

# THE INFLUENCE OF MAGNETIC CLOUDS ON THE PROPAGATION OF ENERGETIC CHARGED PARTICLES IN INTERPLANETARY SPACE

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Magnetic clouds modify the structure of the interplanetary magnetic field on spatial scales of tenth of AU. Their influence on the transport of energetic charged particles is studied with a numerical model that treats the magnetic cloud as an outward propagating modification of the focusing length. As a rule of thumb, the influence of the magnetic cloud on particle intensity and anisotropy profiles increases with decreasing particle mean free path and decreasing particle speed. Special attention is paid to energetic particles running into a magnetic cloud released at an earlier time: here the cloud acts as a barrier, storing the bulk of the particles in its downstream medium.