

Unusual strong Pc5 geomagnetic pulsations during the great magnetic storms in October 2003

N.G. Kleimenova, O.V. Kozyreva (*Institute of the Earth Physics, Moscow, Russia*),
J-J. Schott (*Ecole et Observatoire des Sciences de la Terre, Strasbourg, France*)

Several super strong magnetic storms have happened in the end of October 2003. The aim of this study was the detail analysis of the unusual strong Pc5 geomagnetic pulsations observed in the dayside magnetosphere on October, 29 and 31. The analysis was based on the ground magnetic observations from about 80 globally distributed INTERMAGNET stations and Scandinavia IMAGE meridian chain. The spectral maximum of the wave amplitude was observed in the range of 2.5 - 5.0 mHz ($T \sim 3-6$ min). The pulsation intensity reached up to ~ 600 nT. The amplitude distribution plots have been computed in the co-ordinates of geomagnetic latitude – magnetic local time. In the beginning of magnetic storm (29.10.2003) the Pc5 were stronger in the early morning (02-07 MLT), however on 31.10.2003 the strongest waves were observed in the afternoon (12-18 MLT). The pulsations showed different morphological properties. The possible sources of these pulsations are discussed.