

Solar wind controlled pulsations: A review

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Abstract

Studies of the solar wind controlled Pc 3, 4 pulsations by early and recent researchers are highlighted. The review focuses on the recent observations, which cover the time during the International Magnetospheric Study (IMS). Results from early and recent observations agree on one point, that is, that the Pc 3, 4 pulsations are influenced by three main solar wind parameters, namely, the solar wind velocity V_{sw} , the IMF orientation θ_{xB} , and magnitude B . The results can be interpreted, preferably, in terms of an external origin for Pc 3, 4 pulsations. This implies, essentially, the signal model, which means that the pulsations originate in the upstream waves (in the interplanetary medium) and are transported by convection to the magnetopause, where they couple to oscillations of the magnetospheric field lines.