

## Search for non-standard-model Higgs at the LHC with ATLAS

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The discovery prospects of non Standard Model Higgs bosons with the ATLAS detector are presented. Due to the high branching ratio, results on decay channels that include tau leptons are presented both for the search of the neutral and the charged MSSM Higgs bosons. For the neutral Higgs bosons results on the muon pair final state are also reported. Furthermore, decay scenarios that include SUSY particle cascades are investigated. Finally, in the absence of light Higgs bosons, processes of vector boson scattering at high mass are discussed, in the context of studying the mechanism of electroweak symmetry breaking. All the studies presented are based on the analysis of Monte Carlo signal and background data simulated in detail through the experimental apparatus.

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