

About the cover

On March 8, 2012, the Daya Bay Reactor Neutrino Experiment, a multinational collaboration operating in the south of China, reported the first results of its search for the last, most elusive piece of a long-standing puzzle: how is it that neutrinos can appear to vanish as they travel? The image shows the innards of each cylindrical antineutrino detector at the Daya Bay experiment. They are like a Russian doll, with one transparent acrylic vessel nested inside another one, both of which sit inside a third vessel made of stainless steel. When filled with clear liquid scintillator, the detectors will reveal antineutrino interactions by the very faint flashes of light they emit. Sensitive photomultiplier tubes line the detector walls, ready to amplify and record the telltale flashes. (Courtesy of Roy Kaltschmidt, Lawrence Berkeley National Laboratory)

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Biological techniques to control agricultural pests have been developed by entomologist ZHANG Runzhi, an awardee for the 2011 CAS Outstanding S&T Achievement Prize.

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