

SEMINARIO
Departamentos de Física Teórica I y II
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TITULO: The impact of a light Higgs-like particle on WW scattering at LHC energies

LUGAR: FACULTAD DE CIENCIAS FÍSICAS UCM

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ABSTRACT

In this talk we review the main ATLAS and CMS results leading to the recent finding of a 125-GeV light Higgs-like boson. In the context of the Minimal Standard Model (MSM) this implies a WW system weakly interacting. However this is an exceptional feature not generally true if new physics exists beyond the mass gap found at the LHC up to 700 GeV. By using an extension of the Electroweak Chiral Lagrangian, including one light scalar, it is possible to study the WW scattering at high energies relevant for the future LHC data. For most of the parameter space, the scattering is strongly interacting (with the MSM being a remarkable exception). Therefore, the finding of the so-called Higgs boson could be more a signal for new strongly interacting physics rather than a confirmation of the MSM.