Abstract Submitted
for the DPP10 Meeting of
The American Physical Society

Bi-Dust Solitary Waves JULIO PUERTA, PABLO MARTIN, Universidad Simon Bolivar — Propagations of non-linear solitary waves in bi-dust plasma system is analyzed. In the present treatment one of the dust particles is assumed to be much smaller than other one, in such a way that there are enough time for these particles to reach quasi thermal equilibrium. Maxwell-Boltzmann factors are therefore applied for the density distribution of electrons, ions and light dust grains. The treatment of the problem can now be made by the method of the pseudo-potential taking in to account temperature effects in function of the density of the first grains. A density threshold can be found. In the limit where the light grain density tends to zero recovering the effects found by other authors are founded, where one kind of grains is only present [1,2]. Several numerical calculations for different values of the characteristic parameters will be shown.

[1] Rao N. N., Shukla P. K. and Tu M. Y. (1990), Planet Space Science **38**, 543
[2] Mendoza-Briceño C. A., Russel S. M. and Mamun A. A., (2000) Planet Space Science **48**, 599

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Date submitted: 08 Jul 2010   Electronic form version 1.4