



## **A study of the impact of the CIR parameters on the radiation belts fluxes**

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A magnetosphere is an isolated sphere dropped inside the solar wind where it is in equilibrium. When a solar wind structure impacts the magnetosphere, then, the equilibrium is broken and the whole magnetospheric reacts to prevent a magnetospheric collapse. The CIRs are one of the main solar wind structures. They are not considered as the most disturbing solar wind one, but the evolution of the magnetic indices indicates that the magnetosphere is disturbed deeply during a CIR impact. The radiation belts are a key region located in the deepest part of the magnetosphere, close to the Earth. They constitute a sensitive region to the variations of magnetosphere activity. The study of the flux changes when a CIR impacts the magnetosphere allows to estimate the delays necessary to disturb the radiation belts fluxes. From a statistical study, we will estimate how each parameter of the CIRs could impact the radiation belts fluxes and also which parameters will be necessary to account in a space weather point of view.