



Parameters of 1-4 mHz (Pc5/Pi3) ULF pulsations during the intervals preceding non-triggered substorms at high geomagnetic latitudes

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One of the important questions for understanding substorm generation is the possible existence of specific pre-substorm variations of plasma, particles and electromagnetic field parameters. In this case analyzing of isolated non-triggered substorms (i.e. substorms that occur under quiet geomagnetic conditions without any visible triggers in IMF or SW) gives benefits for investigation of processes of substorm preparation. It was shown in previous studies that during a few hours preceding a non-triggered isolated substorm, coherent geomagnetic and auroral luminosity pulsations are observed. Moreover, PSD, amplitudes of geomagnetic fluctuations in Pc5/Pi3 (1-4 mHz) frequency range and some spectral parameters differ from those registered on days without substorms. In present work this sort of pulsations has been studied in details. Features of longitudinal and latitudinal profiles are presented. Possible correlation with ULF disturbances in IMF and SW as well as in the magnetotail/magnetosheath are discussed.