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## On the presence of stopbands in acoustic soliton existence domains

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

A fully nonlinear Sagdeev pseudopotential approach is used to study the existence domain of fast ion-acoustic solitons

in a plasma composed of cold and warm adiabatic positive ion species and Boltzmann electrons. It is shown that, perhaps surprisingly, for appropriate values of the ion mass ratio and the electron-warm ion temperature ratio, there is a range in cold-to-warm ion density ratio over which a stopband in soliton speed exists. Solitons do not propagate in the stopband, although they can occur for both higher and lower speeds.

**Apply to be<br> considered for a student <br> &nbsp;**award (Yes / No)?

No

**Level for award<br>&nbsp;**(Hons, MSc, <br> &nbsp;

NA

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

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**Would you like to <br> submit a short paper <br> for the Conference <br> Pro-  
ceedings (Yes / No)?**

No

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