

**Table S1. SynFlux sites used in this work and their O<sub>3</sub> trends.** All are Tier 1 in FLUXNET2015.

Site ID	PFT <sup>1</sup>	O <sub>3</sub> Trend, % yr <sup>-1</sup>				Site Name
		Mean	AOT40	W126	POD <sub>0</sub>	
AT-Neu	GRA	-1.3	-6.7	-7.8	-1.3	Neustift
BE-Bra	MF	-0.4	-6.6	-8.6	3.1	Brasschaat
BE-Vie	MF	-1.0	-6.6	-8.6	2.1	Vielsalm
CH-Cha	GRA	0.1	-2.0	-4.9	-6.8	Chamau
CH-Dav	ENF	0.1	-1.7	-4.4	0.8	Davos
CH-Lae	MF	0.0	-1.8	-3.9	0.2	Laegern
CZ-wet	WET	-1.2	-6.3	-9.2	-9.5	Trevon (CZECHWET)
DE-Gri	GRA	-1.1	-6.3	-8.1	3.0	Grillenburg
DE-Tha	ENF	-1.1	-6.3	-8.1	-1.6	Tharandt
DK-Sor	DBF	0.2	-6.7	-3.9	1.1	Soroe
FI-Hyy	ENF	-2.3	-4.7	-13.5	3.4	Hyttiala
FR-Fon	DBF	-0.4	-6.0	-6.7	5.9	Fontainebleau-Barbeau
FR-Gri	GRA	-0.9	-8.6	-8.4	9.9	Grignon
FR-Pue	EBF	-0.6	-2.5	-5.2	-0.7	Puechabon
IT-BCi	CRO	-0.2	-4.3	-7.2	6.1	Borgo Cioffi
IT-Co1	DBF	0.4	-4.1	-8.7	-2.5	Collelongo
IT-Lav	ENF	1.0	3.6	0.9	3.2	Lavarone
IT-MBo	GRA	1.8	5.7	2.8	8.7	Monte Bondone
IT-Noe	CSH	-1.0	-8.7	-11.6	0.8	Arca di Noe – Le Prigionette
IT-Ren	ENF	0.4	2.9	-1.1	-9.2	Renon
NL-Loo	ENF	-0.7	-6.4	-8.4	0.1	Loobos
RU-Fyo	ENF	0.9	6.0	-0.8	1.5	Fyodorovskoye
US-GLE	ENF	-0.4	-1.4	-1.7	-7.4	GLEES
US-MMS	DBF	-1.2	-6.2	-7.5	-4.1	Morgan Monroe State Forest
US-Me2	ENF	1.1	-1.1	-4.0	2.0	Metolius mature ponderosa pine
US-NR1	ENF	0.0	0.4	-1.6	2.0	Niwot Ridge Forest (LTER NWT1)
US-Ne2	CRO	1.7	9.8	8.6	-3.7	Mead – irrigated maize-soybean rotations site
US-PFa	MF	-2.2	-13.5	-11.6	-5.0	Park Falls/WLEF
US-SRM	WSA	-0.4	-2.3	-3.6	-4.2	Santa Rita Mesquite
US-Ton	WSA	-1.1	-4.8	-7.7	-3.1	Tonzi Ranch
US-UMB	DBF	-1.5	-10.5	-10.0	0.6	University of Michigan Biological Station
US-UMd	DBF	0.3	2.0	3.9	-0.6	UMBS Disturbance

<sup>1</sup> Plant functional type. CRO: crop, CSH: closed shrubland, DBF: deciduous broadleaf forest, EBF: evergreen broadleaf forest, ENF: evergreen needleleaf forest, GRA: grassland, MF: mixed forest, WET: wetland, WSA: woody savanna.