



Contribution ID: 101

Type: Oral Presentation

Exotic searches with jet substructure at the LHC

Wednesday, 5 July 2017 15:00 (20 minutes)

Increase energy in LHC drives us to perform exotic searches in the kinematic regions unreachable before. Being a hadron collider it is utterly important to explore the LHC physics with the detailed understanding of the performance of jets, direct manifestations of hadrons as produced in significant number from proton proton interactions. It is most likely that newly reached higher energy can result in such energetic (boosted) objects that decay further into products collimated in a single large radius jet (fatjet) with some definite structure (jet substructure). Jet substructure study describes the distinctive nature of this type of jet (e.g. as observed from boosted top quarks) from the jets coming out of partons (quarks and gluons) and is currently used as one of the primary tools in extensive number of exotic searches of heavy particles decay in LHC. This contribution will briefly talk about some of the recent searches in LHC where jet substructure study plays a significant role.

Apply to be considered for a student award (Yes / No)?

No

Level for award (Hons, MSc, PhD, N/A)?

N/A

Would you like to submit a short paper for the Conference Proceedings (Yes / No)?

Yes

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Session Classification: Nuclear, Particle and Radiation Physics 2

Track Classification: Track B - Nuclear, Particle and Radiation Physics