Response to Reviewer # 2 Comments

We sincerely thank Reviewer # 2 for the careful and critical reading of our manuscript and for his respected suggestions. Below we address each point in detail.

Major Comments

1. Clarification of collision processes

In the revised manuscript, we will add a short paragraph summarizing the key physical differences among Coulomb collisions, hard-sphere interactions, and Maxwell-molecule collisions.

2.Behavior of the effective collision rate (Eq. 57 and Fig. 3)

Does that result mean that a plasma described by a SK distribution has negligible collision rates at small kappas?

Yes, that is exactly what the effective collision frequency indicates: the SK distribution has a very low collision rate compared to the Maxwellian when we are dealing with Coulomb collision interactions. At low values of kappa, most particles are in the tails, and the core of the distribution becomes very low. A similar dependency was found in Scherer et al. (2020) (https://academic.oup.com/mnras/article/497/2/1738/5868832) for the Debye length, which, in the revised manuscript, will be linked to the effective collision frequency, showing the same kappa dependency obtained in this work.

3. Comparison with Solar Wind measurements

We agree that comparison with observational data is highly valuable. While such an analysis is beyond the scope of the present work, we will add a discussion highlighting this point at the end of the conclusion. We also note that a detailed comparison between SK and MK predictions and in-situ measurements will be the subject of future work.

4. Regularized Kappa Distribution (RKD) and comparison with Husidic et al. (2022)

The study of transport coefficients using the Regularized Kappa Distribution (RKD), along with a detailed comparison to the results reported by Husidic et al. (2022), is currently being carried out in a separate work. A brief note has been added to the manuscript to clarify that this analysis is ongoing and to highlight its relevance to the present study.

Minor Comments

All minor comments have been carefully considered and will be implemented where possible in the revised manuscript, including corrections to typographical errors and improvements to clarity and presentation.