Diagnostic Features of VLF Waves in Terrestrial Magnetosphere

A. K. Singh

Physics Department, University of Lucknow, Lucknow - 226 007 Email: aksphys@gmail.com

Large currents along the magnetic field transmit stresses between magnetosphere and ionosphere. If the electrons carrying such currents have high enough drift velocity, waves are generated. VLF waves play major role in the Earth's magnetospheric dynamics. One of the advantages of ELF/VLF radio waves was their ability to propagate globally without excessive attenuation. Knowledge of wave characteristics and the current state of space weather can give one a good idea of what waves are likely to be occurring at any particular latitude and local time. In the present paper, I have emphasizes the role of VLF waves as diagnostic tool for the remote sensing of terrestrial magnetosphere. Many other aspects of these waves have been examined and results are associated with space weather related problems.