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Abstract for an Invited Paper for the HAW09 Meeting of the American Physical Society

Hypernuclear Study with Hadronic Reactions, from AGS/KEK-PS to J-PARC

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I will overview the hypernuclear experiments with meson beams at BNL-AGS and KEK-PS, which have been carried out with strong collaboration between US and Japan. The talk will start with the S=-1 physics; Lambda-hypernuclear spectroscopy, Sigma hypernucleus search, weak decay of the Lambda hypernuclei, gamma-ray spectroscopy of the Lambda hypernuclei, production of the neutron-rich Lambda hypernucleus, and also cover the S=-2 physics; search for H-dibaryon, double-Lambda hypernuclear studies, and so on. Many of these experiments will continue at J-PARC with upgraded experimental equipments and conditions, which will be discussed in detail by Nagae at the plenary talk.