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Lambda-neutron potential through fixed-angular-momentum inversion

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Quantum systems with a strangeness degree of freedom are very important as they provide an extra dimension, and hence a deeper insight into nuclear matter. Usually phenomenological potentials obtained through meson exchange theories have been used in investigating these hypernuclear systems. A lambda-neutron interaction constructed through fixed-angular momentum inversion based on the Marchenko Integral Equation is presented. Owing to experimental difficulties in producing a sufficient number of lambda-nucleon scattering events, theoretical phase shift data is used as input for the inversion. The potential obtained is energy-independent and has a soft core, making it more suitable for quantum-mechanical few-body calculations.

Apply to be
 considered for a student
   award (Yes / No)?

No

Level for award
 (Hons, MSc,
   PhD, N/A)?

None

Main supervisor (name and email)
and his / her institution

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Would you like to <br> submit a short paper <br> for the Conference
 Proceedings (Yes / No)?

No

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