

NAPS PM 2.5 Plots 2003-2008

Number of samples by site

There are differences in the number of observations for all cities.

station	city	number of samples	n_paper	diff
S100119	Burnaby	742	695	47
S101004	Abbotsford	627	537	90
S103202	Golden	433	251	182
S30113	Halifax	198	177	21
S40801	Canterbury	427	346	81
S50104	Montréal	634	554	80
S54401	Saint-Anicet	734	664	70
S60211	Windsor	398	267	131
S60427	Toronto	822	565	257
S62601	Simcoe	496	311	185
S90132	Edmonton	360	333	27

Total $PM_{2.5}$ mass by site

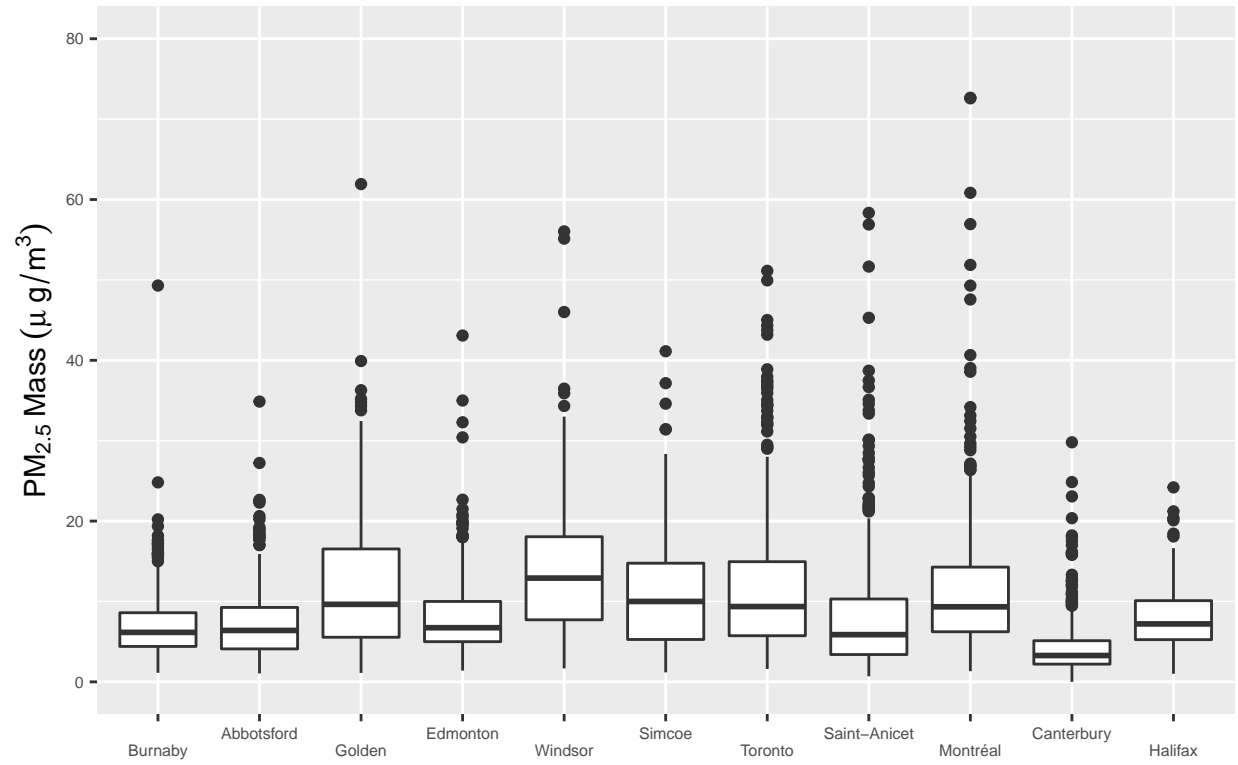


Figure 1: Total $PM_{2.5}$ mass (Median, 25th and 75th percentile, 2nd and 98th percentile)

Monthly mean $PM_{2.5}$ mass by site

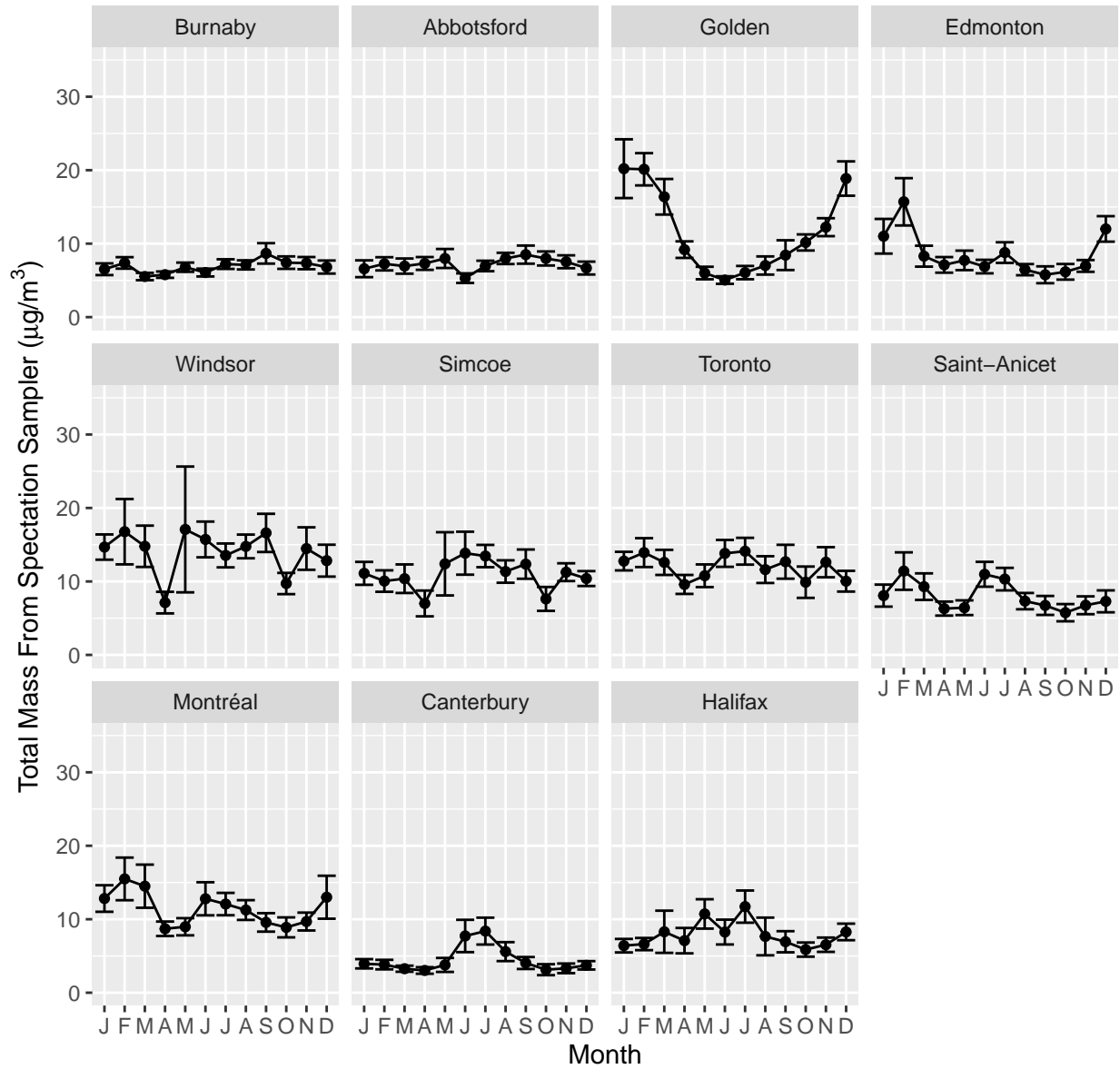


Figure 2: Monthly mean $PM_{2.5}$ (Mean and 90th percent CI)

Mean organic carbon (OC) by site

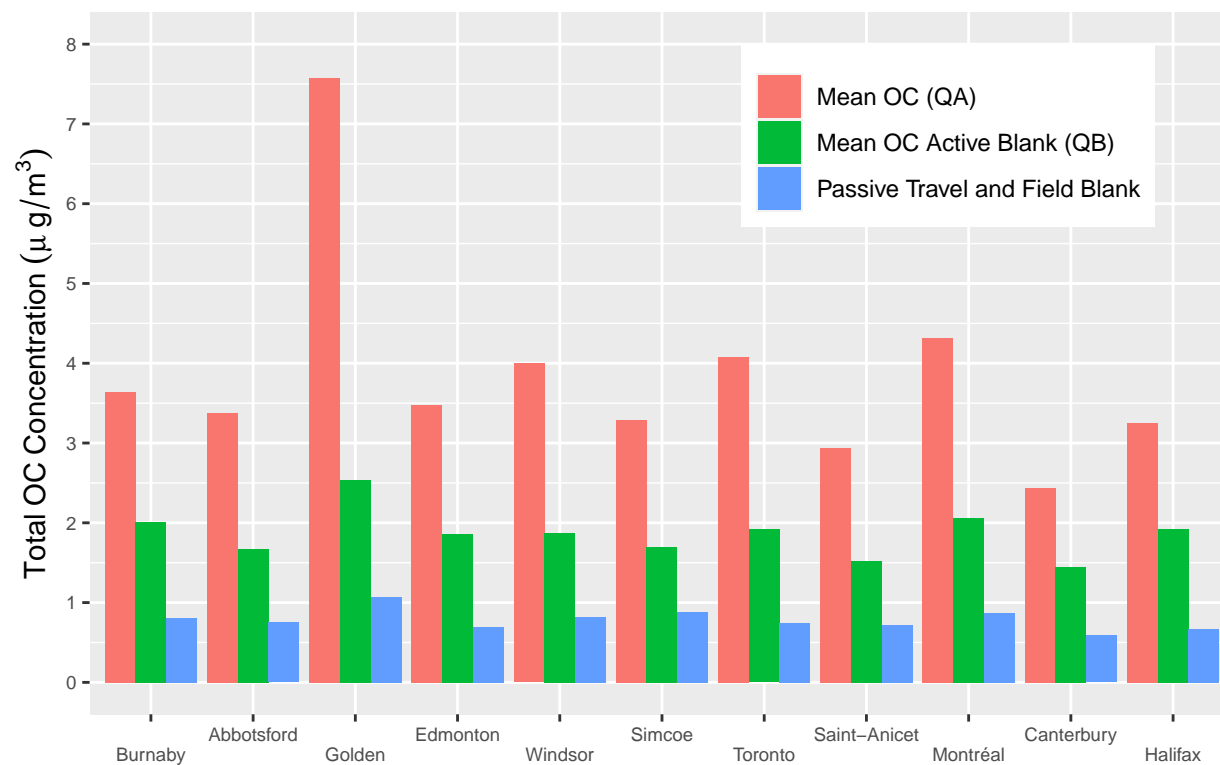


Figure 3: Mean Organic Carbon by cartridge and site

Reconstructed $PM_{2.5}$ mass by major component and site

When calculating the major components, observations from the spectation sampler were used. For a given day, if the spectation observations were missing, and the site had pm 2.5 sampler observations (PM2.5 Manual Air Sampler) was used. This affected the observations for Montreal and Canterbury from 2010-2019.

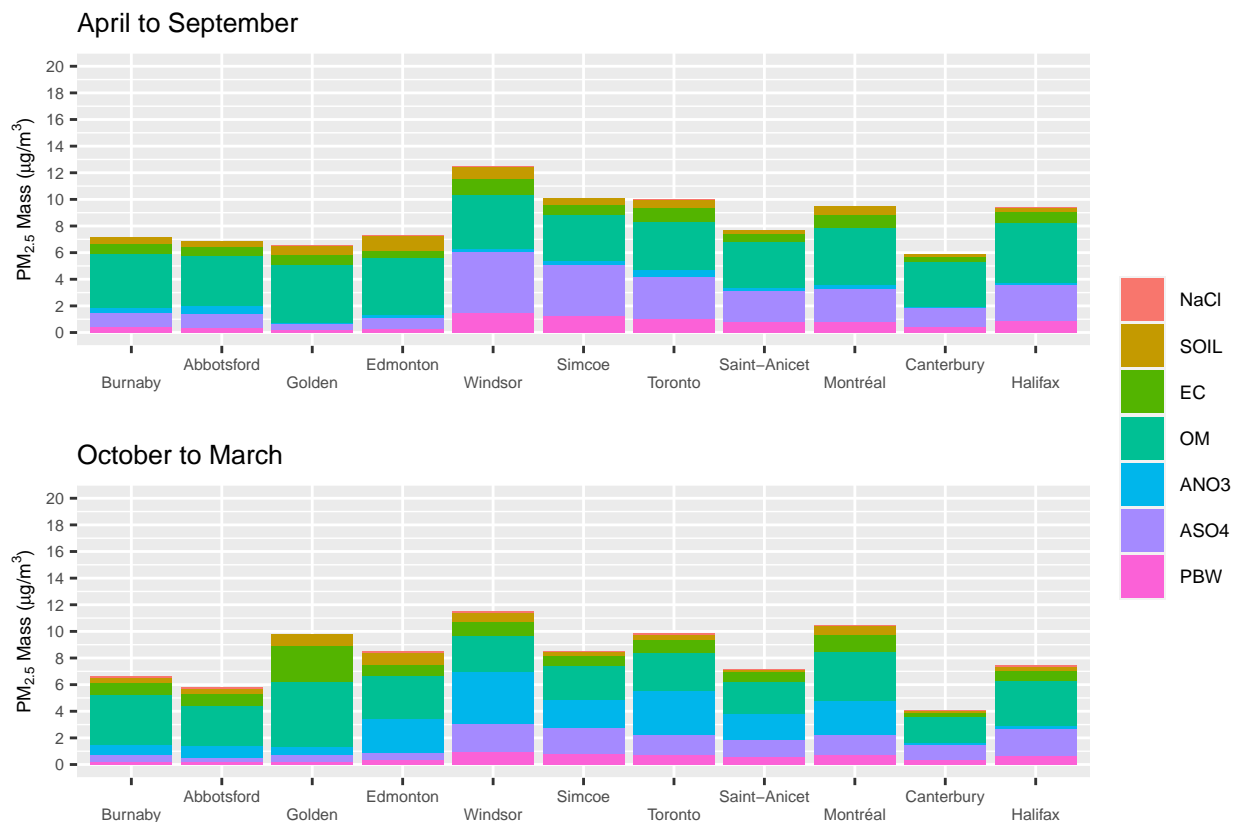


Figure 4: Reconstructed $PM_{2.5}$ mass by compound mean

Reconstructed $PM_{2.5}$ mass by 10 highest mass days and site

To generate the following figure, the days with the largest $PM_{2.5}$ mass that had observations for all reconstructed components were used. (i.e. there were days that had larger masses than used, but were missing observations)

For July 2010 - 2019, Golden, Montreal and Canterbury contained at least one missing observation each day.

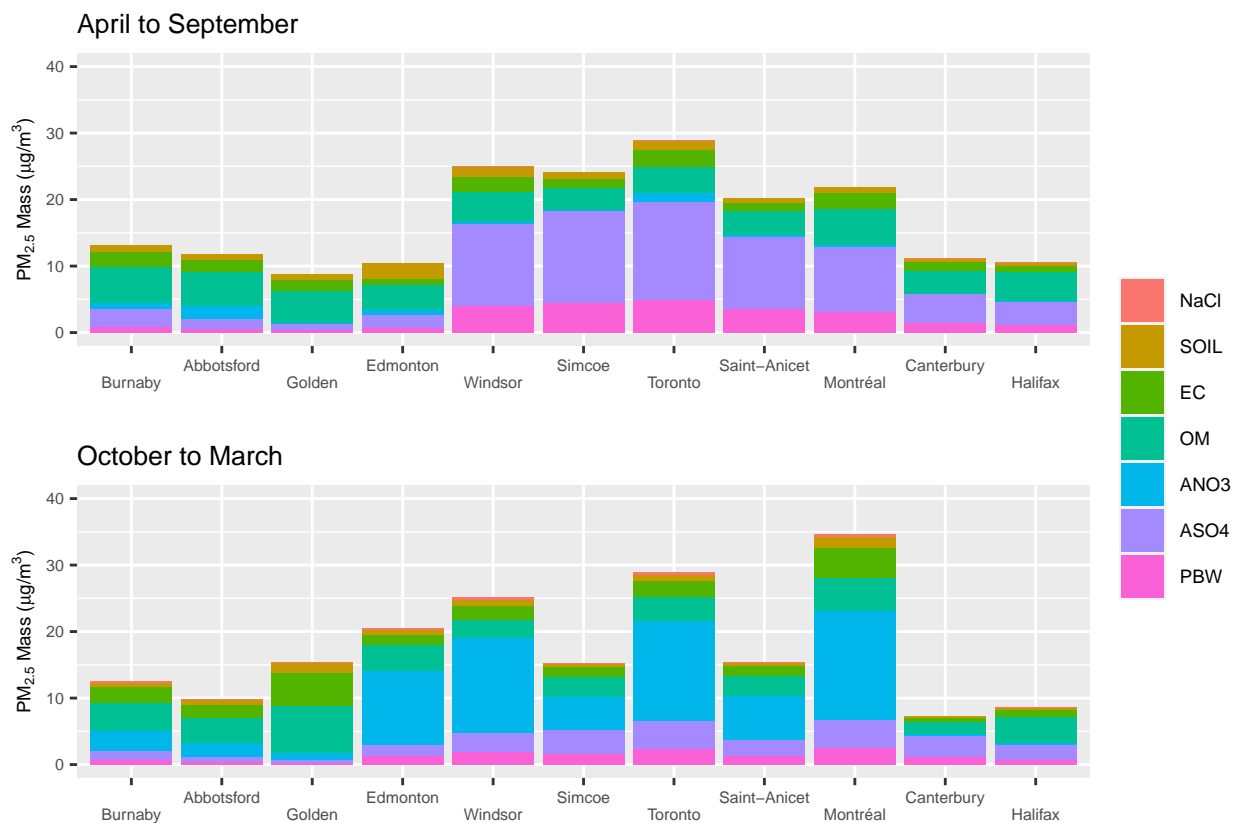


Figure 5: Reconstructed $PM_{2.5}$ mass by mean compound for the 10 highest mass concentration days

Median ammonium sulphate and ammonium nitrate concentrations by site and month

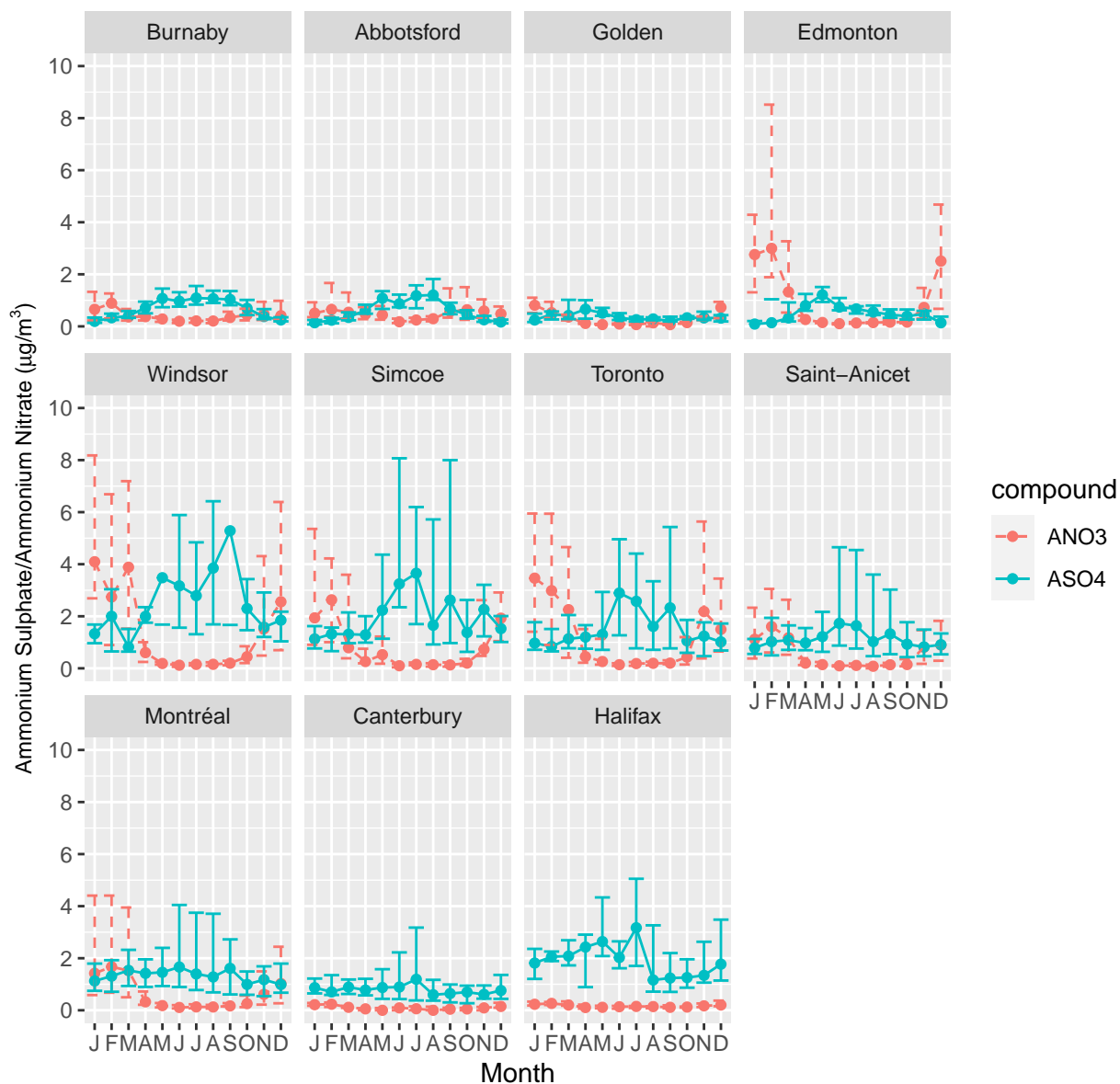


Figure 6: Ammonium sulphate and ammonium nitrate concentrations by site and month (mean and inter-quartile range)

Median elemental carbon (EC) and organic matter (OM) concentrations by site and month

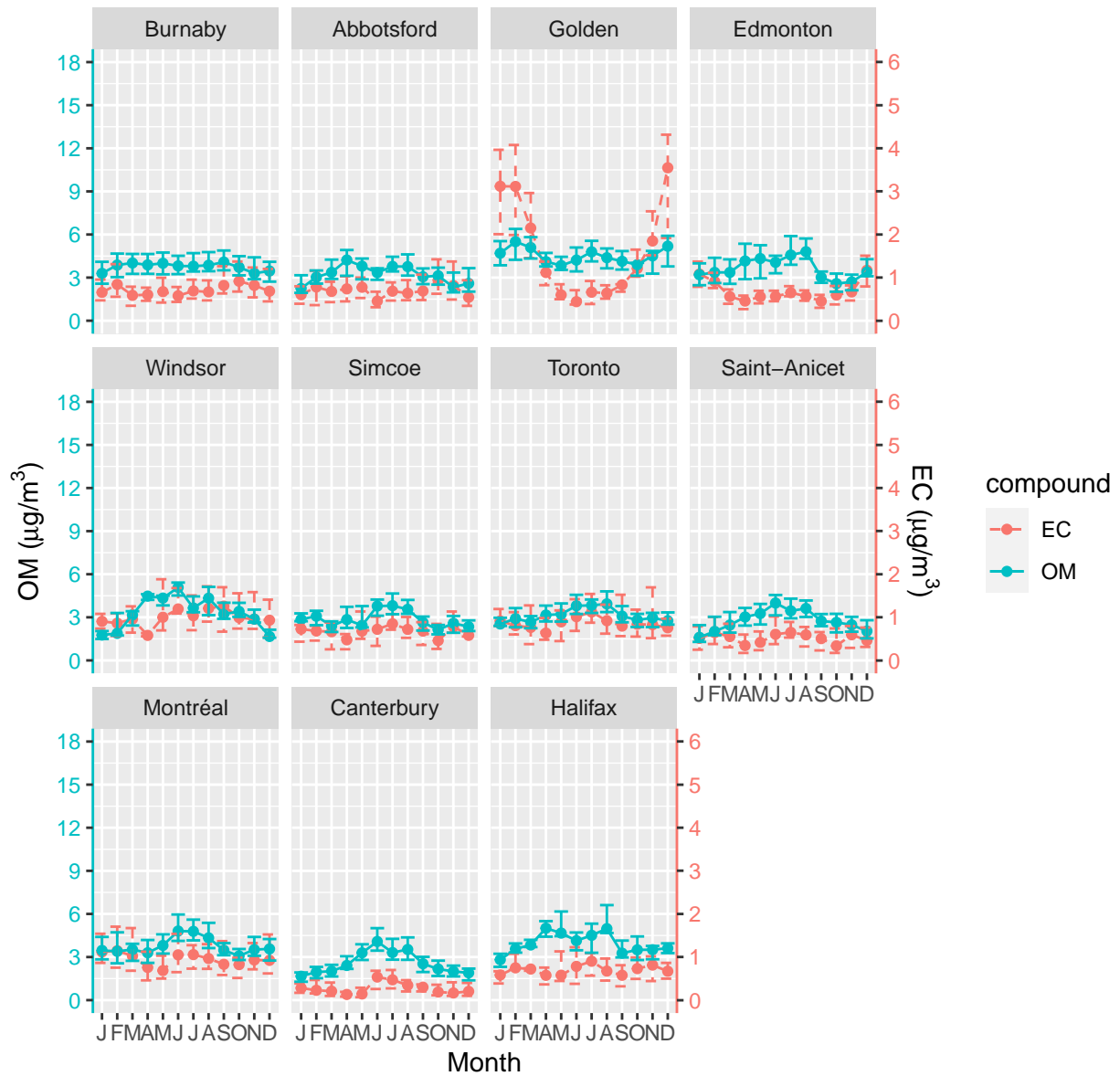


Figure 7: Elemental carbon (EC) and organic matter (OM) by site and month (mean and inter-quartile range)

Median soil and sodium chloride concentrations by site and month

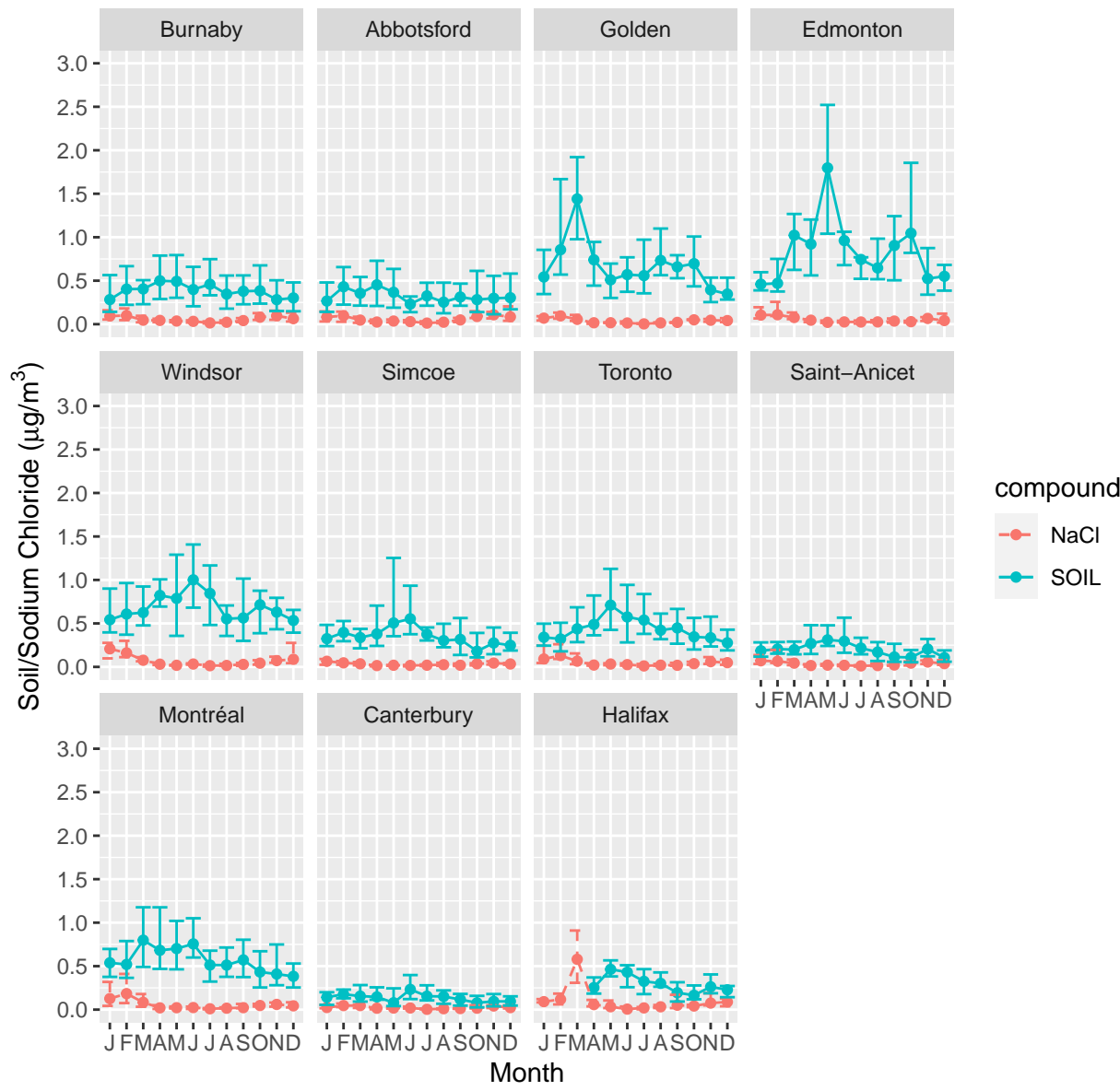


Figure 8: Soil and sodium chloride concentrations by site and month (mean and inter-quartile range)

Ammonia mixing ratio by site and month

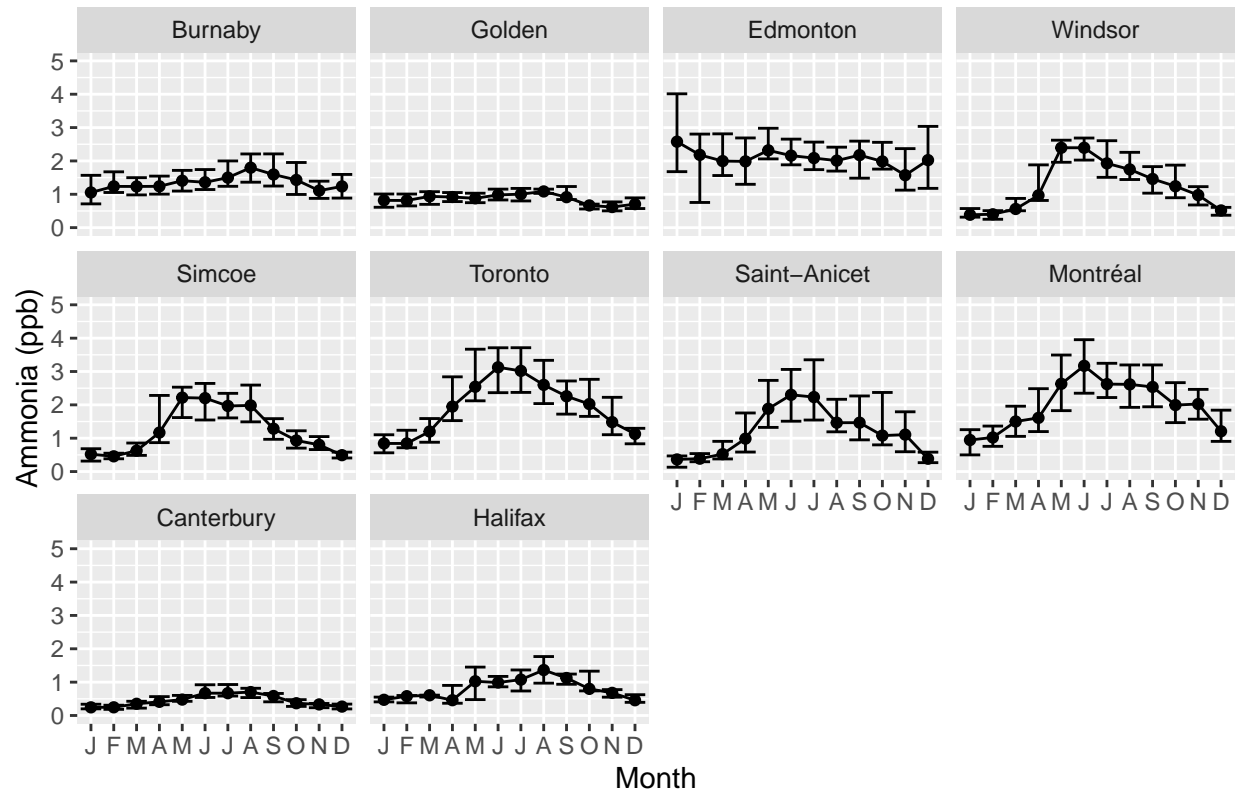


Figure 9: Ammonia mixing ratio by site and month (mean and inter-quartile range)

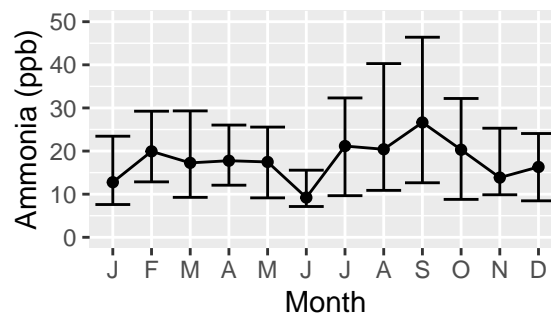


Figure 10: Ammonia mixing ratio for Abbotsford by month (mean and inter-quartile range)

Median sulphur dioxide mixing ratio and nitric acid concentrations by site and month

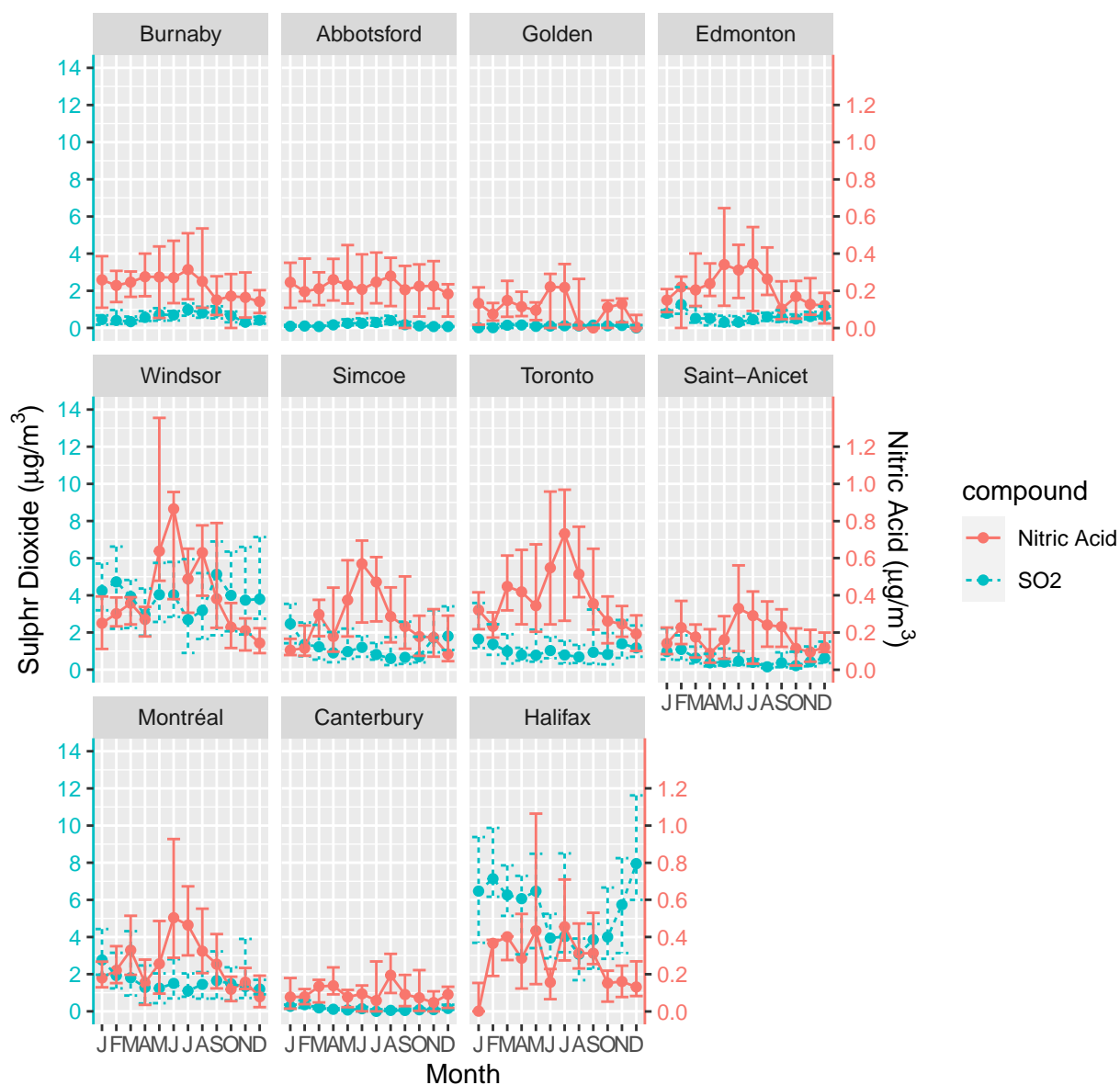


Figure 11: Sulphur dioxide mixing ratio and nitric acid concentrations by site and month (mean and inter-quartile range)

References