Response to Reviewer # 1 Comments

We sincerely thank Dr. Horst Fichtner for the careful reading of our manuscript and for the constructive suggestions provided. We have rewritten the manuscript accordingly to address all points raised. Below, we detail how each comment has been handled.

Major Comments

1. Relation to closely related literature (Du 2013):

2. Comparison to Husidic et al. (2021):

A discussion has been added in highlighting both similarities and differences between our transport coefficient calculations and those obtained by Du and Husidic with the standard kappa distribution. And we have added a new section that relates the five-moment approximation equations to the transport coefficients: electrical conductivity, thermoelectric coefficient, diffusion coefficient, and mobility coefficient, by showing how we can go from the momentum equation to the generalization of Ohm's law and the extended Fick's law.

3. Limitations of the standard kappa distribution and use of the RKD:

We have included a discussion on the known limitations of the standard kappa distribution ($\kappa > 3/2$, diverging velocity moments), referencing Scherer et al. (2019, *Astrophys. J.*, 881:93). Additionally, we now mention the regularized kappa distribution (RKD) introduced by Scherer et al. (2017, *Europhys. Lett.*, 120, 50002) and its application in Husidic et al. (2022, *Astrophys. J.*, 927:159).

Minor Comments

(a) Burgers (1969) reference: We have corrected the reference to include the full publisher information.
(b) Citation formatting: All citations in the text have been checked and adjusted to appear in parentheses where appropriate.
(c) Burgers' results for Maxwellian case: We have added a note mentioning that the Burgers (1969) results for the Maxwellian case are approximations, referencing Fichtner et al. (1996, *J. Plasma Phys.*, 55, 95).
(d) Magnetized space plasma: We have mentioned Guo & Du (2019, Physica A, 523, 156) when we discussed Du and Husidic.