



Magnetic indices and geoeffectiveness of the solar wind from the radiation belts point of view

Sandrine Rochel Grimald, Daniel Boscher, Sébastien Bourdarie, Angelica Sicard-Piet, Vincent Maget, and Didier Lazaro

Onera, Toulouse, France (sandrine.rochel@onera.fr)

The SALAMMBÔ code is a physical model of the radiation belts. It is well known that the radiation belts changes are indirectly linked to the solar wind parameter evolution. It is well known that CME and CIR disturb the magnetosphere in a different way and that they are more or less geoeffective. Then the impact in the radiation belts will also be different. Unfortunately, it is quite difficult to establish a direct link between the inner magnetosphere populations state and the solar wind parameters. As a consequence, the SALAMMBÔ code use the magnetic index K_p as a proxy. In this paper, we will discuss the use of K_p and other magnetic indices and of the geoeffectiveness of the solar wind structures from the radiation belts point of view.