

Abstract Submitted
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Soliton and Double layer in multi-component plasma KARIMA ANNOU, NADIA SAOULA, RABAH TADJINE, cdta — In the present work, an investigation of double layer formation in four-component plasmas is made. Assuming that the constituents of plasma are electrons, ions, and an admixture of dynamics ions with negative and positive charge. It is shown that stationary solutions of the fluid equation combined with Poisson's equation can be expressed in terms of the energy integral of a classical particle with a Sagdeev Potential. Furthermore, the four-fluid plasma system provides the possibility of generation of ion acoustic solitary waves (namely: Solitons), as well as double layers. Additionally, conditions under which double layer arise are given, and their profiles are display graphically.

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