



Beitrag ID: 17

Typ: Talk

Overview on Hypernuclei (present and future)

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Research on hypernuclei plays an essential role in answering how the hierarchy of nuclei is constructed from quarks. We are going to review the recent achievements in hypernuclear programs in J-PARC. One of the recent achievements is the realization of an accurate hyperon-nucleon scattering experiment. The differential cross sections of the Σ^+p , Σ^-p elastic scatterings and $\Sigma^-p \rightarrow \Lambda n$ inelastic scattering have been measured with drastically improved accuracy. These new data will become essential inputs to improve the theories of the two-body baryon-baryon interaction. Now, we have launched a new Λp scattering experiment at SPring-8. I'll also mention the current status. Another achievement is the big progress of research on the double hypernuclei. A lot of information on Λ hypernuclei and Ξ hypernuclei has been accumulated through the experiments at J-PARC, such as gamma-ray spectroscopy and emulsion experiments. In this talk, the progress of the hypernuclear program in J-PARC is presented with a focus on these experimental results. Future prospects are also discussed briefly.

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Sitzung Einordnung: Lectures