**Supplementary Material**



**Figure S1** Sensitivity of calculated CO2 fluxes to estimates of snow density. The propagated errors from porosity and tortuosity estimation resulting in snow density uncertainties estimates of ±10, 20, and 30% are shown as a function of the absolute snow density value.



**Figure S2** Bootstrap randomization without replacement test to examine sampling bias on CO2 flux calculations. Estimation of 95% confidence interval limits based on the number of days sampled in the randomization. Value at ~120 days is the actual confidence limit based on the measured daily fluxes. The average flux (dashed line) in 2006 and 2007, respectively, were 0.74 and 0.76 μmol m-2 s-1 using average daily flux data between 9 am to 5 pm.