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# Result of the Ξˆ- atomic X-ray measurement at J-PARC E07

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$\Xi^-$ atomic X-ray spectroscopy is a useful method for understanding the strong interaction in the S=-2 sector. One of the experimental difficulties is that the in-flight decay of $\Xi^-$ hyperon makes a huge background. We introduced a selection of $\Xi^-$-stop events using a nuclear emulsion, expecting a clean X-ray spectrum with a good significance. We performed the first Ξ- atomic measurement with a counter-emulsion hybrid method at the J-PARC K1.8 beam line (J-PARC E07). $\Xi^-$ hyperons were produced via the $(K^-, K^+)$ reaction. The magnetic spectrometers and silicon strip detectors analyzed the production of $\Xi^-$ hyperon and $\Xi^-$ tracks. The prediction of the position where $\Xi^-$ hyperon hit at the emulsion surface by counters shortened the time for the emulsion image analysis. The $\Xi^-$ atomic X rays were measured by the germanium detectors array, called Hyperball-X.
We show the $\Xi^-$ Ag and $\Xi^-$ Br atomic X-ray measurement results at J-PARC E07 experiment.

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