3rd Asia-Pacific Conference on Plasma Physics, 4-8,11.2019, Hefei, China

EUV Wave Event and their Mode Conversion

Ramesh Chandra

Kumaun University, Nainital, India

Here we present the observations of two successive fast-mode extreme ultraviolet (EUV) wave events observed on 2016 July 23. Both fast-mode waves were observed by the Atmospheric Imaging Assembly instrument on board the Solar Dynamics Observatory satellite, with a traveling speed of ≈ 675 and 640 km/s, respectively. We observed the interaction of the EUV waves with a helmet streamer further away to the south. When either or one of the EUV waves penetrates into the helmet streamer, a slowly propagating wave with a traveling speed of ≈ 150 km/s is observed along the streamer. We conclude that the slowly moving waves are slow-mode waves, and interpret this phenomenon as the magnetohydrodynamic wave-mode conversion from the fast mode to the slow mode.