

Bollettino Settimanale

Lunedì 15 gennaio 2024	Martedì 16 gennaio 2024	Mercoledì 17 gennaio 2024	Giovedì 18 gennaio 2024	Venerdì 19 gennaio 2024
<div><div>AULA CONVERSI ore 14.30</div><div>SEMINARIO INFN</div><div><i>Emanuele Di Marco (INFN Sezione di Roma)</i></div><div>Search for a new resonance decaying into two Higgs boson like particles.</div><div><p>This seminar presents the recent search for a new boson X decaying into either a pair of Higgs bosons HH of mass 125 GeV or an H and a new spin-0 boson Y using the data collected by CMS experiment at the LHC during Run2. The final state addressed is the one where one H subsequently decays to a pair of photons, and the second H or Y, to a pair of bottom quarks. The explored mass ranges of X are 260-1000 GeV, with the Y mass range being 90-800 GeV. For a spin-0 X hypothesis, the 95% confidence level upper limit on the product of its production cross section and decay branching fraction is observed to be within 0.90-0.04 fb, depending on the masses of X and Y. The largest deviation from the background-only hypothesis with a local (global) significance of 3.8 (2.8) standard deviations is observed for X and Y masses of 650 and 90 GeV, respectively. The limits are interpreted using several models of new physics.</p></div></div>				