Supplementary

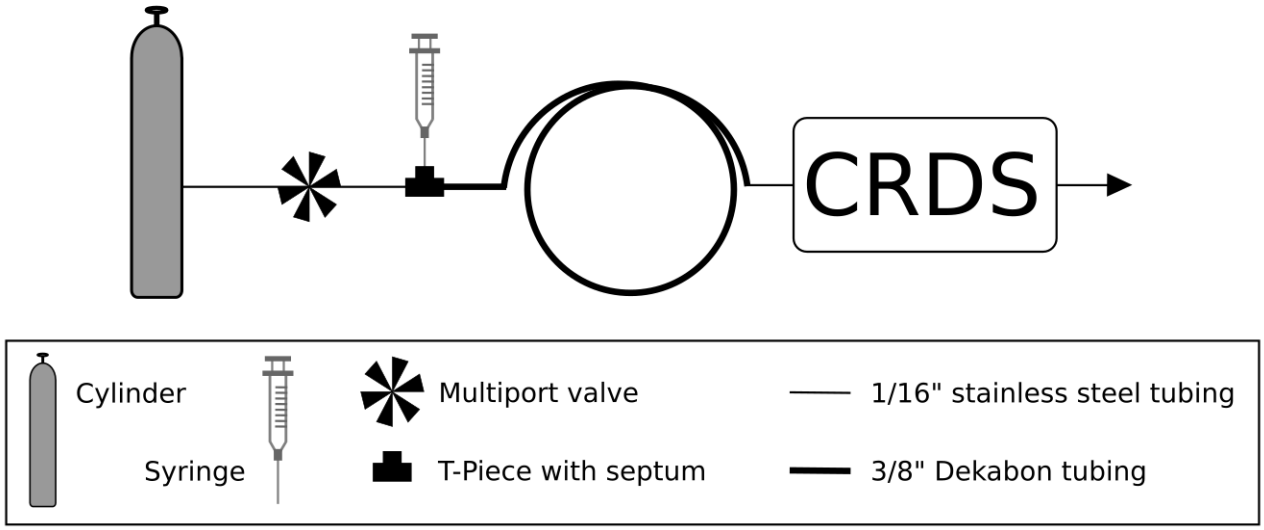

Figure S1 – Instrument specific water correction testing flow path and procedure

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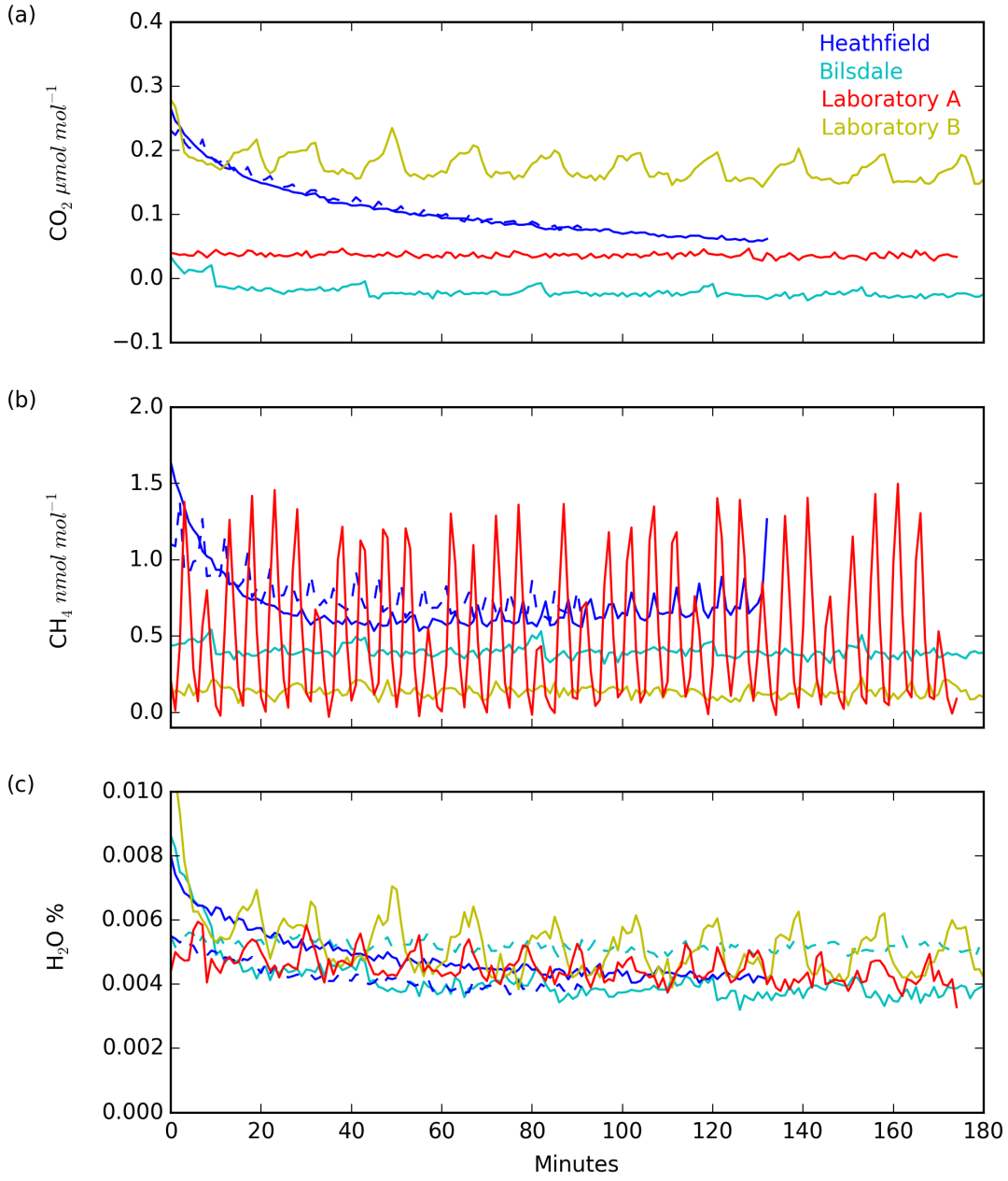

Figure S2 – (a) CO_2, (b) CH_4 and (c) H_2O mole fractions of the TOC output. Note the HFD TOC was powered up just before to analysis in contrast to the other sites where the TOCs had been running for at least 12 hours prior to analysis.

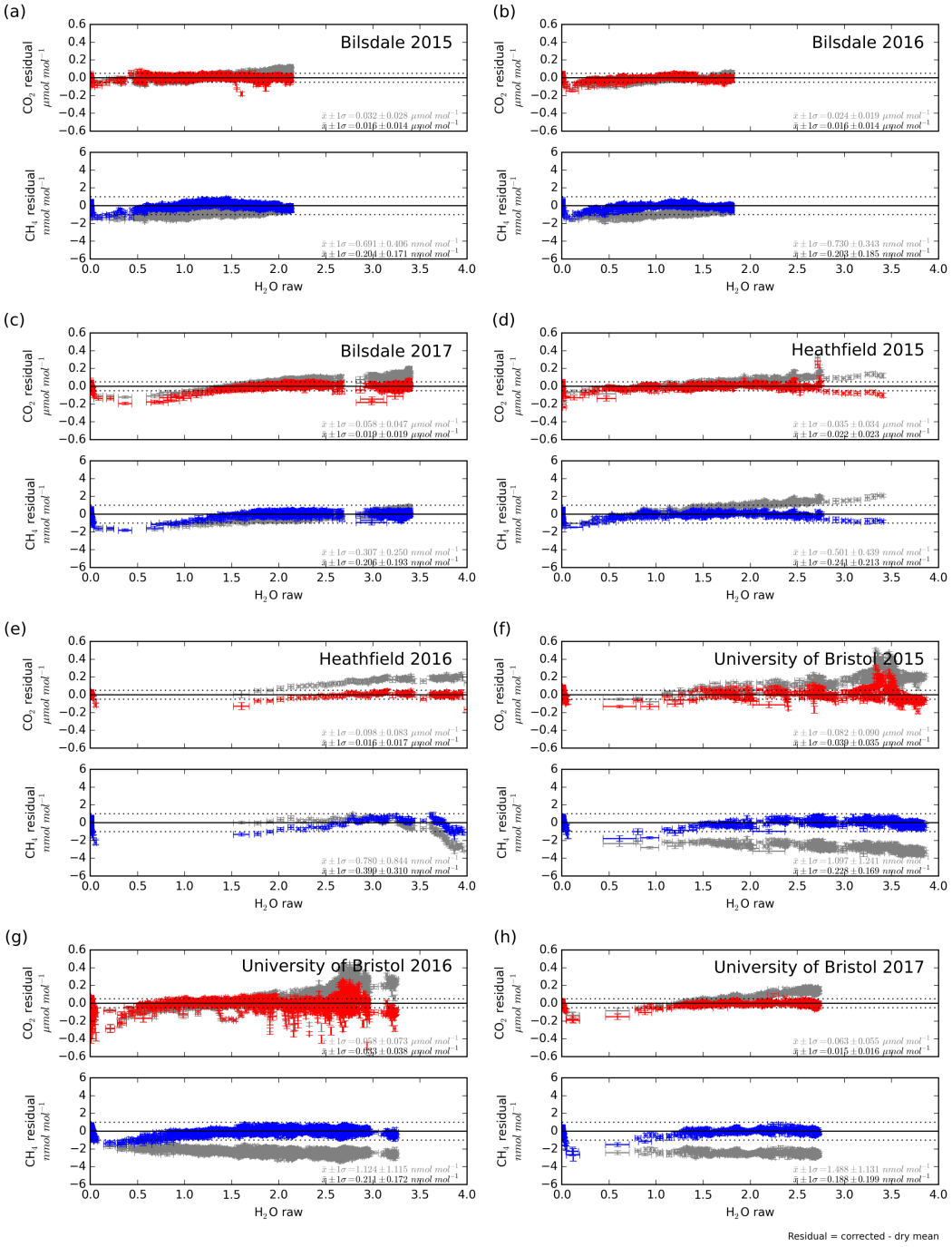

Figure S3 – Droplet test residual, wet corrected data less dry mean, plots for Bilsdale (a) 2015, (b) 2016 and (c) 2017, Heathfield (d) 2015 and (e) 2016 and University of Bristol (f) 2015, (g) 2016 and (h) 2017. The instrument specific CO_2 residual values (red) are shown in the upper plots and CH4 (blue) in the lower plots. The residuals of the factory determined water correction are also shown in grey. The mean ± $1\sigma^2$ of the residuals are given for each plot for both the instrument specific (black) and the factory (grey) corrections.