

Ab-initio nuclear structure calculations with three-nucleon forces

Dr. T. Papenbrock (Oak Ridge)

The systematic construction of modern effective interaction shows that three-nucleon forces (3NF) naturally enter the theoretical description of atomic nuclei. Recently, we extended coupled-cluster theory to deal with 3NF, and I report on our first results for the alpha particle. Our most important result is that the dominant contribution of the 3NF can be formulated as density-dependent zero-, one-, and two-body forces.

Shell Model Approach for nuclei around and beyond drip-lines

Dr. T. Rotureau (Oak Ridge)

During this talk I will present recent results we have obtained for the description of weakly-bound/unbound nuclei using shell model approaches where coupling with the continuum is taken into account.

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Nishina Hall, RIKEN

The seminar will be given in English
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