**Dust-acoustic soliton energy in a magnetized dusty plasma with a nonextensive ion distribution function**

7

Rabia Amour(\*)1, Moufida Benzekka2, Smain Younsi1

P1P *Plasma Physics Group, Theoretical Physics Laboratory, Faculty of Physics, University of Bab-Ezzouar, USTHB, B.P. 32, El Alia, Algiers 16111, Algeria.*

*2Laboratoire de Physique des Particules et Physique Statistique, ENS-Kouba, B.P. 92, 16050, Vieux-Kouba, Algiers, Algeria.*

(\*) amouraz.80@gmail.com

Besides affecting the formation and existing plasma wave spectra of ordinary two species plasma, the charged dust grains also introduce new types of waves in dusty plasma such as, dust ion-acoustic (DIA) wave, and dust-acoustic (DA) wave. The best well studied of such modes is the so-named dust acoustic wave. In this communication, we revisit a class of nonlinear waves propagating along the magnetic field in nonextensive collisionless dusty plasma. In particular, we examine, by using the reductive perturbation method, the effect of the external oblique magnetic field on nonextensive dust acoustic soliton energy in dusty plasma. We will show that the presence of a strong magnetic field causes a dissipation of the energy carried by the DA soliton.