



Figure S1. A scatter plot for comparison of C5 8-day CI and C6 daily CI data with the field CI data at 7 sites with seasonal profiles of field-measured CIs (Table 2). Different symbols denote CI data of different sites, and the red and blue colors indicate C5 and C6 CIs, respectively. Solid regression lines represent the linear fits of field-measured CIs with MODIS CIs, which show a middle-to-high correlation for C5 and C6 CI data in these 7 seasonal sites; however, C6 CI data are closer to field measurements than C5 CI data in this comparison case. Indeed, compared to the validation result at 48 global sites with spatial representativeness (Figure 6), MODIS CI data are in a relatively poor agreement with field CI data at these 7 local sites. This result is most likely because the lack of spatial representativeness comes from part of the 7-site field measurements over the spatial scale of MODIS observations, especially during leaf-off periods.