

Review of: "Comparison of extended irreversible thermodynamics and nonequilibrium statistical operator method with thermodynamics based on a distribution containing the first-passage time"

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Potential competing interests: No potential competing interests to declare.

Comment on the article entitled "Comparison of extended irreversible thermodynamics and nonequilibrium statistical operator method with thermodynamics based on a distribution containing the first-passage time" by V. V. Ryazanov

Author have clearly explained the non-equilibrium thermodynamics containing an additional thermodynamic with statistical operator method and extended irreversible thermodynamics. Further, thermodynamics containing an additional thermodynamic first passage time parameter maps to extended irreversible thermodynamics and various conditions for the dependence of the distribution parameters of the first-passage time on the random value of energy, the first thermodynamic parameter, are carried out well. The relaxation time parameter τ of extended irreversible thermodynamics is replaced by the average first-passage time. In which expressions are found for the thermodynamic parameter and entropy change is seen for the average passage time.

The minor revision is required for the reader to understand:

1. It would be more effective if authors mention the reference and then cite the required references. For example, in page 2, last second line "In [38] another physical ..." it would better to modify something like "In Zubarev [38] another physical...".
2. Referring to comment one, some equation numbering is not clear which needs to be taken care.
3. Also, a mathematical expression has to be corrected carefully. This might be typographical error.

I also have few questions for author:

1. What are the importance of NSO, EIT and FPT? Also, explain the realistic benefits of the same.
2. Explain the linear dependence expression in equation in (49).
3. Appendix should be modified and explanation must be more general.

I recommend for the publication once all the above mentioned queries are answered.