



Dependence of the solar wind electron strahl on the halo properties from the two STEREO/IMPACT/SWEA results

A. Opitz (1), J.-A. Sauvaud (1), P. Louarn (1), B. Lavraud (1), A. Fedorov (1), P. Wurz (2), J. G. Luhmann (3), D. W. Curtis (3), D. E. Larson (3), and the STEREO Team

(1) CESR (CNRS-UPS), University of Toulouse, France (opitz@cesr.fr), (2) Physics Institute, University of Bern, Switzerland, (3) Space Sciences Laboratory, University of Berkeley, USA

Solar wind electron velocity distributions consist of the thermal core, the suprathermal halo, and the strahl aligned with the interplanetary magnetic field. We investigate the electron strahl properties as function of the suprathermal electron halo and the interplanetary magnetic field. The STEREO A and B spacecraft are positioned in the ecliptic at two different vantage points. This allows the study of the halo-strahl relations at two different heliospheric positions. The analyzed solar wind electron characteristics are measured by the two SWEA electron plasma instruments as part of the IMPACT experiment on board STEREO A and B. Both SWEA instruments measure the solar wind electron halo and strahl properties. We search the A counterpart of the halo detected on B, and study the differences between the strahl properties as a function of the magnetic field configuration.