KAWs in the Solar Atmosphere

Jinsong Zhao[1]

[1]Purple Mountain Observatory, Chinese Academy of Sciences, Nanjing 210023, People's Republic of China

Abstract: KAWs are kinetic-scale dispersive Alfven waves propagating in highly-oblique directions with respect to the background magnetic field. Since KAWs carry both parallel and perpendicular electric field perturbations, these waves are widely believed to play significant roles in energizing charged particles. This talk will first introduce the main particle energization mechanisms associated with KAWs in the solar atmosphere. We then introduce the generation mechanisms of KAWs in different solar plasma environments. At last, we will show the recent PSP observations on KAWs as the heliocentric distances below 0.3AU, which provide evident implications for the importance of KAWs in solar atmosphere.