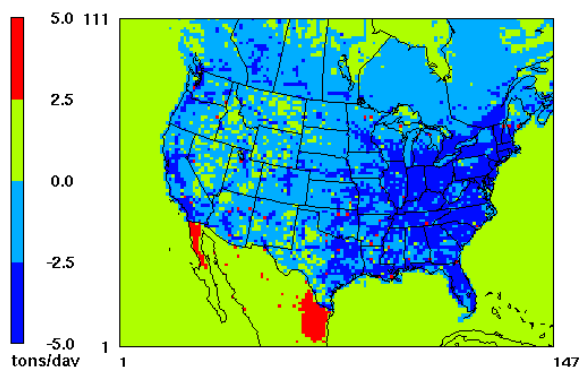
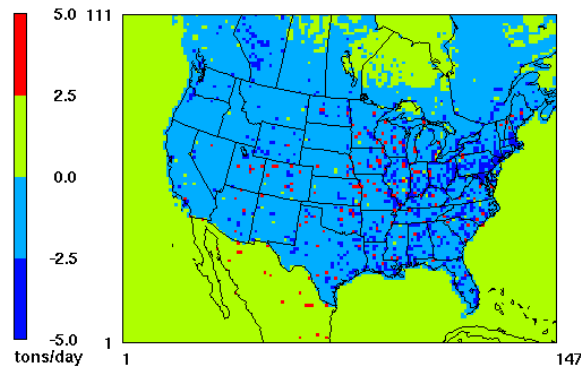


NO<sub>x</sub>: Future summers – Historic summers



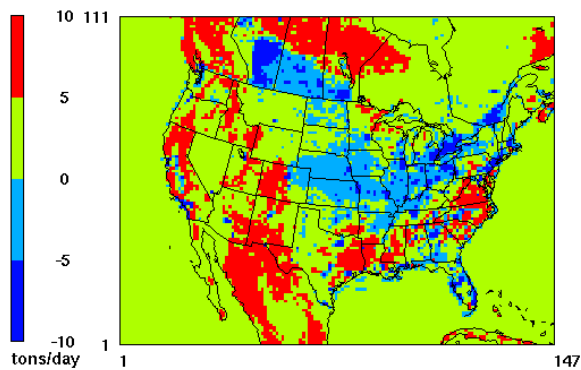
(a)

SO<sub>2</sub>: Future summers – Historic summers



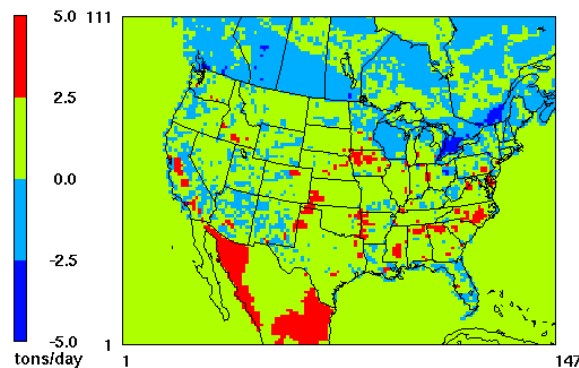
(b)

VOCs: Future summers – Historic summers



(c)

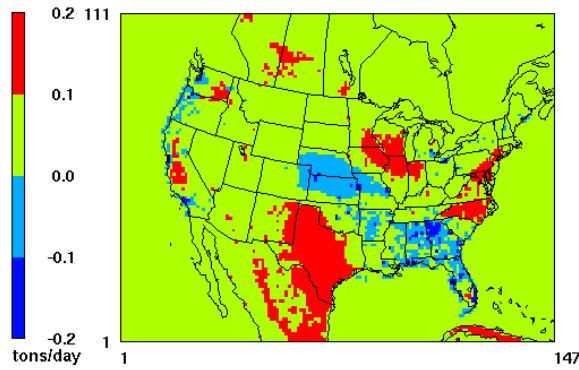
NH<sub>3</sub>: Future summers – Historic summers



(d)

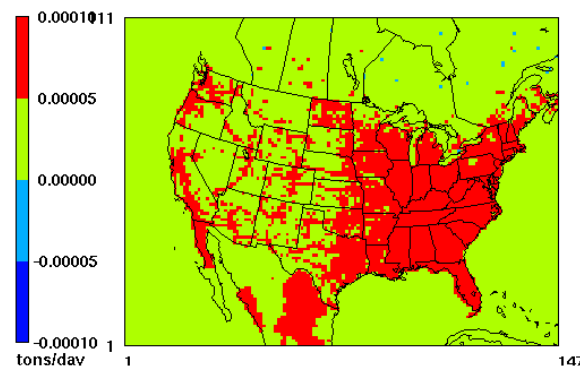
Fig. S1: Spatial distribution plots of the changes in emissions between historic and future summers a: NO<sub>x</sub>, b: SO<sub>2</sub>, c: VOCs d: NH<sub>3</sub>

NO<sub>x</sub>: Future summers\_np – Historic summers



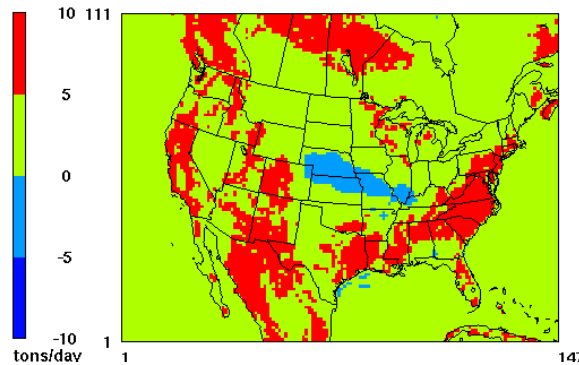
(a)

SO<sub>2</sub>: Future summers\_np – Historic summers



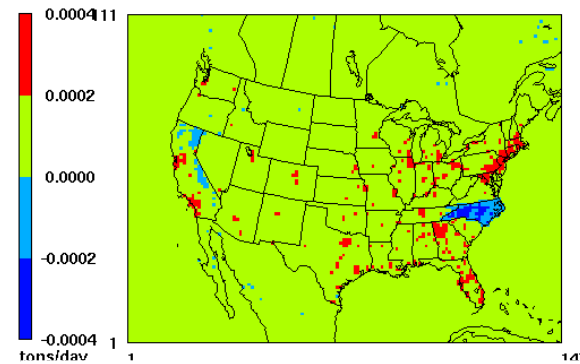
(b)

VOC<sub>s</sub>: Future summers\_np – Historic summers



(c)

NH<sub>3</sub>: Future summers\_np – Historic summers



(d)

Fig. S2: Spatial distribution plots of the changes in emissions between historic and future summers caused by climate change alone a: NO<sub>x</sub>, b: SO<sub>2</sub>, c: VOC<sub>s</sub> d: NH<sub>3</sub>

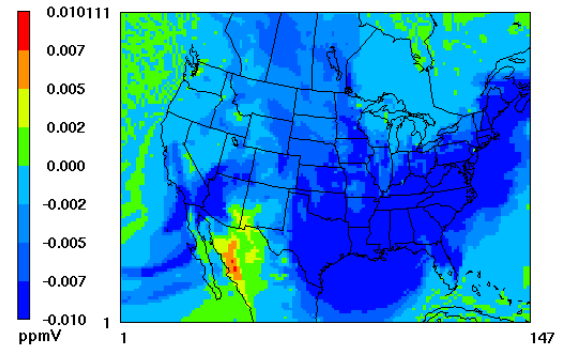
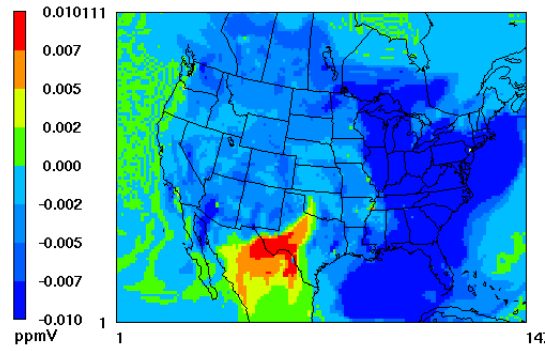
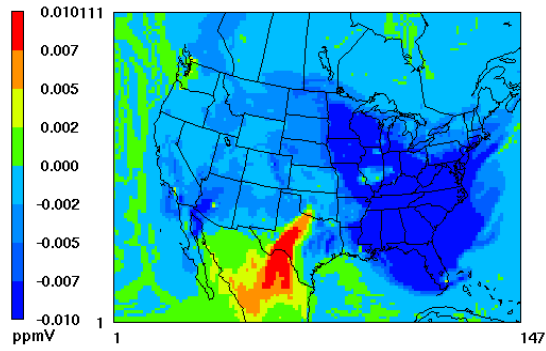
(np: 2001 emission inventory and 2050 meteorology)

O<sub>3</sub>: 2049-2049\_np

June 5

June 8

June 12



July 24

July 29

August 19

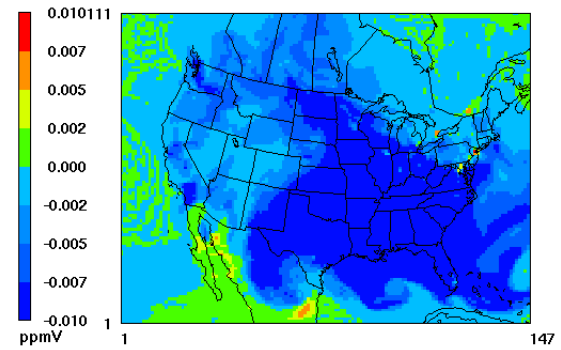
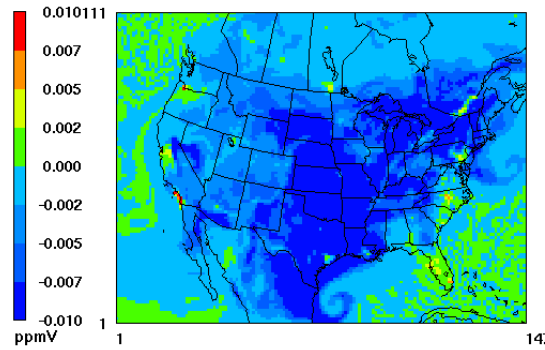
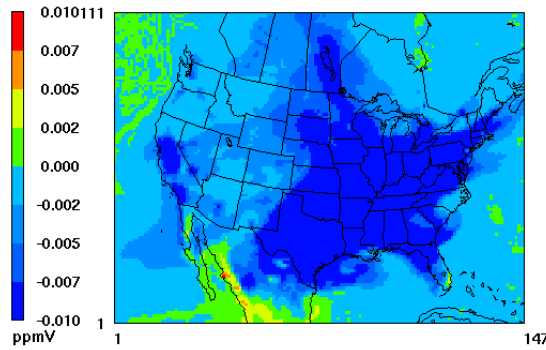


Fig. S3: O<sub>3</sub> concentration change snapshots for different dates under the impact of emission changes alone

PM<sub>2.5</sub>: 2049-2049\_np

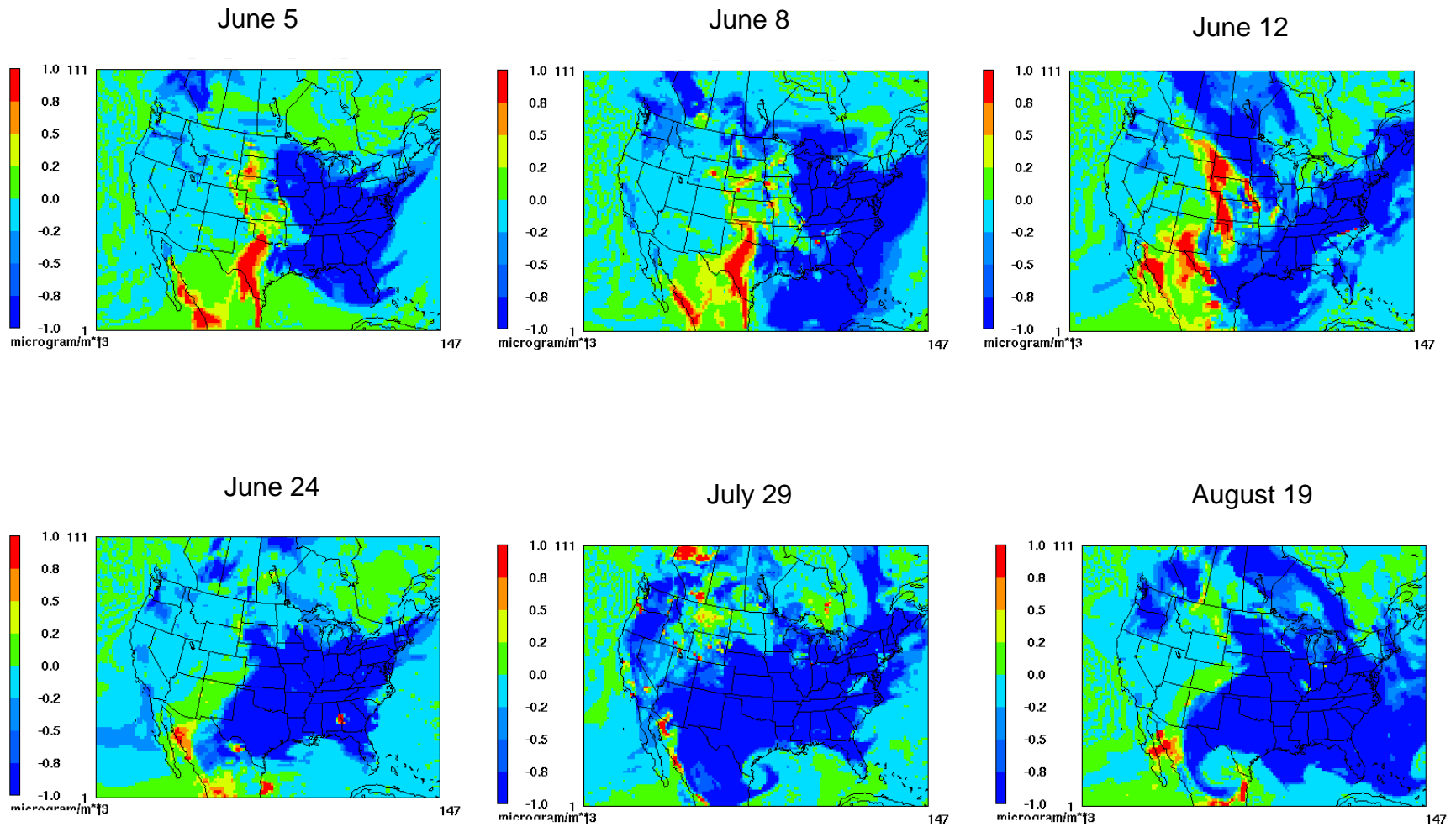


Fig. S4: PM<sub>2.5</sub> concentration change snapshots for different dates under the impact of emission changes alone