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QCD Instantons at hadron colliders

Tuesday 15 December 2020 15:30 (30 minutes)

Instantons are non-perturbative phenomena arising in field theory with degenerate vacua. They are one of the few remaining predictions of the Standard Model that has not been experimentally observed. Discovering instantons at a collider would be another piece of evidence for our current model of QCD and help to understand the vacuum structure of the standard model.

We will discuss the most recent calculation of the instanton cross section at hadron colliders before moving on to discuss their collider signature. We talk about shape variables as possible discriminating variables and how we might potentially discover instantons at the LHC.

[talk based on <https://arxiv.org/abs/2010.02287>]

Would you be interested in receiving feedback on your talk?

Yes

Will you be pre-recording your talk?

No

Length of talk

15-25 minutes

Are you happy for your talk to be recorded?

Yes

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Session Classification: Parallel Stream 1