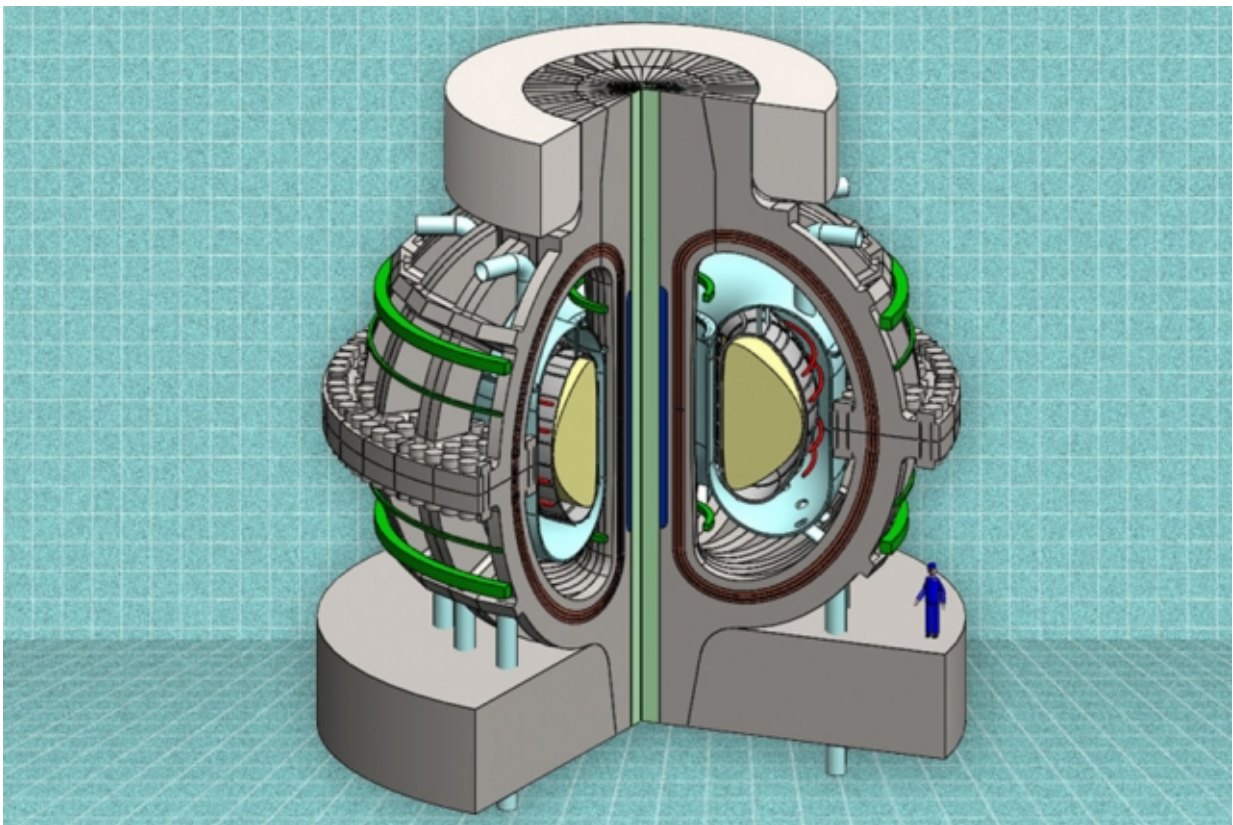


# Best of Last Week – New fusion power design, a space elevator and low-fat diet found to be better than low-carb diet

August 17 2015, by Bob Yirka



A cutaway view of the proposed ARC reactor. Thanks to powerful new magnet technology, the much smaller, less-expensive ARC reactor would deliver the same power output as a much larger reactor. Credit: the MIT ARC team

(Phys.org)—It was a big week for physics—a research team at MIT created [a superfluid in a record-high magnetic field](#)—a Bose-Einstein condensate—for a tenth of a second. And another team at MIT announced [a new design that could finally help to bring fusion power closer to reality](#)—in as little as ten years. Meanwhile, a team working at CERN found that [protons and antiprotons appear to be true mirror images](#)—the most precise measurements of their charge-to-mass ratio to date. And researchers working at the South Pole-based IceCube experiment reported that [a cosmic mystery deepened with the discovery of a new ultra-high-energy neutrino](#)—making it the fourth and highest-energy neutrino yet observed. Also, a team at CalTech announced [a discovery in fundamental physics](#)—pinpointing for the first time how instabilities in the arrangement of electrons in metals arise.

In other news, [a company in Canada got a U.S. patent for a space elevator](#)—their idea is to use modular tubes of Kevlar-polyethylene composites filled with helium to build the structure, which they claim would reach to 12 miles high. The elevator could be used to carry cargo and humans to that height and at the top would be a runway for space planes to take off and land. And another international team of astronomers reported that they have been charting [the slow death of the universe](#). They have conducted the most comprehensive assessment yet of the energy output of the universe measuring the energy generated by 200,000 galaxies, and have found that it is approximately half of what it was two billion years ago.

Also, in an interesting turn of events, a team of researchers at Northwestern University uncovered [a difference between the sexes](#)—other than the obvious ones, of course. They found evidence of male and female human brains operating differently at the molecular level. Meanwhile, another team of molecular scientists unexpectedly produced [a new type of glass](#)—and it might lead to improvements in efficiency of electronic devices.

And finally, if you are one of the many people attempting to lose weight by dieting, you might want to know that a team of researchers with US National Institutes of Health has found that [a low-fat diet results in more fat loss than low-carb diets, in humans](#). Now all you will have to do is stick to it.

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