Closing in on the Higgs boson?

Dr. Sandra Kortner
MPI München

One of the main missing pieces of the puzzle of high energy physics is the mechanism of electroweak symmetry breaking which could explain the origin of particle masses. The Standard Model of particle physics predicts in this context the existence of a new, yet undiscovered particle, the Higgs boson.

The LEP experiments set a lower limit of 114.4 GeV on the unknown mass of the Higgs boson, while higher masses have been constrained recently by the searches at the Tevatron and LHC hadron colliders. Over the past year in particular the allowed mass range has been substantially narrowed down by the LHC experiments, leaving open only a small region between approximately 115 GeV and 130 GeV. In this talk the latest status of the search for the Higgs boson is presented. Possible first hints for its existence as measured by the ATLAS and CMS experiments at the LHC shall be addressed.