



Links between the plasmopause and the radiation belt boundaries from Cluster measurements

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The radiation belt dynamics is strongly influenced by the core plasmasphere distribution and, more specifically, by the position of the plasmopause. The plasma content in the plasmasphere and the position of the radiation belts are studied on the basis of recent CLUSTER observations, when the spacecraft perigee was as close as $L=2$. Density profiles along the spacecraft orbit can be derived from the plasma frequency line determined from the WHISPER wave observations. From these, the plasmopause position can be derived. The radiation belt positions can be determined from a careful analysis of the background noise in the CIS data, but also with the high-energy RAPID spectrometers. We compare the plasmopause and radiation belt positions and discuss their relation.