

# Non-standard heavy vector bosons at the LHC

*Thursday 31 August 2017 17:00 (30 minutes)*

Searching for heavy vector bosons is one of the challenging objectives of the LHC: I will discuss two scenarios which have not been investigated yet by the experimental collaborations. The first scenario consists in searching for  $Z'$  bosons, predicted by U(1) GUT-inspired models, by investigating its possible BSM decays, namely supersymmetric decays, leading to resonant final states with charged leptons and missing energy. Afterwards, I will present a recent work, carried out in the framework of the 331 model, which predicts novel doubly-charged bosons  $Y$  and yields final states with two same-sign lepton pairs, accompanied by two jets, which can be easily separated from the Standard Model backgrounds.

**Author:** CORCELLA, Gennaro (INFN - LNF)

**Presenter:** CORCELLA, Gennaro (INFN - LNF)

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