Supplementary Information

for

A novel data-driven global model of photosynthesis using solar-induced chlorophyll fluorescence

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Table S1

Fig. S1. Location of the BR-K34 eddy covariance tower.

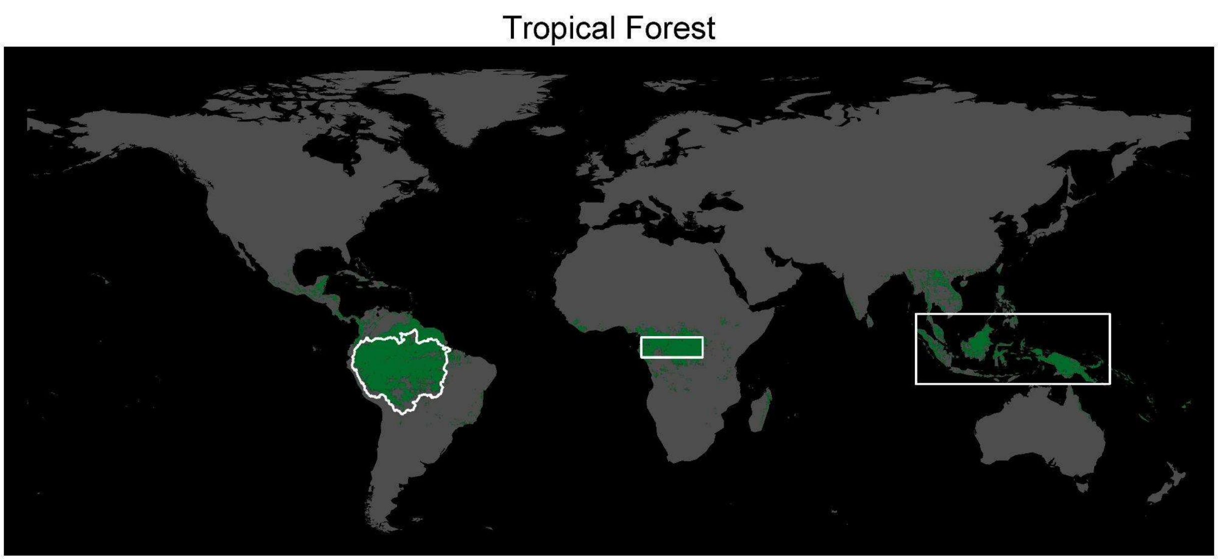


Fig. S2. Tropical evergreen broadleaf forests. White boundaries are those used to define the Amazon Basin, Congo Basin, and Southeast Asia for our regional investigations. Green represents 0.05-degree pixels which were classified as being > 50% evergreen broadleaf forest by the MODIS MCD12C1 land cover product (Friedl & Sulla-Menashe, 2015).

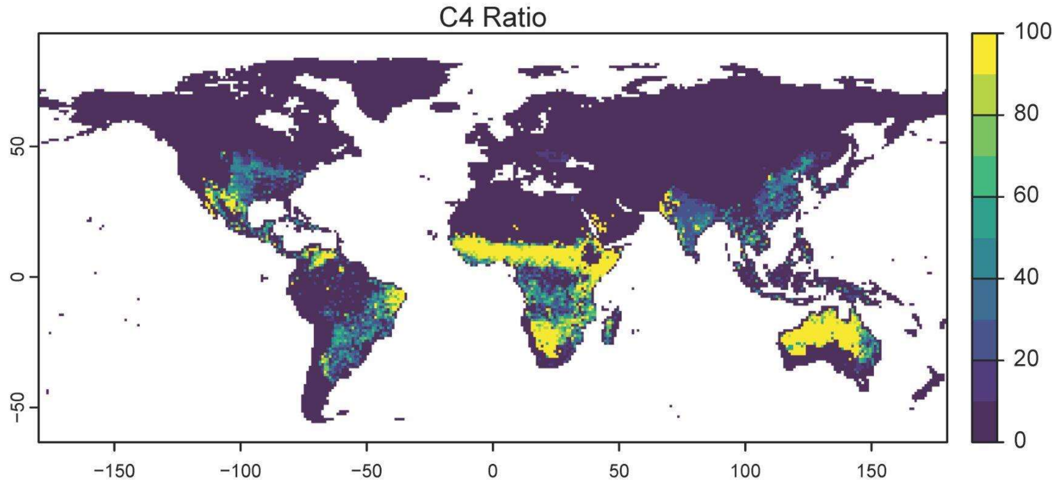


Fig. S3. Ratio of C4 vegetation in percentage.

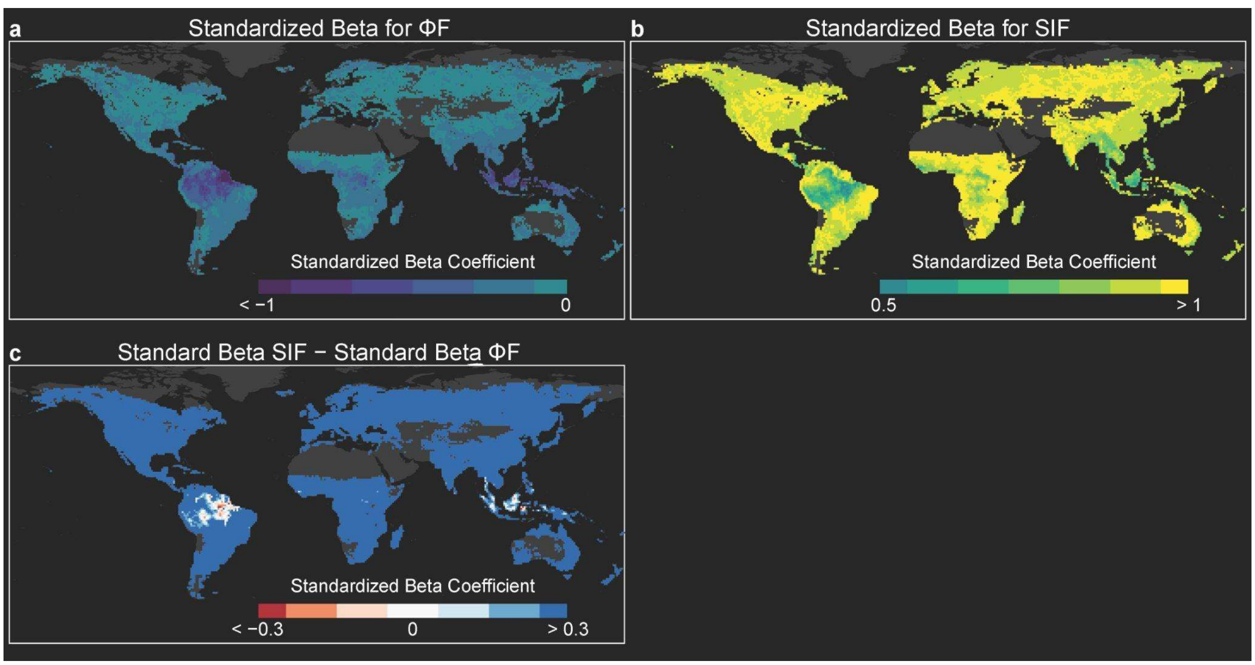


Fig. S4. Standardized beta coefficients from multiple regression using ΦF + SIF to predict $APAR_{chl}$. The standardized beta coefficients reflect the relative contribution of ΦF and SIF to $APAR_{chl}$. and These figures illustrate that SIF is the primary determinant of changes in $APAR_{chl}$ in our model calculation ($APAR_{chl}$ = SIF / ΦF), as the relative changes in SIF are much larger than ΦF.

Figs. S5-S15. Annual monthly mean GPP for the eddy covariance tower site, ChloFluo, FluxCom, FluxSat, and SIF. Regression results at top right are from the respective data set versus tower GPP.

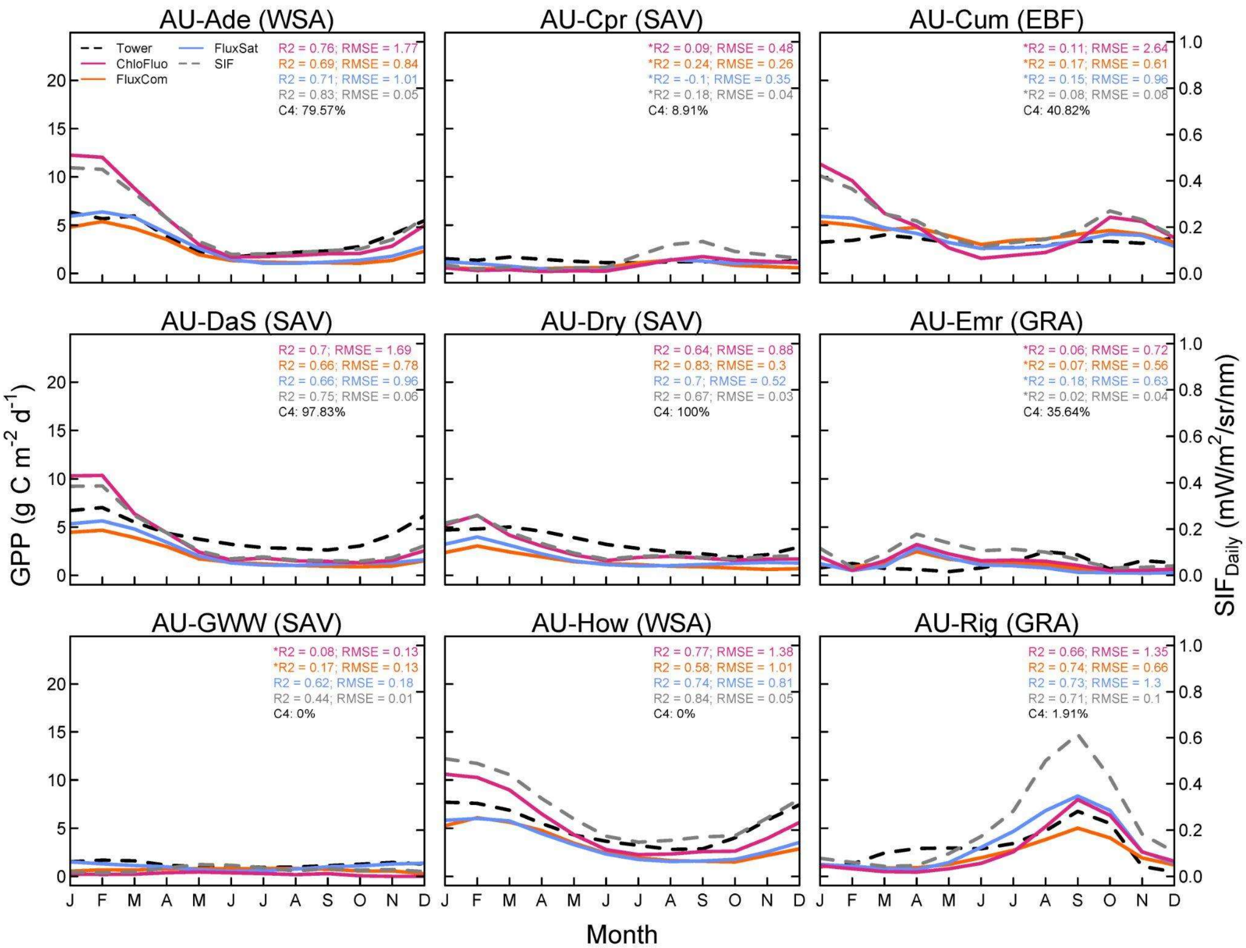


Fig. S5

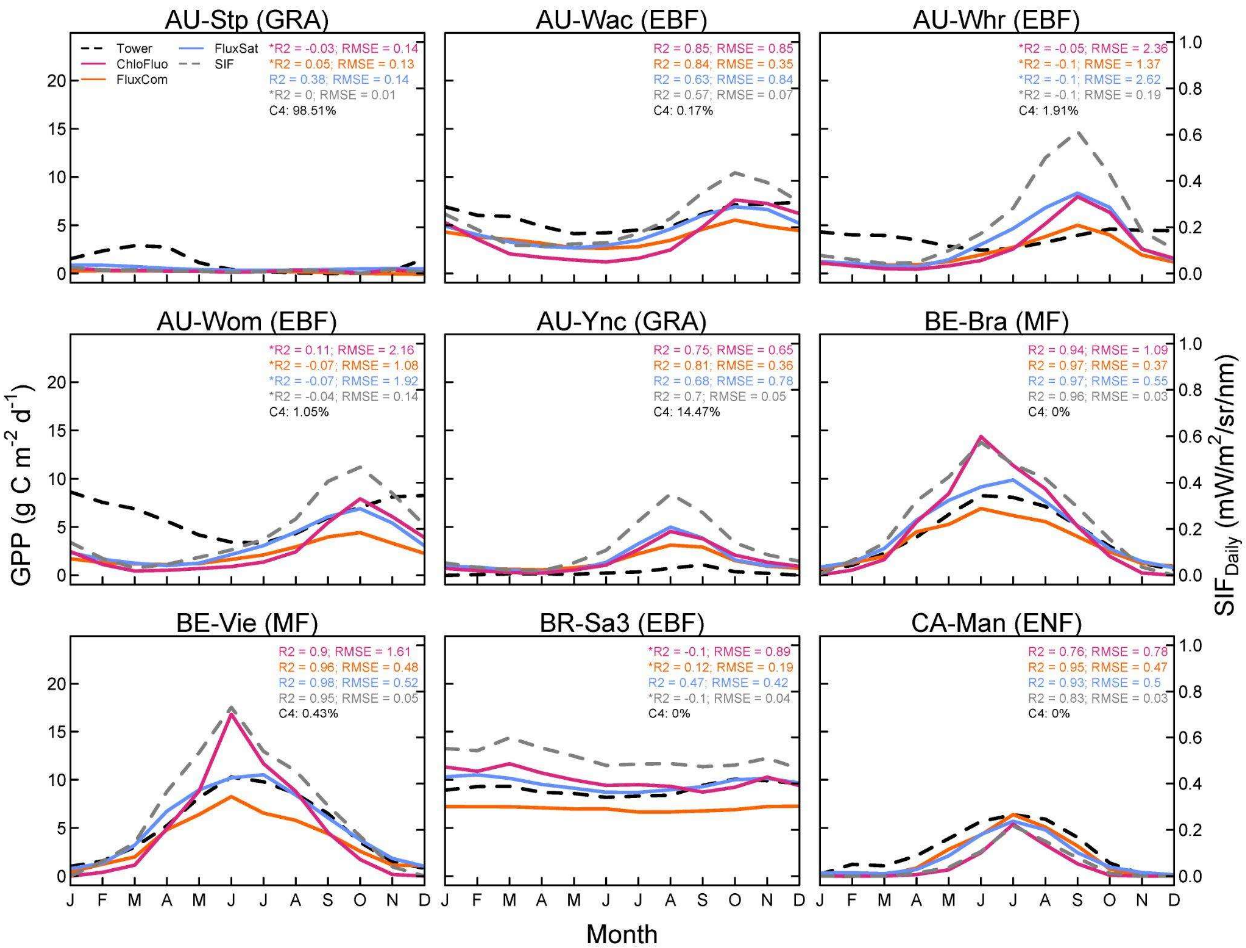

AU-Stp (GRA)
AU-Wac (EBF)
AU-Whr (EBF)
AU-Wom (EBF)
AU-Ync (GRA)
BE-Bra (MF)
BE-Vie (MF)
BR-Sa3 (EBF)
CA-Man (ENF)
Tower
ChloFluo
FluxCom
FluxSat
SIF
GPP (g C m-2 d-1)
SIFDaily (mW/m2/sr/nm)
Month
*R2 = -0.03; RMSE = 0.14
*R2 = 0.05; RMSE = 0.13
R2 = 0.38; RMSE = 0.14
*R2 = 0; RMSE = 0.01
C4: 98.51%
R2 = 0.85; RMSE = 0.85
R2 = 0.84; RMSE = 0.35
R2 = 0.63; RMSE = 0.84
R2 = 0.57; RMSE = 0.07
C4: 0.17%
*R2 = -0.05; RMSE = 2.36
*R2 = -0.1; RMSE = 1.37
*R2 = -0.1; RMSE = 2.62
*R2 = -0.1; RMSE = 0.19
C4: 1.91%
*R2 = 0.11; RMSE = 2.16
*R2 = -0.07; RMSE = 1.08
*R2 = -0.07; RMSE = 1.92
*R2 = -0.04; RMSE = 0.14
C4: 1.05%
R2 = 0.75; RMSE = 0.65
R2 = 0.81; RMSE = 0.36
R2 = 0.68; RMSE = 0.78
R2 = 0.7; RMSE = 0.05
C4: 14.47%
R2 = 0.94; RMSE = 1.09
R2 = 0.97; RMSE = 0.37
R2 = 0.97; RMSE = 0.55
R2 = 0.96; RMSE = 0.03
C4: 0%
R2 = 0.9; RMSE = 1.61
R2 = 0.96; RMSE = 0.48
R2 = 0.98; RMSE = 0.52
R2 = 0.95; RMSE = 0.05
C4: 0.43%
*R2 = -0.1; RMSE = 0.89
*R2 = 0.12; RMSE = 0.19
R2 = 0.47; RMSE = 0.42
*R2 = -0.1; RMSE = 0.04
C4: 0%
R2 = 0.76; RMSE = 0.78
R2 = 0.95; RMSE = 0.47
R2 = 0.93; RMSE = 0.5
R2 = 0.83; RMSE = 0.03
C4: 0%
J F M A M J J A S O N D

Fig. S6

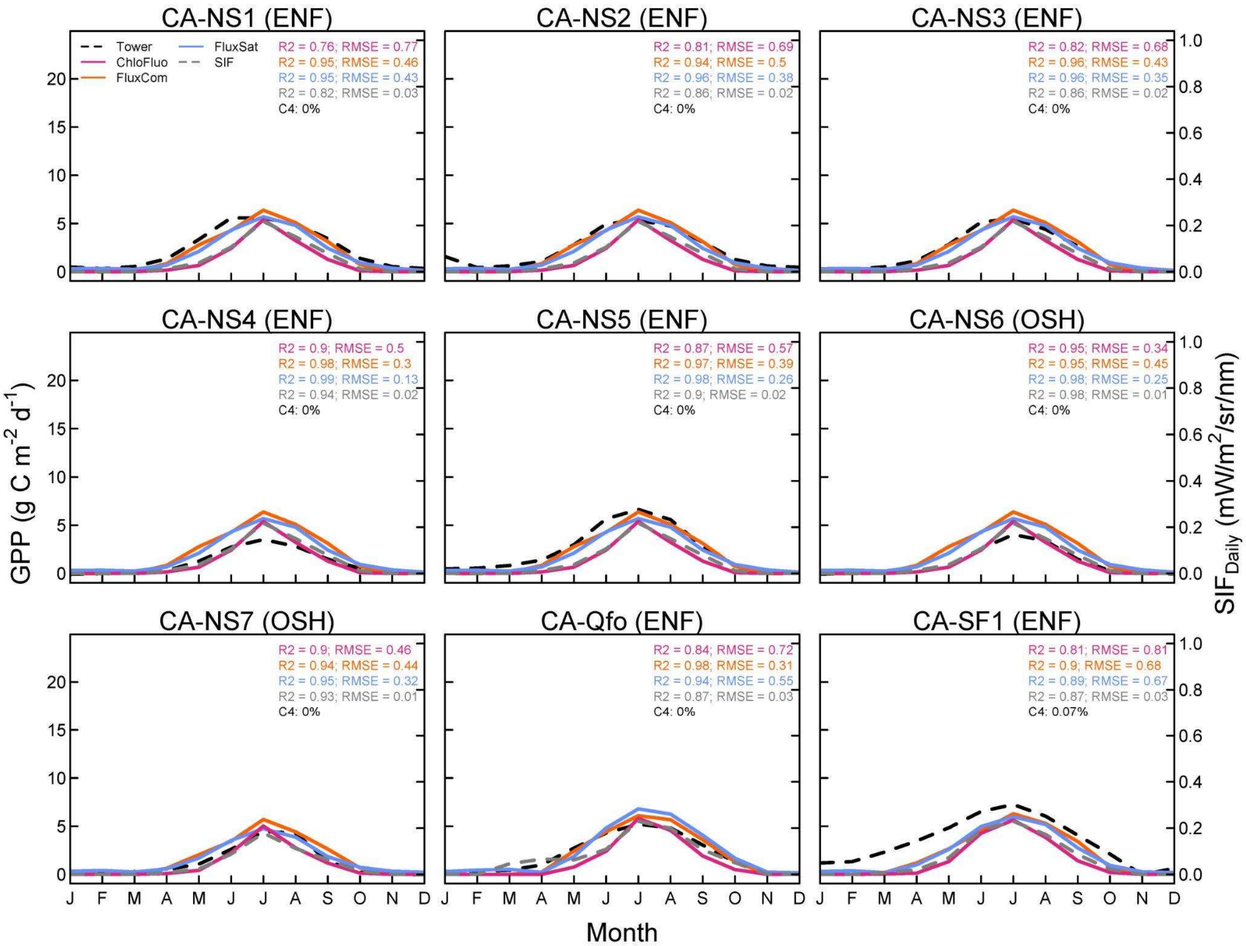
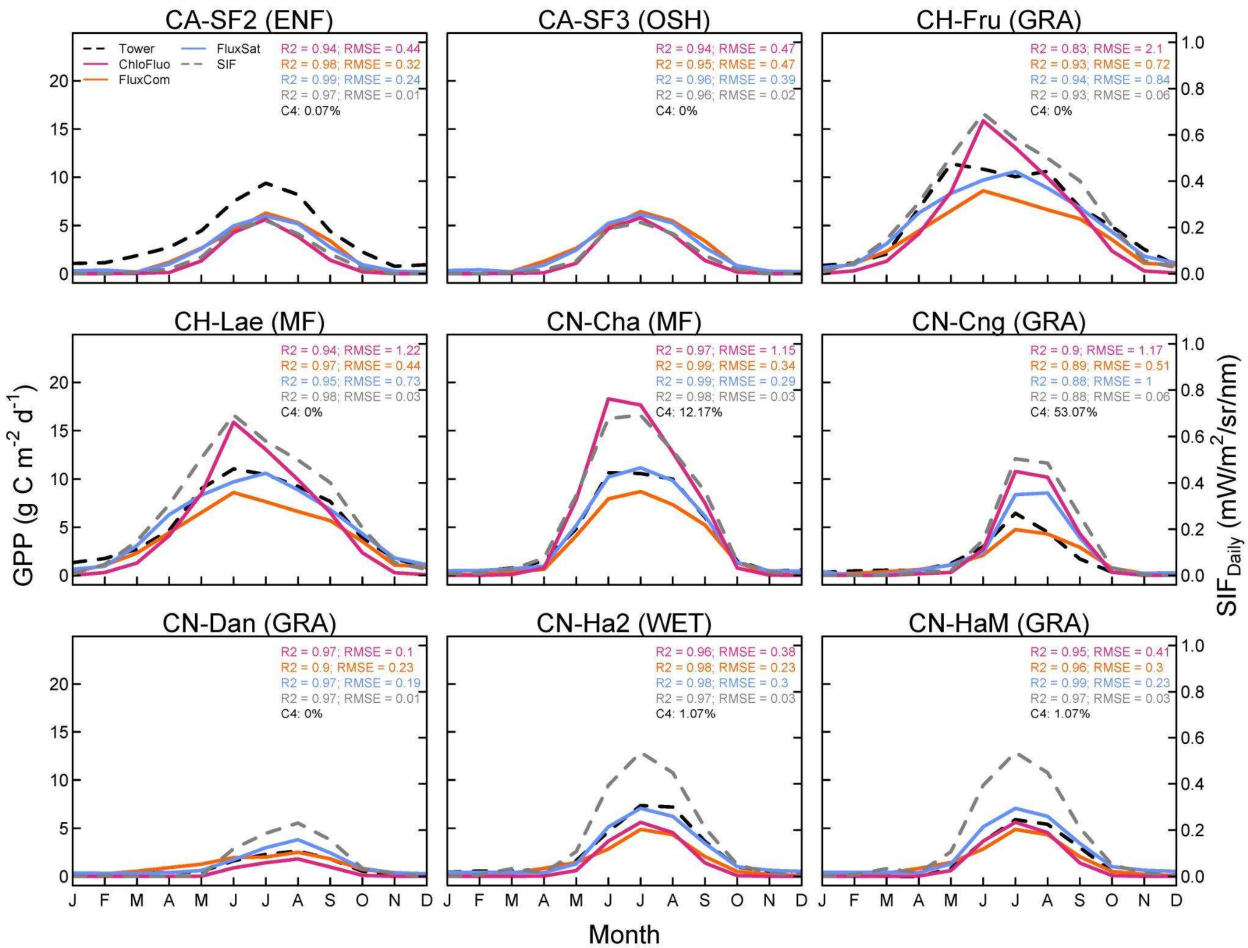

CA-NS1 (ENF)
Tower
ChloFluo
FluxCom
FluxSat
SIF
R2 = 0.76; RMSE = 0.77
R2 = 0.95; RMSE = 0.46
R2 = 0.95; RMSE = 0.43
R2 = 0.82; RMSE = 0.03
C4: 0%
CA-NS2 (ENF)
R2 = 0.81; RMSE = 0.69
R2 = 0.94; RMSE = 0.5
R2 = 0.96; RMSE = 0.38
R2 = 0.86; RMSE = 0.02
C4: 0%
CA-NS3 (ENF)
R2 = 0.82; RMSE = 0.68
R2 = 0.96; RMSE = 0.43
R2 = 0.96; RMSE = 0.35
R2 = 0.86; RMSE = 0.02
C4: 0%
CA-NS4 (ENF)
R2 = 0.9; RMSE = 0.5
R2 = 0.98; RMSE = 0.3
R2 = 0.99; RMSE = 0.13
R2 = 0.94; RMSE = 0.02
C4: 0%
CA-NS5 (ENF)
R2 = 0.87; RMSE = 0.57
R2 = 0.97; RMSE = 0.39
R2 = 0.98; RMSE = 0.26
R2 = 0.9; RMSE = 0.02
C4: 0%
CA-NS6 (OSH)
R2 = 0.95; RMSE = 0.34
R2 = 0.95; RMSE = 0.45
R2 = 0.98; RMSE = 0.25
R2 = 0.98; RMSE = 0.01
C4: 0%
CA-NS7 (OSH)
R2 = 0.9; RMSE = 0.46
R2 = 0.94; RMSE = 0.44
R2 = 0.95; RMSE = 0.32
R2 = 0.93; RMSE = 0.01
C4: 0%
CA-Qfo (ENF)
R2 = 0.84; RMSE = 0.72
R2 = 0.98; RMSE = 0.31
R2 = 0.94; RMSE = 0.55
R2 = 0.87; RMSE = 0.03
C4: 0%
CA-SF1 (ENF)
R2 = 0.81; RMSE = 0.81
R2 = 0.9; RMSE = 0.68
R2 = 0.89; RMSE = 0.67
R2 = 0.87; RMSE = 0.03
C4: 0.07%
GPP (g C m-2 d-1)
SIFDaily (mW/m2/sr/nm)
0
5
10
15
20
0.0
0.2
0.4
0.6
0.8
1.0
J F M A M J J A S O N D
Month

Fig. S7



CA-SF2 (ENF)
Tower
ChloFluo
FluxCom
FluxSat
SIF
R2 = 0.94; RMSE = 0.44
R2 = 0.98; RMSE = 0.32
R2 = 0.99; RMSE = 0.24
R2 = 0.97; RMSE = 0.01
C4: 0.07%
CA-SF3 (OSH)
R2 = 0.94; RMSE = 0.47
R2 = 0.95; RMSE = 0.47
R2 = 0.96; RMSE = 0.39
R2 = 0.96; RMSE = 0.02
C4: 0%
CH-Fru (GRA)
R2 = 0.83; RMSE = 2.1
R2 = 0.93; RMSE = 0.72
R2 = 0.94; RMSE = 0.84
R2 = 0.93; RMSE = 0.06
C4: 0%
CH-Lae (MF)
R2 = 0.94; RMSE = 1.22
R2 = 0.97; RMSE = 0.44
R2 = 0.95; RMSE = 0.73
R2 = 0.98; RMSE = 0.03
C4: 0%
CN-Cha (MF)
R2 = 0.97; RMSE = 1.15
R2 = 0.99; RMSE = 0.34
R2 = 0.99; RMSE = 0.29
R2 = 0.98; RMSE = 0.03
C4: 12.17%
CN-Cng (GRA)
R2 = 0.9; RMSE = 1.17
R2 = 0.89; RMSE = 0.51
R2 = 0.88; RMSE = 1
R2 = 0.88; RMSE = 0.06
C4: 53.07%
CN-Dan (GRA)
R2 = 0.97; RMSE = 0.1
R2 = 0.9; RMSE = 0.23
R2 = 0.97; RMSE = 0.19
R2 = 0.97; RMSE = 0.01
C4: 0%
CN-Ha2 (WET)
R2 = 0.96; RMSE = 0.38
R2 = 0.98; RMSE = 0.23
R2 = 0.98; RMSE = 0.3
R2 = 0.97; RMSE = 0.03
C4: 1.07%
CN-HaM (GRA)
R2 = 0.95; RMSE = 0.41
R2 = 0.96; RMSE = 0.3
R2 = 0.99; RMSE = 0.23
R2 = 0.97; RMSE = 0.03
C4: 1.07%
GPP (g C m-2 d-1)
SIFDaily (mW/m2/sr/nm)
J F M A M J J A S O N D
Month

Fig. S8

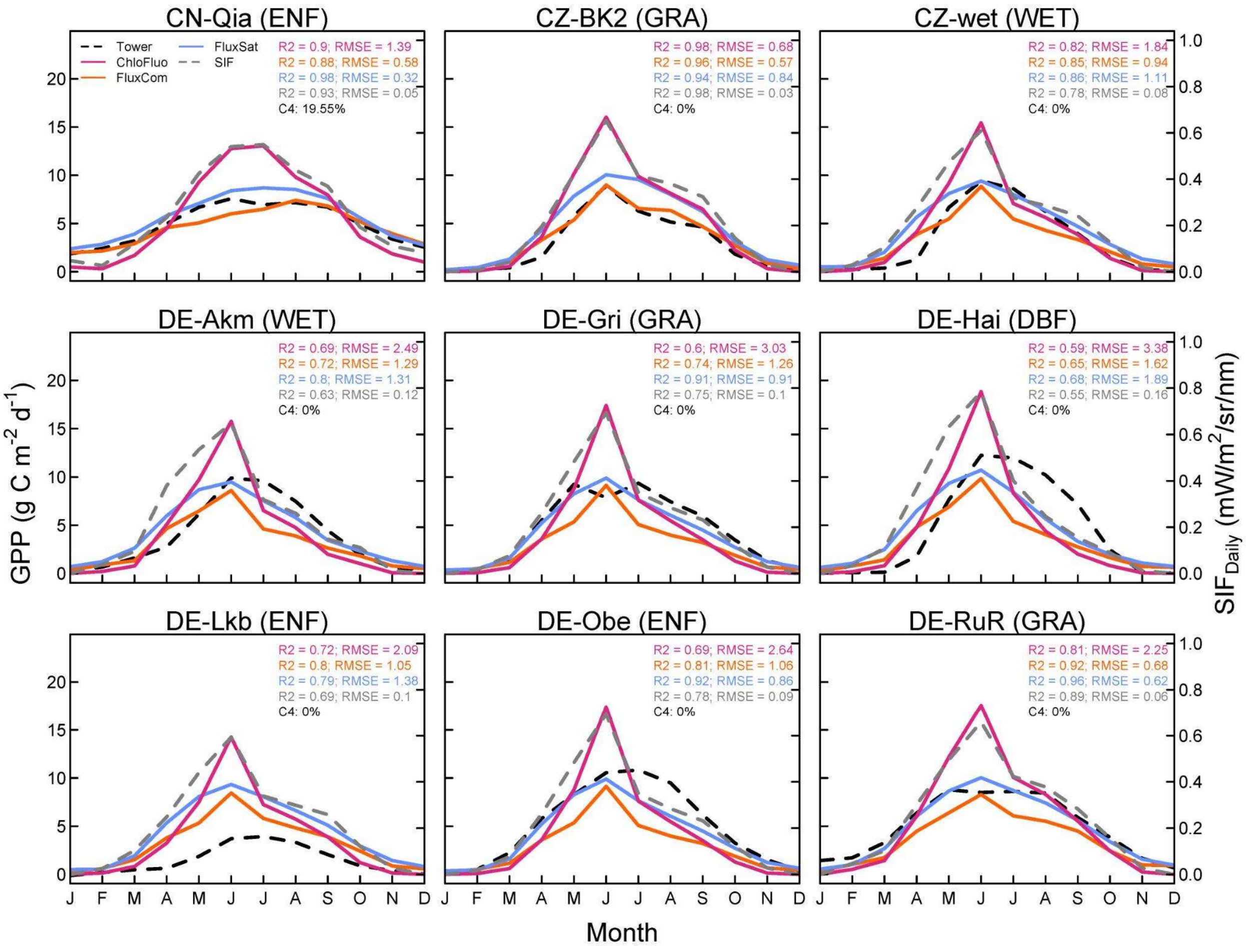

CN-Qia (ENF)
Tower
ChloFluo
FluxCom
FluxSat
SIF
R2 = 0.9; RMSE = 1.39
R2 = 0.88; RMSE = 0.58
R2 = 0.98; RMSE = 0.32
R2 = 0.93; RMSE = 0.05
C4: 19.55%
CZ-BK2 (GRA)
R2 = 0.98; RMSE = 0.68
R2 = 0.96; RMSE = 0.57
R2 = 0.94; RMSE = 0.84
R2 = 0.98; RMSE = 0.03
C4: 0%
CZ-wet (WET)
R2 = 0.82; RMSE = 1.84
R2 = 0.85; RMSE = 0.94
R2 = 0.86; RMSE = 1.11
R2 = 0.78; RMSE = 0.08
C4: 0%
DE-Akm (WET)
R2 = 0.69; RMSE = 2.49
R2 = 0.72; RMSE = 1.29
R2 = 0.8; RMSE = 1.31
R2 = 0.63; RMSE = 0.12
C4: 0%
DE-Gri (GRA)
R2 = 0.6; RMSE = 3.03
R2 = 0.74; RMSE = 1.26
R2 = 0.91; RMSE = 0.91
R2 = 0.75; RMSE = 0.1
C4: 0%
DE-Hai (DBF)
R2 = 0.59; RMSE = 3.38
R2 = 0.65; RMSE = 1.62
R2 = 0.68; RMSE = 1.89
R2 = 0.55; RMSE = 0.16
C4: 0%
DE-Lkb (ENF)
R2 = 0.72; RMSE = 2.09
R2 = 0.8; RMSE = 1.05
R2 = 0.79; RMSE = 1.38
R2 = 0.69; RMSE = 0.1
C4: 0%
DE-Obe (ENF)
R2 = 0.69; RMSE = 2.64
R2 = 0.81; RMSE = 1.06
R2 = 0.92; RMSE = 0.86
R2 = 0.78; RMSE = 0.09
C4: 0%
DE-RuR (GRA)
R2 = 0.81; RMSE = 2.25
R2 = 0.92; RMSE = 0.68
R2 = 0.96; RMSE = 0.62
R2 = 0.89; RMSE = 0.06
C4: 0%
GPP (g C m-2 d-1)
SIFDaily (mW/m2/sr/nm)
J F M A M J J A S O N D
Month

Fig. S9

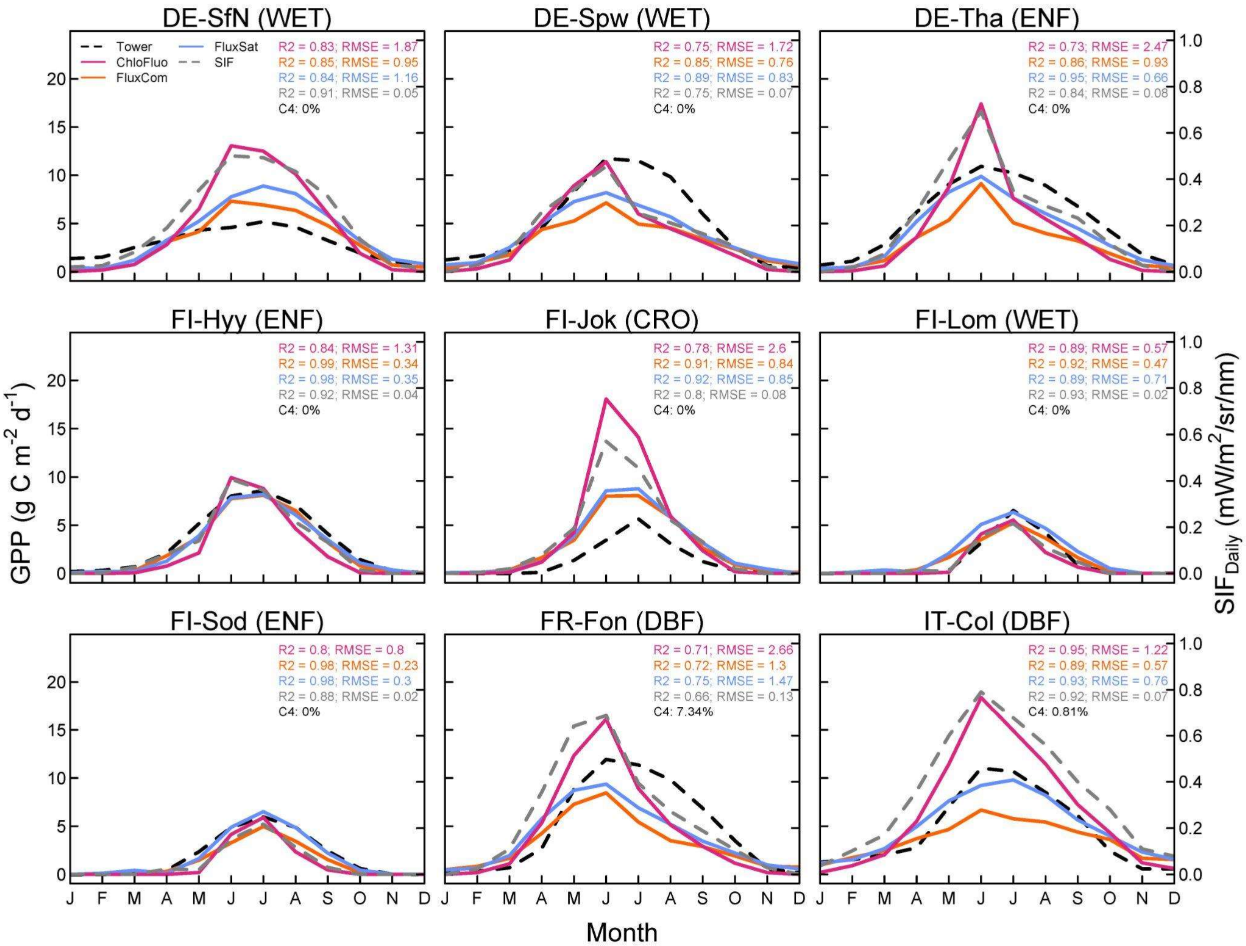

DE-SfN (WET)
Tower
ChloFluo
FluxCom
FluxSat
SIF
R2 = 0.83; RMSE = 1.87
R2 = 0.85; RMSE = 0.95
R2 = 0.84; RMSE = 1.16
R2 = 0.91; RMSE = 0.05
C4: 0%
DE-Spw (WET)
R2 = 0.75; RMSE = 1.72
R2 = 0.85; RMSE = 0.76
R2 = 0.89; RMSE = 0.83
R2 = 0.75; RMSE = 0.07
C4: 0%
DE-Tha (ENF)
R2 = 0.73; RMSE = 2.47
R2 = 0.86; RMSE = 0.93
R2 = 0.95; RMSE = 0.66
R2 = 0.84; RMSE = 0.08
C4: 0%
FI-Hyy (ENF)
R2 = 0.84; RMSE = 1.31
R2 = 0.99; RMSE = 0.34
R2 = 0.98; RMSE = 0.35
R2 = 0.92; RMSE = 0.04
C4: 0%
FI-Jok (CRO)
R2 = 0.78; RMSE = 2.6
R2 = 0.91; RMSE = 0.84
R2 = 0.92; RMSE = 0.85
R2 = 0.8; RMSE = 0.08
C4: 0%
FI-Lom (WET)
R2 = 0.89; RMSE = 0.57
R2 = 0.92; RMSE = 0.47
R2 = 0.89; RMSE = 0.71
R2 = 0.93; RMSE = 0.02
C4: 0%
FI-Sod (ENF)
R2 = 0.8; RMSE = 0.8
R2 = 0.98; RMSE = 0.23
R2 = 0.98; RMSE = 0.3
R2 = 0.88; RMSE = 0.02
C4: 0%
FR-Fon (DBF)
R2 = 0.71; RMSE = 2.66
R2 = 0.72; RMSE = 1.3
R2 = 0.75; RMSE = 1.47
R2 = 0.66; RMSE = 0.13
C4: 7.34%
IT-Col (DBF)
R2 = 0.95; RMSE = 1.22
R2 = 0.89; RMSE = 0.57
R2 = 0.93; RMSE = 0.76
R2 = 0.92; RMSE = 0.07
C4: 0.81%
GPP (g C m-2 d-1)
SIFDaily (mW/m2/sr/nm)
J F M A M J J A S O N D
Month

Fig. S10

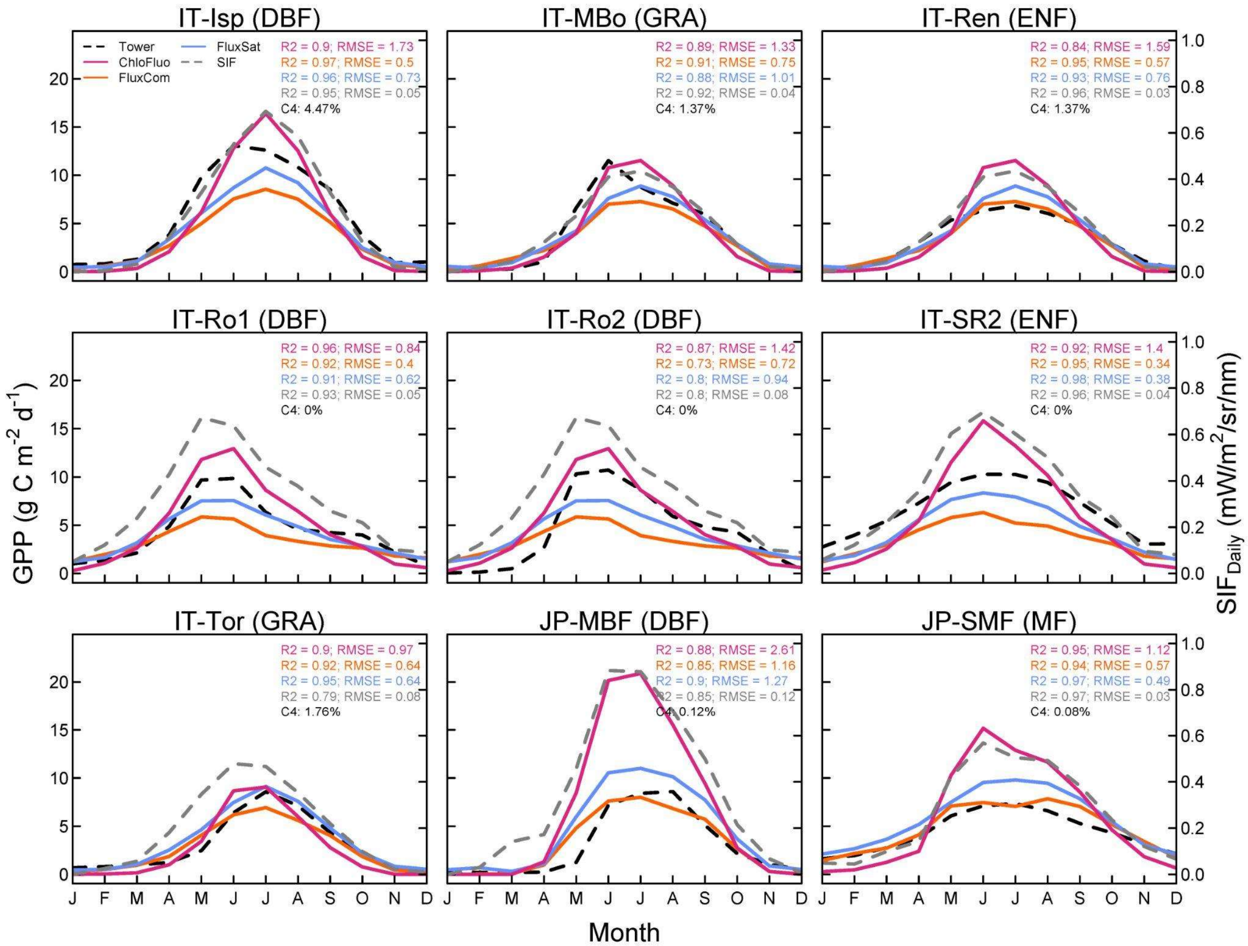
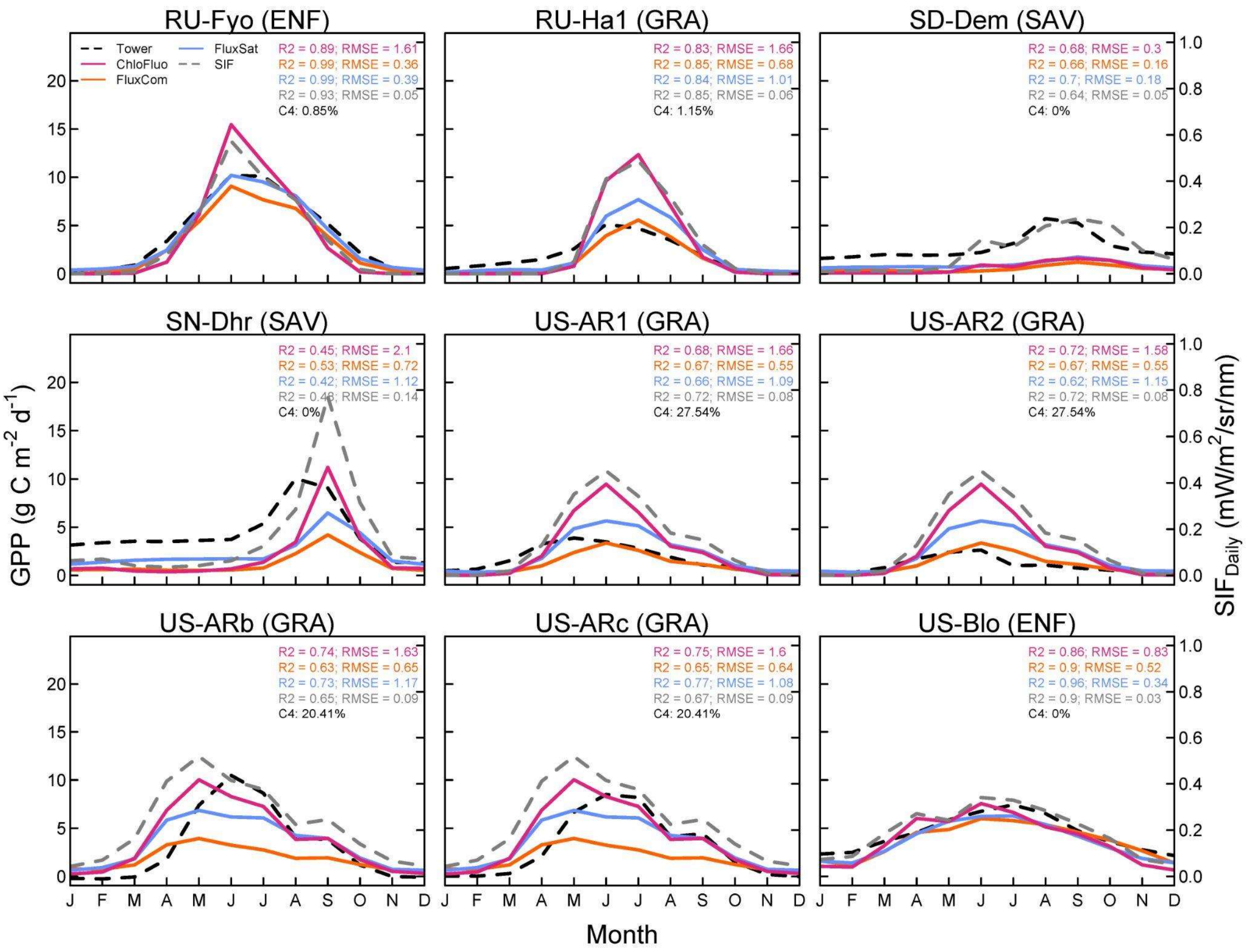
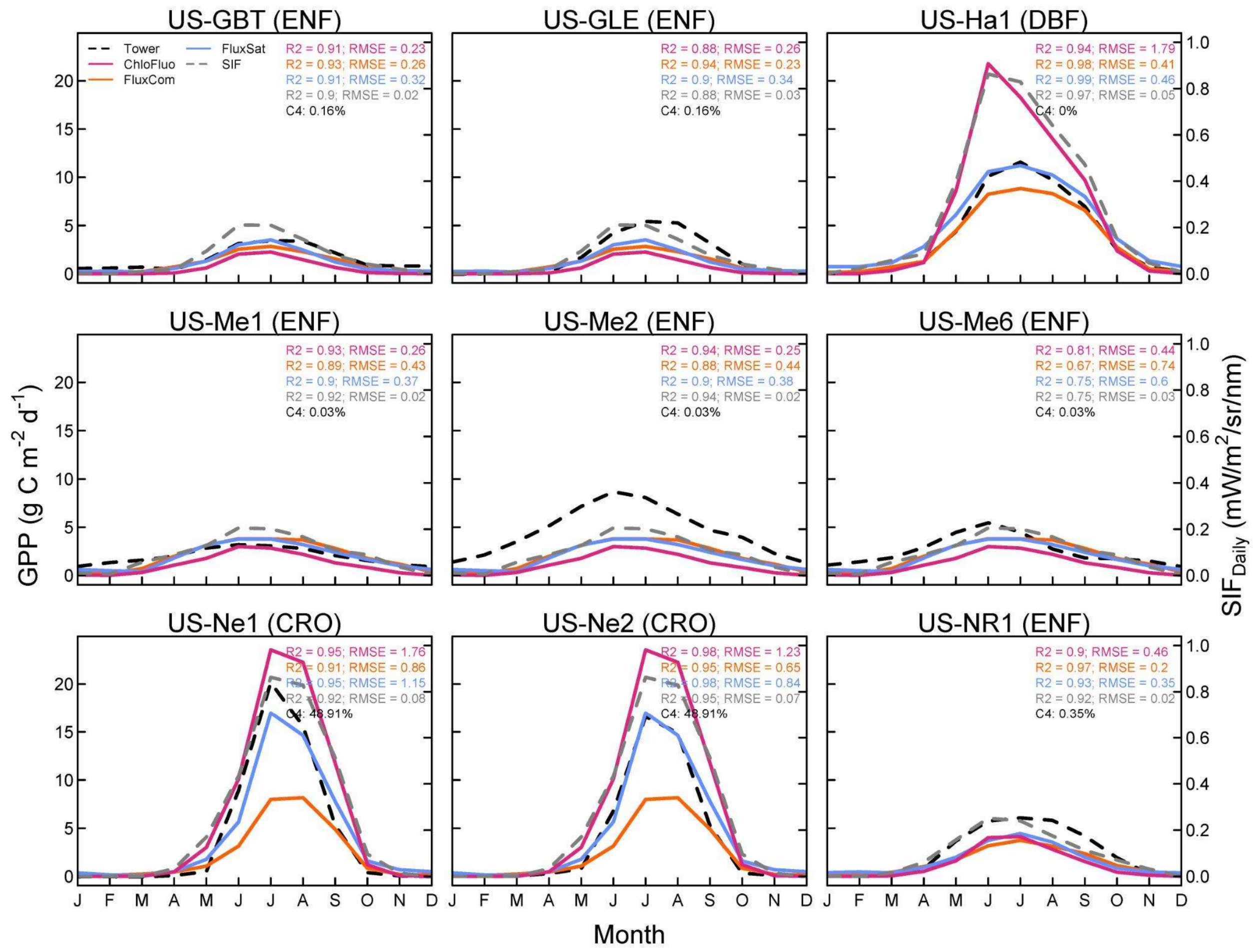

IT-Isp (DBF)
IT-MBo (GRA)
IT-Ren (ENF)
IT-Ro1 (DBF)
IT-Ro2 (DBF)
IT-SR2 (ENF)
IT-Tor (GRA)
JP-MBF (DBF)
JP-SMF (MF)
Tower
ChloFluo
FluxCom
FluxSat
SIF
GPP (g C m-2 d-1)
SIFDaily (mW/m2/sr/nm)
Month
R2 = 0.9; RMSE = 1.73
R2 = 0.97; RMSE = 0.5
R2 = 0.96; RMSE = 0.73
R2 = 0.95; RMSE = 0.05
C4: 4.47%
R2 = 0.89; RMSE = 1.33
R2 = 0.91; RMSE = 0.75
R2 = 0.88; RMSE = 1.01
R2 = 0.92; RMSE = 0.04
C4: 1.37%
R2 = 0.84; RMSE = 1.59
R2 = 0.95; RMSE = 0.57
R2 = 0.93; RMSE = 0.76
R2 = 0.96; RMSE = 0.03
C4: 1.37%
R2 = 0.96; RMSE = 0.84
R2 = 0.92; RMSE = 0.4
R2 = 0.91; RMSE = 0.62
R2 = 0.93; RMSE = 0.05
C4: 0%
R2 = 0.87; RMSE = 1.42
R2 = 0.73; RMSE = 0.72
R2 = 0.8; RMSE = 0.94
R2 = 0.8; RMSE = 0.08
C4: 0%
R2 = 0.92; RMSE = 1.4
R2 = 0.95; RMSE = 0.34
R2 = 0.98; RMSE = 0.38
R2 = 0.96; RMSE = 0.04
C4: 0%
R2 = 0.9; RMSE = 0.97
R2 = 0.92; RMSE = 0.64
R2 = 0.95; RMSE = 0.64
R2 = 0.79; RMSE = 0.08
C4: 1.76%
R2 = 0.88; RMSE = 2.61
R2 = 0.85; RMSE = 1.16
R2 = 0.9; RMSE = 1.27
R2 = 0.85; RMSE = 0.12
C4: 0.12%
R2 = 0.95; RMSE = 1.12
R2 = 0.94; RMSE = 0.57
R2 = 0.97; RMSE = 0.49
R2 = 0.97; RMSE = 0.03
C4: 0.08%
J F M A M J J A S O N D

Fig. S11



RU-Fyo (ENF)
Tower
ChloFluo
FluxCom
FluxSat
SIF
R2 = 0.89; RMSE = 1.61
R2 = 0.99; RMSE = 0.36
R2 = 0.99; RMSE = 0.39
R2 = 0.93; RMSE = 0.05
C4: 0.85%
RU-Ha1 (GRA)
R2 = 0.83; RMSE = 1.66
R2 = 0.85; RMSE = 0.68
R2 = 0.84; RMSE = 1.01
R2 = 0.85; RMSE = 0.06
C4: 1.15%
SD-Dem (SAV)
R2 = 0.68; RMSE = 0.3
R2 = 0.66; RMSE = 0.16
R2 = 0.7; RMSE = 0.18
R2 = 0.64; RMSE = 0.05
C4: 0%
SN-Dhr (SAV)
R2 = 0.45; RMSE = 2.1
R2 = 0.53; RMSE = 0.72
R2 = 0.42; RMSE = 1.12
R2 = 0.48; RMSE = 0.14
C4: 0%
US-AR1 (GRA)
R2 = 0.68; RMSE = 1.66
R2 = 0.67; RMSE = 0.55
R2 = 0.66; RMSE = 1.09
R2 = 0.72; RMSE = 0.08
C4: 27.54%
US-AR2 (GRA)
R2 = 0.72; RMSE = 1.58
R2 = 0.67; RMSE = 0.55
R2 = 0.62; RMSE = 1.15
R2 = 0.72; RMSE = 0.08
C4: 27.54%
US-ARb (GRA)
R2 = 0.74; RMSE = 1.63
R2 = 0.63; RMSE = 0.65
R2 = 0.73; RMSE = 1.17
R2 = 0.65; RMSE = 0.09
C4: 20.41%
US-ARc (GRA)
R2 = 0.75; RMSE = 1.6
R2 = 0.65; RMSE = 0.64
R2 = 0.77; RMSE = 1.08
R2 = 0.67; RMSE = 0.09
C4: 20.41%
US-Blo (ENF)
R2 = 0.86; RMSE = 0.83
R2 = 0.9; RMSE = 0.52
R2 = 0.96; RMSE = 0.34
R2 = 0.9; RMSE = 0.03
C4: 0%
GPP (g C m-2 d-1)
SIFDaily (mW/m2/sr/nm)
J F M A M J J A S O N D
Month

Fig. S12



US-GBT (ENF)
Tower
ChloFluo
FluxCom
FluxSat
SIF
R2 = 0.91; RMSE = 0.23
R2 = 0.93; RMSE = 0.26
R2 = 0.91; RMSE = 0.32
R2 = 0.9; RMSE = 0.02
C4: 0.16%
US-GLE (ENF)
R2 = 0.88; RMSE = 0.26
R2 = 0.94; RMSE = 0.23
R2 = 0.9; RMSE = 0.34
R2 = 0.88; RMSE = 0.03
C4: 0.16%
US-Ha1 (DBF)
R2 = 0.94; RMSE = 1.79
R2 = 0.98; RMSE = 0.41
R2 = 0.99; RMSE = 0.46
R2 = 0.97; RMSE = 0.05
C4: 0%
US-Me1 (ENF)
R2 = 0.93; RMSE = 0.26
R2 = 0.89; RMSE = 0.43
R2 = 0.9; RMSE = 0.37
R2 = 0.92; RMSE = 0.02
C4: 0.03%
US-Me2 (ENF)
R2 = 0.94; RMSE = 0.25
R2 = 0.88; RMSE = 0.44
R2 = 0.9; RMSE = 0.38
R2 = 0.94; RMSE = 0.02
C4: 0.03%
US-Me6 (ENF)
R2 = 0.81; RMSE = 0.44
R2 = 0.67; RMSE = 0.74
R2 = 0.75; RMSE = 0.6
R2 = 0.75; RMSE = 0.03
C4: 0.03%
US-Ne1 (CRO)
R2 = 0.95; RMSE = 1.76
R2 = 0.91; RMSE = 0.86
R2 = 0.95; RMSE = 1.15
R2 = 0.92; RMSE = 0.08
C4: 48.91%
US-Ne2 (CRO)
R2 = 0.98; RMSE = 1.23
R2 = 0.95; RMSE = 0.65
R2 = 0.98; RMSE = 0.84
R2 = 0.95; RMSE = 0.07
C4: 48.91%
US-NR1 (ENF)
R2 = 0.9; RMSE = 0.46
R2 = 0.97; RMSE = 0.2
R2 = 0.93; RMSE = 0.35
R2 = 0.92; RMSE = 0.02
C4: 0.35%
GPP (g C m-2 d-1)
SIFDaily (mW/m2/sr/nm)
J F M A M J J A S O N D
Month

Fig. S13

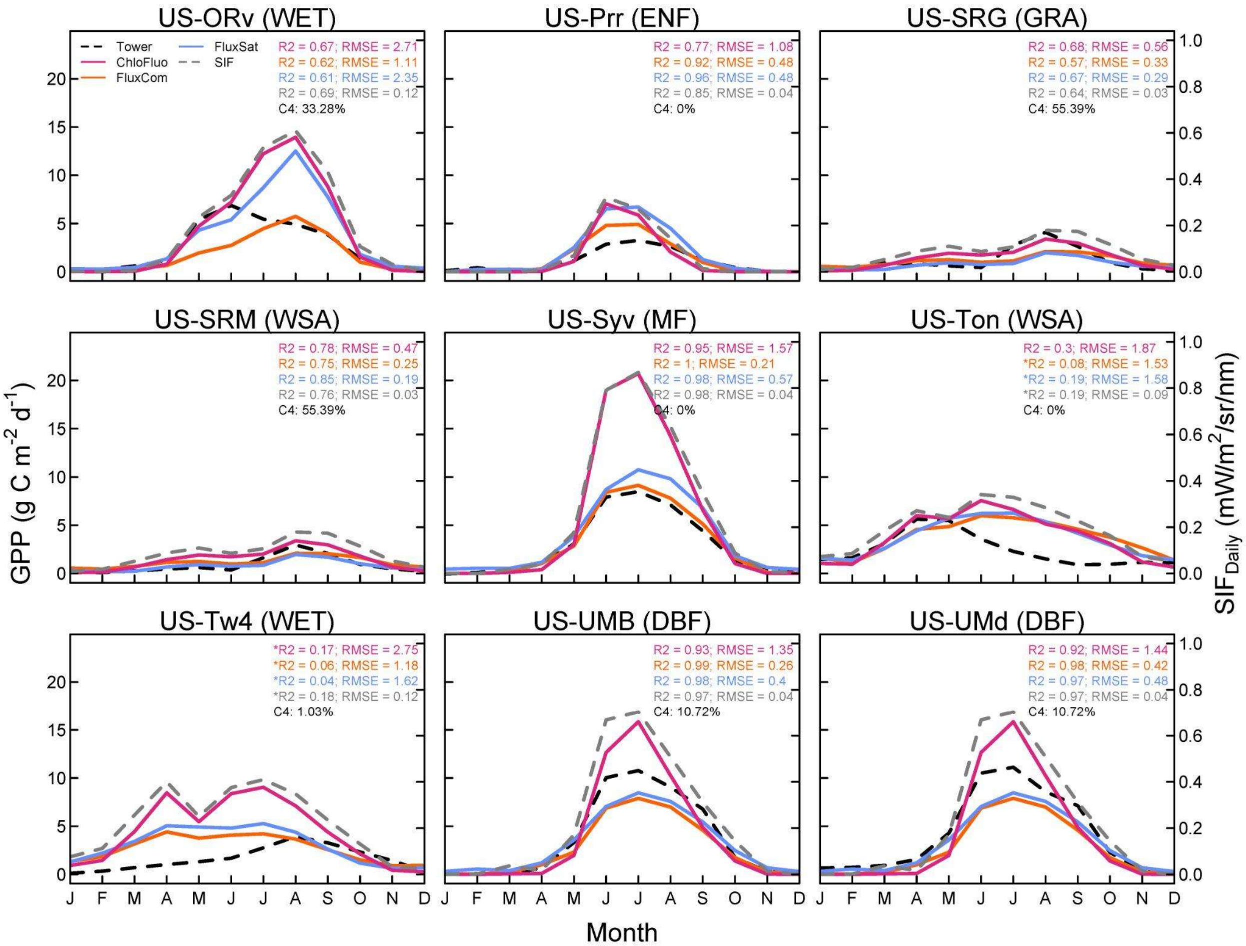

US-ORv (WET)
Tower
FluxSat
ChloFluo
SIF
FluxCom
R2 = 0.67; RMSE = 2.71
R2 = 0.62; RMSE = 1.11
R2 = 0.61; RMSE = 2.35
R2 = 0.69; RMSE = 0.12
C4: 33.28%
US-Prr (ENF)
R2 = 0.77; RMSE = 1.08
R2 = 0.92; RMSE = 0.48
R2 = 0.96; RMSE = 0.48
R2 = 0.85; RMSE = 0.04
C4: 0%
US-SRG (GRA)
R2 = 0.68; RMSE = 0.56
R2 = 0.57; RMSE = 0.33
R2 = 0.67; RMSE = 0.29
R2 = 0.64; RMSE = 0.03
C4: 55.39%
US-SRM (WSA)
R2 = 0.78; RMSE = 0.47
R2 = 0.75; RMSE = 0.25
R2 = 0.85; RMSE = 0.19
R2 = 0.76; RMSE = 0.03
C4: 55.39%
US-Syv (MF)
R2 = 0.95; RMSE = 1.57
R2 = 1; RMSE = 0.21
R2 = 0.98; RMSE = 0.57
R2 = 0.98; RMSE = 0.04
C4: 0%
US-Ton (WSA)
R2 = 0.3; RMSE = 1.87
*R2 = 0.08; RMSE = 1.53
*R2 = 0.19; RMSE = 1.58
*R2 = 0.19; RMSE = 0.09
C4: 0%
US-Tw4 (WET)
*R2 = 0.17; RMSE = 2.75
*R2 = 0.06; RMSE = 1.18
*R2 = 0.04; RMSE = 1.62
*R2 = 0.18; RMSE = 0.12
C4: 1.03%
US-UMB (DBF)
R2 = 0.93; RMSE = 1.35
R2 = 0.99; RMSE = 0.26
R2 = 0.98; RMSE = 0.4
R2 = 0.97; RMSE = 0.04
C4: 10.72%
US-UMd (DBF)
R2 = 0.92; RMSE = 1.44
R2 = 0.98; RMSE = 0.42
R2 = 0.97; RMSE = 0.48
R2 = 0.97; RMSE = 0.04
C4: 10.72%
GPP (g C m-2 d-1)
SIFDaily (mW/m2/sr/nm)
J F M A M J J A S O N D
Month

Fig. S14

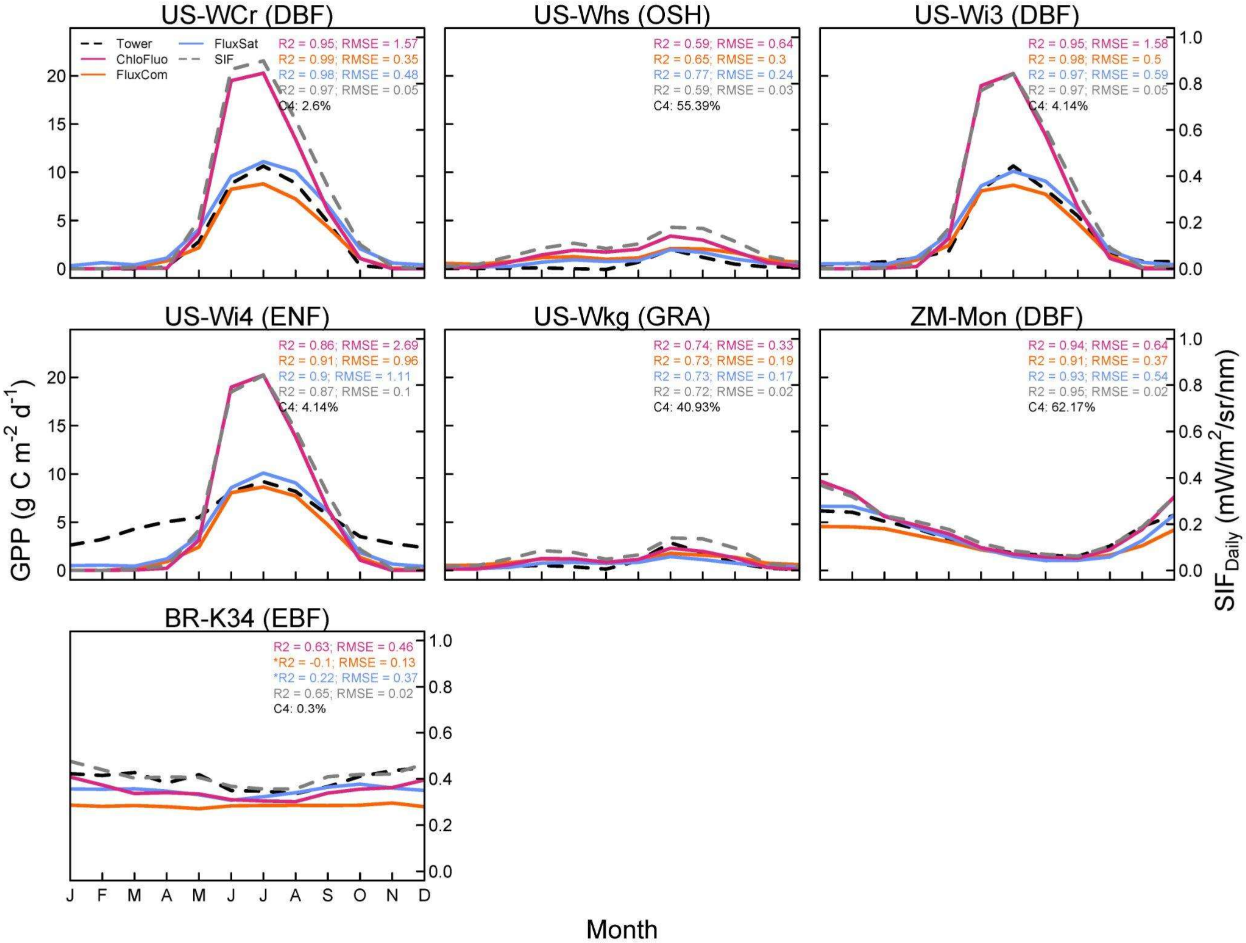


Fig. S15

Table S1. List of eddy covariance towers used for comparison to ChloFluo, FluxSat, FluxCom, and TROPOMI SIF.

Site	Lat.	Lon.	Veg.	Start	End	Reference
AU-Ade	-13.077	131.118	WSA	2007	2009	Beringer and Hutley (2015b)
AU-Cpr	-34.002	140.589	SAV	2010	2014	Meyer et al. (2015)
AU-Cum	-33.613	150.723	EBF	2012	2014	Pendall and Griebel (2015)

AU-DaS	-14.159	131.388	SAV	2008	2014	Beringer and Hutley (2015e)
AU-Dry	-15.259	132.371	SAV	2008	2014	Beringer and Hutley (2015c)
AU-Emr	-23.859	148.475	GRA	2011	2013	Schroder et al. (2015)
AU-GWW	-30.191	120.654	SAV	2013	2014	Macfarlane et al. (2015b)
AU-How	-12.494	131.152	WSA	2001	2014	Beringer and Hutley (2015a)
AU-Rig	-36.65	145.576	GRA	2011	2014	Beringer et al. (2015a)
AU-Stp	-17.151	133.35	GRA	2008	2014	Beringer and Hutley (2015d)
AU-Wac	-37.426	145.188	EBF	2005	2008	Beringer et al. (2015c)
AU-Whr	-36.673	145.029	EBF	2011	2014	Beringer et al. (2015b)
AU-Wom	-37.422	144.094	EBF	2010	2014	Arndt et al. (2015)
AU-Ync	-34.989	146.291	GRA	2012	2014	Beringer and Walker (2015)
BE-Bra	51.309	4.521	MF	1996	2014	Janssens et al. (2015)
BE-Vie	50.305	5.998	MF	1996	2014	Ligne et al. (2015)
BR-Sa3	-3.018	-54.971	EBF	2000	2004	Goulden (2015a)
CA-Man	55.88	-98.481	ENF	1994	2008	Amiro (2015a)
CA-NS1	55.879	-98.484	ENF	2001	2005	Goulden (2015b)

CA-NS2	55.906	-98.525	ENF	2001	2005	Goulden (2015c)
CA-NS3	55.912	-98.382	ENF	2001	2005	Goulden (2015d)
CA-NS4	55.912	-98.382	ENF	2002	2005	Goulden (2015g)
CA-NS5	55.863	-98.485	ENF	2001	2005	Goulden (2015e)
CA-NS6	55.917	-98.964	OSH	2001	2005	Goulden (2015f)
CA-NS7	56.636	-99.948	OSH	2002	2005	Goulden (2015h)
CA-Qfo	49.693	-74.342	ENF	2003	2010	Margolis (2015)
CA-SF1	54.485	-105.818	ENF	2003	2006	Amiro (2015d)
CA-SF2	54.254	-105.878	ENF	2001	2005	Amiro (2015c)
CA-SF3	54.092	-106.005	OSH	2001	2006	Amiro (2015b)
CH-Fru	47.116	8.538	GRA	2005	2014	Hörtnagl et al. (2015b)
CH-Lae	47.478	8.365	MF	2004	2014	Hörtnagl et al. (2015a)
CN-Cha	42.403	128.096	MF	2003	2005	Zhang (2015)
CN-Cng	44.593	123.509	GRA	2007	2010	Dong (2015)
CN-Dan	30.498	91.066	GRA	2004	2005	Shi et al. (2015)
CN-Ha2	37.609	101.327	WET	2003	2005	Li (2015)
CN-HaM	37.37	101.18	GRA	2002	2004	Tang et al. (2015)
CN-Qia	26.741	115.058	ENF	2003	2005	Wang and Fu (2015)

CZ-BK2	49.494	18.543	GRA	2004	2012	Sigut et al. (2015)
CZ-wet	49.025	14.77	WET	2006	2014	Dus?ek et al. (2015)
DE-Akm	53.866	13.683	WET	2009	2014	Bernhofer et al. (2015e)
DE-Gri	50.95	13.512	GRA	2004	2014	Bernhofer et al. (2015b)
DE-Hai	51.079	10.453	DBF	2000	2012	Knohl et al. (2015)
DE-Lkb	49.1	13.305	ENF	2009	2013	Lindauer et al. (2015)
DE-Obe	50.784	13.72	ENF	2008	2014	Bernhofer et al. (2015d)
DE-RuR	50.622	6.304	GRA	2011	2014	Schmidt and Graf (2015)
DE-SfN	47.806	11.328	WET	2012	2014	Klatt et al. (2015)
DE-Spw	51.892	14.034	WET	2010	2014	Bernhofer et al. (2015c)
DE-Tha	50.964	13.567	ENF	1996	2014	Bernhofer et al. (2015a)
FI-Hyy	61.847	24.295	ENF	1996	2014	Mammarella et al. (2015)
FI-Jok	60.899	23.514	CRO	2000	2003	Lohila et al. (2015)
FI-Lom	67.997	24.209	WET	2007	2009	Aurela et al. (2015a)
FI-Sod	67.362	26.638	ENF	2001	2014	Aurela et al. (2015b)
FR-Fon	48.476	2.78	DBF	2005	2014	Berveiller et al. (2015)
IT-Col	41.849	13.588	DBF	1996	2014	Matteucci (2015)
IT-Isp	45.813	8.634	DBF	2013	2014	Gruening et al. (2015)

IT-MBo	46.015	11.046	GRA	2003	2013	Gianelle et al. (2015)
IT-Ren	46.587	11.434	ENF	1998	2013	Montagnani and Minerbi (2015)
IT-Ro1	42.408	11.93	DBF	2000	2008	Valentini et al. (2015a)
IT-Ro2	42.39	11.921	DBF	2002	2012	Papale et al. (2015)
IT-SR2	43.732	10.291	ENF	2013	2014	Arriga et al. (2015)
IT-Tor	45.844	7.578	GRA	2008	2014	Cremonese et al. (2015)
JP-MBF	44.387	142.319	DBF	2003	2005	Kotani (2015b)
JP-SMF	35.262	137.079	MF	2002	2006	Kotani (2015a)
RU-Fyo	56.461	32.922	ENF	1998	2014	Varlagin et al. (2015)
RU-Ha1	54.725	90.002	GRA	2002	2004	Belelli et al. (2015)
SD-Dem	13.283	30.478	SAV	2005	2009	Ardö et al. (2015)
SN-Dhr	15.403	-15.432	SAV	2010	2013	Tagesson et al. (2015)
US-AR1	36.427	-99.42	GRA	2009	2012	Billesbach et al. (2015a)
US-AR2	36.636	-99.598	GRA	2009	2012	Billesbach et al. (2015b)
US-ARb	35.55	-98.04	GRA	2005	2006	Torn (2015a)
US-ARc	35.547	-98.04	GRA	2005	2006	Torn (2015b)
US-Blo	38.895	-120.633	ENF	1997	2007	Goldstein (2015)

US-GBT	41.366	-106.24	ENF	1996	2006	Massman (2015a)
US-GLE	41.367	-106.24	ENF	2004	2014	Massman (2015b)
US-Ha1	42.538	-72.172	DBF	1991	2012	Munger (2015)
US-Me1	44.579	-121.5	ENF	2004	2005	Law (2015b)
US-Me2	44.452	-121.557	ENF	2002	2014	Law (2015a)
US-Me6	44.323	-121.608	ENF	2010	2014	Law (2015c)
US-Ne1	41.165	-96.477	CRO	2001	2013	Suyker (2015a)
US-Ne2	41.165	-96.47	CRO	2001	2013	Suyker (2015b)
US-NR1	40.033	-105.546	ENF	1998	2014	Blanken et al. (2015)
US-ORv	40.02	-83.018	WET	2011	2011	Bohrer (2015)
US-Prr	65.124	-147.488	ENF	2010	2014	Kobayashi and Suzuki (2015)
US-SRG	31.789	-110.828	GRA	2008	2014	Scott (2015d)
US-SRM	31.821	-110.866	WSA	2004	2014	Scott (2015c)
US-Syv	46.242	-89.348	MF	2001	2014	Desai (2015b)
US-Ton	38.432	-120.966	WSA	2001	2014	Baldocchi and Ma (2015)
US-Tw4	38.103	-121.641	WET	2013	2014	Sanchez et al. (2015)
US-UMB	45.56	-84.714	DBF	2000	2014	Gough et al. (2015a)

US-UMd	45.562	-84.698	DBF	2007	2014	Gough et al. (2015b)
US-WCr	45.806	-90.08	DBF	1999	2014	Desai (2015a)
US-Whs	31.744	-110.052	OSH	2007	2014	Scott (2015b)
US-Wi3	46.635	-91.099	DBF	2002	2004	Chen (2015a)
US-Wi4	46.739	-91.166	ENF	2002	2005	Chen (2015b)
US-Wkg	31.736	-109.942	GRA	2004	2014	Scott (2015a)
ZM-Mon	-15.438	23.253	DBF	2000	2009	Kutsch et al. (2015)
BR-K34	-2.6091	-60.2093	EBF	1999	2006	Wu et al. (2015)