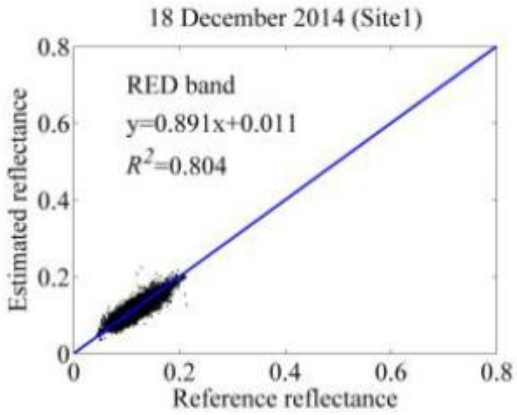
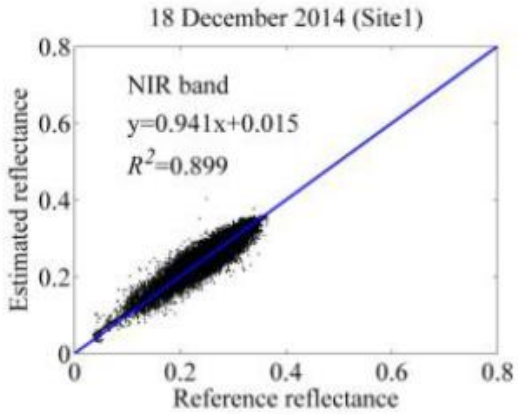
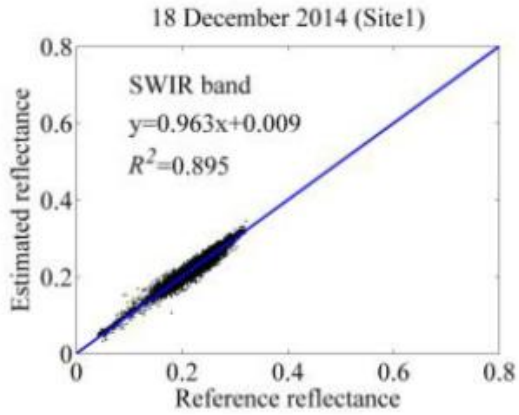
China Shandong JECAM updates

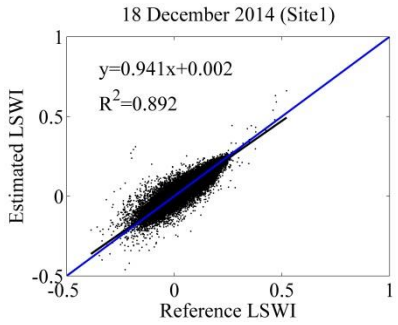
Data fusion based on 100m and 300m Proba-V Reflectance

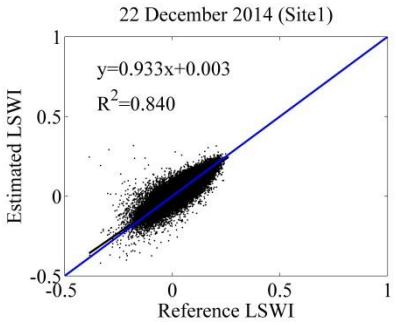
- ESTARFM are used to fill in the gaps of daily 100m Proba-V data
- The accuracy assessment shows that both reflectance and the vegetation indices derived from the blended data is close to the 1:1 line

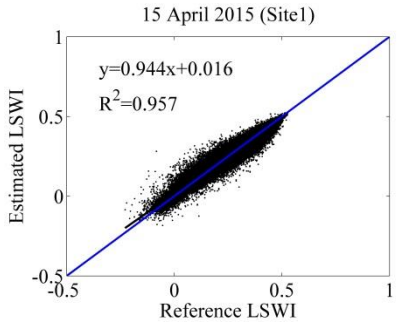


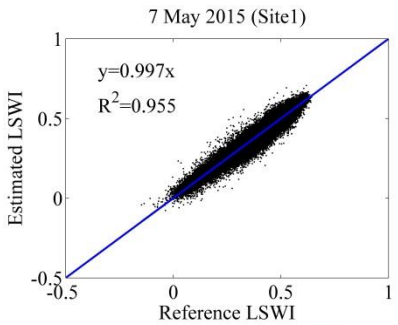












Winter wheat biomass estimation based on LUE model

- The estimated biomass from the blended 100-m data were generally in good agreement with the observed biomass (R^2 = 0.864, RMSE = 191 g/m^2 and RRMSE = 16.7%); most of the scatter points are distributed along the fitting line, and the slopes is 0.916.

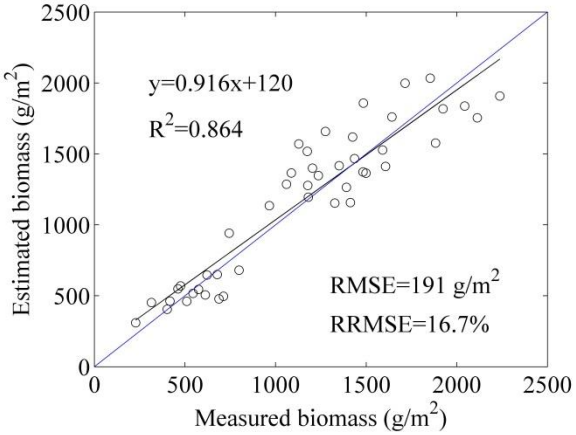
$$AGB = R \times LUE \times \sum_{t=0}^{N} (APAR(\Delta t) \times \Delta t)$$

$$APAR = \sum_{t=0}^{N} (PAR \times FPAR) \times \Delta t$$

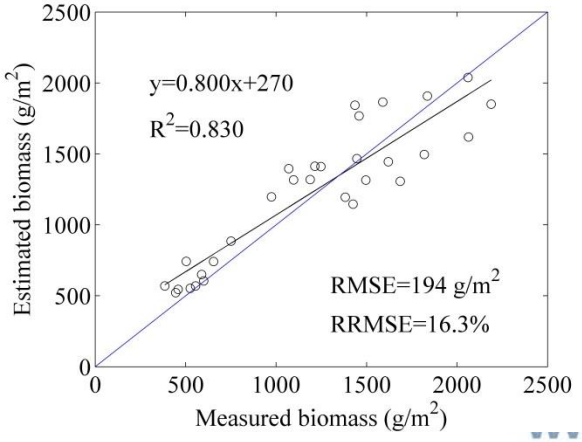
$$LUE(x,t) = \varepsilon^* \times T_{\varepsilon 1}(x,t) \times T_{\varepsilon 2}(x,t) \times W_\varepsilon(x,t)$$

$$W_\varepsilon(x,t) = (1 + LSWI)/(1 + LSWI_{max})$$

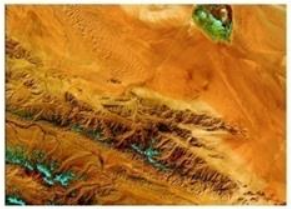
Winter wheat biomass estimation using the fused 100m data

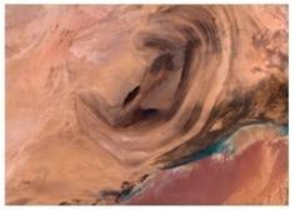


Winter wheat biomass estimation using the 300m data



Thanks!



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