Mosaic of the CMS and ATLAS detectors (as in 2007), part of the Large Hadron Collider at CERN. In 2012, research teams used these detectors to fingerprint decay products from the long-sought Higgs boson and determine its mass, successfully testing a key prediction of the standard model of particle physics. See the Breakthrough of the Year special section beginning on page 1524, three Articles beginning on page 1558, and www.sciencemag.org/special/btoy2012.

Photos: Maximilien Brice and Claudia Marcelloni/CERN
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