



Supplement of

Biomass burning emissions in north Australia during the early dry season: an overview of the 2014 SAFIRED campaign

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1 7. Supplementary

Supplementary Figure 1 shows the ambient relative humidity and the aerosol sample
relative humidity after drying by the Automated Regenerating Aerosol Diffusion Dryer
(ARADD). The ARADD was effective in keeping the sample relative humidity below
40% for the entire sampling period. The two periods with RH > 40% correspond to
power outages at ATARS.



Supplementary Figure S1 The ambient and sample relative humidity for the campaign.

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9 Supplementary Figure S2 shows the mean hourly diurnal variations of various aerosol
10 species measured at ATARS during different biomass burning periods and a coastal
11 period.



Supplementary Figure S2 Mean hourly diurnal (a) NF-PM₁ organic mass concentration, (b) NF-PM₁ organic
 mass fraction, (c), f₄₄, the fraction of m/z to total NR-PM₁ organics, and (d) the particle size distribution mode
 diameter at ATARS, separated into different biomass burning periods (BBP) and a coastal period (CP)

18 attributed to high particle mass loadings acting as a condensation sink.

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¹⁶ Supplementary Figure S3 shows the spectrogram of particle sizes between 1 and 40 nm.

¹⁷ There was a distinct lack of new particle formation over the entire month, likely



Supplementary Figure S3 The particle size distributions measured from 1nm up to 40 nm, demonstrating no nucleation events.