Model of Two-Picometer Deuteron Clusters for LENR Supported by Laser Emission of Nuclear Reactions Products

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Results about nuclear reactions of deuterons in 2 pm distance was specified [1] in support of the experiments [2] for LENR based on an evaluation of results of Prelas et al. were a Coulomb screening by a factor 13 was derived [3]. These results were especially fitting the later results of ultrahigh density clusters fulfilling conditions of Bose-Einstein condensation [4] where the conditions of surface states with swimming electron layers appeared to be of advantage. These results are now supported by recent measurement [5] of emission of nuclear reaction products from the states of clusters within the voids in crystals (Schottky defects). An evaluation of these developments is presented for comparison about ongoing experimental results of LENR with the measurements of large amounts of neutrons [2] from nuclear reactions in the LENR sources. These results are supported by the detailed quantum mechanical evaluation of the Coulomb screening computations which arrived at the same values as the phenomenological evaluations of the measurements of Prelas et al. [3].

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