DESY Seminar

26 June 2007, 17:00, DESY Hörsaal

Michael Kobel (Dresden)

Higgs Searches beyond the Standard Model at LHC

The way electroweak symmetry is broken, is the only experimentally unexplored sector of the Standard Model of Particle Physics in its original version. LEP's direct searches and precision electroweak data meanwhile constrain the Higgs mass between 114 GeV and about 200 GeV for the minimal assumption of one complex Higgs doublet field.
After more than 35 years of searches, the LHC is expected to finally give us the answer, how electroweak symmetry is broken, and if and how many Higgs Bosons exist in nature. Besides the minimal assumption of just one neutral Higgs Boson with firmly predicted production and decay rates, the LHC has to cover a large variety of possible scenarios beyond the Standard Model.
After a short report about the status of the LHC and its detectors a few examples of searches beyond the Standard Model will be discussed, ranging from searches for charged Higgs Bosons over invisibly decaying Higgs Bosons to Higgs-less models of strong electroweak symmetry breaking.

- Tea and cookies will be served at 16:45 in the lobby.
- After the seminar there is a chance for private discussions with the speaker over wine and pretzels also in the lobby.