



Семинар
«МАЛОЧАСТИЧНЫЕ СИСТЕМЫ»
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пройдет в **Zoom***

Faddeev Three-Body Dynamics in Binding Nuclei and Reactions with Coulomb Force

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The report focuses on discussing the application of three-body Faddeev equations to describe thermonuclear reactions between hydrogen isotopes in the presence of a negatively charged lepton in the interaction zone. Attention is also paid to the search for bound and resonant states of nucleus-lepton-nucleus systems with the analytical continuation of two-body interactions within the framework of the three-body eigenvalue problem. The behavior of the Fredholm determinant is analyzed as a function of the grid parameters of the three-body eigenvalue problem. The behavior of the regions of logarithmic singularities of the integral kernels of the Faddeev equations is analyzed in detail, and a method for automatically and numerically traversing these zones for a system of three bodies with different masses is presented. A comparison is made between the solutions of the Faddeev equations obtained by iterations and Pade-approximants using the example of neutron-deuteron breakup and elastic scattering reactions. Estimates are given for the dynamic role of the muon in the interaction zone of dd and dt nuclei in comparison with the analogous role of the electron.

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Адрес подключения:

<https://us02web.zoom.us/j/81455827841?pwd=RPZO4KulcXDSv9ht58n7xMpk3bcjJN.1>