



Supplement of

Significant climate impacts of aerosol changes driven by growth in energy use and advances in emission control technology

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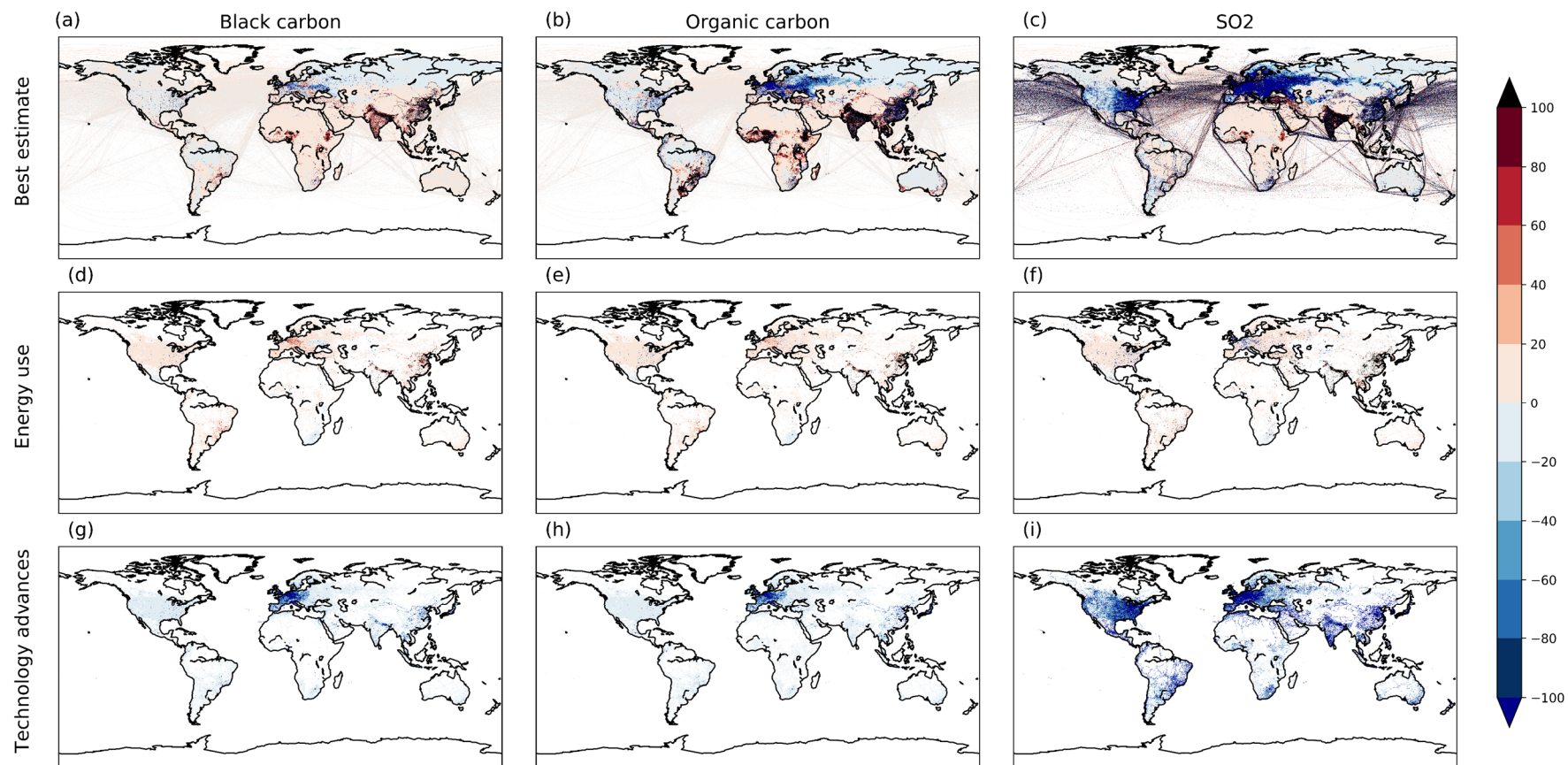


Figure S1 The 1970-2010 emission changes (kg m⁻² yr⁻¹) of black carbon (first column), organic carbon (second column) and sulphate species (SO₂; third column). They are (a-c) the best estimate, (d-f) changes due to energy use growth, and (g-h) changes due to technology advances.

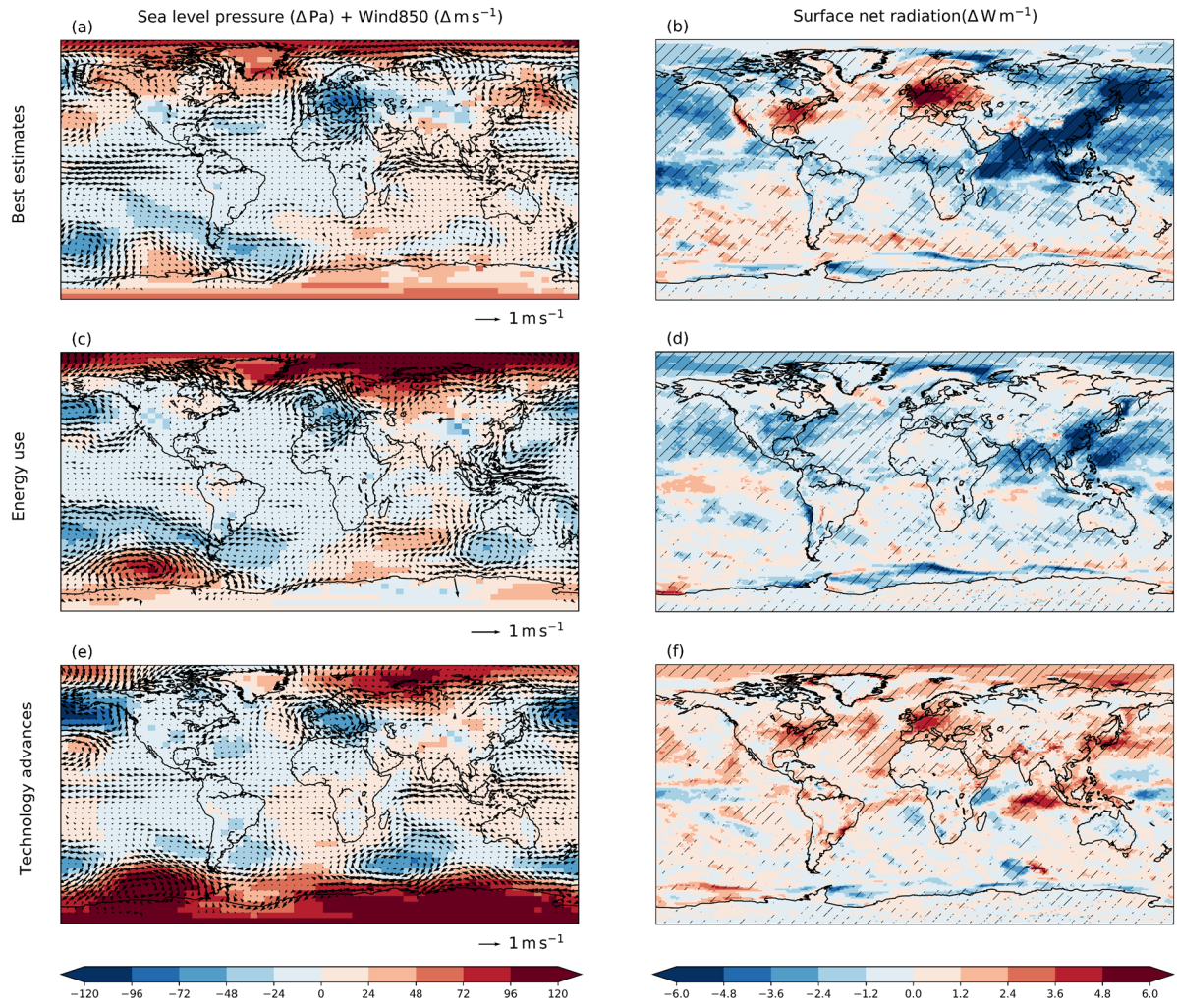


Figure S2 The same as Figure 4 in the main text, but for changes in sea-level pressure (shadings, Pa) and 850 hPa winds (vectors, m s^{-2}) in the left column, as well as surface net radiation (W m^{-2}).

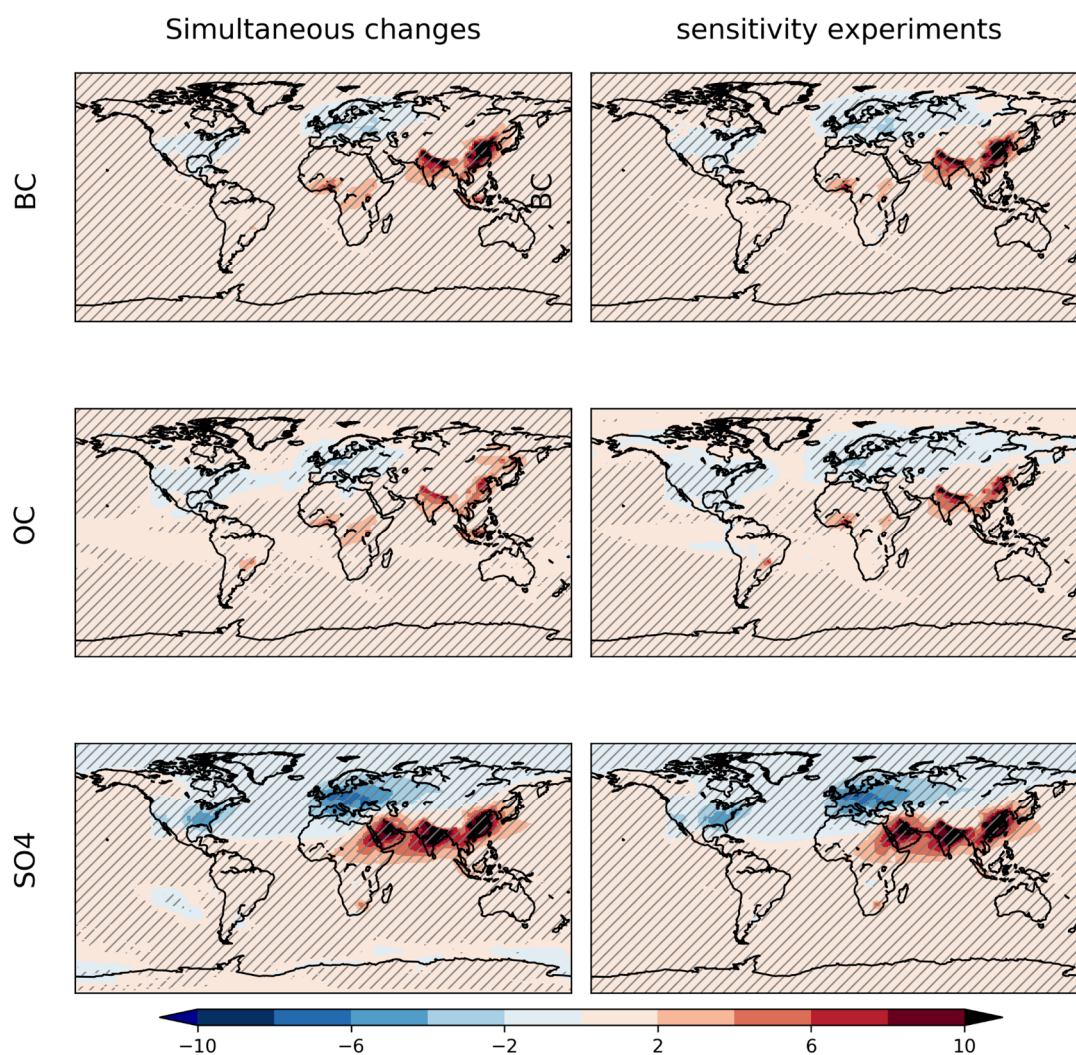


Figure S3 The model simulated 1970-2010 changes in the total column aerosol burden (kg m⁻²) of black carbon (BC, top row), organic carbon (OC, middle row), and sulphate (SO₄, bottom row). The left column are from the experiment where all aerosol species change simultaneously. The right column corresponds to the sensitivity experiment where only the targeted aerosol species changes.