

Plasma Turbulence and Ion Kinetics in The Solar Wind



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In this presentation I give an overview on the importance of turbulence and wave-particle interactions in the heating of the solar corona and the solar wind plasmas. Remote-sensing observations of the solar corona and in situ measurements of the solar wind reveal the existence of Alfvén waves. It is believed that Alfvén waves can significantly contribute to the heating of solar corona and solar wind via a turbulent cascade and wave-particle interactions. Furthermore, observations indicate that the solar corona and solar wind plasmas are far from local thermodynamic equilibrium, e.g., heavy ions are preferentially heated and accelerated than protons (the major species). These non-thermal features of the plasma can be a source of kinetic instabilities. I will explain how these kinetic instabilities can limit the measured non-thermal parameters in the solar wind.

Friday April 7, 2017

4:00-5:00 pm

OPS, Room 140

Light refreshments will be served