CERN continues the hunt for the Higgs

January 31 2011

(PhysOrg.com) -- It has just been decided that CERN will run for the next two years without a break. The Higgs could be within reach sooner than previously thought so all researchers are keen to continue the experiments in the LHC accelerator.

The Higgs is the particle that physicists are looking for with the experiments in the 27 km long subterranean particle accelerator at CERN. According to the theories the Higgs particle gives all things mass

and for decades researchers have been hunting for this particle, which is needed to describe the structure of nature.

The plan was that the experiments would continue through all of 2011 at an energy of 7 TeV (1 TeV is 1000 billion electron Volts) and then be shut down in 2012 to upgrade to full energy of 14 TeV.

"But now the Higgs is lying in wait and we may find it by running for a year at 'low' energy, so we are going to try", explains particle physicist Rasmus Mackeprang, who has just received the news from the annual meeting in Chamonix, where CERN's leadership and researchers are taking stock and planning the course for the coming year.

The detailed plan also tells us that there will be more 'proton packs' in the accelerator. This increases the chances of a collision, where you can 'smash' the protons and get a look into the quark's universe, where the Higgs is presumed to exist.

Provided by Niels Bohr Institute

Citation: CERN continues the hunt for the Higgs (2011, January 31) retrieved 16 April 2024 from https://phys.org/news/2011-01-cern-higgs.html

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