Dear Editor Professor Fu:

Thank you very much for your suggestion of adding a small section of uncertainties associated with the observations and modeling. Assessing uncertainties is essential. In this revised version, we have added a new section "2.6 Uncertainties" to discuss major uncertainties in the observational datasets and GEOS dust modeling.

We look forward to your further comments and suggestions.

Sincerely,

Hongbin Yu on behalf of all the coauthors

July 22, 2021