Abstract Submitted
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Coupled-cluster computations of unbound states in neutron rich calcium isotopes GAUTE HAGEN, Oak Ridge National Laboratory — In this talk I will present microscopic coupled-cluster computations of weakly bound and unbound states in the neutron rich calcium region. Starting from state-of-the-art nucleon-nucleon and schematic three-nucleon forces, the role of continuum on ordering of states close to and above the threshold is discussed. In particular several new level orderings are predicted that contrast the naïve shell-model ordering of states. We also discuss the possibility for Efimov physics around the very neutron rich calcium-62 by merging input from coupled-cluster calculations with halo effective-field-theory.

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