

## Precision measurements of light hypernuclear masses

The study of the masses of light hypernuclei can reveal details of the strong nucleon-hyperon interaction. Theoretical models include Lambda-N-N three-body forces and charge symmetry breaking terms in the description of the binding energies of the Lambda-hyperon in hyperhydrogen or hyperhelium. During the 1960s and 1970s these binding energies were deduced from nuclear emulsion and bubble chamber experiments by analysing weak pionic decays. In 2012, the first high-resolution spectroscopy of pions from decays of hyperhydrogen was performed at the Mainz Microtron MAMI, Germany. The binding energy of Lambda-H-4 was deduced from its two-body decay mode. This method can achieve a precision in light hypernuclear masses better than with the emulsion technique.

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