

LECTURE I:

Thermodynamics based on time average and temporal extensivity of entropy

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Abstract: The recently proposed time-average approach to thermodynamics is reexamined and generalized to nonextensive thermostatistics. It is shown that the Tsallis entropy, S_q , is always temporally extensive, that is, the production rate of S_q is constant, whenever physically relevant. The universal upper bound is also derived for such production rate.