

X-ray spectroscopy on Ξ atoms (J-PARC E03, E07 and future)

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X-ray spectroscopy of hadronic atoms give us various information on the strong interaction between hadrons and nuclei. At J-PARC, we are aiming for the world-first detection of the X rays from atoms with a doubly strange hyperon, Ξ^- . Recently, two experiments, J-PARC E07 and J-PARC E03, have been performed for the detection of X rays from Ξ atoms. Overview and status of these measurements will be presented. We will also discuss future plan of X-ray spectroscopy on Ξ -atoms, which can be performed together with high resolution Ξ hypernuclear spectroscopy using newly constructed S-2S spectrometer. Preparation status will be shown in this contribution.

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