

# Anomalous spatial charge profiles of plasma as manifestation of phase transitions in modified one component plasma model

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The paper discusses the possibility of the appearance of discontinuities in the results of calculations of equilibrium space charge profiles in the vicinity of the source of inhomogeneity [1]. specific manifestation of the above-mentioned nonideality effects in the studied equilibrium charge profiles in the form of an ultradisperse two-phase mixture (“mixed phase”). The proposed general conclusion is the statement that the concept of mixed phase is not an attribute of exclusively astrophysical applications, but is a fairly general property of computational schemes used to describe equilibrium inhomogeneous Coulomb systems [2].

[1] Iosilevski I, Chigvintsev A, Noginova L and Zorina I 2022 *High Temperature* **60** 325

[2] Iosilevski I, Chigvintsev A, Noginova L and Zorina I 2018 *J. of Phys. Conf. Ser.* **946** 012092