

Waves in polar plumes

D. BANERJEE¹, E. O'SHEA², M. POPESCU² AND J.G. DOYLE²

¹*Indian Institute of Astrophysics, Koramangala, Bangalore 560034, India*

²*Armagh Observatory, College Hill, Armagh BT61 9DG, N. Ireland*

We examine long spectral time series of polar coronal holes with the Coronal Diagnostic Spectrometer (CDS) and the Solar Ultraviolet Measurements of Emitted Radiation (SUMER) spectrograph on-board SoHO. Previously, the presence of long period waves in the plumes and inter-plume regions has been reported from the observations of transition region lines as seen by CDS. In this study we will report on results from CDS and SUMER. From the current study of several lines formed at different heights of the solar atmosphere we will report on the presence of long period outwardly propagating slow magneto-acoustic waves. We will make a comparative study of the plumes and inter-plumes. These slow magneto-acoustic waves may contribute significantly to the heating of the lower corona by compressive dissipation and may also provide some of the energy flux required for the acceleration of the fast solar wind.