

Thermal Equilibrium of a charged star in electromagnetic fields and gravitational fields

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In this talk, I will revisit the condition for the thermal equilibrium of charged fluids in electromagnetic fields and gravitational fields, where the Tolman like law is derived by the maximal entropy principle from scratch. As a warm up, I will first address the case with the electromagnetic fields and gravitational fields fixed as background fields. After this, I will move onto the charged star by taking into account the backreaction of charged fluids onto the electromagnetic fields and gravitational fields through Maxwell equation and Einstein equation. Based on our result I will conclude my talk with an interesting perspective into the rotation curve.

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