



Observations of Magnetic Restructuring during the Development of Coronal Mass Ejections

M. Pick (1), D. Maia (2)

(1) LESIA, UMR-CNRS 8109, Observatoire de Paris, Meudon France, (2) CICGE, Obs. Astronomico Professor Manuel de Barros, Vila Nova de Gaia, Portugal

Using a multiwavelength approach during the period 1996-2003, we investigate the different scenarios for the onset and development of Coronal Mass Ejections (CMEs). We developed a daily patrol which includes the radio emission measured by the Nançay Radioheliograph and the spectra obtained by the Nançay DAM array, by WAVES aboard SOHO and by various spectrographs operating in the dm-m domain. We first concentrate on about 30 fast CMEs (greater than 700 km/s) which include narrow mini-CMEs as well as wide CMEs. Their development result from successive sequences that are associated with abrupt modifications in the radio emission and the onset of new emitting sources at positions covering a large portion of the solar disk in the case of wide CMEs. We identify the multi loops systems that participate in the eruption process. Through this data analysis, we identify the coronal regions of magnetic field interaction leading to the restructuring of the corona and the development of CMEs. We secondly focuss on the study of complex type III-like events detected by WAVES at 1MHz. These events present a close association with wide CMEs. We trace the progression of these events from the low corona to the interplanetary medium. Most of the accelerated electrons are from coronal origin, in regions