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Investigation of solitary waves in multi component warm plasma with weakly relativistic effect in all the species

Manabendra Deka
Gauhati University, India

In this paper, consider a model of multi component plasmas with weakly relativistic effects in all the species namely ions, electrons and electron beams, both compressive and rarefactive solitons are shown to exist corresponding to various modes represented by the biquadratic phase velocity (M). Simultaneous existence of either both compressive and rarefactive solitons or only compressive solitons or simply rarefactive solitons against some individual mode/modes are the most striking features of this investigation of relativistic plasma composition where the normalized speed of light is taken as $c=300$ throughout the consideration.

Biography

Manabendra Deka has completed his PhD from Gauhati University, Assam, India. He has published the papers in reputed journal Astrophysics and Space Science are (a) "Weakly Relativistic Solitary Waves in Multicomponent Plasmas With Electron Inertia", Vol. 338,87-90, 2012, Springer, (b) "Investigation of Solitary Waves in Warm Plasma for Smaller Order Relativistic Effects with Variable Pressures and Inertia of Electrons", Vol. 343, 609-614, 2013, Springer, (c) "Investigation of Ion Acoustic Solitons (IAS) in a Weakly Relativistic Magnetized Plasma", Vol. 347, 109-117, 2013, Springer" and he has presented the paper in "XXXI International Conference of Phenomena in Ionized Gases (ICPIG-2013) Granada, Spain. He has participated as a speaker in International conference on Astrophysics and Particle Physics December 08-10,2016 Dallas, Texas, USA.

dekamanabendra@gmail.com

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