LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS (LEPP)

Journal Club

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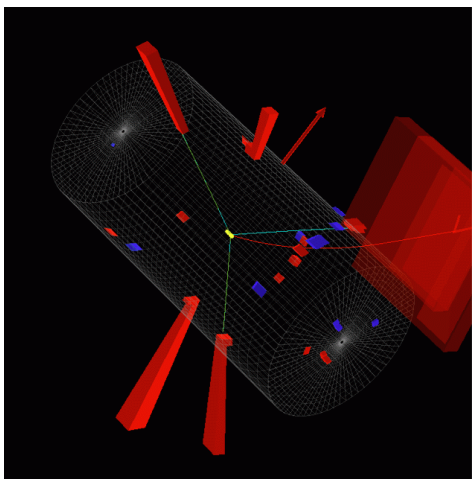
Illuminating New Physics at the LHC with the Higgs Boson

The experimental data from the LHC strongly points toward the existence of a fundamental spin-0 particle, the Higgs boson, as a remnant of the broken Electroweak symmetry. The existence of such a fundamental particle poses a host of questions, the most immediate of which is why its mass is so small. A general program of searches for new phenomena that could stabilize the Higgs boson mass is underway at the LHC. In this talk I will describe some of the Run 1 searches with the Higgs boson in the final state using its di-photon decay mode and will make some projections for the upcoming Run 2.



Friday,

Feb. 20, 2015

4:00pm

301 Physical Sciences Bldg.

LEPP and CHESS resources have merged and a new lab, (CLASSE), has formed. LEPP's primary source of support is the National Science Foundation. Visit us at www.lepp.cornell.edu