

Particle Physics Seminar

Dr Henning Flaecher - CERN

Wednesday
27th May
3:30pm
HLT1

Search for a Dark Matter Candidate with the CMS Detector at the LHC

In this talk I will review the present status of the searches for a dark matter candidate in multi-jet events with missing energy at CMS where I will place particular focus on robust analysis techniques that are suited for the early physics data. Using the example of di-jet events I will discuss the importance of topological variables for controlling the overwhelming background from QCD events and cover data-driven methods for estimation of the remaining backgrounds with the help of control samples. Furthermore, I will discuss the relevance of these searches in the context of selected supersymmetric models also in light of existing bounds from collider physics observables and cosmological data.

