Geophysical Research Abstracts,
Vol. 11, EGU2009-9242, 2009
EGU General Assembly 2009

Multi-spacecraft observations of CIR-associated ion increases during the Ulysses 2007 ecliptic crossing

N. Dresing, B. Heber, R. Gomez, R. Mueller-Mellin, R. Wimmer-Schweingruber, and A. Klassen

Christian-Albrechts-Universität Kiel, Institut für Experimentelle und Angewandte Physik, Kiel, Germany (heber@physik.uni-kiel.de)

The period between June 21 and October 8, 2007 (Carrington rotations 2058 to 2061), comprising the Ulysses ecliptic plane crossing, was characterized by low solar activity. Several CIR-related ion increases between 100 keV and 10 MeV were investigated using multipoint observations from Ulysses, ACE, and the twin STEREO spacecraft. The ballistic backmapping technique has been used to correlate in-situ observations of these spacecraft with remote-sensing observations of coronal holes. Due to larger latitudinal separation between Ulysses and the other spacecraft in Carrington rotations 2058 and 2061, we concentrate on the two Carrington rotations 2059 and 2060 for a more detailled study of CIR events. Therefore two siginficant CIR-associated ion increases from day 5 to day 10 of August 2007 and from day 25 to day 31 of August 2007 lend themselves to a more undisturbed comparison. Using the multi spacecraft measurements we could determine a radial gradient, which is consistent with previous results by van Hollebeke in 1978 of $\sim 350\,\%$/AU using Helios and Pioneer data.