

Physics News Update

The AIP Bulletin of Physics News

Number 850 #1, December 13, 2007 by Phil Schewe

Ten Top Physics Stories for 2007

In chronological order during the year:

1. Light, slowed in one Bose Einstein condensate (BEC), is passed on to another BEC (<http://www.aip.org/pnu/2007/split/812-1.html>);
2. Electron tunneling in real time can be observed with the use of attosecond pulses (<http://www.aip.org/pnu/2007/split/818-2.html>);
3. Laser cooling of coin-sized object, at least in one dimension (<http://www.aip.org/pnu/2007/split/818-1.html>);
4. The best test ever of Newton's second law, using a tabletop torsion pendulum (<http://www.aip.org/pnu/2007/split/819-1.html>);
5. First Gravity Probe B first results, the measurement of the geodetic effect--the warping of spacetime in the vicinity of and caused by Earth--to a precision of 1%, with better precision yet to come (<http://www.aip.org/pnu/2007/split/820-2.html>).
6. The MiniBooNE experiment at Fermilab solves a neutrino mystery, apparently dismissing the possibility of a fourth species of neutrino (<http://www.aip.org/pnu/2007/split/820-1.html>);
7. The Tevatron, in its quest to observe the Higgs boson, updated the top quark mass and observed several new types of collision events, such as those in which only a single top quark is made, and those in which a W and Z boson or two Z bosons are made simultaneously (<http://www.aip.org/pnu/2007/split/821-1.html>);
8. The shortest light pulse, a 130-attosecond burst of extreme ultraviolet light (<http://www.aip.org/pnu/2007/split/823-1.html>);
9. Based on data recorded at the Auger Observatory, astronomers conclude that the highest energy cosmic rays come from active galactic nuclei (<http://www.aip.org/pnu/2007/split/846-1.html>);
10. And the observation of Cooper pairs in insulators (<http://www.aip.org/pnu/2007/split/849-1.html>).

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