



ID de Contribution: 163

Type: Talk

Studies of odd-A nuclei and high-K isomeric states with the BCPM functional

mardi 21 mars 2023 09:45 (30 minutes)

The BCPM (Barcelona-Catania-Paris-Madrid) is a nuclear energy density functional with a central term obtained by using the density of finite nuclei in a polynomial fit to nuclear matter equation of state (both symmetric and neutron matter). As formulated, the BCPM functional does not contain time-odd densities and therefore it should not be used to describe odd-A nuclei and/or multi-quasiparticle excitations like the ones making high-K isomeric states. However, the equal filling approximation to full blocking has proved to be very accurate in describing the above mentioned systems, with the advantage of not requiring time odd fields. We have implemented the EFA along with the BCPM functional to obtain properties of odd-A nuclei like ground state spin and parity and the excitation energy spectrum. The idea can easily be generalized to describe high-K isomeric states.

Auteur principal: ROBLED0, Luis (Universidad Autonoma de Madrid)

Orateur: ROBLED0, Luis (Universidad Autonoma de Madrid)

Classification de Session: Tuesday 09:00-10:45

Classification de thématique: Nuclear Physics