Supporting Material for

Temporal and Spatial Variability of Ammonia in Urban and Agricultural Regions of Northern Colorado, United States

This file includes Table S1 and Fig. S1-S6.

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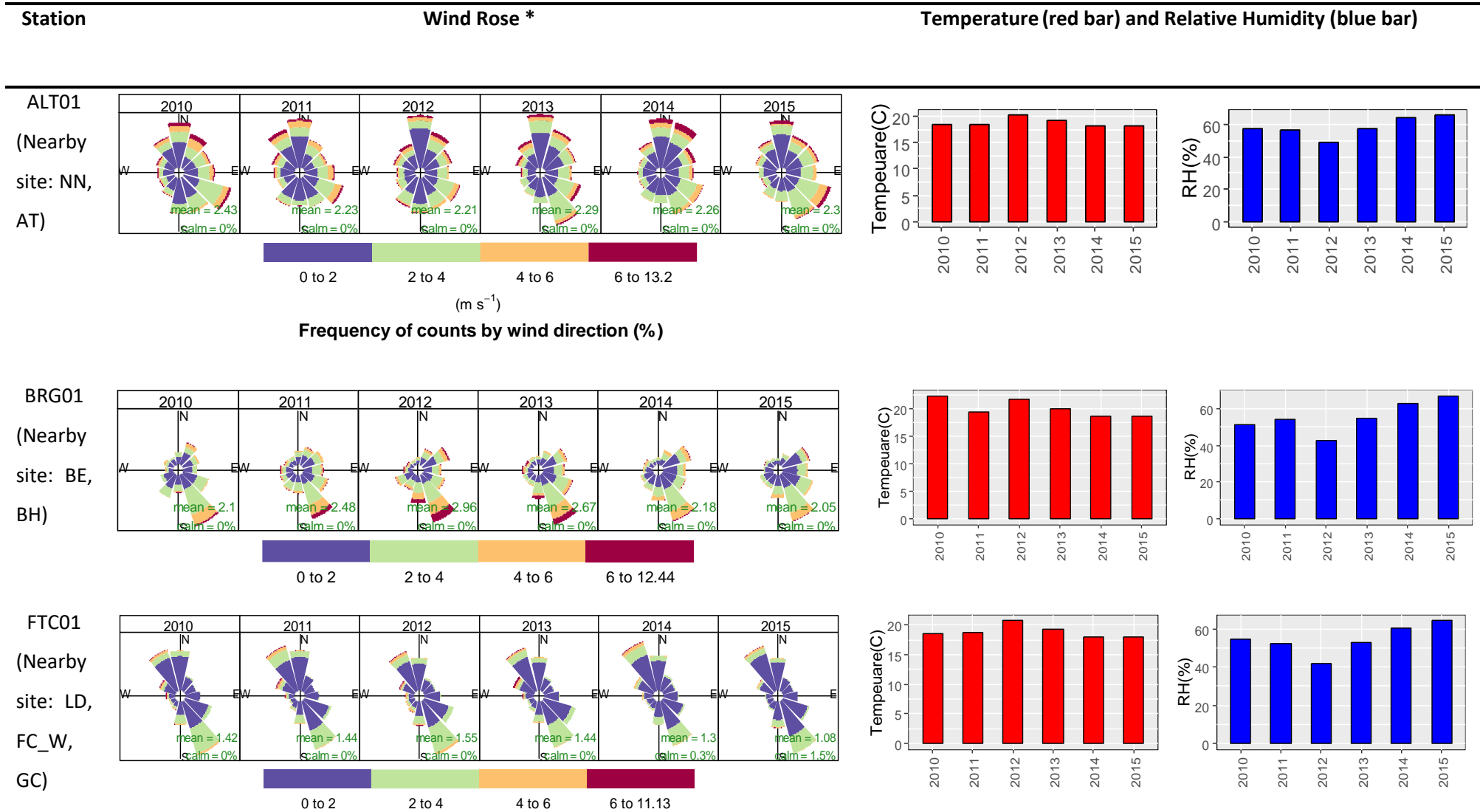
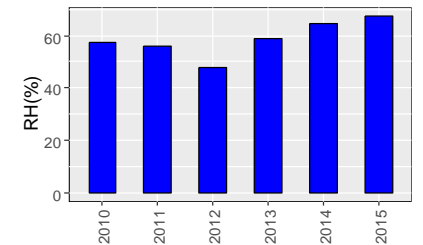
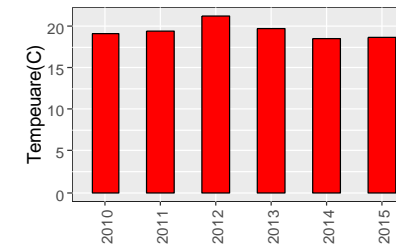
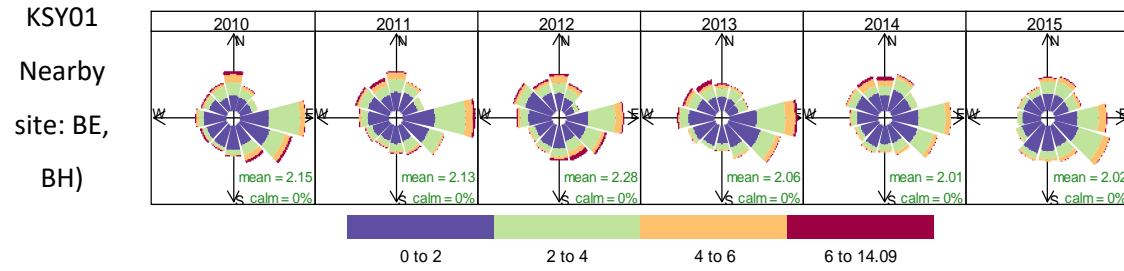
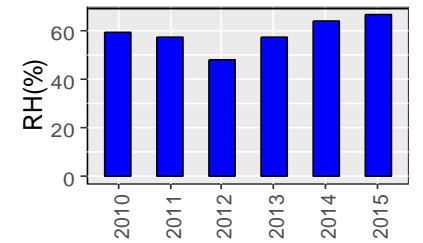
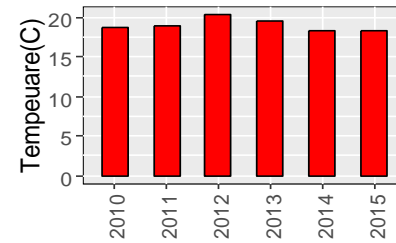
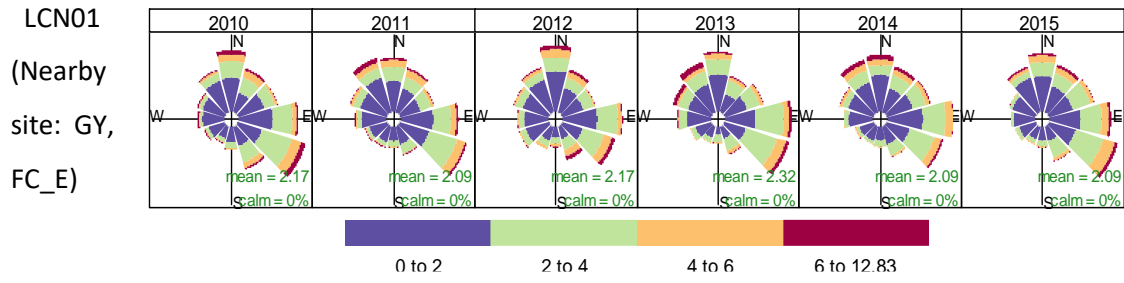
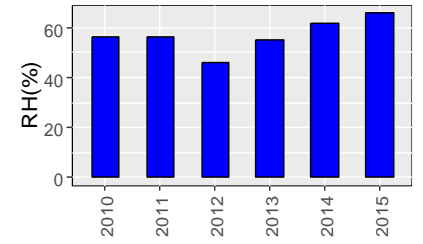
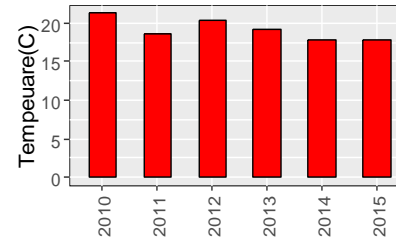
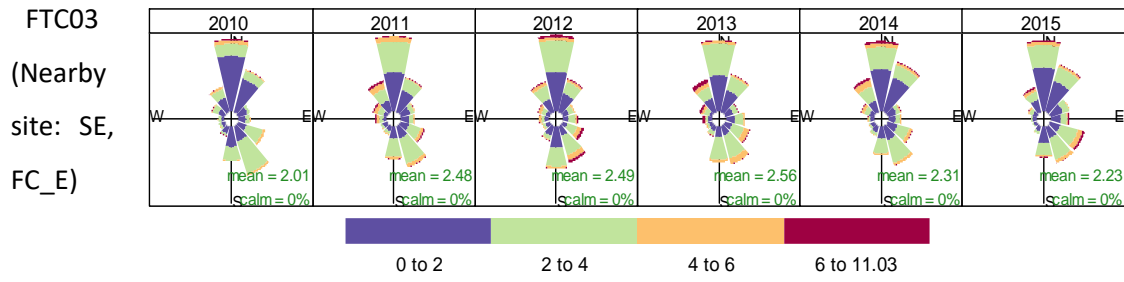
Table S1. Meteorological information near the sites from May to August in each year

Station	Wind Rose *	Temperature (red bar) and Relative Humidity (blue bar)

* Wind speeds (unit: m/s) were indicated by color bars

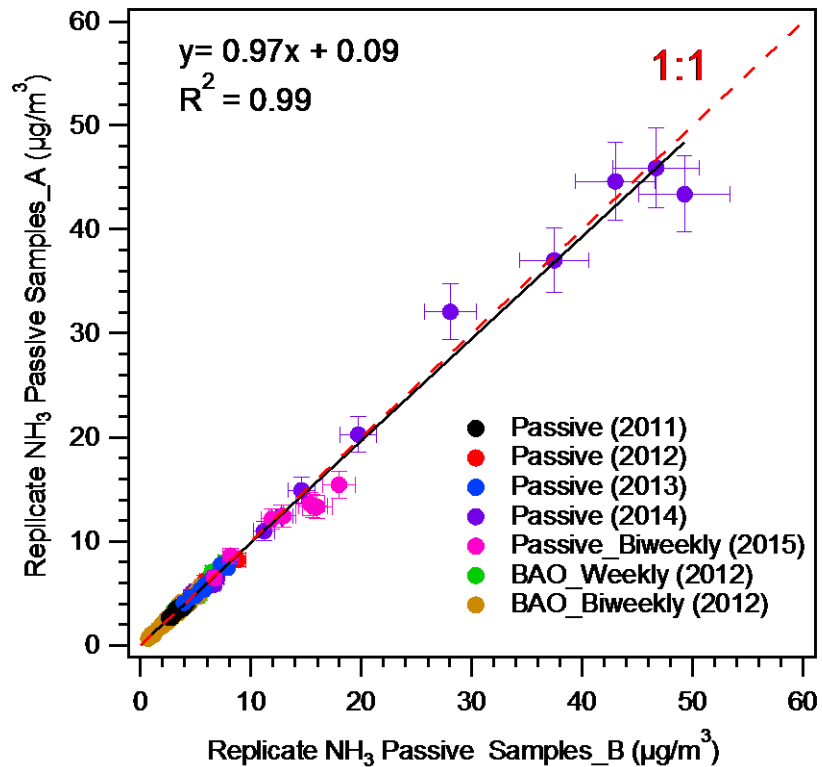



Fig.S1. Comparison of ammonia concentrations measured by replicate passive samples. The error bars represent the relative standard deviation of 8.9 % calculated from all 288 pooled replicate samples.

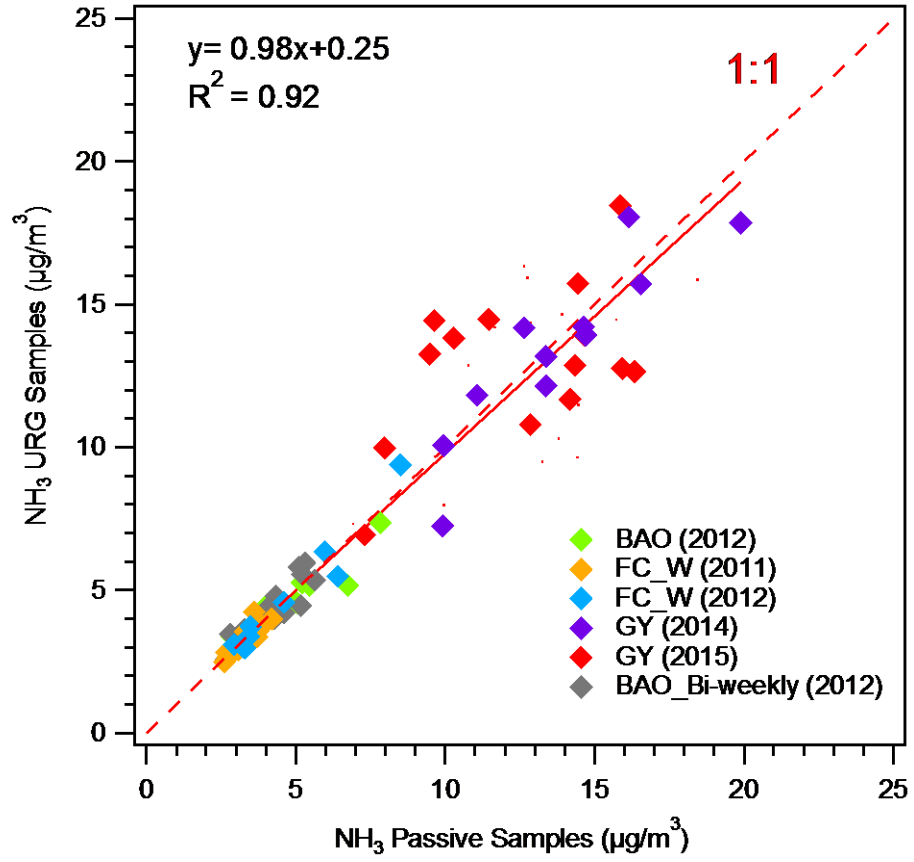



Fig.S2. Comparison of NH₃ concentrations from the Radiello passive samplers and URG samplers.

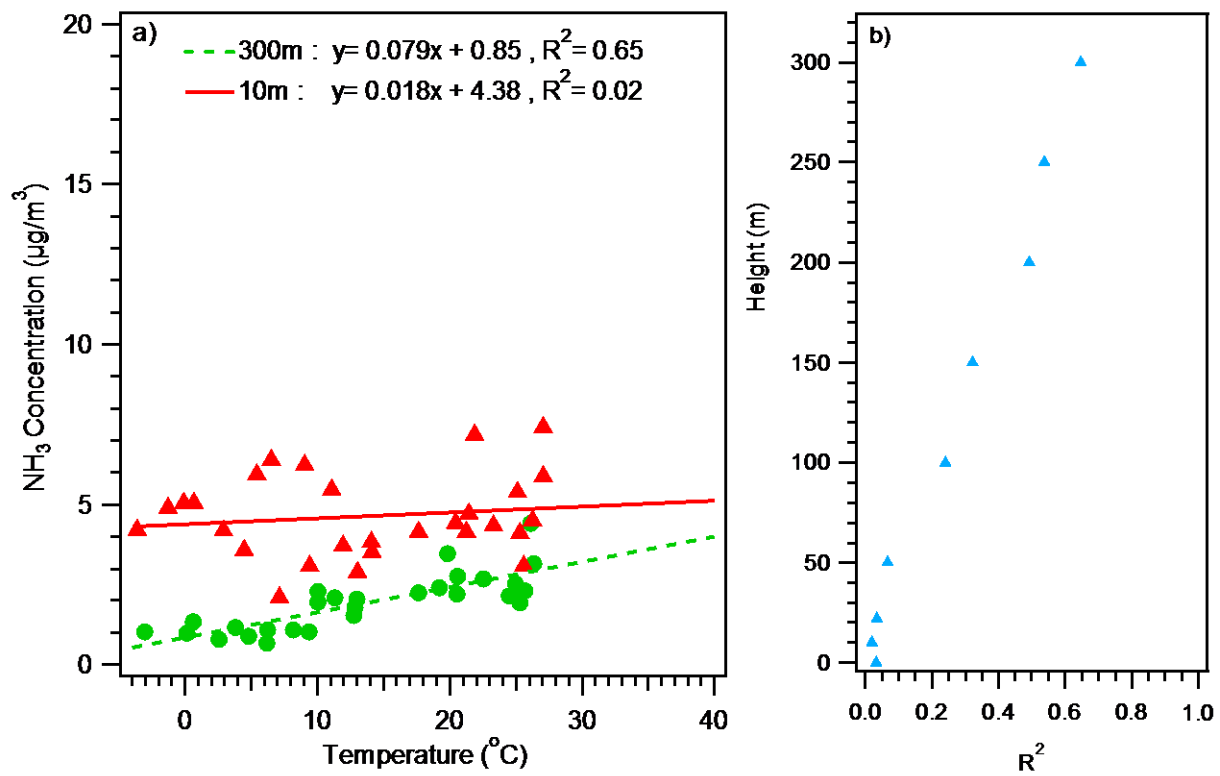



Fig.S3. (a) NH$_3$ concentration versus temperature at 10 m and 300 m and (b) correlation coefficients between NH$_3$ concentration and temperatures at different heights of the BAO tower.

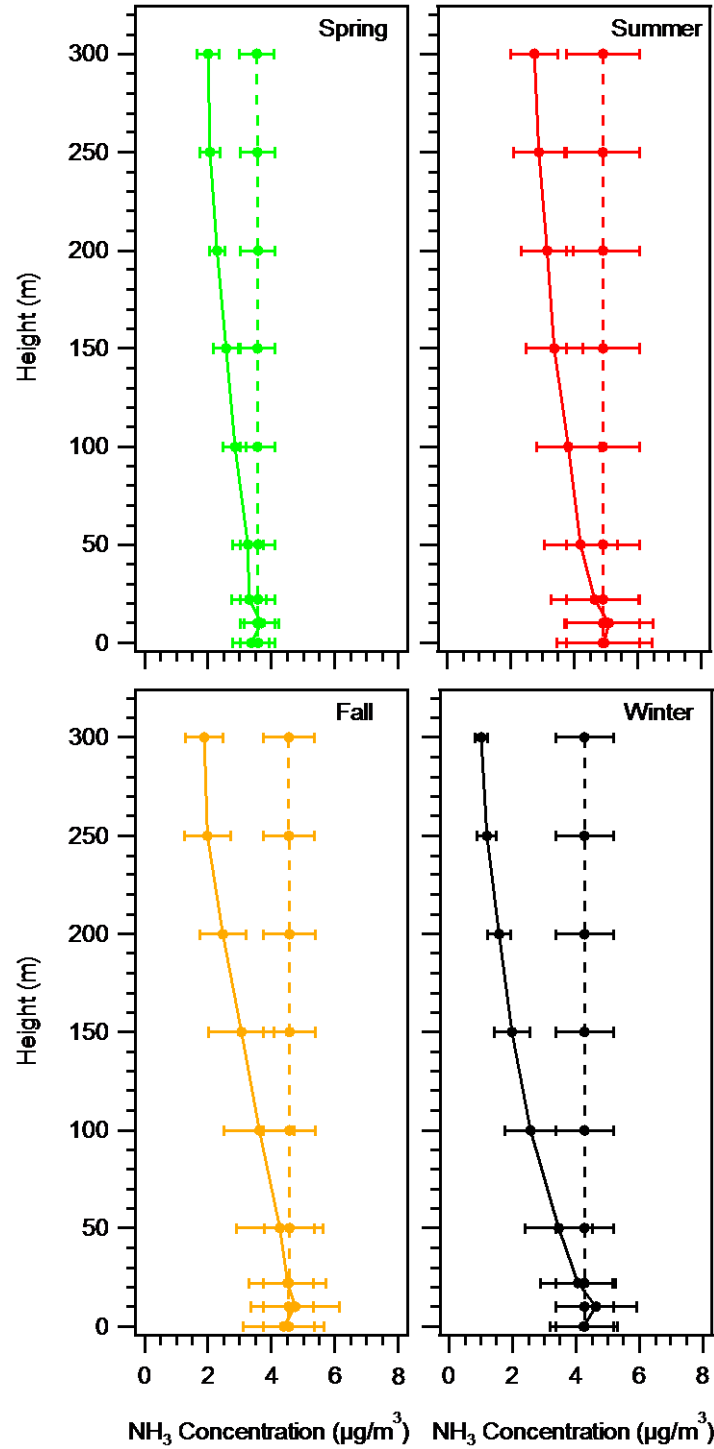



Fig.S4. Seasonal average vertical profiles of NH₃ measured at the BAO tower (solid line) and ISORROPIA II model results (dashed line) in 2012. The x-error bars represent the relative standard deviation of NH₃ concentrations.

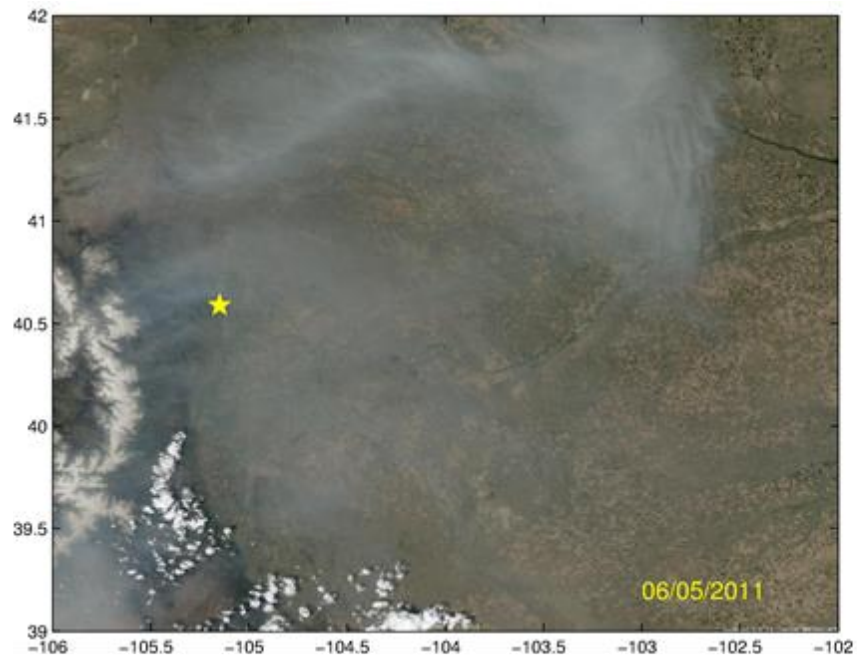



Fig.S5. Satellite image of the wildfire plume over northeastern Colorado caught by the Moderate Resolution Imaging Spectroradiometer (MODIS) (Image downloaded at http://loatec.univ-lille1.fr/TerreEtCiel/module.php?lang=us). The FC_W site is indicated by a yellow star.

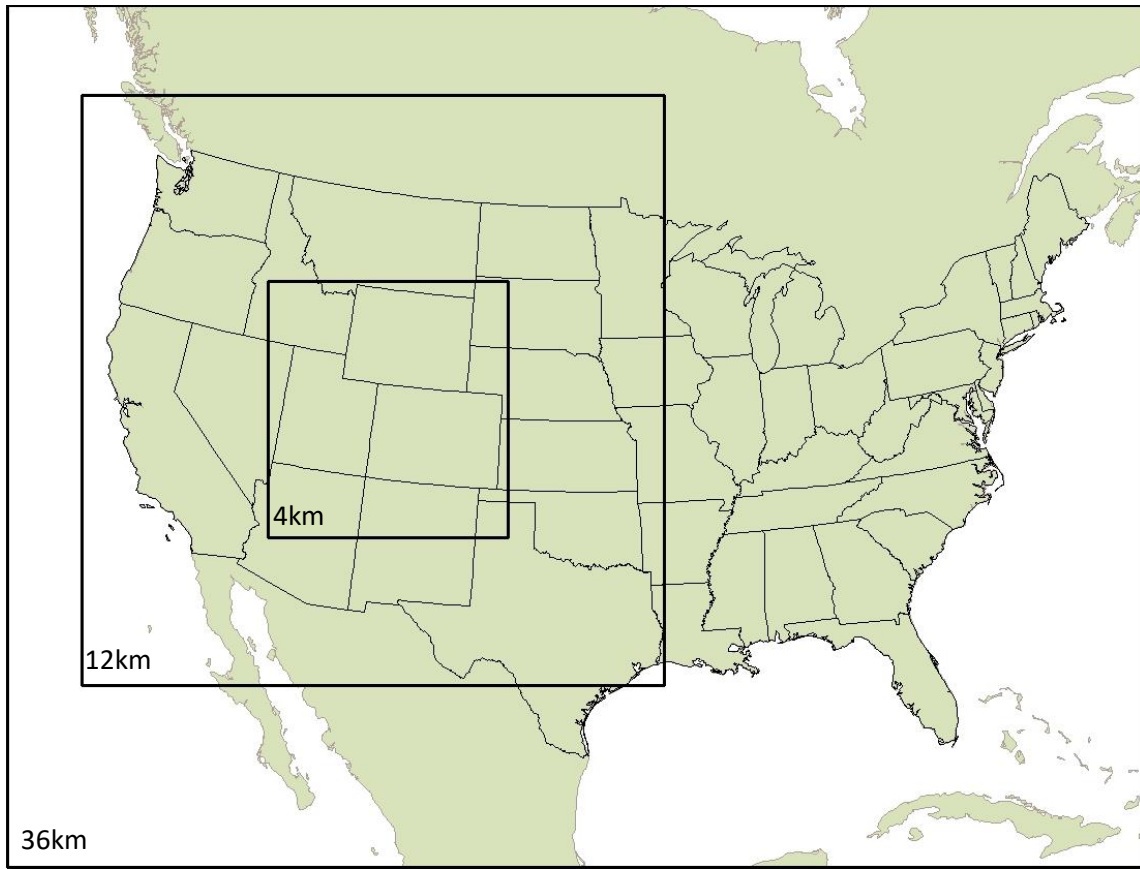



Fig.S6. The 36-km horizontal grid resolution outer domain, represented by the extent of
the larger box, covers the contiguous United States, northern Mexico, and southern Canada.
The 12-km domain includes states surrounding Colorado. The inner 4-km domain extends
over Colorado, Utah, Wyoming and portions of surrounding states.