

# UCLA NUCLEAR PHYSICS SEMINAR

## Entanglement and Quantum tomography for collider physics

Presented by: Daniel Tapia Takaki, University of Kansas

Quantum mechanics is experiencing an experimental and theoretical renaissance. In this talk, we will discuss novel ways to use quantum mechanics and provide several experimental applications of quantum tomography for proton-proton and heavy-ion collision experiments at the CERN Large Hadron Collider. We will discuss application of this model-independent analysis technique for Z bosons, dijets and quarkonia. The first observation of an unexpected correlation of spin and momentum in the experimental data will also be presented.

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**Tuesday • Apr 6, 2021 • 11 PM**

**Via Zoom**