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Production of fully-heavy tetraquark at the LHC and electron-ion colliders

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The $X(6900)$ resonance, originally discovered by the LHCb collaboration and later confirmed by both ATLAS and CMS experiments, has sparked broad interests in the fully-charmed tetraquark states. Relative to the mass spectra and decay properties of fully-heavy tetraquarks, our knowledge on their production mechanism is still rather limited. In this talk, I will discuss the production of S-wave fully-heavy tetraquark at the LHC and electron-ion collider with the nonrelativistic QCD (NRQCD) framework. We predicted the differential p_T spectra of various fully-charmed S-wave tetraquarks at the LHC, and compare with the results predicted from the fragmentation mechanism at large p_T end. We also looked at the production prospects at various electron-proton colliders.

Mini Symposia (Invited Talks Only)

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