## Siam Physics Congress 2017



Contribution ID: 122

Type: Poster

## Instability analysis of dust acoustic solitons in dusty plasma with both trapped electrons and ions

Thursday 25 May 2017 17:45 (15 minutes)

The reductive perturbation technique is applied to obtain the dust acoustic wave equation from the governing equations for dust grains in plasma. Some electrons and ions can be trapped in the charged dust potential and the populations of these two particles will be described by the Maxewellian distribution. The growth rate can be determined by applying a long-wavelength perturbation to the perpendicular direction of the dust acoustic soliton.

**Authors:** PHIBANCHON, Sarun (Burapha University); Prof. ALLEN, Michael (Physics Department, Mahidol University)

Presenter: PHIBANCHON, Sarun (Burapha University)

Session Classification: Poster Presentation II

Track Classification: Statistical and Theoretical Physics