## Supplementary

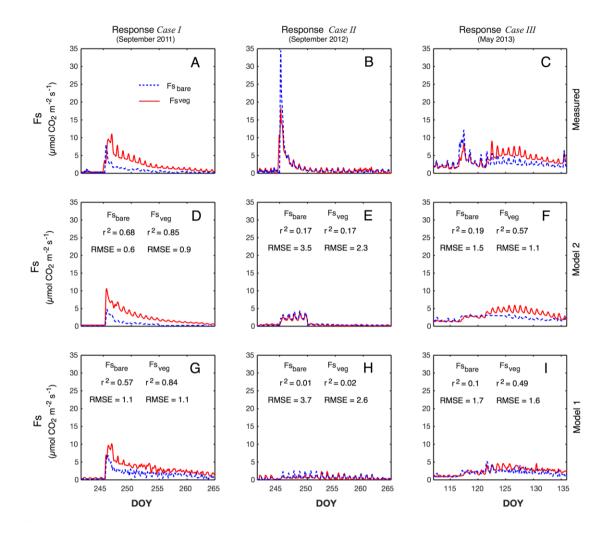


Figure S1. Measured pulse responses of Fs (A-C), model output using modeling approach 2 (D-F) and modeling approach 1 (G-I). Responses are defined as  $Case\ I-III$ , and are identified in Figures 1, and 3. Solid lines represent variables measured under vegetation and dashed lines represent variables measured in bare soil. Fs = soil respiration. The numbers in the x-axis represent the day of the year (DOY) for years 2011 to 2013 for each panel.