SAIP2013



Contribution ID: 28 Type: Oral Presentation

Simulations of ion acoustic waves in Saturn's magnetosphere

Wednesday, 10 July 2013 16:20 (20 minutes)

Abstract content
 (Max 300 words)

Existence domains and characteristics of ion acoustic waves are studied in a two-temperature electron, adiabatic ions and low density ion plasma with the electron components being kappa-distributed. Such an environment has been found in Saturn's magnetosphere. Using a Particle-in-Cell (PIC) simulation, the evolution of the spatial electric field is tracked during the entire simulation, after which a dispersion diagram is constructed to study the dispersion characteristics of the ion acoustic mode.

Apply to be
 considered for a student
 award (Yes / No)?

Yes

Level for award

d-br> (Hons, MSc,
> PhD)?

PhD

Main supervisor (name and email)
 sand his / her institution

Andrew Collier, collierab@gmail.com, SANSA Space Science

Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?

Yes

Primary author: Mr KOEN, Etienne (SANSA Space Science)

Co-authors: Dr COLLIER, Andrew (SANSA Space Science); Mr MBULI, Lifa (SANSA Space Science); Dr

MAHARAJ, Shimul (SANSA Space Science)

Presenter: Mr KOEN, Etienne (SANSA Space Science)

Session Classification: Space Science

Track Classification: Track D2 - Space Science