Contribution ID: **32**   Type: **Poster**

Tensor force and relativistic mean field calculations of multi-Lambda hypernuclei

Tuesday, 9 June 2015 18:30 (1h 30m)

We use a microscopic self-consistent relativistic mean field theory with effective interactions to calculate the Lambda-hyperon separation energies of different hypernuclei. Such a microscopic framework has already been found to be successful in explaining different properties of normal nuclei. Calculations for hypernuclei are found to be in excellent agreement with the experimental data of single-Lambda and Lambda-Lambda separation energies of different single and double-Lambda hypernuclei when a tensor interaction term (T=1.1) is added, implying a change in nuclear potential in presence of Lambda hyperon(s).

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Session Classification: Poster session

Track Classification: Fundamental interactions