## **Electron Acoustic Solitary Waves with Kappa-distributed Electrons**

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Nonthermal distributions such as kappa distributions are observed in the Earth's magnetosphere. Electron acoustic solitary waves in an unmagnetized plasma consisting of kappa distributed electrons, fluid cold electrons and ions are studied. Sagdeev pseudo-potential technique is used to carry out the theoretical analysis. Parametric regime for the electron acoustic solitons is explored. Negative polarity potential structures are obtained through this model. The results of the findings will be compared with the observations in the Earth's magnetosphere.