Search for an H-dibaryon near $\Lambda\Lambda$ and $\Xi^-p$ thresholds in $(K^-, K^+)$ reaction

Tuesday, 4 June 2019 17:00 (30 minutes)

Recent Lattice QCD predictions for the mass of H-dibaryon pointing to the mass region near $\Lambda\Lambda$ and $\Xi^-p$ thresholds encourage experimental searches. A dedicated experiment (J-PARC E42) is designed to measure $\Lambda p\pi^-$, $\Lambda\Lambda$ and $\Xi^-p$ decays from the H-dibaryon in the $^{12}\text{C}(K^-,K^+)$ reaction at the K1.8 beam line of J-PARC. A new superconducting Hyperon Spectrometer is now under commissioning, consisting of a conduction-cooled superconducting dipole magnet and a time projection chamber (HypTPC). This talk will review our new attempt to find evidence supporting the existence of the H-dibaryon in the wide mass range as well as the current status of the Hyperon Spectrometer.

Early Consideration
No

Graduate Student
No

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Session Classification: Few-Body Systems
Track Classification: Hadron Spectroscopy