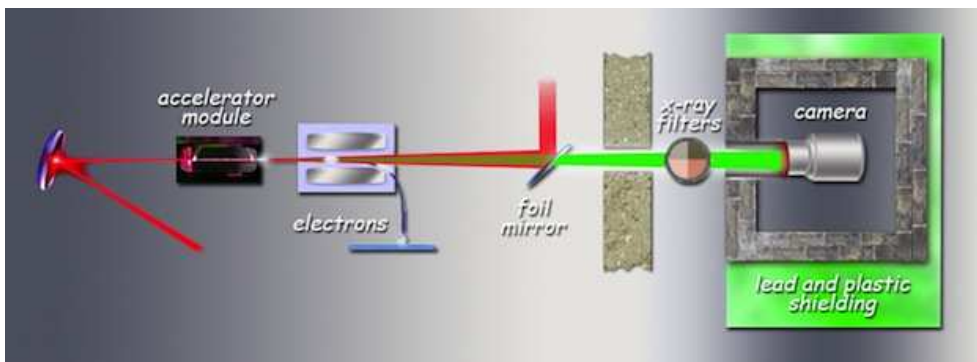


Greening High-Energy Colliders; Cato Institute Publishes Deceptive Climate Report

Discovered: New accelerators lessen environmental impact of physics research; Cato Institute tries to quash climate findings; Lorca earthquake linked to well digging; rice crops speed warming.

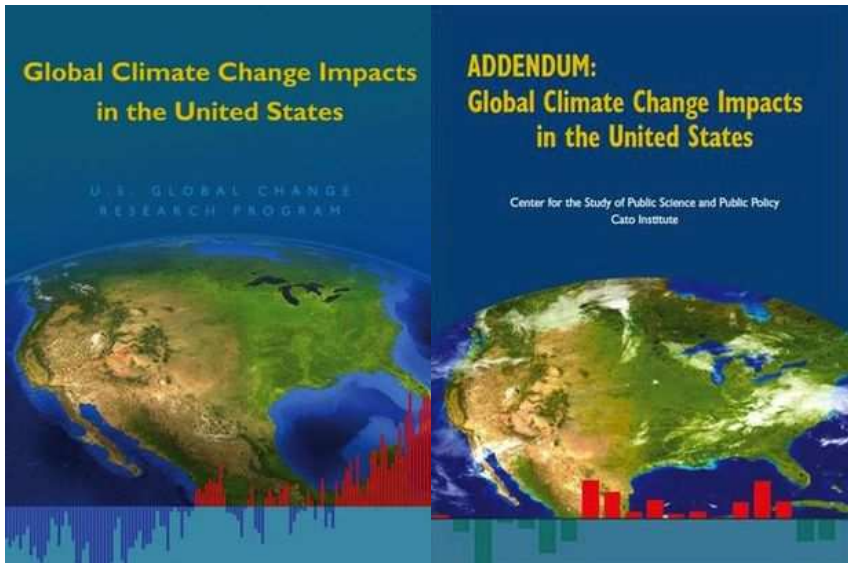
DAVID WAGNER - OCT 22, 2012

Greening high-energy colliders. Giant particle accelerators are helping scientists do important work on better understanding the world of particle physics. CERN's Large Hadron Collider (pictured above), for instance, was instrumental in proving the existence of the Higgs boson earlier this year. But due to their size, and the energy needed to run them, these accelerators aren't the most eco-friendly machines. Newer, more diminutive laser plasma accelerators (LPAs) being pioneered by engineers at Lawrence Berkeley National Laboratory might help green high-energy colliders, though. They're so small that scientists casually refer to them as "table-top accelerators." Conventional accelerators bring particles to huge speeds by oscillating electromagnetic fields, but the new accelerators work by beaming lasers at a plasma of free electrons and ions, pressurizing them until some shoot off at near light-speed.



Lawrence Berkeley National Laboratory

Cato publishes deceptive government climate report "addendum." Publishing climate change denialism is gross enough. But trying to pass it off as a legitimate government report? That's some low-down shady tactic, Cato Institute. The right wing D.C. think tank cobbled together some fake research about how global warming isn't happening, and then mimicked the format of a 2009 U.S. Global Change Research Program report called *Global Climate Change Impacts in the United States*, down to the typeface, headings, and cover design. They even called it *ADDENDUM: Global Climate Change Impacts in the United States*, as if the commission had decided to revise its findings. "It's not an addendum. It's a counterfeit," says University of Saint Thomas professor John Abraham. "It's a continued effort to kick the can down the road: A steady drip, drip, drip of fake reports by false scientists to create a false sense of debate." See the real and fake reports, side by side, below: [[Scientific American](#)]



Wells linked with Lorca earthquake. It's a big day for [seismology news](#). Researchers from Canada, Italy and Spain think they've zeroed in on one possible cause of the 5.1 magnitude earthquake that killed nine and injured hundreds in Lorca, Spain last year. Relying on satellite imagery of the effected region, they observed that the fault line ran along a line of deep wells drilled by local farmers to water their crops. Five decades of aggressive digging and water extraction weakened a basin near the quake's epicenter, which has scientists worrying about the effects of new energy extraction like fracking. Miguel de las Doblav Lavigne, a geologist with Spain's National Natural Science Museum, says, "This has been going on for years in the Mediterranean areas, all very famous for their agriculture and plastic greenhouses. They are just sucking all the water out of the aquifers, drying them out. From Lorca to (the regional capital of) Murcia you can find a very depleted water level ... [It's] no coincidence that all the aftershocks were located on the exact position of maximum depletion." [[The Christian Science Monitor](#)]

Rice crops speeding up global warming. The more you learn about global warming, the more you realize that it can be a vicious cycle. By spewing more carbon dioxide into the atmosphere, we're doubling the amount of greenhouse methane gas released by rice agriculture, according to a meta-analysis of studies on Asian and North American rice farms. UC Davis scientists. Rice, the second most produced staple crop in the world, is a huge source of man-made methane. "Because global demand for rice will increase further with a growing world population, our results suggest that without additional measures, the total methane emissions from rice agriculture will strongly increase," says plant sciences professor Chris van Kessel. But fixes could be made to address rice crops' environmental damage, such as mid-season drainage and using alternative fertilizers, van Kessel and his colleagues assure. [[University of California, Davis](#)]