Fig. S1 Location of plots and flux sits for model calibration and validation
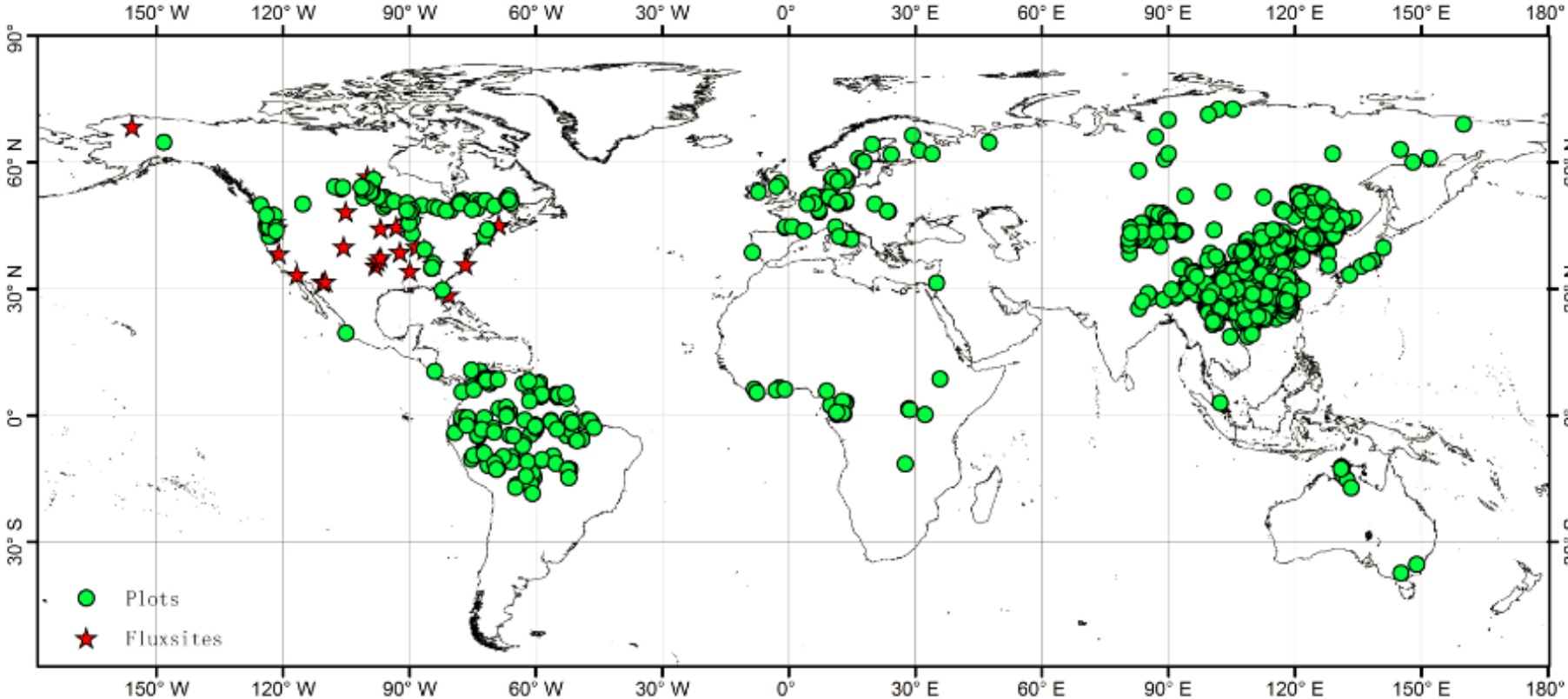
Table S1 Reference information for flux sites from Fluxnet

Longitude	Latitude	Site	PI	References
131.15	-12.49	Au-How	Jason Beringer	Beringer *et al* .(2003)
-68.75	45.21	US-Ho2	David Hollinger	Andrew *et al* . (2005)
-121.56	44.45	US-Me2	Bev Law	Van Tuyl *et al* . (2005)
-121.61	44.32	US-Me3	Bev Law	Campbell and Law (2005)
-121.57	44.44	US-Me5	Bev Law	Anthoni *et al* . (2002)
-76.67	35.80	US-NC2	Asko Noormets	Domec *et al* . (2012)
-105.55	40.03	US-NR1	Peter Blanken	Monson *et al* . (2002)
-89.87	34.25	US-Goo	Tilden Meyers	Wilson and Meyers (2007)
-72.17	42.54	US-Ha1	William Munger	Urbanski *et al* .(2007)
-72.19	42.54	US-LPH	Julian Hadley	Borken *et al* . (2006)
-86.41	39.32	US-MMS	Kim Novick	Oliphant *et al* .(2004)
-92.20	38.74	US-MOz	Lianhong Gu	Gu *et al* .(2006)
-82.24	29.76	US-SP2	Tim Martin	Gholz and Clark (2002)
-84.29	35.96	US-WBW	Tilden Meyers	Hui *et al* .(2004)
-98.48	55.88	CA-NS1	Mike Goulden	Goulden *et al* .(2006)
-98.52	55.91	CA-NS2	Mike Goulden	Wang *et al* .(2003)
-98.38	55.91	CA-NS3	Mike Goulden	Wang *et al* .(2002)
-98.38	55.91	CA-NS4	Mike Goulden	Bond-Lamberty *et al* . (2003)
-98.49	55.86	CA-NS5	Mike Goulden	Hirsch *et al* .(2004)
-99.95	56.64	CA-NS7	Mike Goulden	Bond-Lamberty *et al* . (2003)
-121.95	45.82	US-Wrc	Ken Bible	Harmon *et al* . (2004)
-89.98	46.08	US-Los	Ankur Desai	Sulman *et al* .(2009)
-89.35	46.24	US-Syv	Ankur Desai	Desai *et al* . (2005)
-90.08	45.81	US-WCr	Ankur Desai	Cook *et al* . (2004)
-110.51	31.59	US-Aud	Tilden Meyers	Krishnan *et al* .(2012)
-155.75	68.49	US-Ivo	Donatella Zona	McEwing *et al* .(2015)
-80.67	28.61	US-KS2	Bert Drake	Stiling *et al* .(2002)
-116.64	33.38	US-SO4	Walt Oechel	Luo *et al* .(2007)
-120.95	38.41	US-Var	Dennis Baldocchi	Ma *et al.* (2007)
-98.04	35.55	US-ARb	Margaret Torn	Migliavacca *et al* .(2010)
-98.04	35.55	US-ARc	Margaret Torn	Anderson *et al* .(2008)
-97.49	36.61	US-ARM	Margaret Torn	Fischer *et al* .(2007)
-96.84	44.35	US-Bkg	Tilden Meyers	Gilmanov *et al* .(2005)
-88.29	40.01	US-Bo1	Tilden Meyers	Turner *et al.* (2003)
-105.10	48.31	US-FPe	Tilden Meyers	Gilmanov *et al* .(2005)
-93.09	44.71	US-Ro1	John Baker	Griffis *et al* .(2010)
-93.09	44.72	US-Ro3	John Baker	Griffis *et al* . (2011)
-109.94	31.74	US-Wkg	Russell Scott	Scott *et al.* (2010)
-96.86	37.52	US-Wlr	David Cook	Song and Wesely (2003)

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