

Thermodynamics of the Solar Wind Electrons

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Because of the low level of Coulomb collisionality the Solar Wind electrons exhibit permanently non-thermal features which are the cause or consequence of a specific kind of thermodynamics far from equilibrium. I will review recent observations and literature on this topic and show that contrary to the protons, the solar wind electrons probably do not require dissipative stochastic heating, in order to explain their observed temperature gradients.