Gap-Filling for Daily Evapotranspiration Observations with full-factorial method at Global Flux Sites

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Table S1: Basic information of 339 sites from AmeriFlux, FLUXNET, OzFlux, EuroFlux, ChinaFLUX, TPDC and NCDDC involved in the ET gap filling in this study.

Site	Longitude(°)	Latitude(°)	IGBP	Temporalcoverage	Network
ArcturusEmerald	148.4746	-23.85872	GRA	2012-2013	OzFlux
AR-SLu	-66.4598	-33.4648	MF	2009-2011	FLUXNET
AT-Neu	11.3175	47.1167	GRA	2002-2012	FLUXNET
AU-Ade	131.1178	-13.0769	WSA	2007-2009	FLUXNET
AU-ASM	133.249	-22.283	SAV	2010-2022	OzFlux,FLUXNET
AU-Cpr	140.5891	-34.0021	SAV	2010-2014	FLUXNET
AU-Cum	150.7236	-33.6152	EBF	2012-2022	OzFlux,FLUXNET
AU-DaP	131.3181	-14.0633	GRA	2007-2013	FLUXNET
AU-DaS	131.3881	-14.1593	SAV	2008-2022	OzFlux,FLUXNET
AU-Dry	132.3706	-15.2588	SAV	2008-2022	OzFlux,FLUXNET
AU-Emr	148.4746	-23.8587	GRA	2011-2013	FLUXNET
AU-Fog	131.3072	-12.5452	WET	2006-2008	FLUXNET
AU-Gin	115.7138	-31.3764	WSA	2011-2022	OzFlux,FLUXNET
AU-GWW	120.6541	-30.1913	SAV	2013-2022	OzFlux,FLUXNET
AU-How	131.1523	-12.4943	WSA	2001-2014	FLUXNET
AU-Lox	140.6551	-34.4704	DBF	2008-2009	FLUXNET
AU-RDF	132.4776	-14.5636	WSA	2011-2013	FLUXNET
AU-Rig	145.5759	-36.6499	GRA	2011-2014	FLUXNET
AU-Rob	145.6301	-17.1175	EBF	2014-2014	FLUXNET
AU-Stp	133.3502	-17.1507	GRA	2008-2014	FLUXNET
AU-TTE	133.64	-22.287	GRA	2012-2021	OzFlux,FLUXNET
AU-Tum	148.1517	-35.6566	EBF	2001-2022	OzFlux,FLUXNET
AU-Wac	145.1878	-37.4259	EBF	2005-2013	OzFlux,FLUXNET
AU-Whr	145.0294	-36.6732	EBF	2011-2021	OzFlux,FLUXNET
AU-Wom	144.0944	-37.4222	EBF	2010-2020	OzFlux,FLUXNET

AU-Ync	146.2907	-34.9893	GRA	2012-2014	OzFlux,FLUXNET
BE-Bra	4.5198	51.3076	MF	1996-2014	EuroFlux,FLUXNET
BE-Lcr	3.85043	51.11218	DBF	2019-2022	EuroFlux
BE-Lon	4.7462	50.5516	CRO	2004-2020	EuroFlux,FLUXNET
BE-Maa	5.631851	50.979868	CSH	2016-2021	EuroFlux
BE-Vie	5.9981	50.3049	MF	1996-2014	FLUXNET
Boyagin	116.938559	-32.477093	CSH	2018-2022	OzFlux
BR-Sa3	-54.9714	-3.018	EBF	2000-2004	FLUXNET
CA-Ca1	-125.3336	49.8673	ENF	1996-2010	AmeriFlux
CA-Ca2	-125.2909	49.8705	ENF	1999-2010	AmeriFlux
CA-Cbo	-79.9333	44.3167	DBF	1994-2020	AmeriFlux
CA-DB2	-122.9951	49.119	WET	2019-2020	AmeriFlux
CA-DBB	-122.9849	49.1293	WET	2014-2020	AmeriFlux
CA-Gro	-82.1556	48.2167	MF	2003-2014	AmeriFlux,FLUXNET
CA-LP1	-122.8414	55.1119	ENF	2007-2020	AmeriFlux
Calperum	140.58912	-34.00206	CSH	2011-2022	OzFlux
CA-MA2	-97.8762	50.171	CRO	2009-2011	AmeriFlux
CA-MA3	-97.8686	50.1774	GRA	2009-2011	AmeriFlux
CA-Obs	-105.1178	53.9872	ENF	1997-2010	FLUXNET
CapeTribulation	145.446922	-16.103219	ENF	2010-2017	OzFlux
CA-Qfo	-74.3421	49.6925	ENF	2003-2010	AmeriFlux,FLUXNET
CA-SF1	-105.8176	54.485	ENF	2003-2006	AmeriFlux,FLUXNET
CA-SF2	-105.8775	54.2539	ENF	2001-2005	AmeriFlux,FLUXNET
CA-SF3	-106.0053	54.0916	OSH	2001-2006	FLUXNET
CA-TP1	-80.5595	42.6609	ENF	2002-2015	AmeriFlux,FLUXNET
CA-TP2	-80.4588	42.7744	ENF	2002-2007	FLUXNET
CA-TP3	-80.3483	42.7068	ENF	2002-2017	AmeriFlux,FLUXNET
CA-TP4	-80.3574	42.7102	ENF	2002-2014	FLUXNET
CA-TPD	-80.5577	42.6353	DBF	2012-2017	AmeriFlux,FLUXNET
CH-BaA	7.5956	47.55123	URB	2016-2020	EuroFlux
CH-Cha	8.4104	47.2102	GRA	2005-2021	EuroFlux,FLUXNET
CH-Dav	9.8559	46.8153	ENF	1997-2014	FLUXNET
CH-Fru	8.5378	47.1158	GRA	2005-2020	EuroFlux,FLUXNET
CH-Oe1	7.73194	47.28583	GRA	2002-2008	EuroFlux
CH-Oe2	7.73375	47.28642	CRO	2004-2021	EuroFlux
CN-ARou	101.4643	39.0473	GRA	2015-2019	ChinaFLUX
CN-Cng	123.5092	44.5934	GRA	2007-2010	FLUXNET
CN-Damao	110.32839	41.64394	GRA	2015-2018	ChinaFLUX
CN-Du2	116.2836	42.0467	GRA	2006-2008	FLUXNET
CN-Du3	116.2809	42.0551	GRA	2009-2010	FLUXNET
CN-HaM	101.18	37.37	GRA	2002-2004	FLUXNET
CN-Huailai	115.788	40.3491	CRO	2013-2017	TPDC
CN-HuaZhaizi	100.3201	38.7659	BAR	2015-2019	TPDC
CN-Jinzhou	121.201667	41.148056	CRO	2005-2014	ChinaFLUX
CN-Jurong	119.217264	31.806831	CRO	2015-2020	ChinaFLUX
CN-SiDaoqiao1	101.1374	42.0012	OSH	2015-2019	TPDC
CN-SiDaoqiao2	101.1335	41.9903	MF	2017-2019	TPDC
CN-Xilinhot	116.671389	43.554444	GRA	2006-2015	ChinaFLUX

CN-Yakou	100.2421	38.0142	GRA	2015-2019	TPDC
CN-Zhangye	100.4464	38.97514	WET	2017-2019	NCDDC
Collie	21.62919813	1.618787868	EBF	2018-2018	OzFlux
CowBay	145.42715	-16.238189	ENF	2009-2022	OzFlux
CumberlandPlain	150.723611	-33.615278	ENF	2018-2018	OzFlux
CZ-BK1	18.53688	49.50208	ENF	2004-2021	EuroFlux
CZ-KrP	15.078773	49.573257	CRO	2014-2020	EuroFlux
CZ-Lnz	16.9463317	48.6815483	MF	2015-2020	EuroFlux
CZ-RAJ	16.6965125	49.4437236	ENF	2012-2021	EuroFlux
CZ-Stn	17.9699	49.035975	DBF	2010-2021	EuroFlux
CZ-wet	14.77035	49.02465	WET	2006-2022	EuroFlux,FLUXNET
DE-Akm	13.68342	53.86617	WET	2009-2015	EuroFlux
DE-Bay	11.86694	50.14194	ENF	1996-1999	EuroFlux
DE-Dgw	13.0542746	53.1514092	WAT	2015-2018	EuroFlux
DE-Geb	10.9146	51.0997	CRO	2001-2020	EuroFlux,FLUXNET
DE-Gri	13.5126	50.95	GRA	2004-2014	EuroFlux,FLUXNET
DE-Hai	10.4522	51.0792	DBF	2000-2016	EuroFlux,FLUXNET
DE-HoH	11.22235	52.08656	DBF	2015-2020	EuroFlux
DE-Kli	13.5224	50.8931	CRO	2004-2017	EuroFlux,FLUXNET
DE-Lkb	13.3047	49.0996	ENF	2009-2013	EuroFlux,FLUXNET
DE-Lnf	10.3678	51.3282	DBF	2002-2012	FLUXNET
DE-Me2	10.65555	51.275366	GRA	2004-2006	EuroFlux
DE-Meh	10.65547222	51.27530556	MF	2003-2006	EuroFlux
DE-Obe	13.7213	50.7867	ENF	2008-2014	EuroFlux,FLUXNET
DE-RuR	6.3041	50.6219	GRA	2011-2022	EuroFlux,FLUXNET
DE-RuS	6.4471	50.8659	CRO	2011-2014	FLUXNET
DE-RuW	6.330962475	50.50492685	ENF	2010-2020	EuroFlux
DE-Seh	6.4497	50.8706	CRO	2007-2010	EuroFlux,FLUXNET
DE-SfN	11.3275	47.8064	WET	2012-2014	FLUXNET
DE-Spw	14.03369	51.89225	WET	2010-2015	EuroFlux
DE-Tha	13.5651	50.9626	ENF	1996-2014	EuroFlux,FLUXNET
DE-Wet	11.45753333	50.4535	ENF	2002-2008	EuroFlux
DE-Zrk	12.889	53.8759	WET	2013-2017	EuroFlux,FLUXNET
DigbyPlantation	141.616472	-37.882694	CRO	2018-2020	OzFlux
DK-Eng	12.1918	55.6905	GRA	2005-2008	FLUXNET
DK-Fou	9.5872	56.4842	CRO	2005-2005	EuroFlux,FLUXNET
DK-Lva	12.08329964	55.68330002	GRA	2004-2008	EuroFlux
DK-Ris	12.09722222	55.53027778	CRO	2004-2008	EuroFlux
DK-Skj	8.40481	55.91273	WET	2009-2022	EuroFlux
DK-Sor	11.6446	55.4859	DBF	2001-2014	EuroFlux,FLUXNET
DK-Vng	9.16070962	56.0374765	CRO	2009-2018	EuroFlux
ES-Amo	-2.2523	36.8336	OSH	2007-2012	EuroFlux,FLUXNET
ES-ES1	-0.31999	39.34481	ENF	1999-2006	EuroFlux
ES-ES2	-0.31641	39.27438	CRO	2004-2008	EuroFlux
ES-LgS	-2.9658	37.0979	OSH	2007-2009	EuroFlux,FLUXNET
ES-LJu	-2.7521	36.9266	OSH	2004-2013	EuroFlux,FLUXNET
ES-LMa	-5.77465	39.94033	SAV	2004-2011	EuroFlux
ES-Ln1	-3.473851	36.972098	OSH	2008-2009	EuroFlux

ES-Ln2	-3.47582	36.9695	OSH	2009-2009	EuroFlux
ES-VDA	1.44738	42.15111	GRA	2007-2008	EuroFlux
FI-Hyy	24.29477	61.84741	ENF	1996-2014	EuroFlux,FLUXNET
FI-Jok	23.5134	60.8986	CRO	2000-2003	EuroFlux,FLUXNET
FI-Kaa	27.26985	69.14057	WET	2000-2008	EuroFlux
FI-Let	23.9595	60.6418	ENF	2009-2012	FLUXNET
FI-Lom	24.2092	67.9972	WET	2007-2009	FLUXNET
FI-Sod	26.6386	67.3624	ENF	2001-2012	EuroFlux,FLUXNET
FI-Var	29.61	67.7549	ENF	2016-2022	EuroFlux
FR-Gri	1.9519	48.8442	CRO	2004-2014	FLUXNET
FR-Hes	7.06465	48.6741	DBF	2011-2020	EuroFlux
FR-LBr	-0.7693	44.7171	ENF	1996-2008	FLUXNET
FR-Lq2	2.737027778	45.63919444	GRA	2002-2010	EuroFlux
FR-Pue	3.5957	43.7413	EBF	2000-2014	FLUXNET
GatumPasture	141.960897	-37.390033	CRO	2016-2021	OzFlux
GH-Ank	-2.6942	5.2685	EBF	2011-2014	FLUXNET
GL-ZaF	-20.5545	74.4814	WET	2008-2011	FLUXNET
HowardSprings	131.15005	-12.4952	WAT	2001-2022	OzFlux
HU-Bug	19.60129929	46.69110107	GRA	2002-2008	EuroFlux
HU-Mat	19.72599983	47.84690094	GRA	2004-2008	EuroFlux
IE-Dri	-8.75180556	51.9866944	GRA	2002-2012	EuroFlux
IL-Yat	35.05198851	31.34504459	ENF	2000-2018	EuroFlux
IS-Gun	-20.2166996	63.83330154	DBF	1996-1998	EuroFlux
IT-BCi	14.95744	40.52375	CRO	2005-2020	EuroFlux,FLUXNET
IT-CA1	12.0266	42.3804	DBF	2011-2014	EuroFlux,FLUXNET
IT-CA2	12.026	42.3772	CRO	2011-2014	EuroFlux,FLUXNET
IT-CA3	12.0222	42.38	DBF	2011-2014	FLUXNET
IT-Col	13.5881	41.8494	DBF	1996-2014	EuroFlux,FLUXNET
IT-Cp2	12.3573	41.7043	EBF	2012-2014	FLUXNET
IT-Cpz	12.3761	41.7052	EBF	1997-2008	EuroFlux,FLUXNET
IT-Isp	8.6336	45.8126	DBF	2013-2014	FLUXNET
IT-La2	11.2853	45.9542	ENF	2000-2002	EuroFlux
IT-Lav	11.2813	45.9562	ENF	2003-2014	FLUXNET
IT-Lec	11.26975	43.30359	EBF	2005-2010	EuroFlux
IT-MBo	11.0458	46.0147	GRA	2003-2013	EuroFlux,FLUXNET
IT-Noe	8.1517	40.6062	CSH	2004-2014	FLUXNET
IT-PT1	9.061	45.2009	DBF	2002-2004	FLUXNET
IT-Ren	11.4337	46.5869	ENF	1998-2013	FLUXNET
IT-Ro2	11.9209	42.3903	DBF	2002-2012	FLUXNET
IT-SR2	10.2909	43.732	ENF	2013-2014	FLUXNET
IT-SRo	10.2844	43.7279	ENF	1999-2012	FLUXNET
IT-Tor	7.5781	45.8444	GRA	2008-2014	FLUXNET
Litchfield	130.7945459	-13.17904178	WSA	2016-2021	OzFlux
Longreach	31.1054725	3.48581518	CVM	2019-2021	OzFlux
MY-PSO	102.3062	2.973	EBF	2003-2009	FLUXNET
NL-Hor	5.0713	52.2403	GRA	2004-2011	FLUXNET
NL-Loo	5.7436	52.1666	ENF	1996-2014	FLUXNET
PL-Brd	16.299523	52.434181	CRO	2011-2012	EuroFlux

PL-Tcz	16.09748333	53.19295	ENF	2011-2016	EuroFlux
PL-wet	16.3095	52.7623	WET	2004-2009	EuroFlux
RU-Che	161.34143	68.61304	WET	2002-2016	EuroFlux
RU-Cok	147.4943	70.8291	OSH	2003-2015	EuroFlux,FLUXNET
RU-Fy2	32.901878	56.447603	ENF	2015-2023	EuroFlux
RU-Fy3	33.0478	56.4435	ENF	2016-2018	EuroFlux
RU-Fyo	32.9221	56.4615	ENF	1998-2021	EuroFlux,FLUXNET
RU-Ha1	90.0022	54.7252	GRA	2002-2004	EuroFlux,FLUXNET
RU-Ha3	90.07785	54.70455	GRA	2004-2004	EuroFlux
RU-SkP	129.168	62.255	DNF	2012-2014	FLUXNET
RU-Tks	128.8878	71.5943	GRA	2010-2014	FLUXNET
RU-Vrk	62.9405	67.0547	CSH	2008-2008	FLUXNET
RU-Zot	89.35079956	60.80080032	WSA	2002-2004	EuroFlux
SD-Dem	30.4783	13.2829	SAV	2005-2009	FLUXNET
SE-Fla	19.45694444	64.11277777	ENF	1996-2009	EuroFlux
SE-Sk1	17.91805556	60.125	ENF	2004-2008	EuroFlux
SE-Sk2	17.84005556	60.12966667	ENF	2004-2006	EuroFlux
SE-St1	19.05033	68.35415	WET	2012-2019	EuroFlux
SJ-Adv	15.923	78.186	WET	2011-2014	EuroFlux,FLUXNET
SJ-Blv	11.83109	78.92163	SNO	2008-2017	EuroFlux
SK-Ta1	20.26111111	49.15833333	ENF	2006-2007	EuroFlux
SK-Ta2	20.10777778	49.12638889	ENF	2006-2007	EuroFlux
SK-Tat	20.1635	49.1207778	ENF	2005-2007	EuroFlux
SN-Dhr	-15.4322	15.4028	SAV	2010-2013	EuroFlux,FLUXNET
UK-AMo	-3.2436918	55.792546	WET	2002-2020	EuroFlux
UK-EBu	-3.205777778	55.866	GRA	2004-2008	EuroFlux
UK-ESa	-2.85861111	55.9069444	CRO	2003-2006	EuroFlux
UK-Gri	-3.79805556	56.6072222	ENF	1997-2011	EuroFlux
US-A32	-97.8198	36.8193	GRA	2015-2017	AmeriFlux
US-A74	-97.5489	36.8085	CRO	2016-2017	AmeriFlux
US-AR1	-99.42	36.4267	GRA	2009-2012	AmeriFlux,FLUXNET
US-AR2	-99.5975	36.6358	GRA	2009-2012	AmeriFlux,FLUXNET
US-ARb	-98.0402	35.5497	GRA	2005-2006	AmeriFlux,FLUXNET
US-ARc	-98.04	35.5465	GRA	2005-2006	AmeriFlux,FLUXNET
US-ARM	-97.4888	36.6058	CRO	2003-2020	AmeriFlux,FLUXNET
US-Atq	-157.4089	70.4696	WET	2003-2008	FLUXNET
US-Bi1	-121.4993	38.0992	CRO	2016-2021	AmeriFlux
US-Bi2	-121.5351	38.1091	CRO	2017-2021	AmeriFlux
US-Blo	-120.6328	38.8953	ENF	1997-2007	FLUXNET
US-BZB	-148.3208	64.6955	WET	2011-2021	AmeriFlux
US-BZF	-148.3121	64.7013	WET	2011-2021	AmeriFlux
US-BZo	-148.33	64.6936	WET	2018-2021	AmeriFlux
US-BZS	-148.3235	64.6963	ENF	2010-2021	AmeriFlux
US-Cop	-109.39	38.09	GRA	2001-2007	FLUXNET
US-CRT	-83.3471	41.6285	CRO	2011-2013	AmeriFlux,FLUXNET
US-CS2	-89.5002	44.1467	ENF	2018-2021	AmeriFlux
US-DFC	-89.7117	43.3448	CRO	2018-2021	AmeriFlux
US-DS3	-121.549	38.1235	CRO	2021-2021	AmeriFlux

US-Fcr	-148.9348	65.3968	OSH	2011-2014	AmeriFlux
US-Fmf	-111.7273	35.1426	ENF	2005-2010	AmeriFlux
US-Fuf	-111.762	35.089	ENF	2005-2010	AmeriFlux
US-GBT	-106.2397	41.3658	ENF	1999-2006	FLUXNET
US-GLE	-106.2399	41.3665	ENF	2004-2020	AmeriFlux,FLUXNET
US-Goo	-89.8735	34.2547	GRA	2002-2006	FLUXNET
US-HB2	-79.244	33.3242	ENF	2019-2019	AmeriFlux
US-HB3	-79.2322	33.3482	ENF	2019-2021	AmeriFlux
US-Hn2	-119.4641	46.6889	GRA	2015-2018	AmeriFlux
US-Hn3	-119.4614	46.6878	OSH	2017-2018	AmeriFlux
US-IB2	-88.241	41.8406	GRA	2004-2011	FLUXNET
US-ICh	-149.2958	68.6068	OSH	2007-2021	AmeriFlux
US-ICs	-149.311	68.6058	WET	2007-2020	AmeriFlux
US-ICt	-149.3041	68.6063	OSH	2007-2021	AmeriFlux
US-Ivo	-155.7503	68.4865	WET	2004-2007	FLUXNET
US-Jo1	-106.635	32.582	OSH	2010-2020	AmeriFlux
US-Jo2	-106.6032	32.5849	OSH	2010-2020	AmeriFlux
US-KFS	-95.1907	39.0561	GRA	2007-2019	AmeriFlux
US-KLS	-97.5684	38.7745	GRA	2012-2019	AmeriFlux
US-KS1	-80.6709	28.4583	ENF	2002-2003	AmeriFlux,FLUXNET
US-KS2	-80.6715	28.6086	CSH	2000-2006	AmeriFlux,FLUXNET
US-Lin	-119.0922	36.3566	CRO	2009-2010	AmeriFlux,FLUXNET
US-Los	-89.9792	46.0827	WET	2000-2014	FLUXNET
US-LS2	-110.1344	31.5659	SAV	2002-2007	AmeriFlux
US-LWW	-97.9789	34.9604	GRA	1997-1998	FLUXNET
US-Me1	-121.5	44.5794	ENF	2004-2005	AmeriFlux,FLUXNET
US-Me2	-121.5589	44.4526	ENF	2002-2020	AmeriFlux,FLUXNET
US-Me4	-121.6224	44.4992	ENF	1996-2000	FLUXNET
US-Me5	-121.5668	44.4372	ENF	2000-2002	FLUXNET
US-Me6	-121.6078	44.3233	ENF	2012-2021	AmeriFlux,FLUXNET
US-Mo1	-92.1167	39.2298	CRO	2015-2021	AmeriFlux
US-Mo2	-91.9945	38.9488	GRA	2018-2021	AmeriFlux
US-Mo3	-92.1497	39.2311	CRO	2016-2021	AmeriFlux
US-MOz	-92.2	38.7441	DBF	2004-2019	AmeriFlux
US-NC1	-76.7119	35.8118	ENF	2005-2012	AmeriFlux
US-NC3	-76.656	35.799	ENF	2013-2021	AmeriFlux
US-NC4	-75.9038	35.7879	WET	2009-2021	AmeriFlux
US-NGB	-156.6092	71.28	SNO	2012-2019	AmeriFlux
US-NGC	-163.7002	64.8618	GRA	2017-2019	AmeriFlux
US-NR1	-105.5464	40.0329	ENF	1998-2016	AmeriFlux,FLUXNET
US-Oho	-83.8438	41.5545	DBF	2004-2013	AmeriFlux,FLUXNET
US-ONA	-81.9509	27.3836	GRA	2015-2020	AmeriFlux
US-Prr	-147.4876	65.1237	ENF	2010-2014	FLUXNET
US-RGA	-91.6733	34.4159	CRO	2021-2021	AmeriFlux
US-RGB	-121.8579	39.5782	CRO	2021-2021	AmeriFlux
US-RGo	-122.0026	39.6805	CRO	2021-2021	AmeriFlux
US-Rls	-116.7356	43.1439	CSH	2014-2021	AmeriFlux
US-Rms	-116.7486	43.0645	CSH	2014-2020	AmeriFlux

US-Ro1	-93.0898	44.7143	CRO	2004-2016	AmeriFlux
US-Ro2	-93.0888	44.7288	CRO	2008-2016	AmeriFlux
US-Ro4	-93.0723	44.6781	GRA	2014-2021	AmeriFlux
US-Ro5	-93.0576	44.691	CRO	2017-2020	AmeriFlux
US-Ro6	-93.0578	44.6946	CRO	2017-2021	AmeriFlux
US-Rpf	-147.429	65.1198	DBF	2008-2021	AmeriFlux
US-Rwe	-116.7591	43.0653	CSH	2003-2007	AmeriFlux
US-Rwf	-116.7231	43.1207	CSH	2014-2020	AmeriFlux
US-Rws	-116.7132	43.1675	OSH	2014-2020	AmeriFlux
US-Sne	-121.7547	38.0369	GRA	2016-2020	AmeriFlux
US-Snf	-121.7272	38.0402	GRA	2018-2020	AmeriFlux
US-SRC	-110.8395	31.9083	OSH	2008-2014	AmeriFlux,FLUXNET
US-SRG	-110.8277	31.7894	GRA	2008-2021	AmeriFlux,FLUXNET
US-SRM	-110.8661	31.8214	WSA	2004-2014	FLUXNET
US-Srr	-122.0264	38.2006	WET	2014-2017	AmeriFlux
US-SRS	-110.8508	31.8173	WSA	2011-2018	AmeriFlux
US-Syv	-89.3477	46.242	MF	2001-2021	AmeriFlux,FLUXNET
US-Ton	-120.966	38.4309	WSA	2001-2020	AmeriFlux,FLUXNET
US-Tw2	-121.6365	38.0969	CRO	2012-2013	AmeriFlux,FLUXNET
US-Tw3	-121.6469	38.1152	CRO	2013-2018	AmeriFlux,FLUXNET
US-Tw4	-121.6413	38.1027	WET	2013-2021	AmeriFlux,FLUXNET
US-Twt	-121.6531	38.1087	CRO	2009-2014	FLUXNET
US-Var	-120.9508	38.4133	GRA	2000-2021	AmeriFlux,FLUXNET
US-WCr	-90.0799	45.8059	DBF	1999-2014	FLUXNET
US-Whs	-110.0522	31.7438	OSH	2007-2020	AmeriFlux,FLUXNET
US-Wi0	-91.0814	46.6188	ENF	2002-2002	AmeriFlux,FLUXNET
US-Wi1	-91.2329	46.7305	DBF	2003-2003	AmeriFlux,FLUXNET
US-Wi2	-91.1528	46.6869	ENF	2003-2003	FLUXNET
US-Wi3	-91.0987	46.6347	DBF	2002-2004	AmeriFlux,FLUXNET
US-Wi4	-91.1663	46.7393	ENF	2002-2005	AmeriFlux,FLUXNET
US-Wi6	-91.2982	46.6249	OSH	2002-2002	AmeriFlux,FLUXNET
US-Wi8	-91.2524	46.7223	DBF	2002-2002	AmeriFlux,FLUXNET
US-Wkg	-109.9419	31.7365	GRA	2004-2021	AmeriFlux,FLUXNET
US-xAB	-122.3303	45.7624	ENF	2019-2021	AmeriFlux
US-xAE	-99.0588	35.4106	GRA	2017-2021	AmeriFlux
US-xBA	-156.6194	71.2824	WET	2019-2021	AmeriFlux
US-xBL	-78.0716	39.0603	DBF	2019-2021	AmeriFlux
US-xBN	-147.5026	65.154	ENF	2019-2021	AmeriFlux
US-xBR	-71.2873	44.0639	DBF	2017-2021	AmeriFlux
US-xCL	-97.57	33.4012	GRA	2017-2021	AmeriFlux
US-xCP	-104.7456	40.8155	GRA	2016-2021	AmeriFlux
US-xDC	-99.1066	47.1617	GRA	2017-2021	AmeriFlux
US-xDJ	-145.7514	63.8811	ENF	2019-2021	AmeriFlux
US-xDL	-87.8039	32.5417	MF	2017-2021	AmeriFlux
US-xDS	-81.4362	28.125	CVM	2017-2021	AmeriFlux
US-xGR	-83.5019	35.689	DBF	2017-2021	AmeriFlux
US-xHA	-72.1727	42.5369	DBF	2017-2021	AmeriFlux
US-xHE	-149.2133	63.8757	OSH	2017-2021	AmeriFlux

US-xJE	-84.4686	31.1948	ENF	2017-2021	AmeriFlux
US-xJR	-106.8425	32.5907	OSH	2019-2021	AmeriFlux
US-xKA	-96.6129	39.1104	GRA	2017-2021	AmeriFlux
US-xKZ	-96.5631	39.1008	GRA	2017-2021	AmeriFlux
US-xMB	-109.3883	38.2483	OSH	2017-2021	AmeriFlux
US-xML	-80.5248	37.3783	DBF	2017-2021	AmeriFlux
US-xNG	-100.9154	46.7697	GRA	2017-2021	AmeriFlux
US-xNQ	-112.4524	40.1776	OSH	2017-2021	AmeriFlux
US-xRM	-105.5459	40.2759	ENF	2017-2021	AmeriFlux
US-xSB	-81.9934	29.6893	ENF	2017-2021	AmeriFlux
US-xSC	-78.1395	38.8929	DBF	2019-2021	AmeriFlux
US-xSE	-76.56	38.8901	DBF	2017-2021	AmeriFlux
US-xSJ	-119.7323	37.1088	SAV	2019-2021	AmeriFlux
US-xSL	-103.0293	40.4619	CRO	2019-2021	AmeriFlux
US-xSR	-110.8355	31.9107	OSH	2017-2021	AmeriFlux
US-xST	-89.5864	45.5089	DBF	2017-2021	AmeriFlux
US-xTA	-87.3933	32.9505	ENF	2017-2021	AmeriFlux
US-xTR	-89.5857	45.4937	DBF	2017-2021	AmeriFlux
US-xUK	-95.1921	39.0404	DBF	2017-2021	AmeriFlux
US-xUN	-89.5373	46.2339	MF	2017-2021	AmeriFlux
US-xWD	-99.2414	47.1282	GRA	2019-2021	AmeriFlux
US-xYE	-110.5391	44.9535	ENF	2018-2021	AmeriFlux
Warra	146.65452	-43.09502	EBF	2014-2022	OzFlux
Yarramundi	150.763284	-33.620812	GRA	2020-2022	OzFlux
ZA-Kru	31.4969	-25.0197	SAV	2000-2013	FLUXNET
ZM-Mon	23.2525	-15.4391	DBF	2000-2009	FLUXNET

Table S2: Methods for calculating meteorological variables based on reanalysis products

$$\text{TA} = T_k - 273.15 \tag{1}$$

$$\text{PA} = \frac{\text{P}}{1000} \tag{2}$$

$$\text{VPD} = e_s - e_a \tag{3}$$

$$\text{RH} = \left(\frac{e_a}{e_s}\right) \times 100 \tag{4}$$

$$e_s = 0.6108 \times \exp\left(\frac{17.27 \times T}{T + 237.3}\right) \tag{5}$$

$$e_a = 0.6108 \times \exp\left(\frac{17.27 \times T_d}{T_d + 237.3}\right) \tag{6}$$

$$T = T_k - 273.15 \tag{7}$$

$$T_d = T_a - 273.15 \tag{8}$$

$$R_n = \frac{R_s + R_t}{86400} \tag{9}$$

$$WS = \sqrt{u^2 + v^2} \tag{10}$$

$$G = Qg_{\_tavg} \tag{11}$$

Where, T_k is temperature_2m, P is surface_pressure, T_a is dewpoint_temperature_2m, R_s is surface_net_solar_radiation_sum, R_t is surface_net_thermal_radiation_sum , u is u_component_of_wind_10m, v is v_component_of_wind_10m.
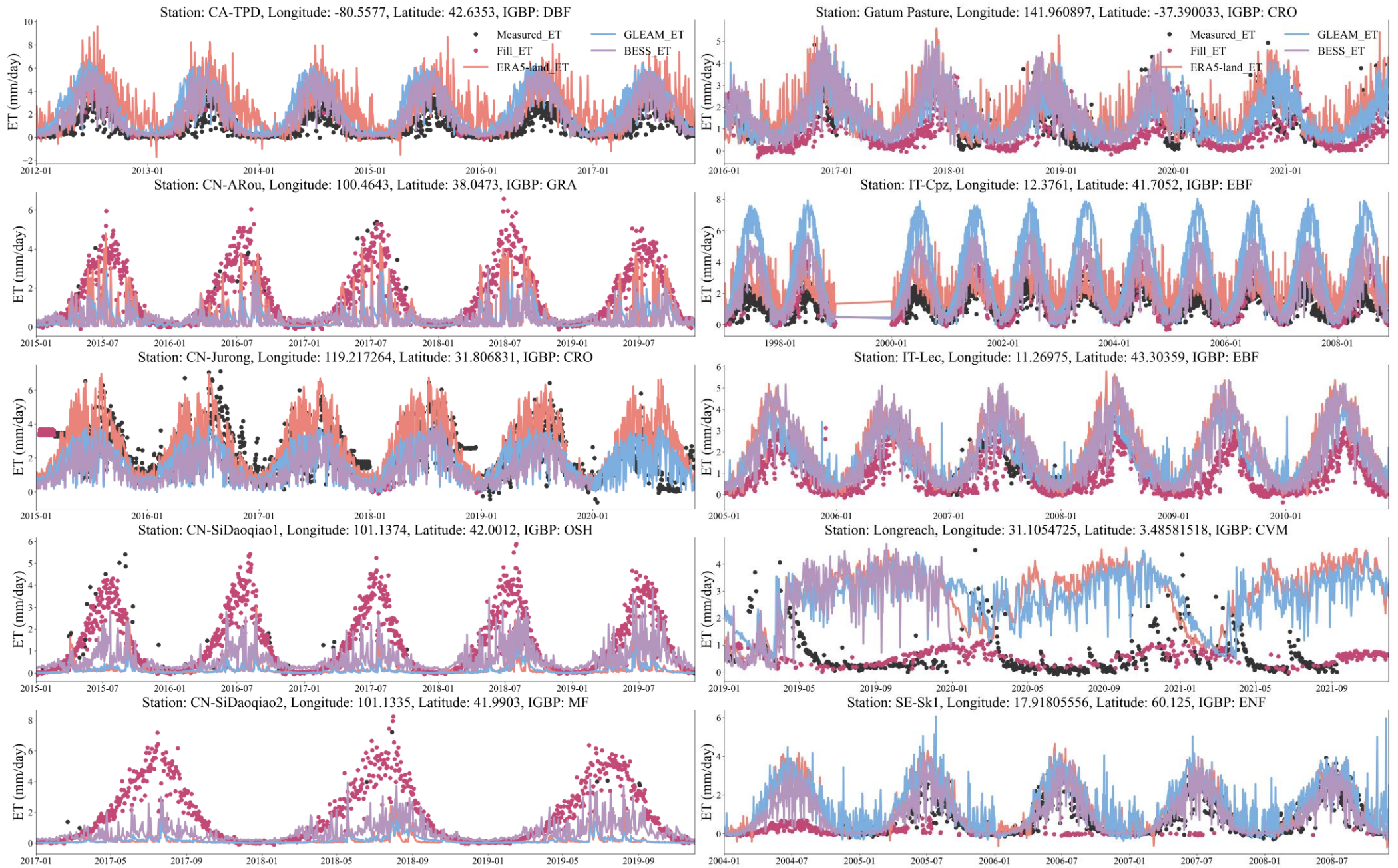
Figure.1S-1 Sites with value range differences between the filled ET and ET products.
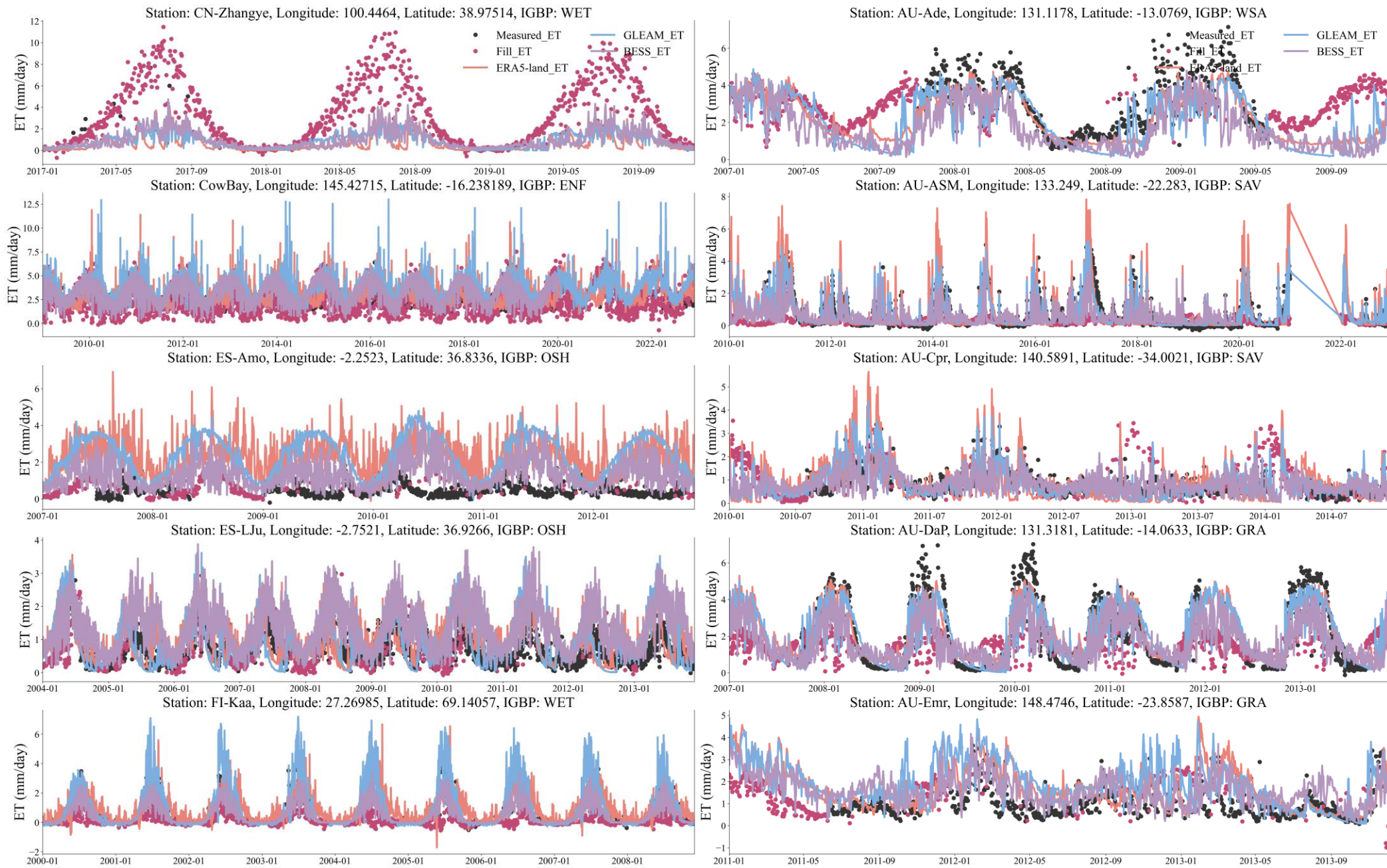
Figure.1S-2 Sites with value range differences between the filled ET and ET products.
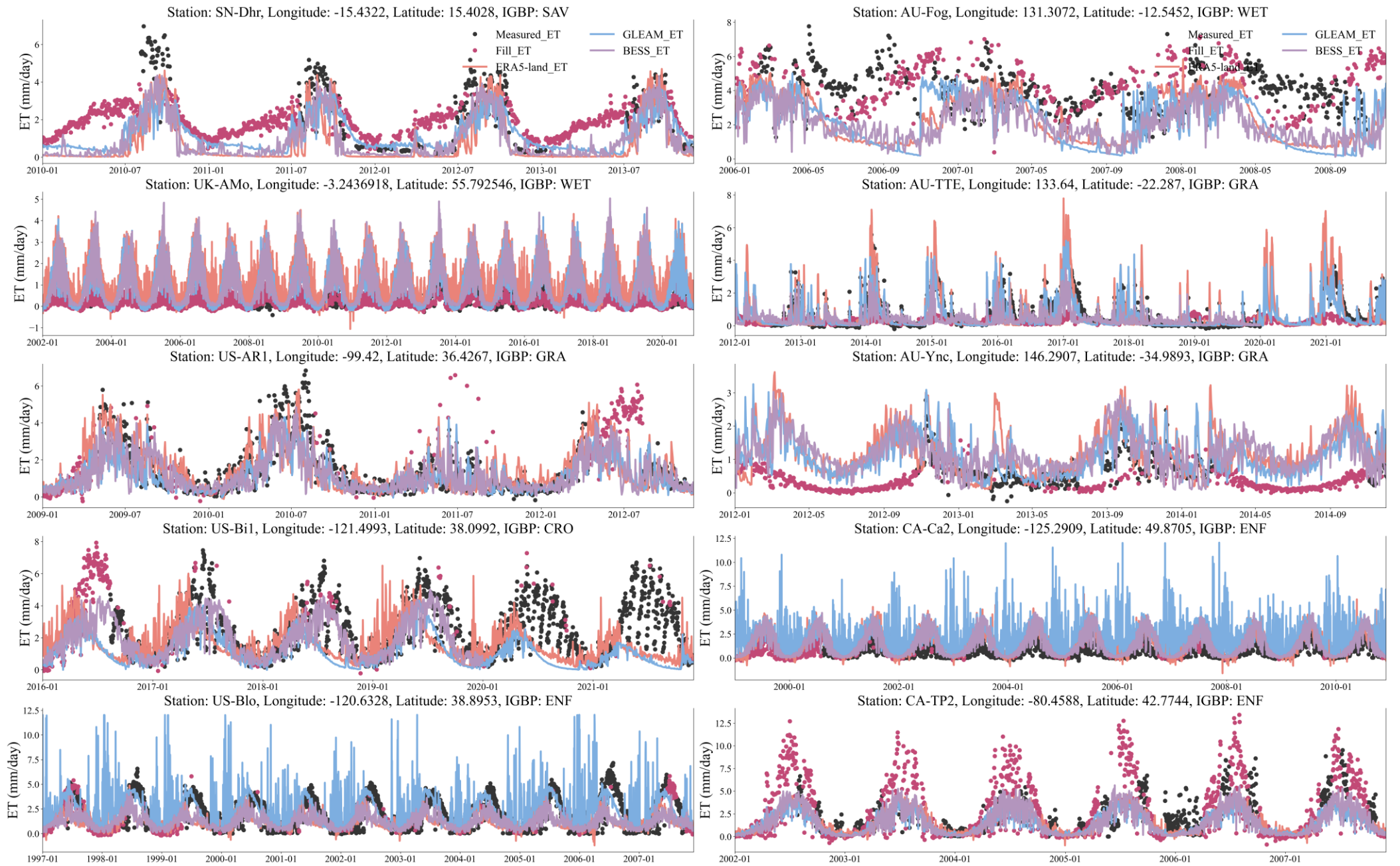
Figure.1S-3 Sites with value range differences between the filled ET and ET products.
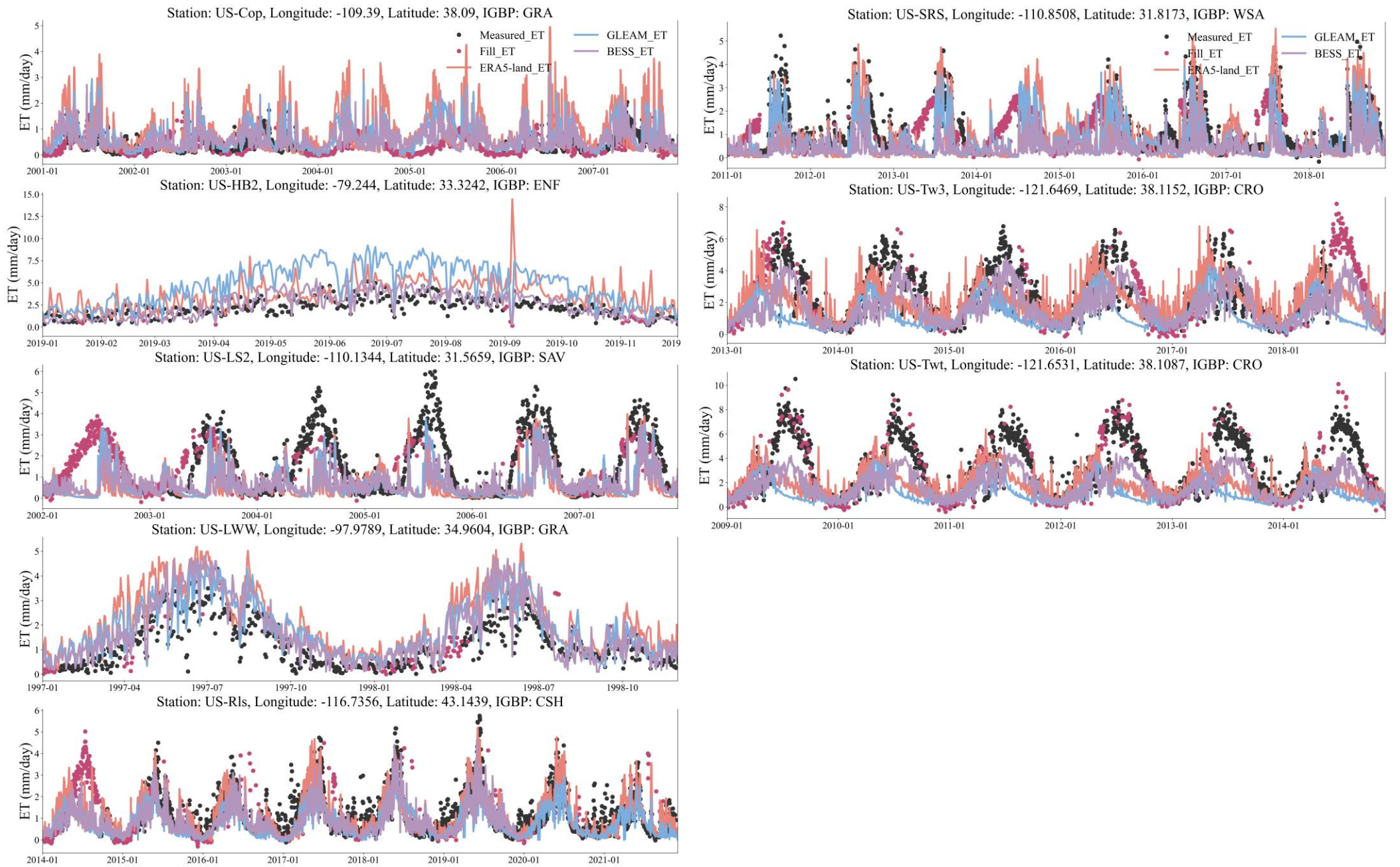
Figure.1S-4 Sites with value range differences between the filled ET and ET products.
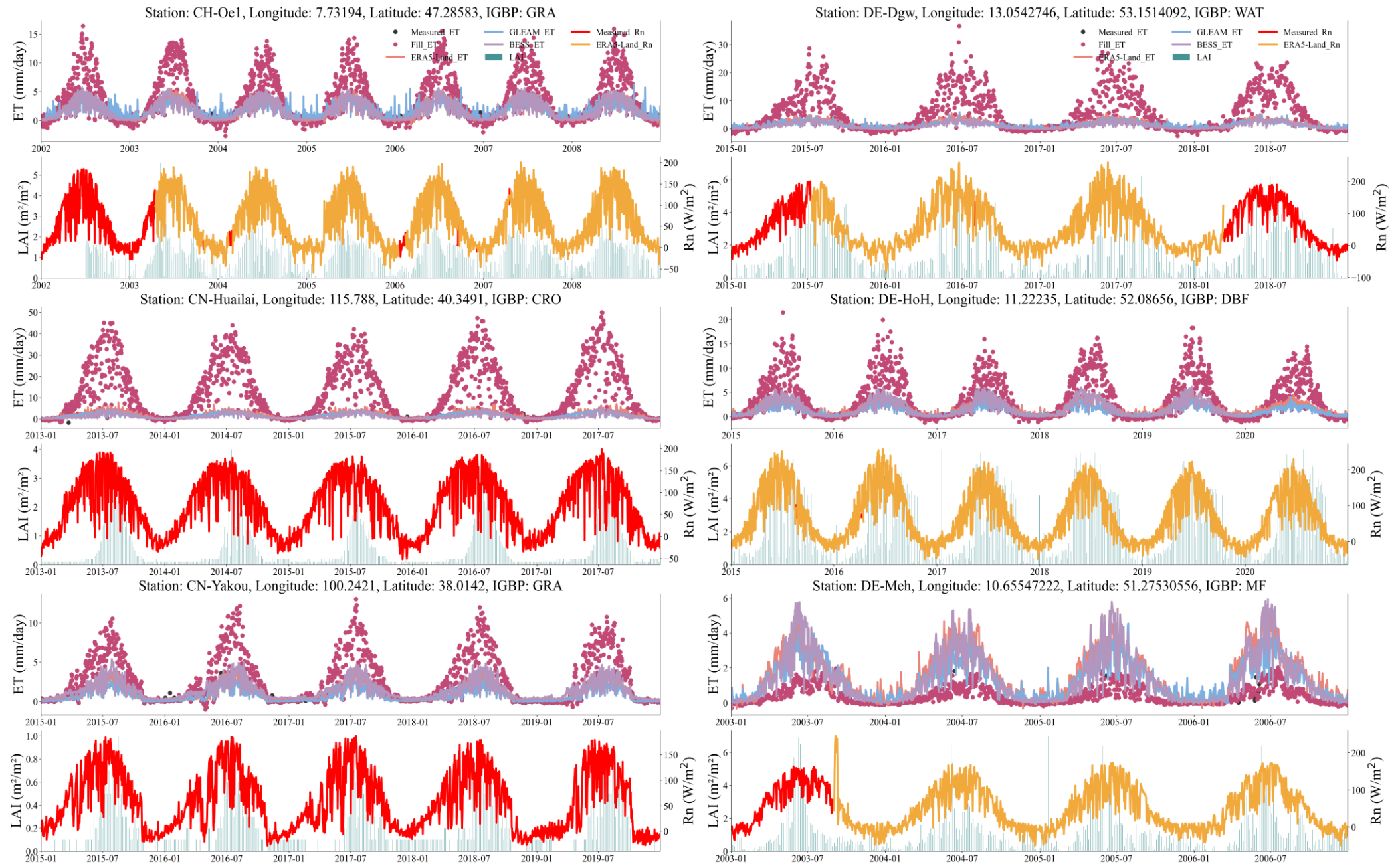
Figure.2S-1 Filled ET for uncertain sites.
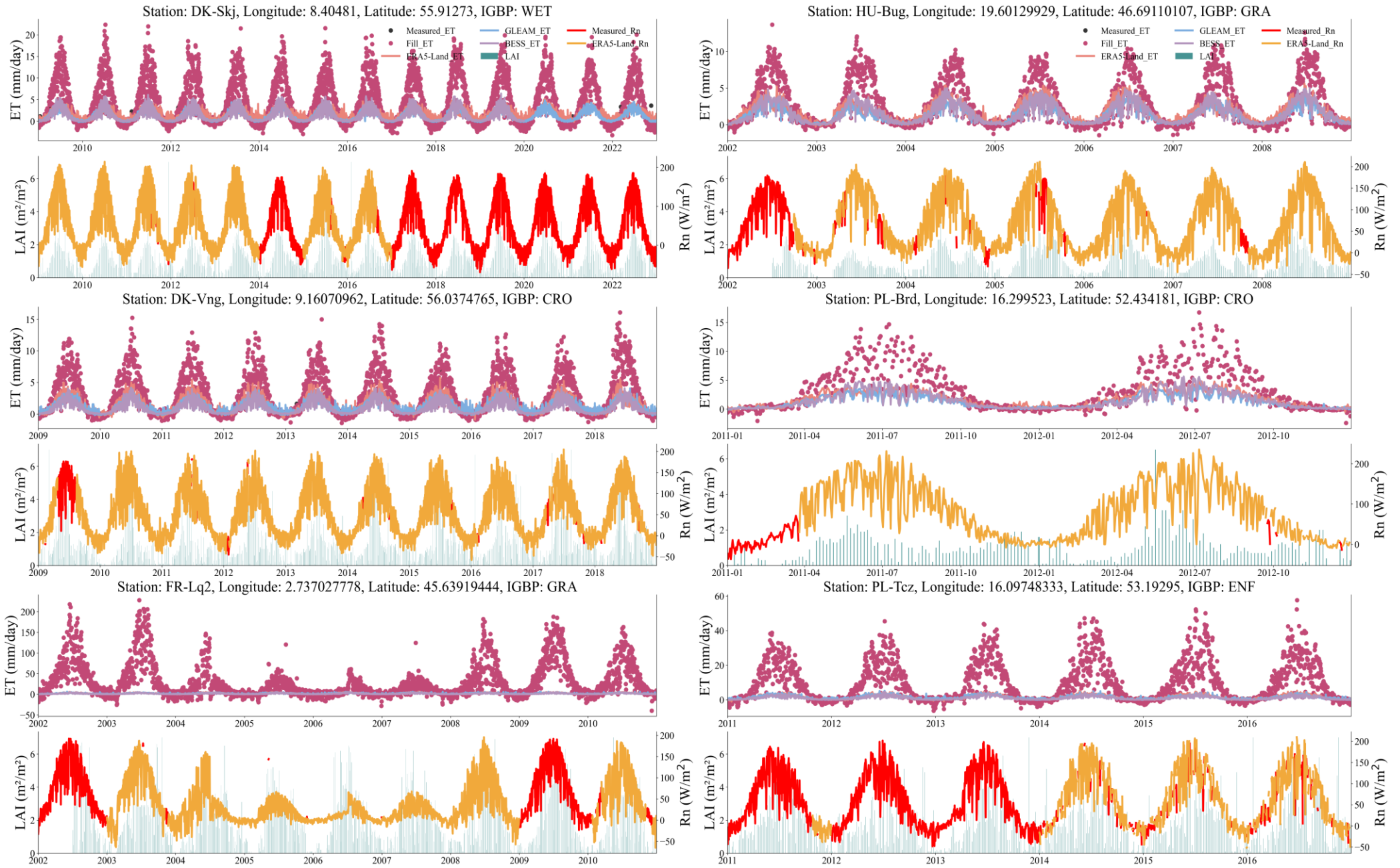
Figure.2S-2 Filled ET for uncertain sites.
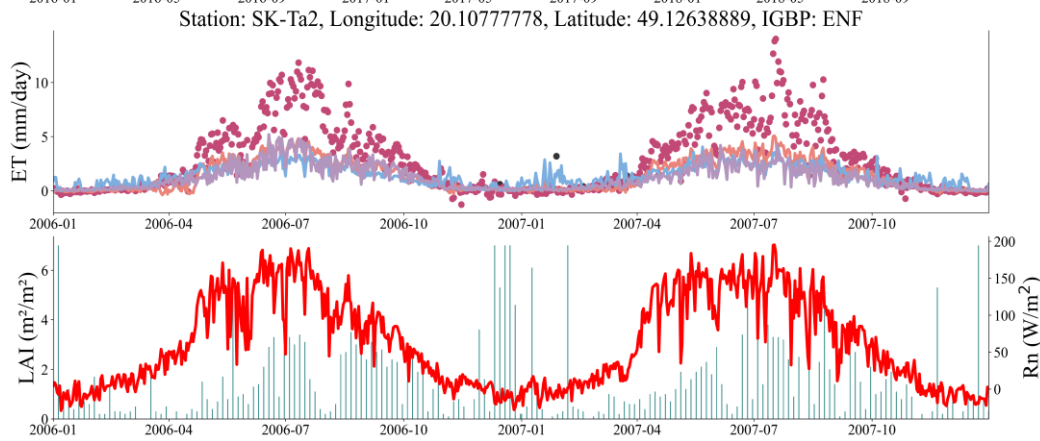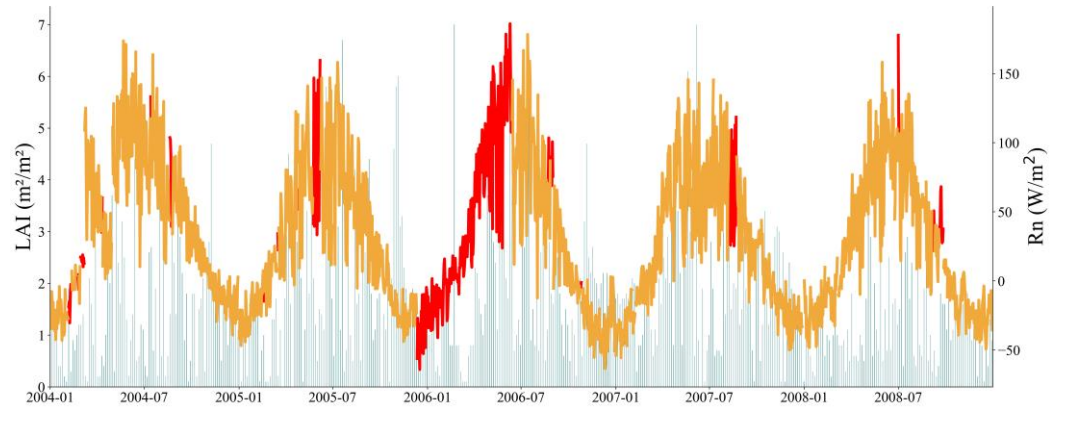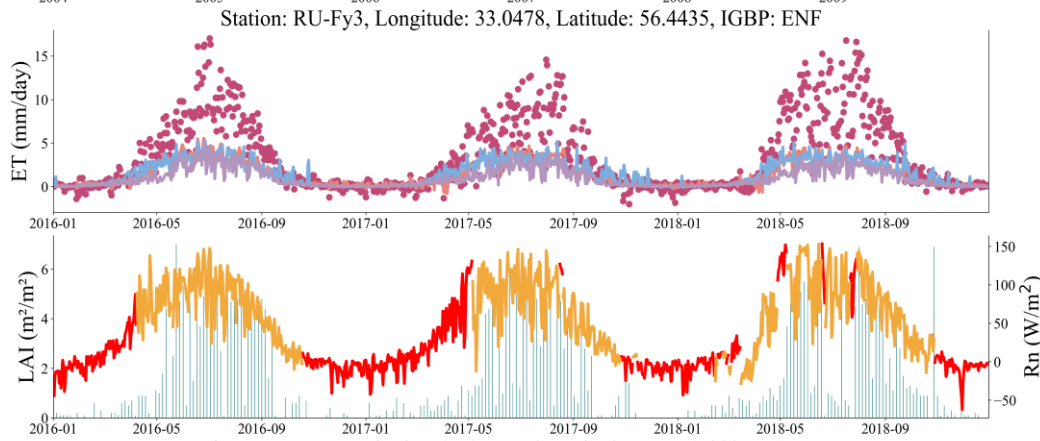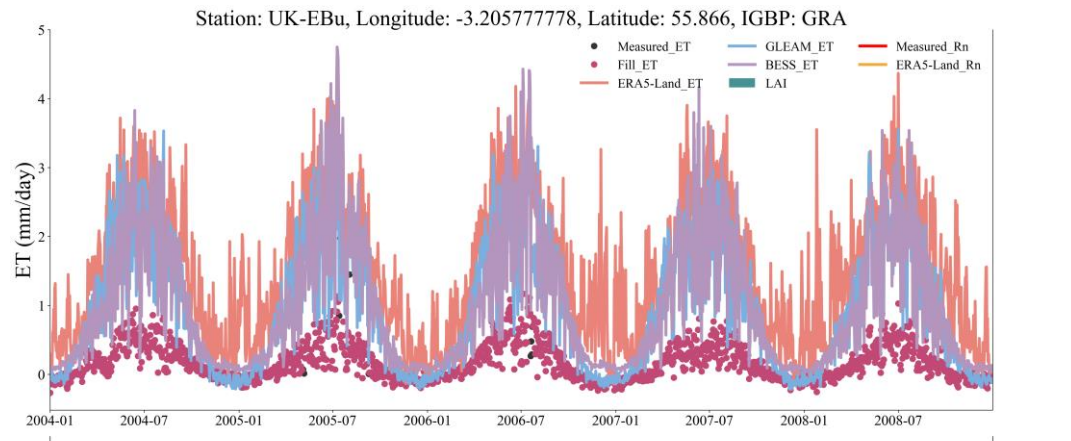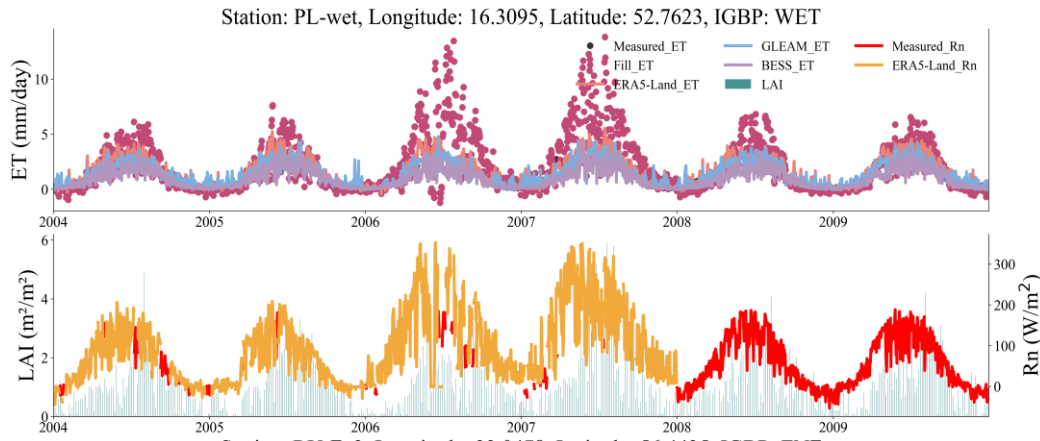
Figure.2S-3 Filled ET for uncertain sites.