

Empirical support for the planetary model of the hydrogen atom

© Alexey A. Potapov,*⁺ and Yury V. Mineev¹ Butlerov Science Foundation. Bondarenko St., 33-44. Kazan, 420066. Russia.Phone: +7 (843) 231-42-30; +7 (395) 246-30-09. E-mail: aleksey.potapov.icc@gmail.com² Training Department. East-Siberian Institute of the Russian Interior Ministry.Lermontov St., 110. Irkutsk, 664074. Russia. Phone: +7 (3952) 410-146. E-mail: mineev12@rambler.ru*Supervising author; ⁺Corresponding author**Keywords:** planetary model of the hydrogen atom, electron, stability, fundamental constants.

Abstract

The substantiation of the planetary model of the hydrogen atom which are the development of the Rutherford-Bohr atom model have been described. The polarizability measurement range data, the electric and magnetic moments of atoms, as well as the Stark and Zeeman effects presented as the argument. The central point of the work is the implementation of comparing of the bonding energy obtained from the data of wave measurements of the Rydberg constant, and bonding energies obtained by calculation according to the fundamental constants of the charge and mass of the electron and the application of the law of conservation of movement. The atom stability have been described.

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