



Universidade Federal da Paraíba
Centro de Ciências Exatas e da Natureza
Programa de Pós-Graduação *Stricto Sensu* em Física

Colóquio

“Is a Higgs of 125GeV of mass supported by supersymmetry?”

RESUMO: The minimal supersymmetric standard model(MSSM) is an interesting extension of the standard model. Recently the CMS and ATLAS experiments in the LHC found a Higgs of 125 GeV of mass. In the context of supersymmetry, with soft breaking terms, such a Higgs mass requires robust radiative corrections which implies either extreme heavy stop mass or near-maximal stop mixing. Moreover, in the minimal gauge mediated SUSY breaking framework such a Higgs mass is not allowed. We review the implications of such light Higgs mass in the context of MSSM with soft SUSY breaking terms and in the context of gauge mediated SUSY breaking and discuss extensions of the MSSM that may accommodate such a Higgs mass.

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