

Search for a high-mass DM mediator decaying to a dilepton final state.

Tuesday, 10 November 2020 14:00 (15 minutes)

The presented search for new high-mass resonances decaying into lepton pair. The search uses pp collision data at a centre-of-mass energy of 13 TeV collected by the CMS experiment at the LHC in 2016, corresponding to an integrated luminosity of 36 fb⁻¹. Upper limits on the product of a new resonances production cross section and branching fraction to dileptons are calculated in a model independent manner. Performed interpretation in a simplified model of dark matter production via a vector or axial vector mediator, limits at 95% confidence level are obtained on the masses of the dark matter particle and its mediator.

Primary author: ZHIZHIN, Ilia (JINR)

Co-authors: Dr SHMATOV, Sergei (JINR); LANYOV, Alexander (JINR)

Presenter: ZHIZHIN, Ilia (JINR)

Session Classification: High energy physics

Track Classification: HEP I - physics on accelerators