

Figure S1 below shows the differences in CO<sub>2</sub> and CH<sub>4</sub> fluxes between the LGR (ambient and numerically dried) and Picarro (physically dried) plotted against the measured H<sub>2</sub>O flux by the LGR. The LGR H<sub>2</sub>O flux is computed at the optimal lag time for H<sub>2</sub>O (~20s). These plots show the same qualitative trend as Figure 5 of the paper, i.e. the differences in CO<sub>2</sub> and CH<sub>4</sub> fluxes due to the H<sub>2</sub>O correction increase with increasing H<sub>2</sub>O flux.

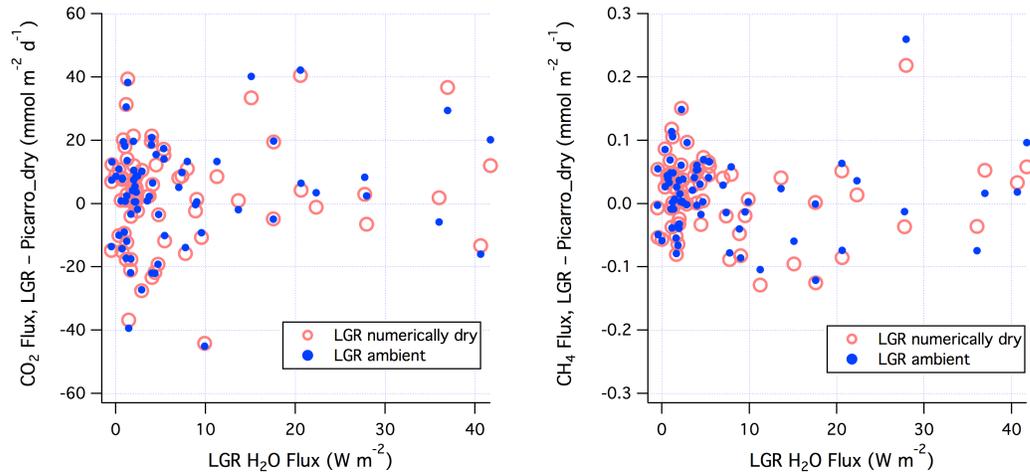


Figure S1. Differences in CO<sub>2</sub> and CH<sub>4</sub> fluxes between the LGR and Picarro vs. measured H<sub>2</sub>O flux by the LGR.

Figure S2 below shows that measured LGR H<sub>2</sub>O flux increases non-linearly with the predicted bulk H<sub>2</sub>O flux. Attenuation of H<sub>2</sub>O flux principally by the tubing was at least 80%.

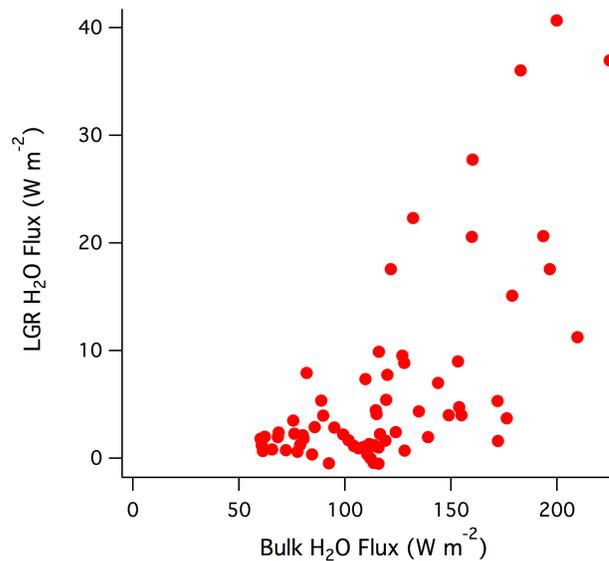


Figure S2. Measured H<sub>2</sub>O flux by the LGR vs. predicted bulk H<sub>2</sub>O flux for the air-water wind sector.