

Abstract Submitted  
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**Double Strangeness Weak Interaction** KAZUMA KAKAZAWA,  
Phys. Dept., Gifu Univ., E373 (KEK-PS) COLLABORATION — In the E373(KEK-PS) experiment, several hundreds events caused by  $\Xi^-$  hyperon capture at rest in nuclei were located in nuclear emulsion to study  $S = -2$  systems. Among those events, we detected seven candidate events with topologies shown by the production and decay of double- $\Lambda$  hypernucleus, and also found an event showing that a  $\Sigma^-$  hyperon was probably emitted from  $\Xi^-$  hyperon capture point, very recently. This kind of phenomenon,  $\Xi N \rightarrow \Sigma N$  or  $\Lambda\Lambda \rightarrow \Sigma N$ , shall be quite usefull to know the weak interaction involving double strangeness. The result of the analysis will be reported not only for the event, but also about the probability for such kind of the reaction caused by at rest capture of  $\Xi^-$  hyperon in nucleus.

E373(KEK-PS)Collaboration : Gifu, Kyoto, Kobe, Toho, Wonkwang, Korea, New-Mexico., U.C. London, KEK, Nagoya, Chonnam, Gyeongsang, Konkuk, Carnegie-Mellon, BNL, Tohoku, Kyoto-Sangyo, Aichi, Tokyo, NIRS, Osaka City U., Osaka Pref. Edu.

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