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ABSTRACTS

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HYDROMAGNETIC SURFACE WAVES ALONG A MOVING PLASMA COLUMN SURROUNDED BY A NEUTRAL GAS

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The hydromagnetic surface waves propagation along the interface of a moving incompressible plasma slab surrounded by a neutral gas embedded in a stationary magnetic field is studied. The characteristics of the kink and sausage mode are discussed. The effect of the flow velocity of the plasma, the interfacial parameters, “alpha”, the ratio of stationary magnetic field in the gas to the magnetic field in the plasma and “eta”, the ratio of the mass densities of the gas to the plasma are studied. Such results are relevant to the plasma flow in the gas discharge in the atmosphere and in the earth’s magnetosphere.

FORMATION AND PROPAGATION OF ION ACOUSTIC SOLITON IN MAGNETIZED MULTICOMPONENT PLASMA

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Based on a new approach known as tanh-method derived by modifying the traveling wave solution technique, the formation of various soliton propagation is studied in magnetized multicomponent plasma through the derivation of Korteweg de Vries (K-dV) equation. As and when the nonlinearity appears in the derived wave equation, the

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