Large Amplitude Solitary Waves in a Four-Component Dusty Plasma with Nonthermal Ions

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Dust acoustic solitary waves are studied in a four-component dusty plasma. Positively and negatively charged mobile dust and Boltzmann-distributed electrons are considered. The ion distribution is taken as nonthermal. The existence of a soliton solution is determined by the pseudo-potential approach. It is shown that in small amplitude approximation our result obtained from the Sagdeev potential technique reproduce the result obtained by Sayed and Mamun [Phys. Plasmas **14**, 014501 (2007)] provided one cosiders the nonthermal distribution for ions.

Key words: Pseudo-Potential; Solitary Waves; Four-Component Dusty Plasma; Nonthermal Ions.