



## CLUSTER II Observations of Solar Wind Electrons

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The electrons in the solar wind typically exhibit three different populations: a nearly isotropic thermal *core*, representing roughly 95% of the total density, a suprathermal *halo* and a magnetic field aligned *strahl*. We have done a statistical study of these three populations based on data from the CLUSTER II mission in order to get the typical plasma properties at 1 AU. In our work we have fitted the electron pitch angle velocity distribution functions measured with the PEACE instrument and computed the basic moments, namely the density, temperature and heat flux. The used fitting analytical model was a sum of a bi-Maxwellian and a bi-Kappa distribution for the core and halo population respectively. More precisely we have studied the, still not well understood, properties of the strahl component. We have looked for analytical representation of the strahl component as a function of the plasma parameters and the pitch angle. For this study, only distributions measured in the regions far enough and not magnetically connected to the Earth bow shock were used.