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## Ab initio exploration of $^{12}C$

Monday 3 June 2019 13:15 (30 minutes)

Obtaining accurate predictions of nuclear structure starting from the interaction between constituent protons and neutrons is a complex, computationally demanding problem. Accurate predictions depend on both short-range correlations as well as long-range clustering and collective dynamics, particularly when describing resonances and continuum states. We present state of the art methods used to obtain predictions of properties of both bound states and resonances in  $^{12}\mathrm{C}$  with nuclear interactions from chiral effective field theory as the only input.

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