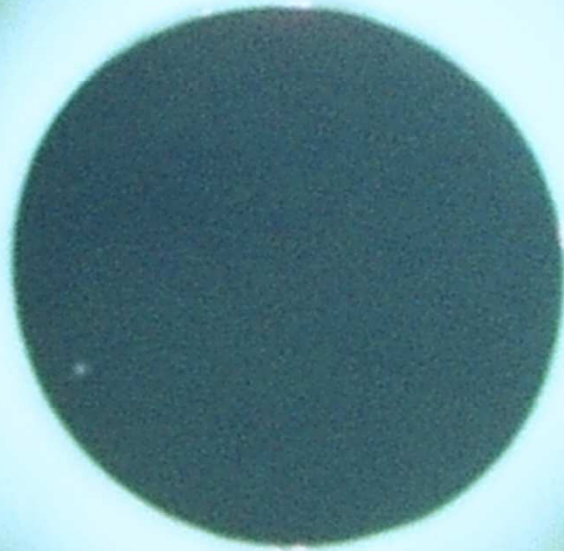


Cosmology/Astrophysics News



Total solar eclipse July 11, 1991

January 18, 2017

for Rose City Astronomers SIG

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

Nature – November 17, 2016

- No cosmology news this issue

Science – November 18, 2016

- New estimate: 2 ± 0.6 trillion galaxies in observable universe

Nature – November 24, 2016

- Homing on a fast radio burst
 - <http://doi.org/bs66>

Science – November 25, 2016

- No cosmology news this issue

Nature – December 1, 2016

- Pluto's telltale heart

- <http://www.nature.com/nature/journal/v540/n7631/full/540042a.html>
- <http://www.nature.com/nature/journal/v540/n7631/full/nature19337.html>
- <http://www.nature.com/nature/journal/v540/n7631/full/nature20120.html>
- <http://www.nature.com/nature/journal/v540/n7631/full/nature20148.html>
- <http://www.nature.com/nature/journal/v540/n7631/full/nature20586.html>

- A black hole changes its feeding habits

- <http://www.nature.com/nature/journal/v540/n7631/full/nature20480.html>

Science – December 2, 2016

- Hubble uses galactic lens to study universe's first stars
 - <http://science.sciencemag.org/content/354/6316/1087>
- Galaxy formation through cosmic recycling
 - <http://science.sciencemag.org/content/354/6316/1102>
 - <http://science.sciencemag.org/content/354/6316/1128>

Nature – December 8, 2016

- Black-hole puzzle - \$3M Breakthrough Prize
 - <http://go.nature.com/2gxims3>
 - <http://link.springer.com/article/10.1007%2FJHEP02%282013%29062>
 - We argue that the following three statements cannot all be true: (i) Hawking radiation is in a pure state, (ii) the information carried by the radiation is emitted from the region near the horizon, with low energy effective field theory valid beyond some microscopic distance from the horizon, and (iii) the infalling observer encounters nothing unusual at the horizon. Perhaps the most conservative resolution is that the infalling observer burns up at the horizon. Alternatives would seem to require novel dynamics that nevertheless cause notable violations of semiclassical physics at macroscopic distances from the horizon.
- Elemental abundances across cosmic time
 - <http://www.nature.com/nature/journal/v540/n7632/full/540205a.html>
 - <http://www.nature.com/nature/journal/v540/n7632/full/nature20570.html>

Science – December 9, 2016

- ESA's 2020 mission to Mars a go
 - <http://scim.ag/ESAMinist>
- Gravitational wave hunt resumes
 - <http://www.sciencemag.org/news/2016/02/gravitational-waves-einsteins-ripples-spacetime-spotted-first-time>
- A Fast Radio Boom – Bright distant radio bursts are excellent probes of the intergalactic medium
 - <http://science.sciencemag.org/content/354/6317/1230.summary>
 - <http://science.sciencemag.org/content/early/2016/11/16/science.aaf6807>

Nature – December 15, 2016

- Dark matter may not be so clumpy
 - <https://arxiv.org/abs/1606.05338>

Science – December 16, 2016

- The universe's brightest supernova may be something much more exciting: A spinning, star-eating black hole
 - <http://www.sciencemag.org/news/2016/12/universe-s-brightest-supernova-may-be-something-much-more-exciting-spinning-star-eating>
- Star Gliese 710 will pass through solar systems Oort Cloud in 1.3 million years
 - <http://science.sciencemag.org/content/354/6318/1388.1>

Nature – December 22/29, 2016

- Where Ceres hides its water
 - <http://doi.org/bv3z>
- 30 meter telescope approval in Hawaii denied.. Backup site is in Canary Islands

Science – December 23, 2016

- The cosmos aquiver – breakthrough of the year
 - <http://science.sciencemag.org/content/354/6319/1516>
- More than a day in the life of a comet – Rosetta mission & comet 67P/Churyumov-Gerasimenko
 - <http://science.sciencemag.org/content/354/6319/1536>
 - <http://science.sciencemag.org/content/354/6319/1563>
 - <http://science.sciencemag.org/content/early/2016/11/16/science.aag2671>

Nature – January 5, 2017

- Radio burst caught red-handed
 - <http://www.nature.com/nature/journal/v541/n7635/full/541032a.html>
 - <http://www.nature.com/nature/journal/v541/n7635/full/nature20797.html>

Nature – January 12, 2017

- Many collisions made the moon
 - <http://dx.doi.org/10.1038/ngeo2866>
- Penitentes as the origin of the bladed terrain of Tartarus Dorsa on Pluto
 - <http://www.nature.com/nature/journal/v541/n7636/full/nature20779.html>

Scientific American – January 2017

- Telescope tag team – 2 cubesats form telescope
- Tangled Up in Spacetime
 - Hundreds of researchers in a collaborative project called “It from Qubit” say space and time may spring up from the quantum entanglement of tiny bits of information
 - <https://www.scientificamerican.com/article/tangled-up-in-spacetime/>
 - <https://arxiv.org/pdf/hep-th/9711200v3.pdf>
 - <http://www.simonsfoundation.org/mathematics-and-physical-science/it-from-qubit-simons-collaboration-on-quantum-fields-gravity-and-information>

Miscellaneous

- January 6 and later issues of Science have not arrived due to USPS fear of snow.