

Parallel Proton Heating In Solar Wind Using Generalized (r, q) Distribution Function.

Z. Kiran (1), H. A. Shah (2), M. N. S. Qureshi (3) and G. Murtaza (4)
Govt. College University, Lahore. (*zubia_kiran@hotmail.com*)

Kinetic theory is used to calculate the power dissipated through obliquely propagating Alfvén waves to heat the solar wind protons, using the Generalized (r,q) distribution function. The evolution of power dissipation of protons with increasing Heliocentric distance is subsequently determined. Comparison between theoretical and observational results with data shows good agreement, especially for the slow solar wind streams. Previous results where a Maxwellian distribution function, was used to calculate the power dissipated did not match well with observations.