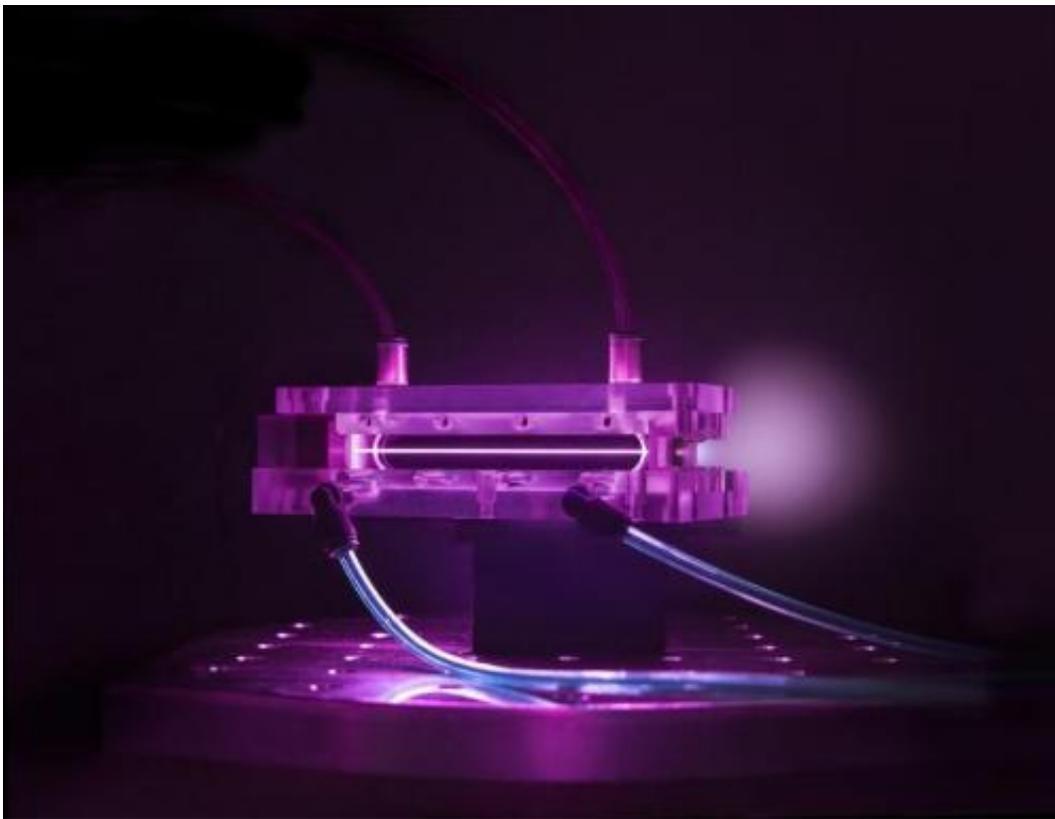


Best of Last Week – World record for tabletop accelerator, mystery of Earth's water source and roller coaster strokes

December 15 2014, by Bob Yirka



A 9 cm-long capillary discharge waveguide used in BELLA experiments to generate multi-GeV electron beams. The plasma plume has been made more prominent with the use of HDR photography. Credit: Roy Kaltschmidt

It was a good week for physics as one team of [researchers set a world](#)

[record for a compact 'tabletop' particle accelerator](#)—they used one of the most powerful lasers in existence to accelerate subatomic particles to the highest energies ever recorded for such a device, setting a new benchmark for what can be accomplished on them. Meanwhile, a team of physicists attempted to explain why some [composite subatomic structures created at the Large Hadron Collider fell apart in unexpected ways](#) during collisions, by reconsidering the math behind the underlying physics. Also, another team of researchers found a way to use [real data rather than theory to measure the cosmos](#)—they used data from astronomical surveys to measure a standard distance, suggesting that some current methods for measuring distance in the universe may be more complicated than they need to be.

In other interesting news, a study illuminated [some possible reasons for gay marriage gaining voter acceptance](#)—researchers showed that conventional wisdom suggesting that it's extremely difficult to change voter views on divisive issues may be wrong. Turns out, simply putting someone in direct contact with a person impacted by an issue can cause reconsideration of previous views.

Another groundbreaking study has revealed evidence that [supports the theory that "men are idiots"](#) or at least engage in riskier behavior than women. Also, a large-scale analysis by a team of researchers has found that [brain inflammation is a hallmark of autism](#)—they haven't found any new clues about the cause of the disorder, but their findings show that those afflicted have one more thing in common—a type of [brain inflammation](#) related to an overzealous immune response. There was also news from the research team looking at data from the Rosetta probe—they found that [water on a comet is different from that on Earth, deepening the mystery of water source](#)—many have been betting that water arrived here on our planet via comets, but that idea may have to be shelved. Also [underwater excavators in Israel revealed a lost Levantine village](#)—offering new clues about Neolithic society.

And finally, for those looking forward to spring and summer and fun at an amusement park, a team of researchers has found that [roller coaster rides can trigger pediatric stroke](#)—likely due to a small tear in the carotid artery. Parents may want to reconsider letting kids under ten get on those rides.

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