

Hyperon-Nucleon Interactions

Monday, 16 October 2023 17:20 (20 minutes)

Scattering experiments of pions and kaons impinging on nuclear targets have a rich history, providing important insight into the strong interaction. Similar experiments with hyperon beams are much harder to realize given higher masses and shorter lifetimes. Two-body J/ψ decays represent a clean source of hyperons so that the high statistics sample of 10 billion J/ψ events collected with the BESIII detector enables studies of hyperon-nucleon interactions using the BESIII beam pipe as an effective nuclear target. Here, we will present the novel method of studying hyperon-nucleon interactions at an e^+e^- collider and discuss first results for the reaction $\Xi^0 + {}^9\text{Be} \rightarrow \Xi^- + p + {}^8\text{Be}$.

Parallel Session

Miscellaneous Session

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Session Classification: Mixed