



Study of the impact of the CIRs on the inner magnetosphere and the auroral region using magnetic indices

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A magnetosphere is an isolated sphere dropped inside the solar wind. she is in equilibrium in the solar wind. If the solar wind parameters change, then, the magnetospheric balance is upset. Moreover, the magnetosphere is not a solar-wind-proof bulkhead. Using several processes, particles and energy from the solar wind can go inside, disturbing the magnetosphere and being responsible of variation of currents and generation of waves. Those phenomenon allow to absorb the energy overflow and to allow the come back to the equilibrium.

The purpose of this work is to understand the CIRs impact in the terrestrial magnetosphere. To do so, the magnetic indices will be used in order to study the delay of the substorm, its intensity and its duration depending on the initial state of the magnetosphere,