

A little more gauge mediation and the light higgs mass

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Minimal Gauge Mediation has been under severe stress since the discovery of the Higgs Boson at 125 GeV. In the present talk, we propose solution which do not introduce messenger-matter mixing. We show that an extra $U(1)$ factor in addition to the Standard Model gauge group can significantly alter the situation. A $U(1)$ charged, Standard Model singlet is assumed to be present which allows for an additional NMSSM like coupling, $\lambda H_u H_d S$. The $U(1)$ is assumed to be flavour universal. Anomaly cancellation in the MSSM sector requires additional coloured degrees of freedom. The S field can get a large vacuum expectation value along with consistent electroweak symmetry breaking. It is shown that the lightest CP even Higgs boson can attain mass of the order of 125 GeV.

Author: VEMPATI, Sudhir Kumar (Centre for High Energy Physics, Indian Institute of Science)

Presenter: VEMPATI, Sudhir Kumar (Centre for High Energy Physics, Indian Institute of Science)

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