

Cosmic ray transport in a MHD heliosphere

SES. Ferreira (1), MS. Potgieter (1), K. Scherer (2) and H. Fichtner (2)

(1) North-West University, SA (2) Ruhr-Universität Bochum, Germany (Contact: fsksesf@puknet.puk.ac.za)

Results from a new magnetohydrodynamic approach are presented. The Euler equations together with Faraday's law, under the assumption of ideal MHD, are solved simultaneously to calculate the heliospheric interface as well as the heliospheric magnetic field within. We compare this field to previous kinetic approaches to highlight the differences. Furthermore, we show that for a dynamic heliosphere, and especially in the heliospheric tail, multiple magnetic polarities can exist and also show how this may affect cosmic ray transport within.