Magnetospheric substorm and Steady Magnetospheric Convection: comparative study of global parameters

N. Dmitrieva, M. Shukhtina, V. Sergeev
Institute of Physics, St.-Petersburg University, St.-Petersburg, Russia
dmitrieva@geo.phys.spbu.ru

Three basic magnetospheric states: quite, Steady Magnetospheric Convection and substorms are studied. Average variation of external and internal magnetospheric parameters (IMF, interplanetary electric field, solar wind dynamic pressure, magnetospheric flaring angle, total magnetospheric pressure (equivalent lobe magnetic field), magnetospheric Bz component, plasma beta value, plasma velocity) have been studied using superposed epoch analysis. Parameter distributions for each group of events are obtained. The study is based on Wind interplanetary parameter data, Geotail magnetotail data and ground SYM, AE and PC indices for 1995-1998.