



Relationship between magnetic clouds and solar flares

M. A. Hidalgo, J. Medina, C. Martin and J. Sequeiros

Space Research Group. Departamento de Física. Universidad de Alcalá.
(miguel.hidalgo@uah.es)

We analyse the effect of the magnetic clouds (MCs) over the solar energetic particle fluxes at several energy ranges (between 0.5-100 MeV). In spite of the low magnetic field intensity inside MCs (about 40 nT), a depression in those fluxes is always observed at the MC time interval and, simultaneously, an increase at its associated forward shock interval. For comparison we also show solar flare profiles without the appearance of a MC and when there were not a solar flare at the Sun. A possible explanation of the combined MC-forward shock effect is proposed. In the elaboration of this work we have used data from SOHO and ACE satellites.