

Auxiliary Material for

**A practical approach for uncertainty quantification of high frequency soil
respiration using Forced Diffusion chambers**

Martin Lavoie, Claire Phillips, David Risk

Department of Earth Sciences, St. Francis Xavier University, P.O. 5000, Antigonish,
Nova Scotia, Canada, B2G 2W5

Department of Crops and Soil Science, 3057, Agriculture and Life Sciences Building,
Oregon State University, Corvallis, OR, USA, 97331

Journal of Geophysical Research, Biogeosciences, 2014

These appendices contain the results of linear relationships between soil temperature and moisture, and soil flux random error. For complete description of the processing steps, readers are invited to consult the statistics section of the manuscript.

Appendix Table A1. Linear relationships between the random error (RE; $\mu\text{mol m}^{-2} \text{s}^{-1}$; σ and μ) and soil flux ($\mu\text{mol m}^{-2} \text{s}^{-1}$).

Appendix Table A2. Linear relationships between the random error (RE; $\mu\text{mol m}^{-2} \text{s}^{-1}$; σ and μ) and soil temperature ($^{\circ}\text{C}$). Because R-square is defined as the proportion of variance explained by the fit, if the fit is actually worse than just fitting a horizontal line then R-square is negative.

Appendix Table A3. Linear relationships between the random error (RE; $\mu\text{mol m}^{-2} \text{s}^{-1}$; σ and μ) and soil moisture (v/v). Because R-square is defined as the proportion of variance explained by the fit, if the fit is actually worse than just fitting a horizontal line then R-square is negative.

Appendix Table A4. Full models on the effects of site, and soil flux, soil temperature and soil moisture on the random error (RE; σ and μ). SD=Standard deviation.