

Abstract Submitted
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Kinematical analysis of Ξ^- hyperons stop event in KEK-E373 experiment HIROYUKI NAKAMURA, Gifu-University, KEK-PS E373 COLLABORATION — The purpose of the E373 experiment is to study S=-2 nuclear systems with hundreds stopping events of Ξ^- hyperons. Ξ^- hyperon is captured in the emulsion, interacts with a proton, and two Λ hyperons are produced, in usual. In this experiment, we found NAGARA event that was identified as the production and decay of ${}^6_{\Lambda\Lambda}He$ among seven candidate events of double hypernucleus. We found several hundreds' events showing the emission of charged particles at the Ξ^- stopping points. Among them, there are two events having very characteristic decay topology. Only two charged particles were emitted from Ξ^- hyperon capture point, and one of those particles associated with an energetic charged particle. By the kinematical analysis, one event was identified as a non-mesonic decay of Λ^4H , and another one is probably a decay of Σ^- hyperon which is produced by weak interaction between double strangeness.

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