

WRF-Chem simulated surface PM_{2.5}.

This dataset was created by Bonne Ford and William Lassman under the guidance of Gabriele Pfister. Please contact bonne@atmos.colostate.edu if you have any questions.

The simulation was completed for 1 June – 1 October 2015. For this simulation, we used Global Forecast System (GFS) meteorology, biogenic emissions from the Model of Emissions of Gases and Aerosols from Nature (MEGAN), National Emission Inventory 2011 (NEI) anthropogenic emissions, FINN biomass-burning emissions, MOZCART aerosol species and chemistry, and (MOZART) chemical boundaries. Horizontal resolution is 15 km and there are 27 vertical levels. Concentrations are output for each model hour, which we then average to provide daily 24-hour average surface-concentration maps for each US timezone. These files are provided in netcdf format and were generated using IDL code.

The file wrfchemPM2.5_summer2015.tar.gz contains a directory with the following four files, designated by time zone:

- (1) **wrfchemPM2.5_20150601-20151001-cst.nc** : Central
- (2) **wrfchemPM2.5_20150601-20151001-est.nc** : Eastern
- (3) **wrfchemPM2.5_20150601-20151001-mst.nc** : Mountain
- (4) **wrfchemPM2.5_20150601-20151001-pct.nc** : Pacific

Variables in the files are:

- (1) PM2.5: Daily-averaged surface PM_{2.5} with units of μgm^{-3} . This is a 3-dimensional array with x, y, and time dimensions (269,253,122 days).
- (2) LAT: Latitude, a 2-dimensional array (269,253).
- (3) LON: Longitude, a 2-dimensional array (269,253).

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