The pressure-relevance of suprathermal solar wind electrons for the heliosheath

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In this presentation solar wind electrons and protons are studied which, after their passage over the solar wind termination shock, are convected downstream into the heliosheath. Due to the electric nature of this shock, downstream electrons appear highly energized with non-equilibrium, kappa-like distributions. When looking upon the moments of these downstream electrons and protons, it turns out as a surprise that the pressure of the electrons, compared to the protons, is larger by a factor of 2. Then it is taken into account that the pressure of kappa-distributed particles contains contributions from particles with super-luminal velocities which need to be removed from the pressure values. Even when these reductions are carried out, it is manifest that the heliosheath pressures of electrons and protons are of equal orders of magnitudes. In conclusion it is found that there is no pressure deficit in the heliosheath with respect to the ambient interstellar medium.