Atmospheric
Chemistry
and Physics

Supplement of

Status update: is smoke on your mind? Using social media to assess smoke exposure

Bonne Ford et al.

Correspondence to: Bonne Ford (bonne@atmos.colostate.edu)

Supplement

Search Criteria:

text RLIKE 'smoke|smoky|haze|hazy|air quality'

text NOT RLIKE 'cigarette|i smoke|a smoke|we smoke|to smoke|gonna smoke|smoker|smoke free home|smoke free pet free|second hand|u smoke|you smoke|smoke signals|can smoke|can t smoke|cant smoke|don t smoke|dont smoke|pack of smoke|who smokes|who smoke|smoke a| smoked a|smoking home|smoking|smokeing|smoke this|smoked|hazel'
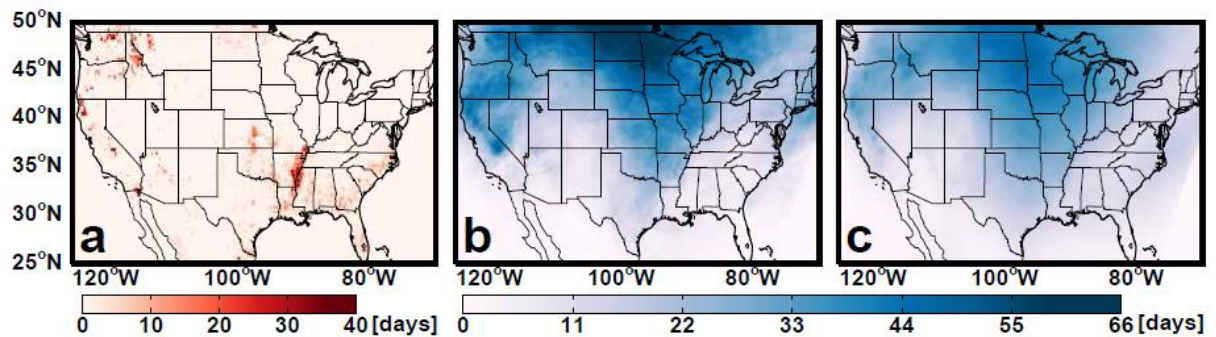

Figure S1. Number of days where the HMS product noted (a) a fire or (b) smoke for June 1- September 30, 2015 and (c) the average number of days in June 1- September 30 where the HMS product noted smoke for 2006-2014.
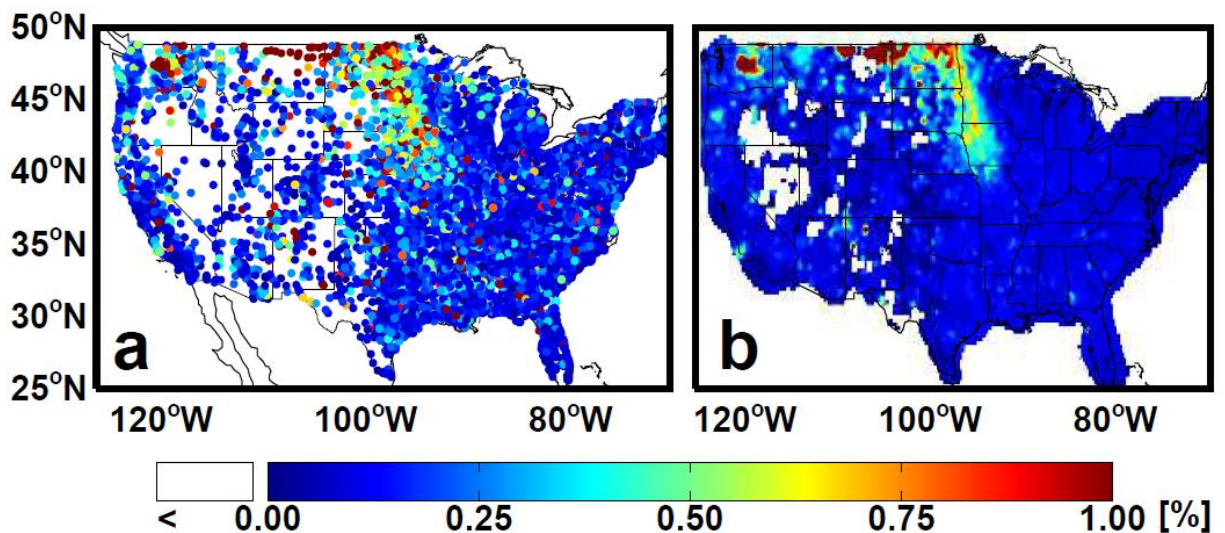

Figure S2. Percent of Facebook posters meeting our search criteria for 29 June 2012 a.) "Raw" values with points representing city centroids and b.) gridded and population-weighted values (white signifies no data or regions with weighted population < 10).
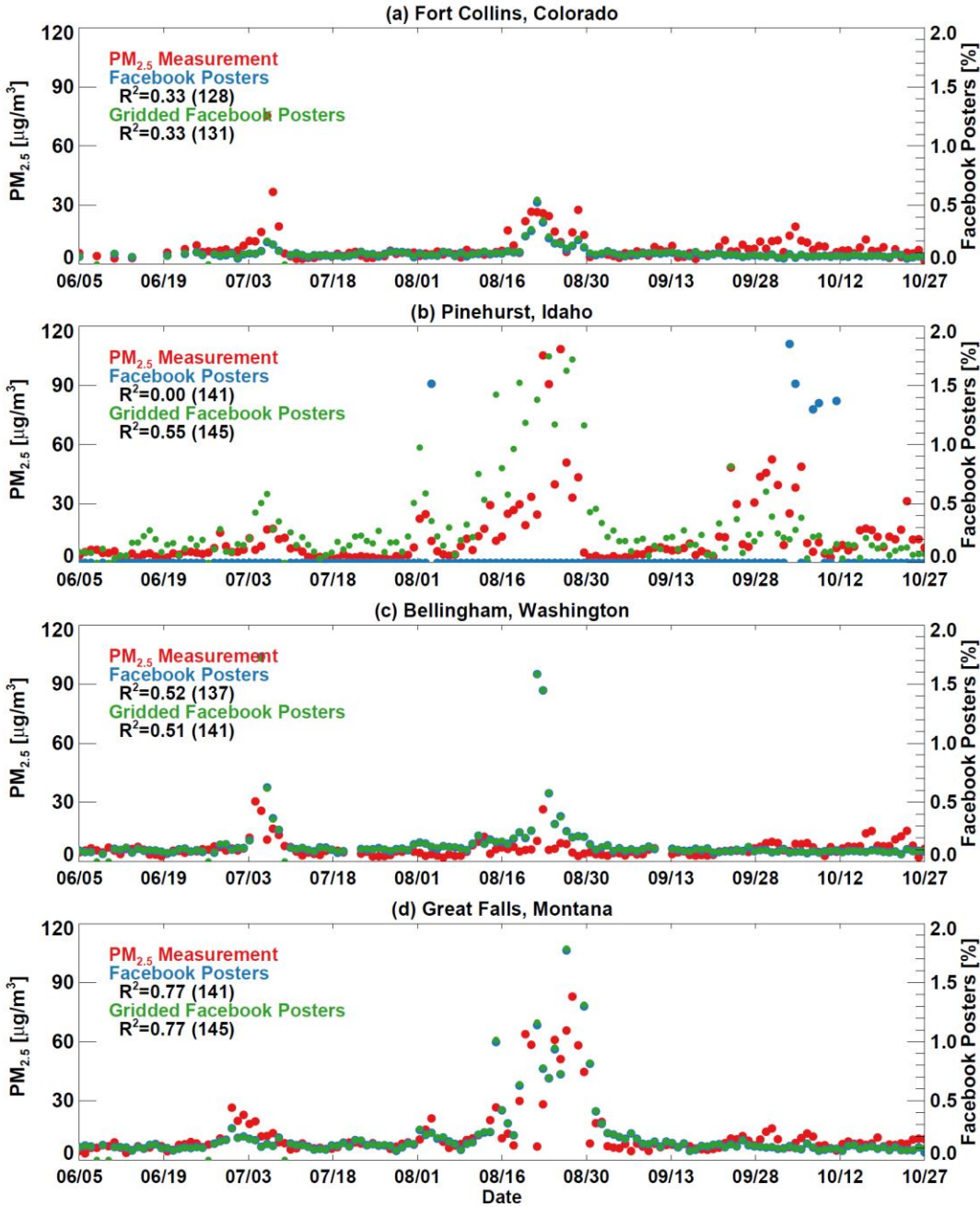
Figure S3. Time series of measured surface PM$_{2.5}$ concentrations (red), "raw" percent of Facebook posters matching criteria (blue), and gridded and population-weighted percent of Facebook posters (green), at (a) Fort Collins, CO; (b) Pinehurst, ID; (c) Bellingham, WA; and (d) Great Falls, MT for 5 June – 27 October 2015. R^2 values for each dataset with the surface measurement are given along with the number of days available for the calculation noted in parentheses.
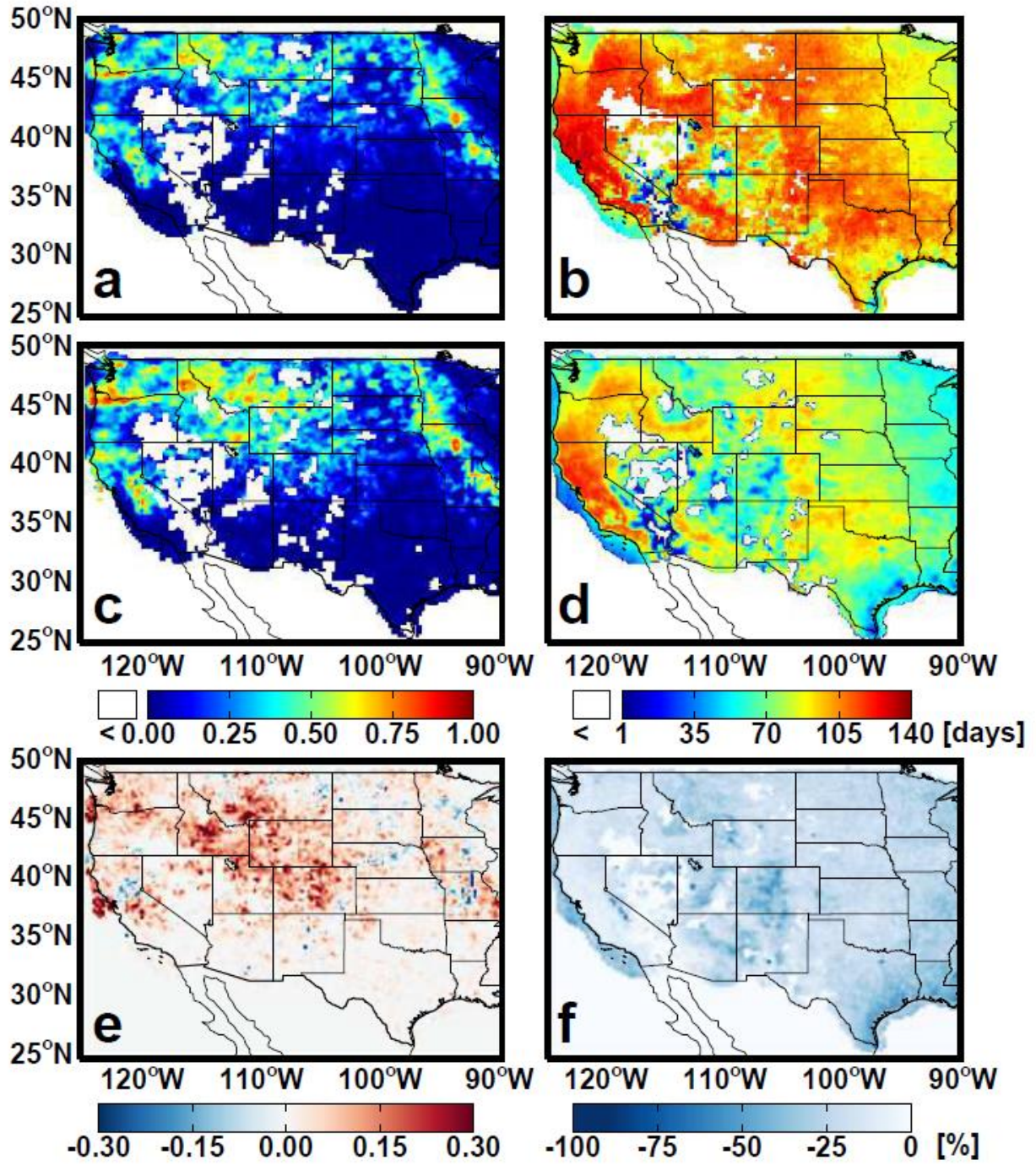
Figure S4. R^2 for % Facebook posters and MODIS AOD for (a) all cloud fractions and (c) cloud fraction <0.75, number of days meeting criteria (b, d), (e) the change in R^2, and (f) change in number of days as a percent of the total observation days.

Figure S5. R^2 for % Facebook posters and surface concentrations for (a) all cloud fractions and (c) cloud fraction <0.75, number of days meeting criteria (b, d), (e) the change in R^2, and (f) change in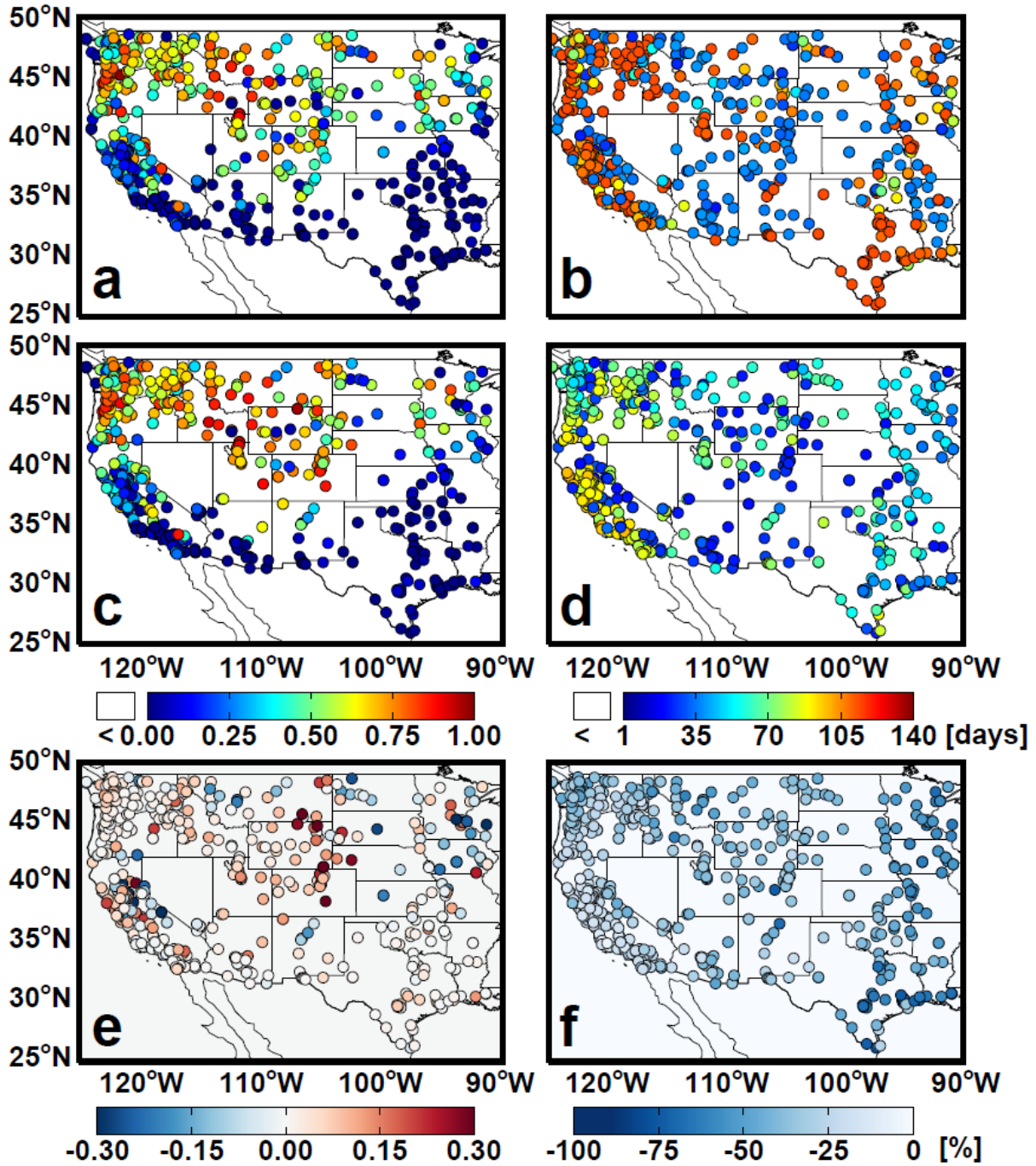 number of days as a percent of the total observation days.