Contribution ID: **260** Type: **Oral talk (15 min + 5 min questions)**

Experiments to search for singlet deuteron and problem of the dineutron

Friday, 15 July 2022 17:50 (20 minutes)

The possibility of the existence of quasi-stationary state of a neutron and a proton in the 1S0 state with a mass slightly less than the sum of the masses of the neutron and proton is discussed in a number of works. This work discusses the manifestations of this level in electromagnetic interactions - radiative capture np-dγ and scattering of gamma quanta by deuterons. The problem of the existence of the singlet deuteron is connected with the question of the existence of the dineutron. Literature data on this problem are presented.

1. T. Belgya, S.B. Borzakov, M. Jentschel, B. Maroti, Yu.N. Pokotilovski, L. Szentmiklosi, Phys. Rev. C99, 044001 (2019).
2. S.B. Borzakov, E-ArXive, nucl-ex: 2105.10286 (2021).

The speaker is a student or young scientist

No

Section

1. Experimental and theoretical studies of nuclear reactions

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Session Classification: Experimental and theoretical studies of nuclear reactions