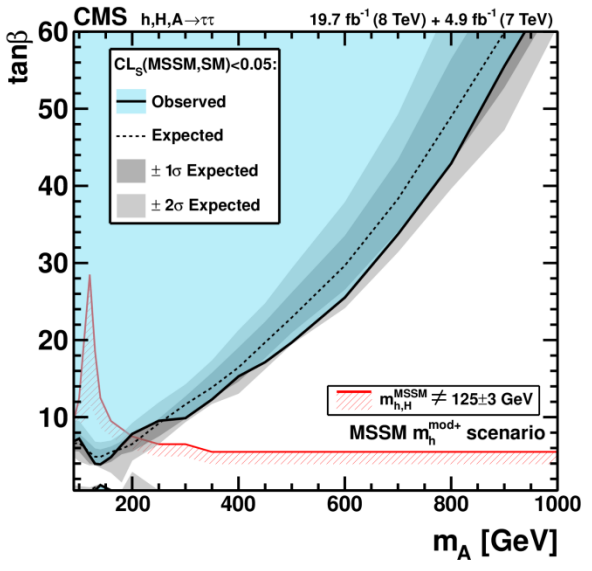
DESY
Physics Seminar

Search for Higgs Bosons Beyond the Standard Model with the CMS Experiment at the LHC.

Roger Wolf (Karlsruher Institut für Technologie)

Tuesday, 18 November 2014
16:45 h, Auditorium

After an inclusive analysis of its coupling structure the particle that has been discovered at the LHC is compatible with the predictions of a standard model (SM) Higgs boson with a mass of 125 GeV, within an accuracy of 10%. However these measurements still have a large uncertainty, which leaves room for a branching fraction of roughly 30% into potentially new, yet, undiscovered final states. Also the discovered Higgs boson could well be interpreted as the first particle of a model describing physics beyond the SM (BSM). The observation of a second Higgs boson remains a smoking gun signature for any BSM model. In this seminar an overview will be given of parts of the rich program of BSM Higgs boson searches that have been performed with the CMS experiment on the LHC run-1 data. Such an overview cannot be complete. The presented searches will mostly be guided by the expectations of supersymmetric extensions of the SM.



Coffee, tea and cookies will be served at 16:30h.

After the seminar there is a chance for private discussions with the speaker over wine and pretzels.

Accelerators | Photon Science | Particle Physics

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