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Nuclear Emulsion Treatment for Study of $S = -2$ Nuclear Systems at AGS-E964 TETSUYA HIBI, Phys. Dep., Gifu Univ., E964(BNL-AGS) COLLABORATION — The purpose of the E964 experiment is to study $S = -2$ nuclear systems with 10^4 stopping events of Ξ^- hyperons and also to know $\Xi^- N$ interaction by measuring atomic X-ray from Ξ^- absorption, for the first time. In the experiment, nuclear emulsion is used for detecting sequential weak decay of double-Λ hypernuclei and also pointing Ξ^- hyperons stopping events in huge amount of X-ray data. We have developed a new type of nuclear emulsion for E964. Very thin film made of polyethyleneterephthalate (PET) is used for the first time as emulsion support so as to minimize a dead space. We use the emulsion with fine and uniform AgBr(I) crystal of the size of $0.18 \pm 0.015 \mu$m, which was improved from that used in the previous experiments ($0.24 \pm 0.078 \mu$m) to get better position resolution. A method of its treatment is reported in detail on each process of plate making, beam exposure and development.

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