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## 19B isotope as a 17B-n-n three-body system in the unitary limit

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Motivated by the recent experimental observation of an extremely large scattering length for the n-17B system [1], we present a model describing the n-17B virtual state and the 19B bound isotope in terms of a 17B-n-n 3-body system, in which the two 2-body unbound subsystems 17B-n and n-n are close to the unitary limit. A n-17B local interaction is parametrized in order to reproduce the near-threshold virtual state observed in [1] as a function of the scattering length, and results are explored within the range  $a_s < -50$  fm allowed by experiment. The binding energy of the 19B ground state is found to be in agreement with the experimental value [2] using only two-body potentials. The possible existence of resonant states is also discussed, as well as the eventual relation with Efimov physics and the extension of this work to heavier B isotopes [3].

[1] A. Spyrou et al, Physics Letters B 683 (2010) 129.

[2] L. Gaudefroy et al, Phys. Rev. Lett. 109 (2012) 202503.

[3] S. Leblond et al, Phys. Rev. Lett. 121 (2018) 262502.

**Authors:** HIYAMA, Emiko; CARBONELL, Jaume (CNRS); LAZAUSKAS, Rimantas (University of Strasbourg); Dr MARQUÉS, F.M. (LPC, Université Normandie, ENSICAEN, Université Caen, France)

**Presenter:** CARBONELL, Jaume (CNRS)

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