Supplement of

Meteorological controls on atmospheric particulate pollution during hazard reduction burns

Giovanni Di Virgilio et al.

Correspondence to: Giovanni Di Virgilio (giovanni@unsw.edu.au)

The copyright of individual parts of the supplement might differ from the CC BY 3.0 License.
Figure S1. Auto-correlation plots for the residuals obtained by applying GAM models on the complete time series for each monitoring location. Correlation in the residuals is evident at both short and longer lags. Lag is in days.
Figure S2. Auto-correlation plots for the residuals obtained by applying GAMM models on the complete time series for each monitoring location. The short-term, residual correlation is no longer present. Lag is in days.
**Figure S3.** The contribution by the prescribed burn distance component of the model linear predictor to the fitted values (PM$_{2.5}$ µg/m$^3$ centred) in the intermediate GAMM – see main text for further explanation.
Figure S4. Wind rose diagrams showing wind speed/direction frequencies split by season at each of four locations in Sydney. Wind speeds are split according to the intervals shown by the scale bar to the right of the figure. Wind roses were generated using the openair package (Carslaw & Ropkins, 2012).
Figure S5. The contribution by the rainfall component of the GAMM linear predictor to fitted PM$_{2.5}$ values (µg m$^{-3}$, centred).
Figure S6. The contribution by the MSLP component of the GAMM linear predictor to fitted PM$_{2.5}$ values (µg m$^{-3}$, centred).
Figure S7. The contribution by the wind speed component of the GAMM linear predictor to fitted PM$_{2.5}$ values (µg m$^{-3}$, centred).
Figure S8. Chullora: Mean diurnal variation of PBLH, total cloud cover, temperature and wind speed for low versus high PM$_{2.5}$ pollution during prescribed burning days in Sydney. Shading represents the 95% confidence intervals of the means.
Figure S9. Earlwood: Mean diurnal variation of PBLH, total cloud cover, temperature and wind speed for low versus high PM$_{2.5}$ pollution during prescribed burning days in Sydney. Shading represents the 95 % confidence intervals of the means.
Figure S10. Richmond: Mean diurnal variation of PBLH, total cloud cover, temperature and wind speed for low versus high PM$_{2.5}$ pollution during prescribed burning days in Sydney. Shading represents the 95% confidence intervals of the means. Note the lower mean PBLH and temperatures at Richmond, relative to at the other sites.
References