Supplementary Materials: list of Figures

Field B

GV

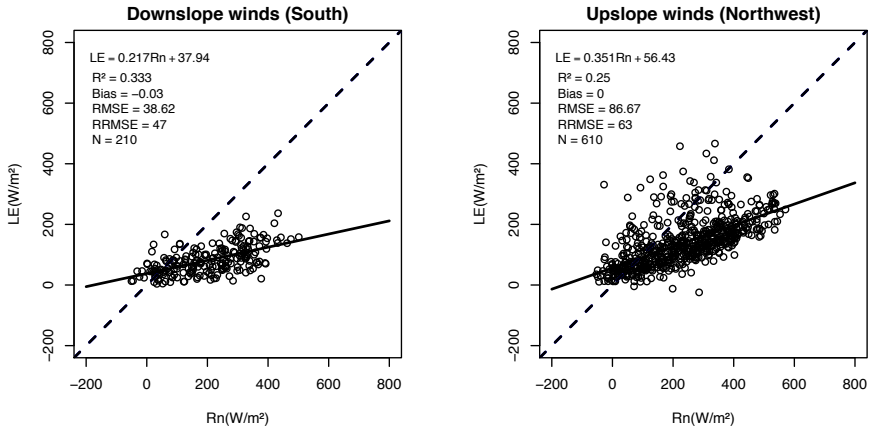

Figure SP1a. Calibration of the LE - Rn gap-filling method on field B. Columns 1 and 2 correspond to downslope and upslope winds, respectively. Line 1 corresponds to the period with green vegetation (GV). The dashed line is the 1:1 line, and the continuous line is the regression line. R^2 is coefficient of determination. RMSE and RRMSE are absolute and relative root mean square errors, respectively. N is the number of flux data calculated over 30 min intervals.

Field C

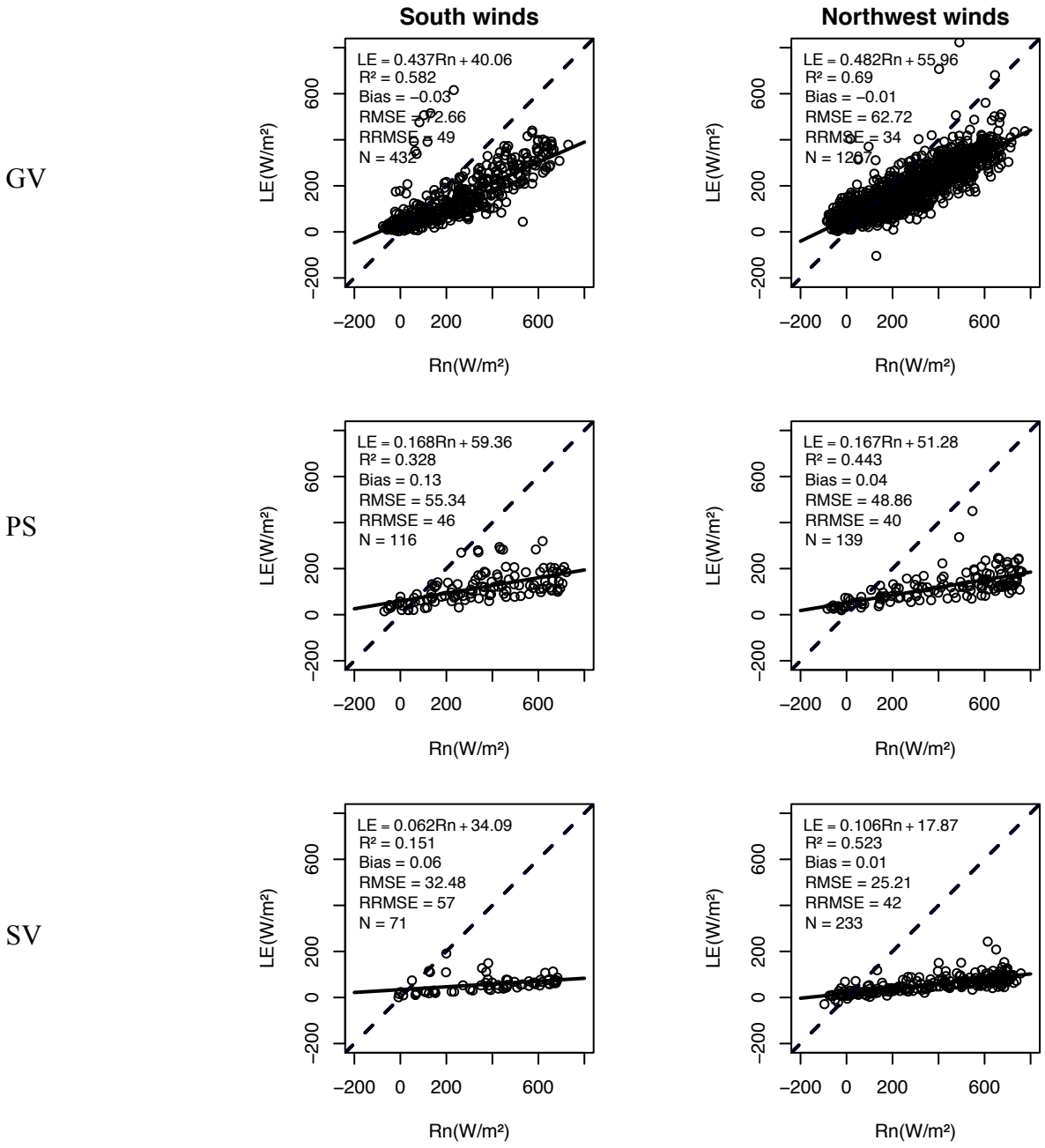

Figure SP1b. Calibration of the LE - Rn gap-filling method on field C. Columns 1 and 2 correspond to south and northwest winds, respectively. Lines 1, 2 and 3 correspond to the three periods (GV, PS, SV) that differed in vegetation phenology, soil water content and climatic conditions. The dashed line is the 1:1 line, and the continuous line is the regression line. R^2 is coefficient of determination. RMSE and RRMSE are absolute and relative root mean square errors, respectively. N is the number of flux data calculated over 30 min intervals.

Field B

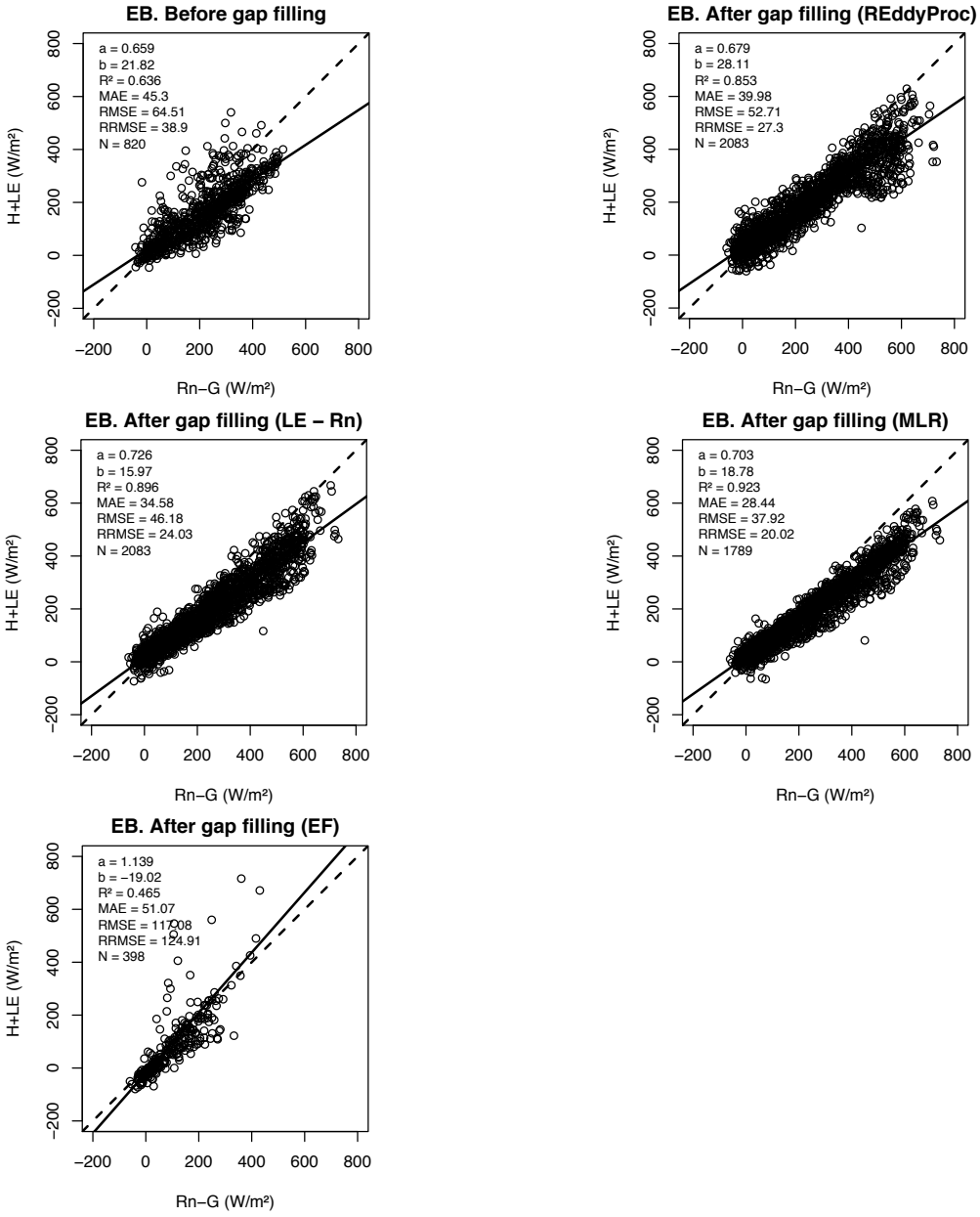

Figure SP2a. Energy balance closure (EB) for field B. Flux data are calculated over 30 minutes intervals. Statistical indicators correspond to the comparison of convective energy (H + LE) on y-axis against the available energy (Rn −G) on x-axis, before (top left subplot) and after (other subplots) reconstruction of LE data by the four gap-filling methods. The dashed line is the 1:1 line, and the continuous line is the regression line. Terms a and b are the slope and the intercept of the linear regression, respectively. R^2 is coefficient of determination. MAE is the mean absolute error. RMSE and RRMSE are absolute and relative root mean square errors, respectively. N is the number of 30 min intervals data.

Field C

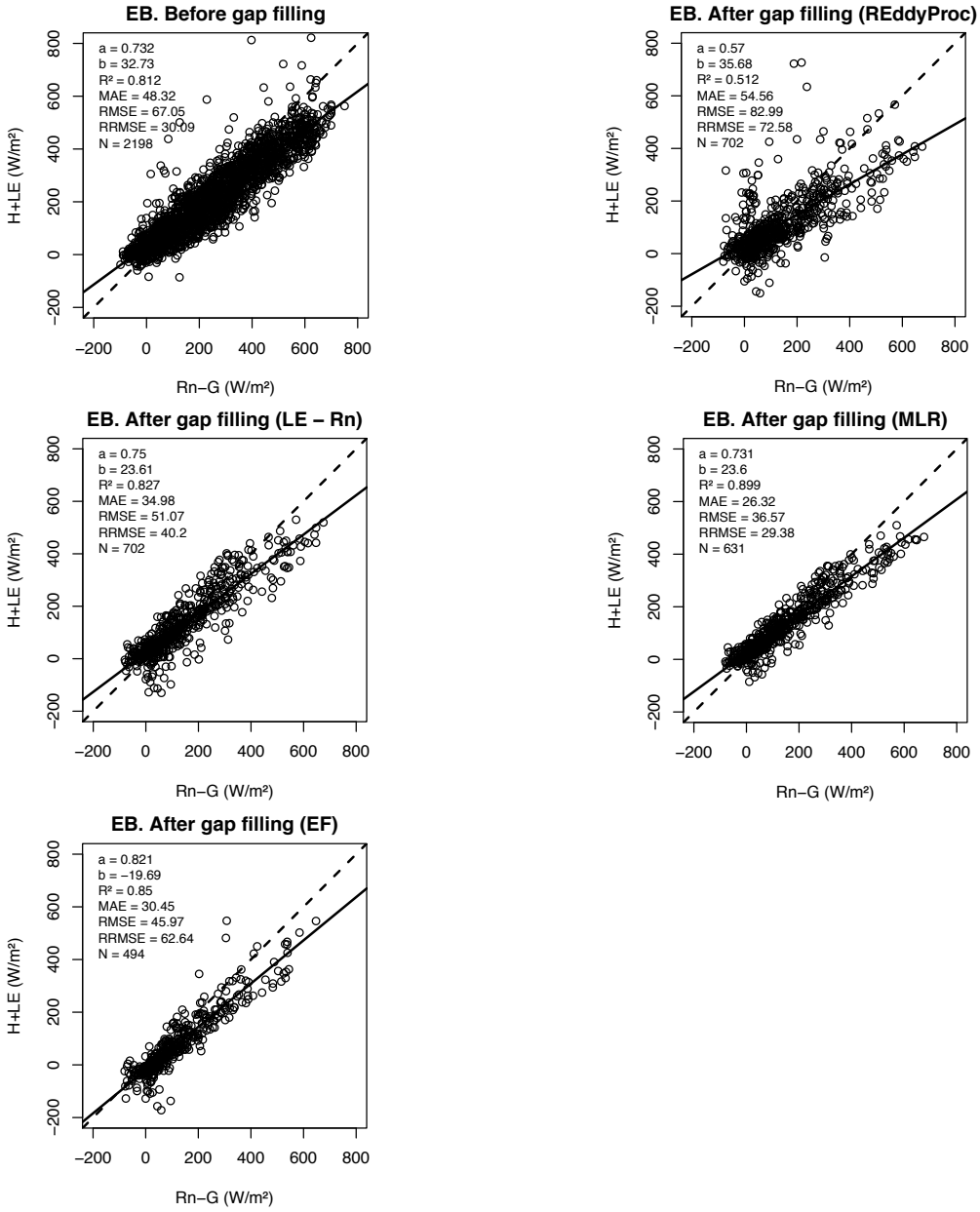

Figure SP2b. Energy balance closure (EB) for field C. Flux data are calculated over 30 minutes intervals. Statistical indicators correspond to the comparison of convective energy (H + LE) on y-axis against the available energy (Rn −G) on x-axis, before (top left subplot) and after (others subplots) reconstruction of LE data by the four gap-filling methods. The dashed line is the 1:1 line, and the continuous line is the regression line. Terms a and b are the slope and the intercept of the linear regression, respectively. R^2 is coefficient of determination. MAE is the mean absolute error. RMSE and RRMSE are absolute and relative root mean square errors, respectively. N is the number of 30 min intervals data.

Supplementary Materials: list of tables

Table SP1. Covariance analysis on regression coefficients for the LE - Rn method when discriminating between the two main winds directions.

Field	Period	Test of equal slopes	Test of equal intercepts
A	GV	**	*
	PS		**
	SV		
B	GV	***	
C	GV		**
	PS		
	SV	*	*

Signification codes

*** <= 0.001
0.001 < ** <= 0.01
0.01 < * <= 0.05