**SAIP2015** 



Contribution ID: 126

Type: Oral Presentation

### Large amplitude slow and fast electron-acoustic solitons and supersolitons in three-electron temperature space plasmas

Wednesday, 1 July 2015 11:30 (20 minutes)

# Abstract content <br> &nbsp; (Max 300 words)<br><a href="http://events.saip.org.za/getFile.py/starget="\_blank">Formatting &<br>Special chars</a>

Arbitrary amplitude slow and fast electron-acoustic solitons are investigated in a four-component unmagnetised plasma model consisting of cool, warm and hot electrons, and ions. In addition to modelling all species as adiabatic fluids, the effect of neglecting inertia and treating the warm and hot electrons, respectively, as Boltzmann distributed and non-thermal species are also examined. The admissible slow and fast electronacoustic soliton existence regions are obtained by considering both the lower and upper Mach number limits. The possibility of obtaining supersolitons is also investigated.

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Yes

#### Level for award<br>&nbsp;(Hons, MSc, <br> &nbsp; PhD, N/A)?

PhD

#### Main supervisor (name and email)<br>and his / her institution

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No

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Yes

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Session Classification: Space

Track Classification: Track D2 - Space Science