Supplementary material for "Potential limitations of using a modal aerosol approach for sulfate geoengineering applications in climate models"

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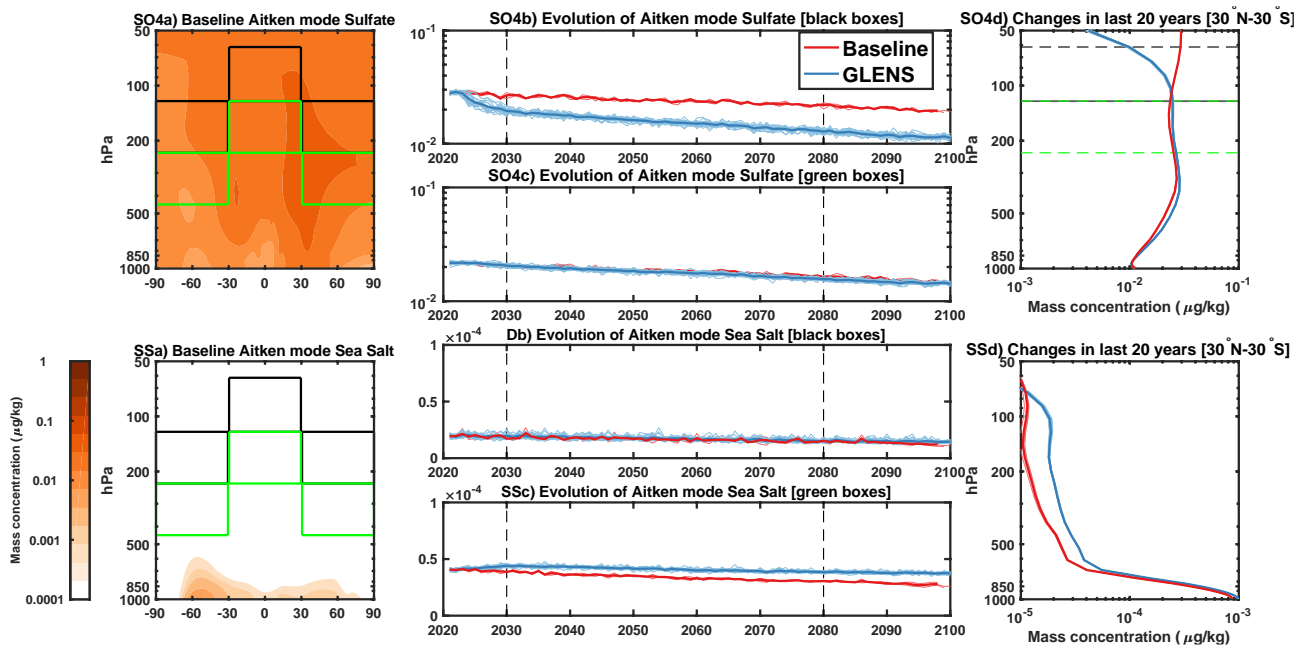
Fig. S1 As Fig. 1, but for Aitken mode particles.
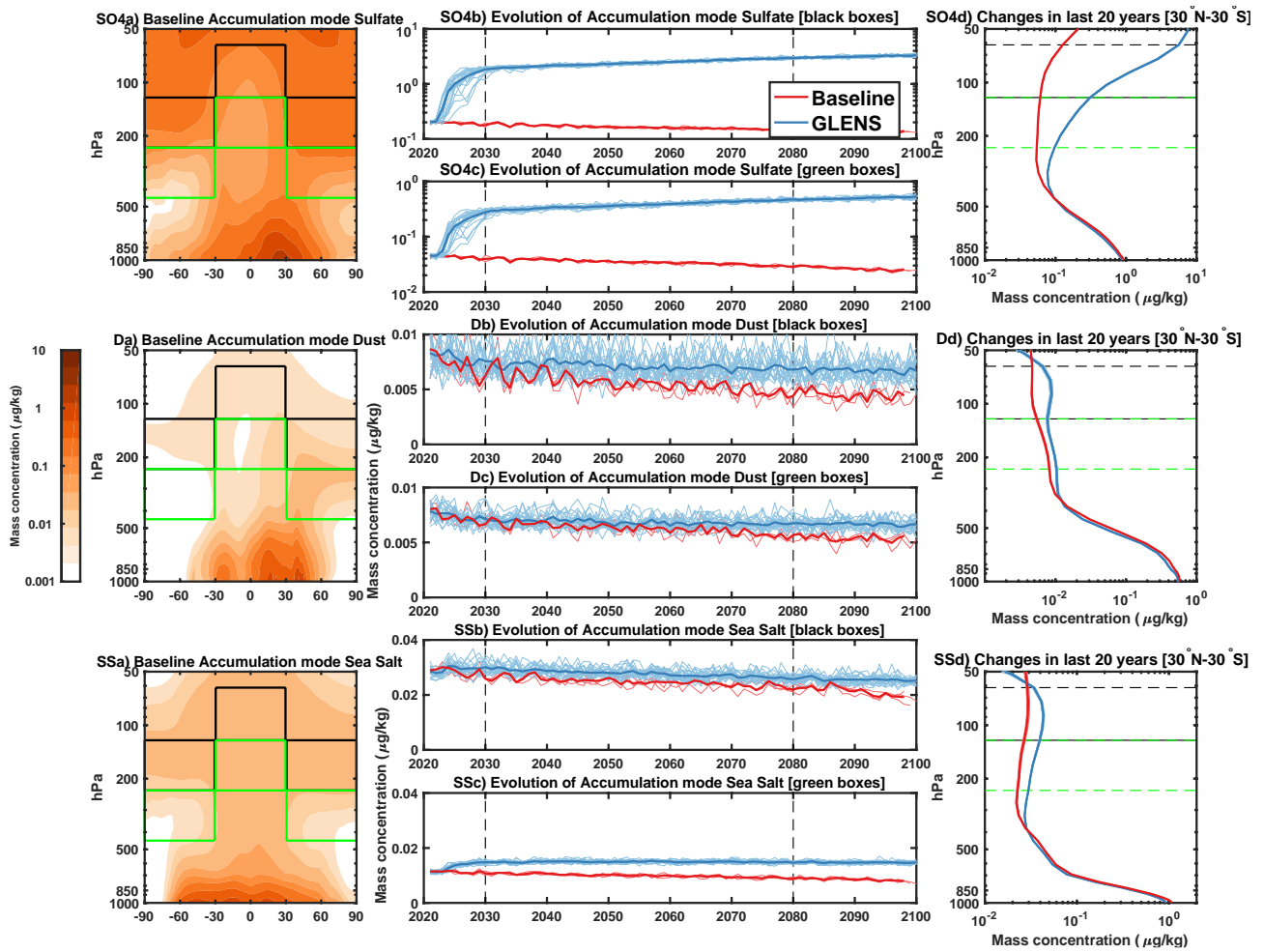
Fig. S2 As Fig. 1, but for Accumulation mode particles.
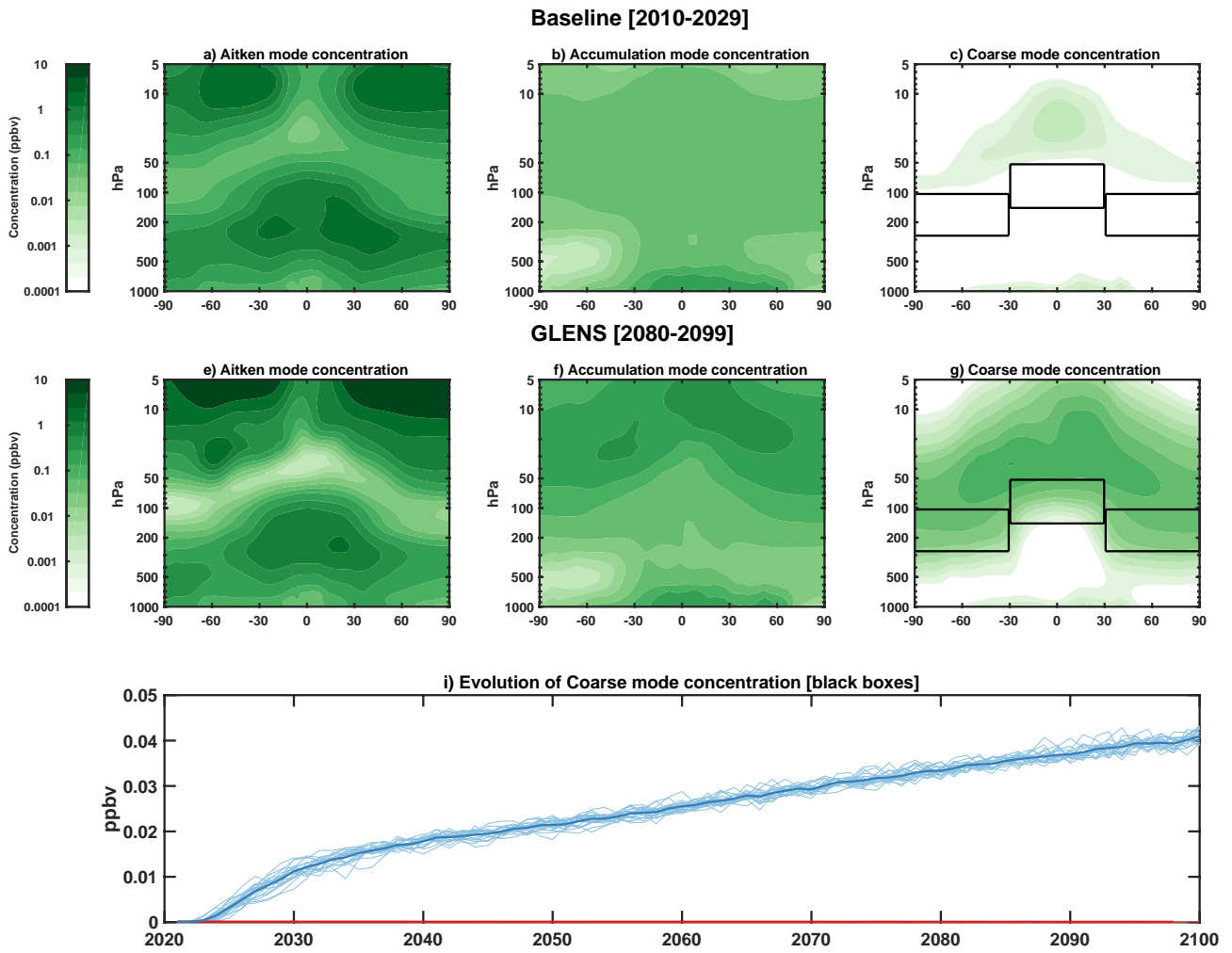
Fig. S3 As Fig. 4, but for particle concentration.
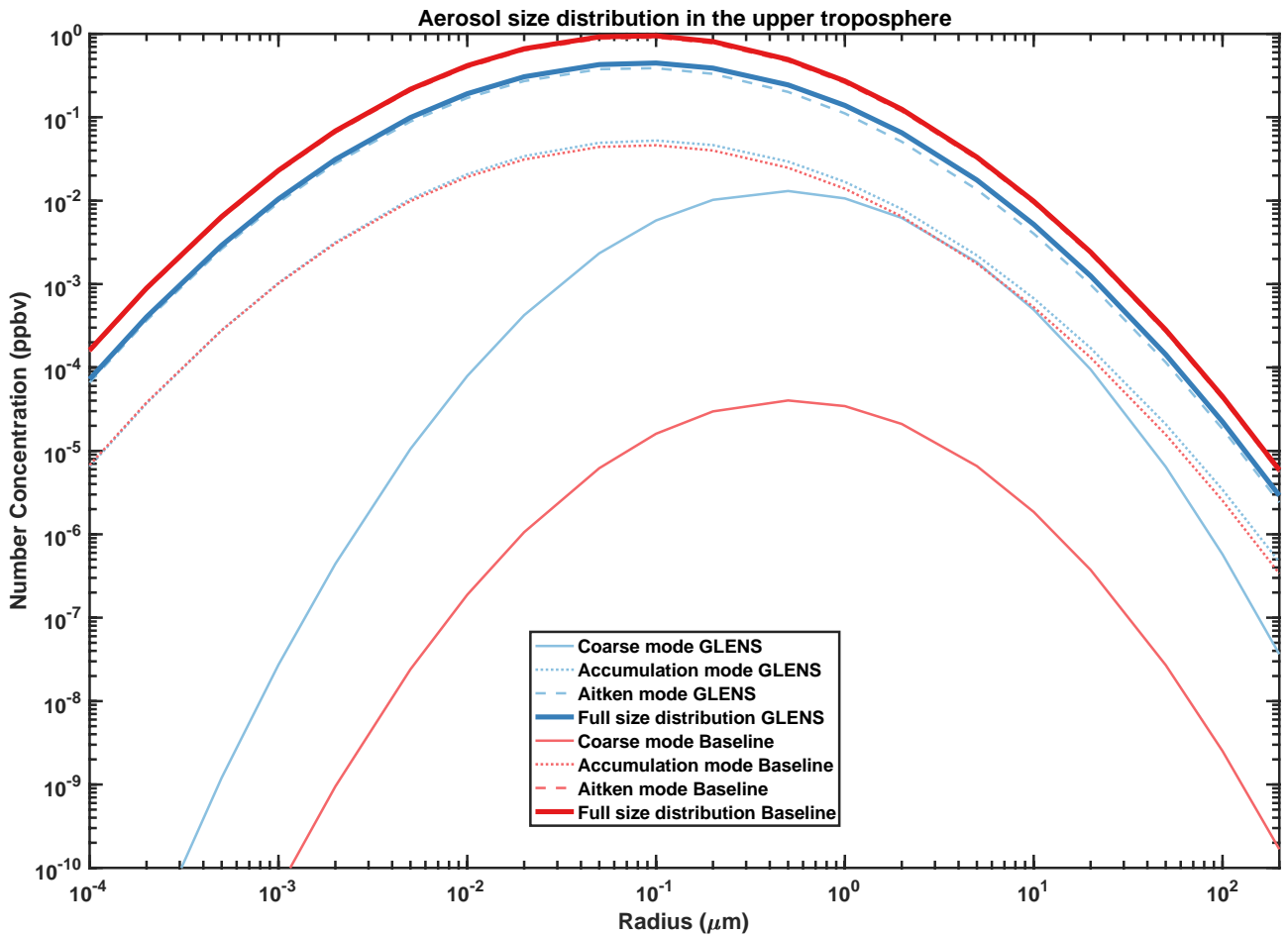
Fig. S4 Size distribution of the aerosols in the upper troposphere in the three separate modes, and composite one of all three (thicker line) for Baseline (2010-2029) and GLENS (2080-2099). Standard deviation for the three modes (constant throughout the entire atmosphere) σ_P from Mills et al. (2016). Number concentrations and aerosol sizes calculated in the black boxes from Fig. 4.
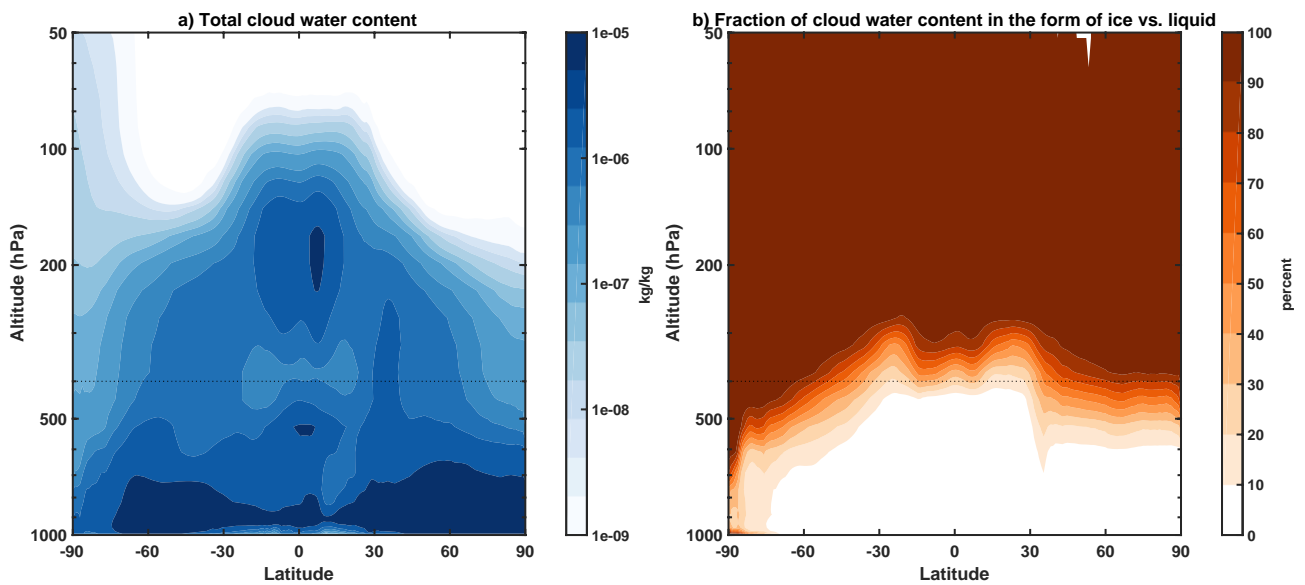
Fig. S5 a) Annual, zonal mean amount of water content (in liquid+ice form, kg for kg of air) in the Baseline case (2010-2029 average). b) Fraction of the water in panel a) that is in solid ice form.