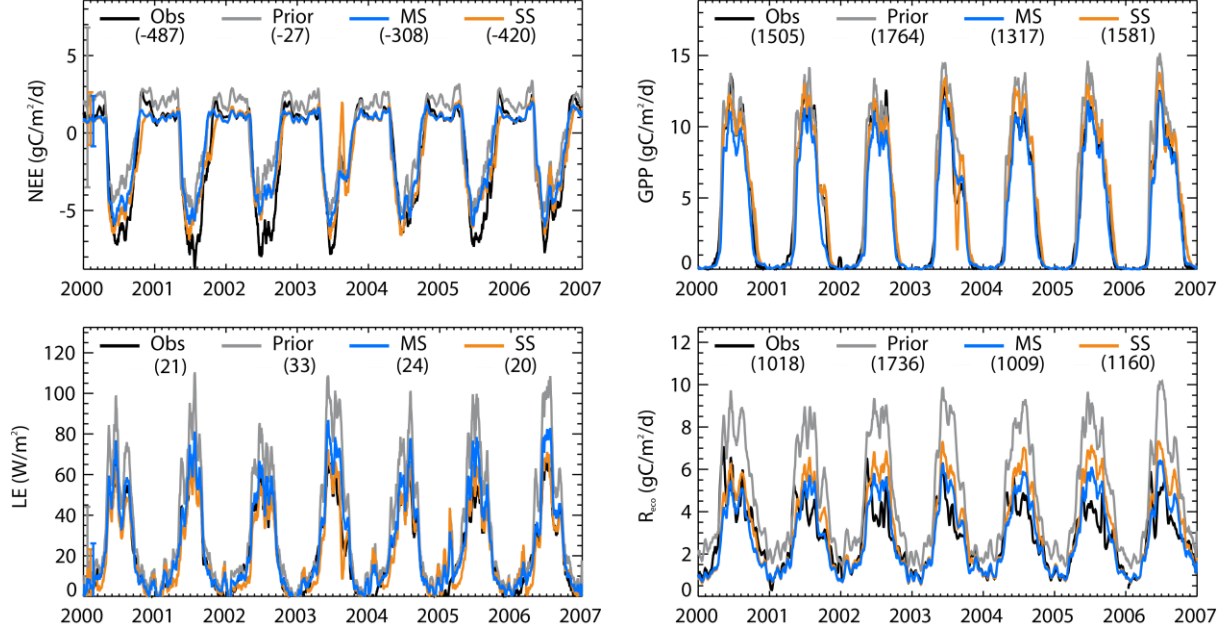


### DE-Hai



### DK-Sor

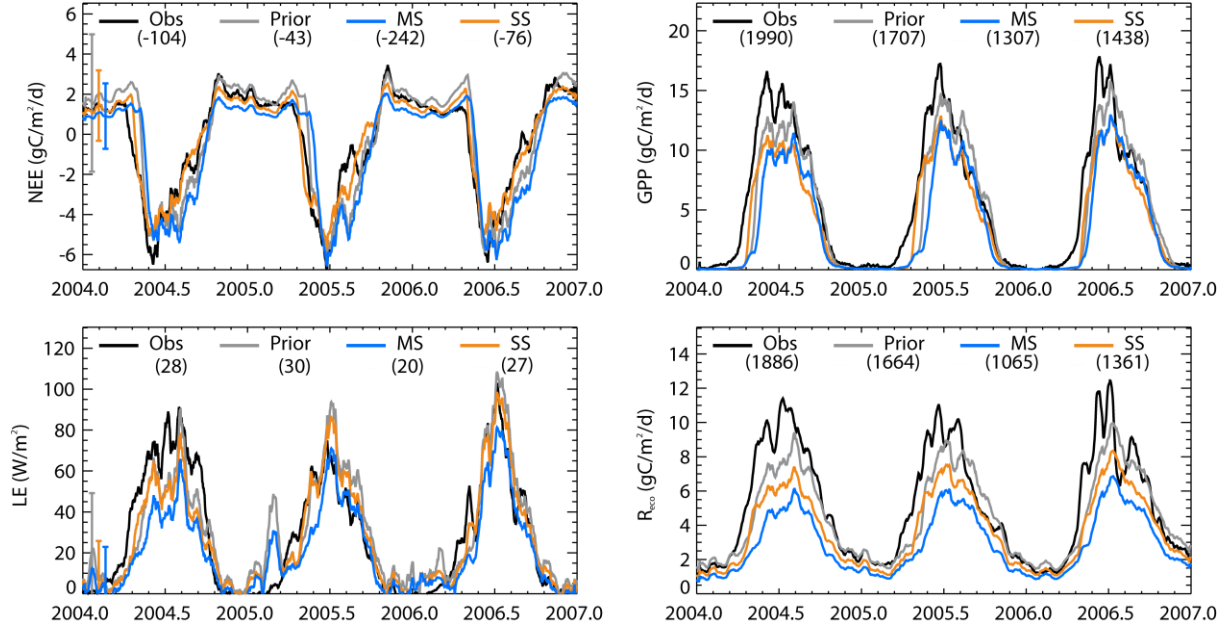


Figure S2. Same as Fig. S1 at Soroe-LilleBogeskov site.

### FR-Fon

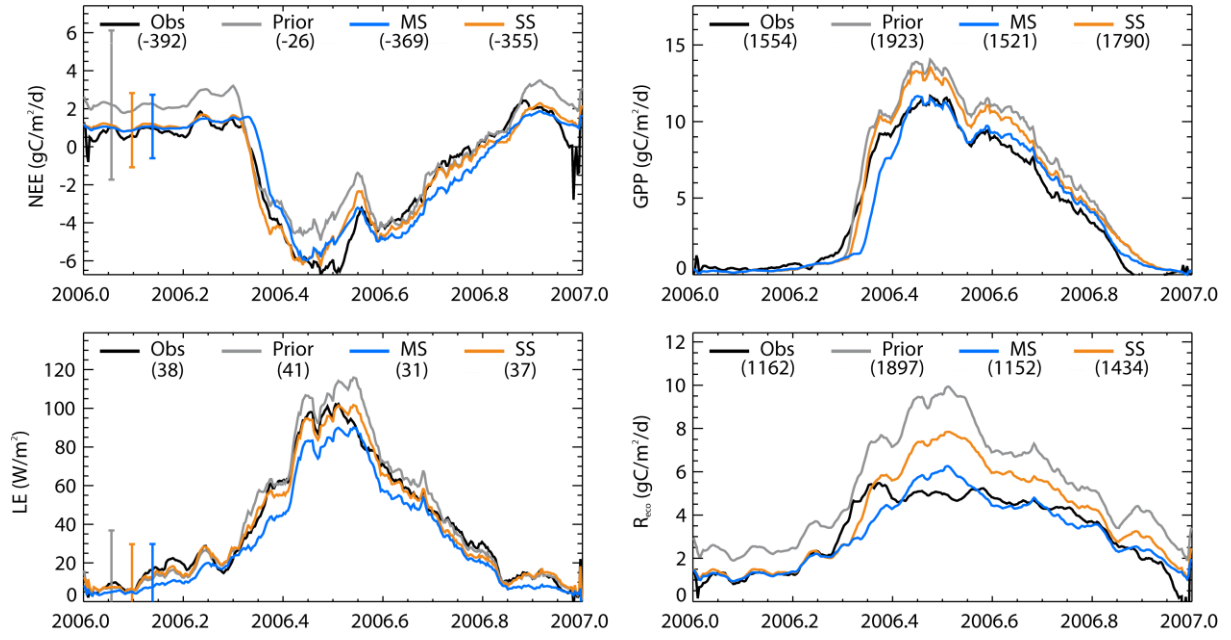


Figure S3. Same as Fig. S1 at Fontainebleau site.

### FR-Hes

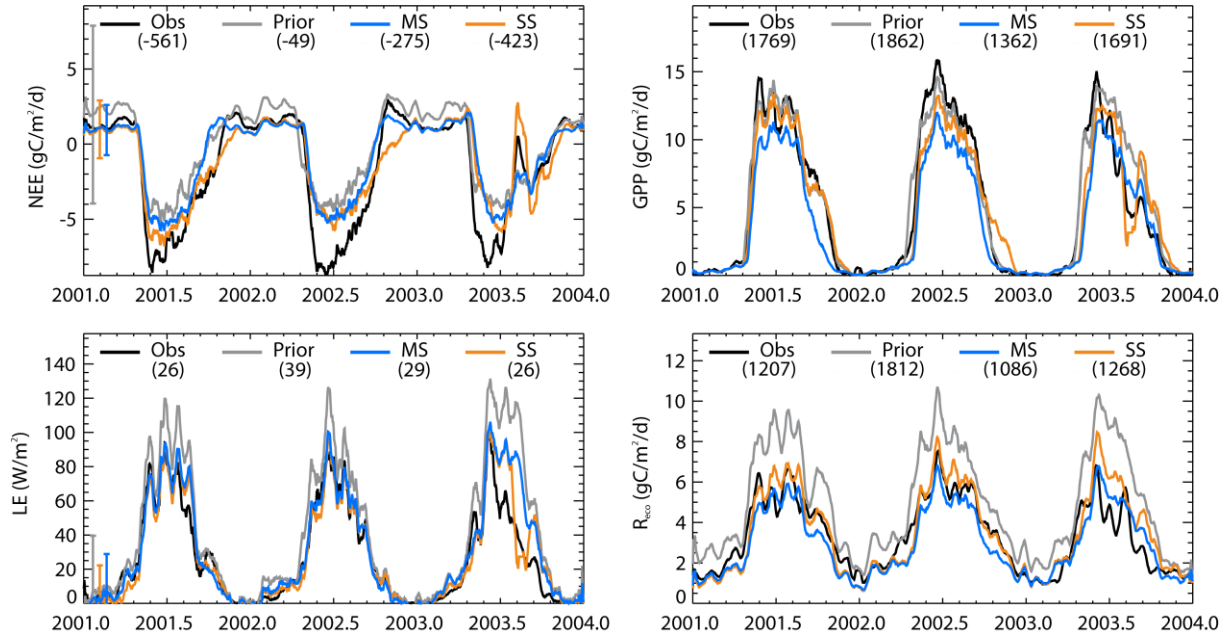


Figure S4. Same as Fig. S1 at Hesse Forest site.

### JP-Tak

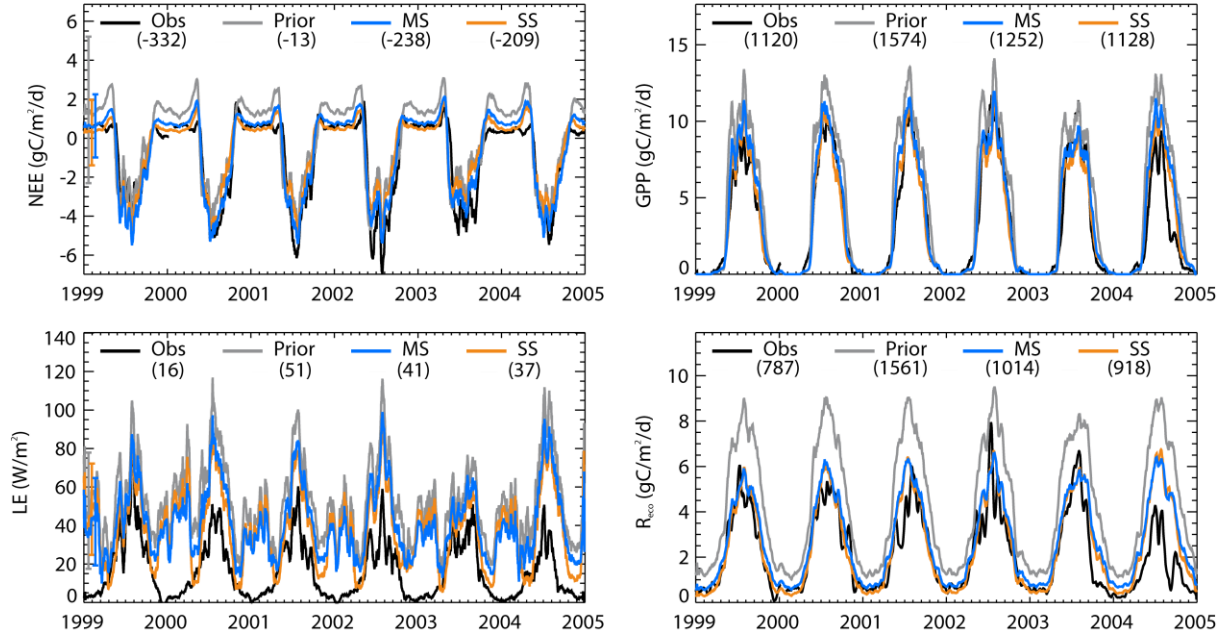


Figure S5. Same as Fig. S1 at Takayama site.

### UK-Ham

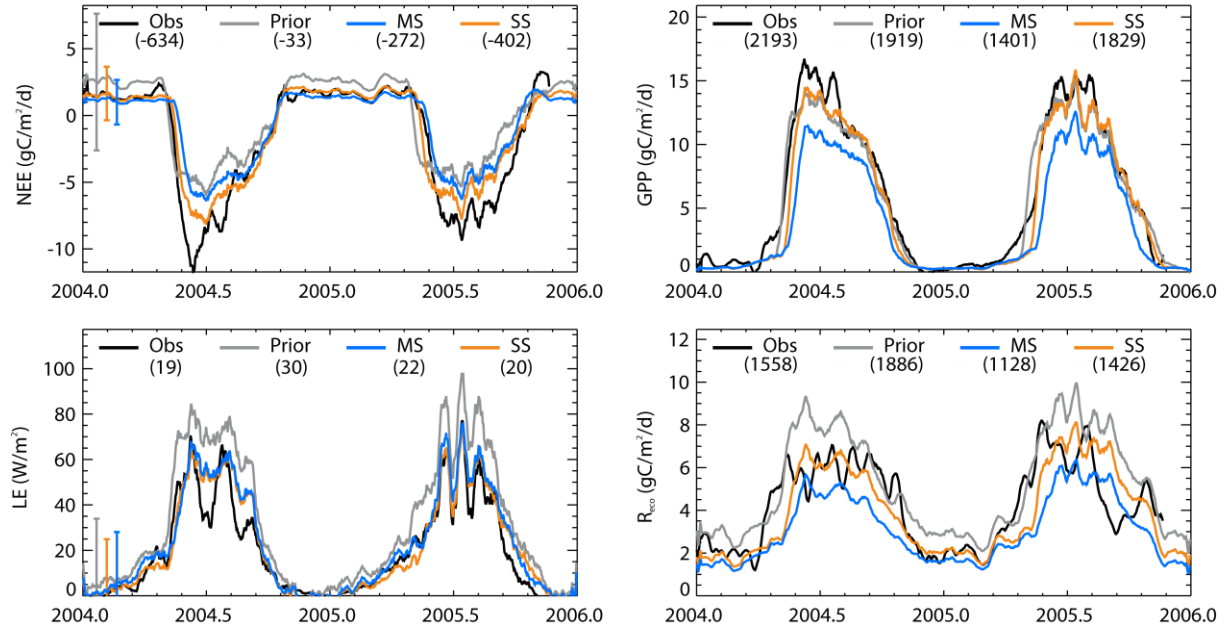


Figure S6. Same as Fig. S1 at Hampshire site.

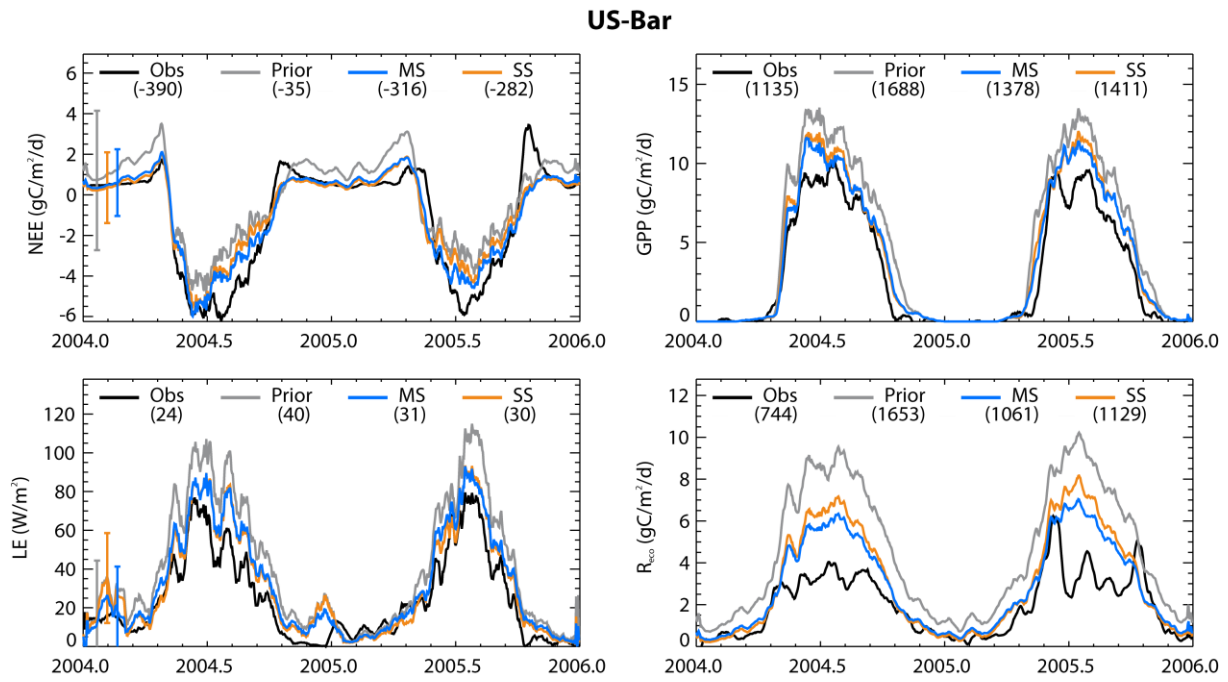


Figure S7. Same as Fig. S1 at Bartlett Experimental Forest site.

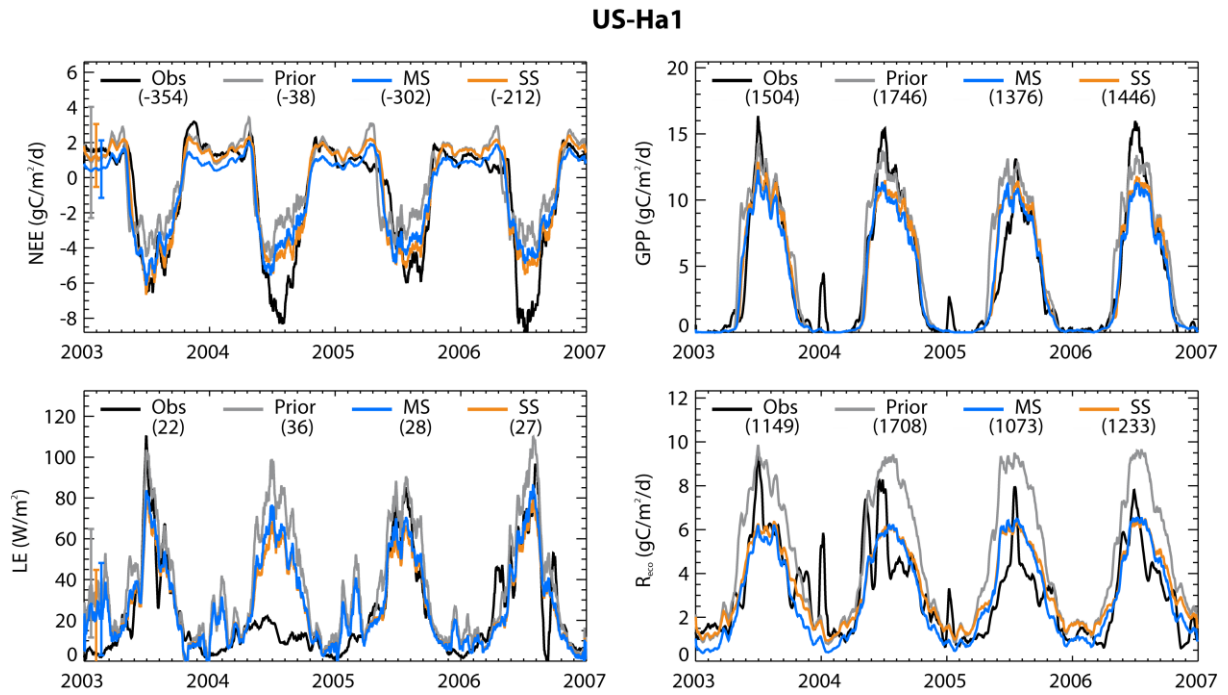


Figure S8. Same as Fig. S1 at Harvard Forest site.

### US-LPH

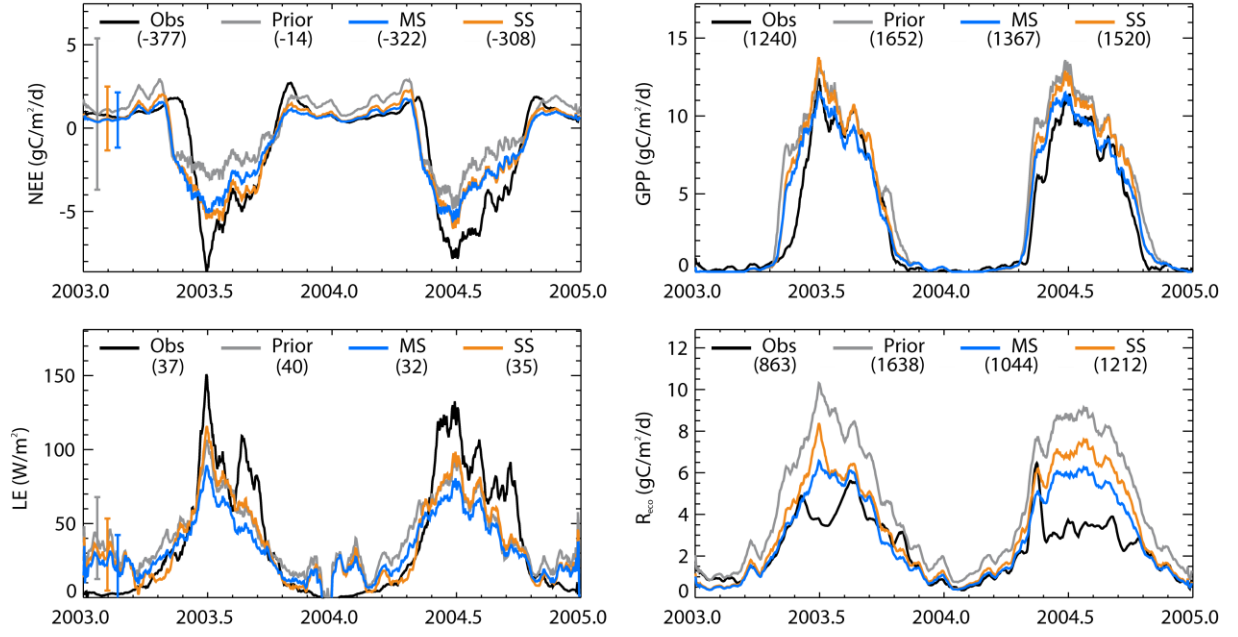


Figure S9. Same as Fig. S1 at Little Prospect Hill site.

### US-MOz

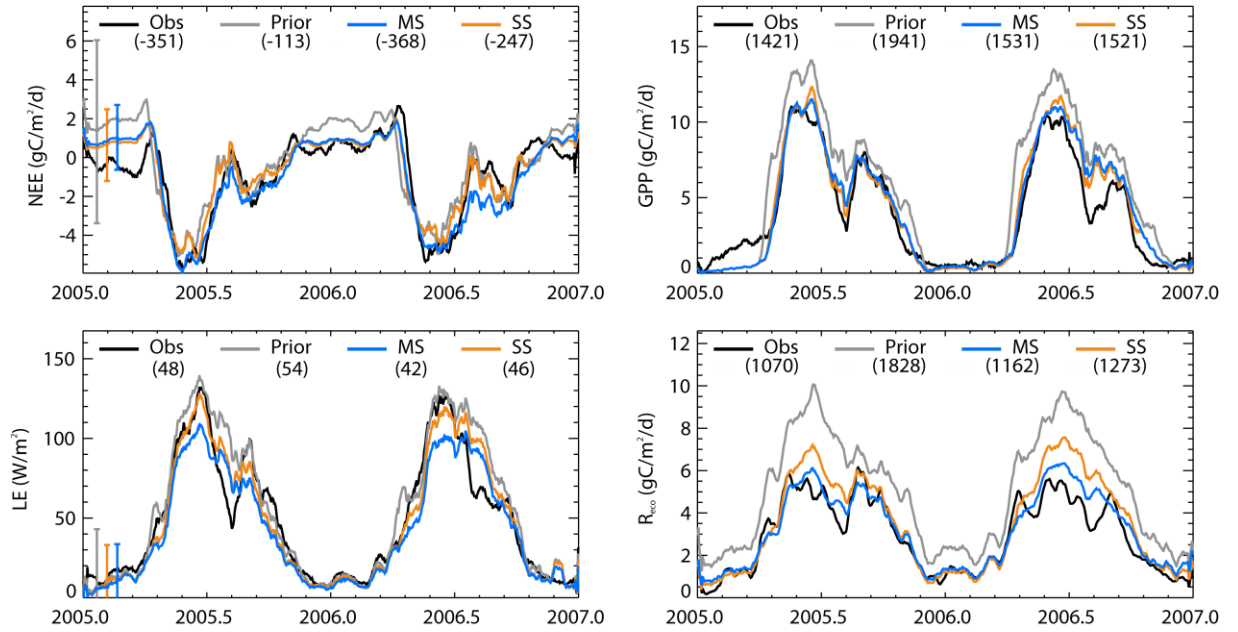


Figure S10. Same as Fig. S1 at Missouri Ozark site.



### US-UMB

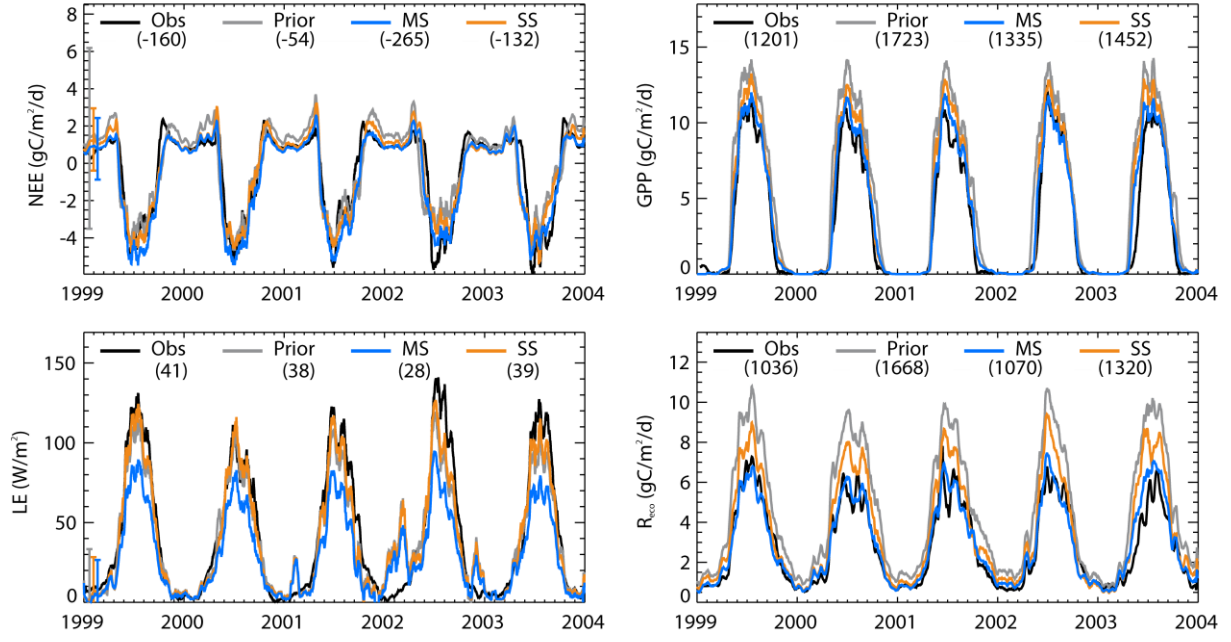


Figure S11. Same as Fig. S1 at Univ. of Mich. Biological Station site.

### US-WCr

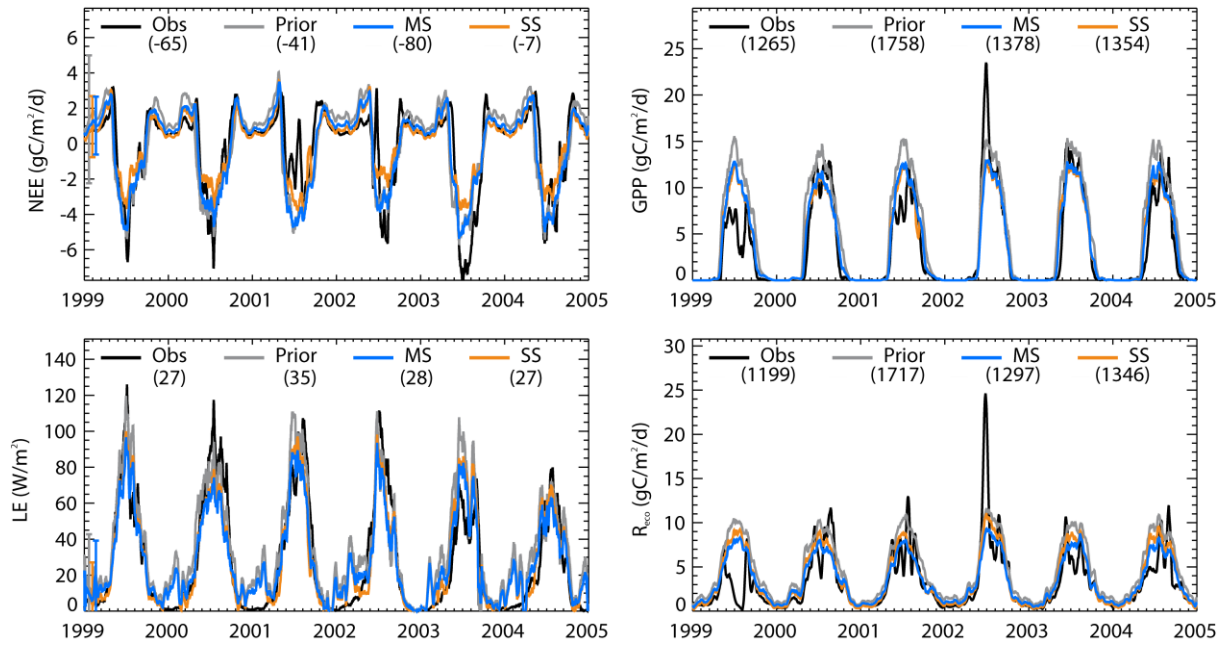


Figure S12. Same as Fig. S1 at Willow Creek site.

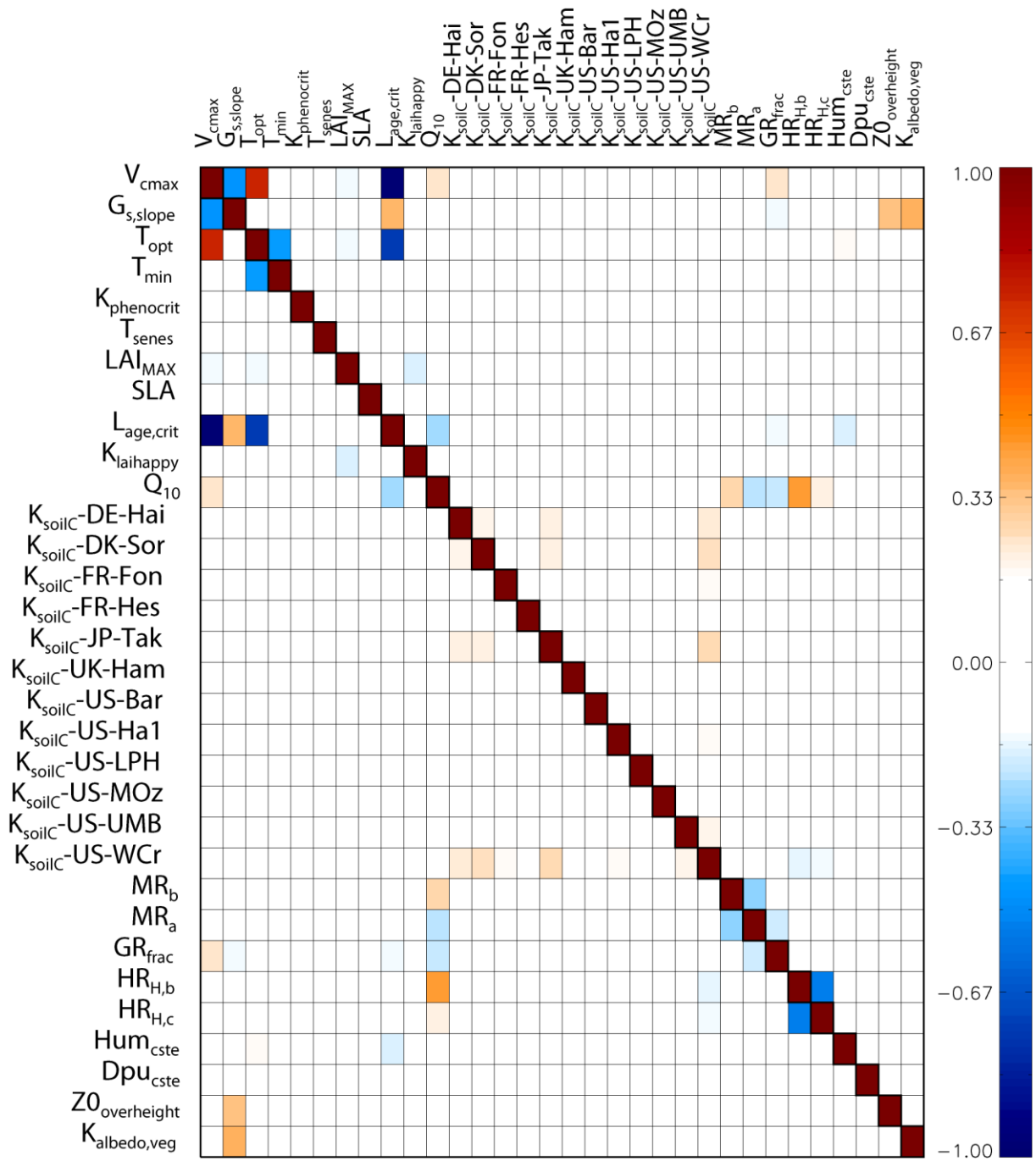


Figure S13. All-site MS posterior parameter error correlation matrix.

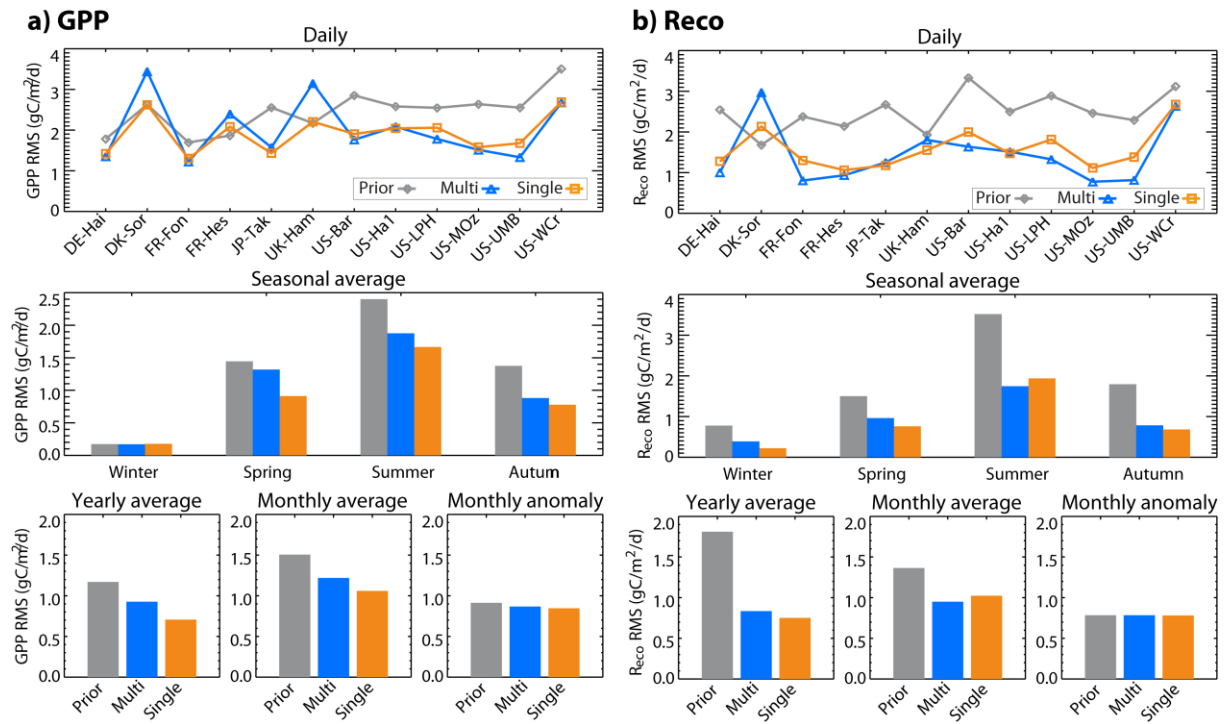


Figure S14. Model-data RMSs at different time scales for a) GPP and b)  $R_{eco}$ . Prior model is in grey, MS optimization in blue, and SS optimization in orange.