

Theory Predictions for the Higgs Mass and Implications for Phenomenology

Monday 2 December 2013 14:00 (1 hour)

Supersymmetric models allow the calculation of the Higgs masses in terms of the model parameters. Together with the LHC measurement of the Higgs mass, this can be used to exclude whole regions of the parameter space that predict the wrong mass. However, great care has to be taken regarding uncertainties in the prediction.

We consider the light Higgs boson of the MSSM and compare the experimental results to the theory prediction, including leading terms at three-loop order. We also consider constraints from Dark Matter searches. We find that there are large regions of the MSSM that are both consistent with these constraints and within the reach of the LHC at 14 TeV.

Presenter: KANT, Philipp (Humboldt U.)

Session Classification: Afternoon session 1