

Supplementary_material_S1

No.	code	surface sites	latitude	longitude	altitude	Institute(s)	ObsPack/source/type
GLOBALVIEWplus_v6.0_2023-12-01, obspack_ch4_1_NRT_v6.0_2023-11-30							
1	IZO	Izana, Tenerife, Canary Islands	28.309	-16.499	2372.9	AEMET	izo_surface-insitu_27_allvalid
2	KAS	Kasprowy Wierch, High Tatra	49.2325	19.9818	1989	AGH	kas_surface-insitu_53_allvalid
3	SNO	Station Nord	81.3605	-16.3943	24	AU,ICOS RI,ICOS-ATC	sno_tower-insitu_464_allvalid-85magl
4	RUN	La Réunion	-21.0796	55.3841	2154	BIRA-IASB,ICOS RI,ICOS-ATC	run_surface-insitu_472_allvalid
5	KRE	Kresin u Pacova	49.583	15.083	534	CAS,ICOS,ICOS-ATC,ICOS RI	kre_tower-insitu_441_allvalid-250magl
6	CVO	Cape Verde Observatory	16.864	-24.8675	10	CEDA,MPI-BGC	cvo_surface-insitu_456_allvalid
7	CMN	Mt. Cimone Station	44.1936	10.6999	2165	CNR-ISAC,ICOS RI,ICOS-ATC	cmn_surface-insitu_443_allvalid
8	CGO	Cape Grim, Tasmania	-40.683	144.69	94	CSIRO	cgo_surface-insitu_2_allvalid
9	MQA	Macquarie Island	-54.483	158.967	6	CSIRO	mqa_surface-flask_2_representative
10	SPO	South Pole, Antarctica	-89.98	-24.8	2810	CSIRO	spo_surface-flask_2_representative
11	CFA	Cape Ferguson, Queensland	-19.28	147.057	2	CSIRO	cfa_surface-flask_2_representative
12	MAA	Mawson Station, Antarctica	-67.617	62.867	32	CSIRO	maa_surface-flask_2_representative
13	CGO	Cape Grim, Tasmania	-40.683	144.69	94	CSIRO	cgo_surface-flask_2_representative
14	MLO	Mauna Loa, Hawaii	19.5362	-155.5763	3397	CSIRO	mlo_surface-flask_2_representative
15	CYA	Casey, Antarctica	-66.283	110.517	47	CSIRO	cya_surface-flask_2_representative
16	ALT	Alert, Nunavut	82.4508	-62.5072	185	CSIRO	alt_surface-flask_2_representative
17	GPA	Gunn Point	-12.2488	131.0453	25	CSIRO	gpa_surface-flask_2_representative
18	HPB	Hohenpeissenberg	47.8011	11.0245	985	DWD,ICOS RI,ICOS-ATC	hpb_tower-insitu_147_allvalid-131magl
19	LIN	Lindenberg	52.1663	14.1226	73	DWD,ICOS RI,ICOS-ATC	lin_tower-insitu_147_allvalid-98magl
20	GAT	Gartow	53.0657	11.4429	70	DWD,ICOS RI,ICOS-ATC	gat_tower-insitu_147_allvalid-341magl
21	KIT	Karlsruhe	49.0915	8.4249	110	DWD,ICOS RI,ICOS-ATC	kit_tower-insitu_147_allvalid-200magl
22	TOH	Torfhaus	51.8088	10.535	801	DWD,ICOS RI,ICOS-ATC	toh_tower-insitu_147_allvalid-147magl
23	STE	Steinkimmen	53.0431	8.4588	29	DWD,ICOS RI,ICOS-ATC	ste_tower-insitu_147_allvalid-252magl
24	OXK	Ochsenkopf	50.0301	11.8084	1022	DWD,ICOS RI,ICOS-ATC	oxk_tower-insitu_147_allvalid-163magl
25	JUE	Jülich	50.9102	6.4096	98	DWD,ICOS RI,ICOS-ATC	jue_tower-insitu_147_allvalid-120magl
26	HEL	Helgoland	54.1804	7.8832	43	DWD,ICOS RI,ICOS-ATC	hel_surface-insitu_147_allvalid
27	FNE	Fort Nelson, British Columbia	58.8412	-122.5737	361	ECCC	fne_surface-insitu_6_allvalid
28	ABT	Abbotsford, British Columbia	49.0114	-122.3353	60	ECCC	abt_surface-insitu_6_allvalid
29	EGB	Egbert, Ontario	44.231	-79.7838	251	ECCC	egb_surface-insitu_6_allvalid
30	HNP	Hanlan\'s Point, Ontario	43.6122	-79.3887	87	ECCC	hnp_surface-insitu_6_allvalid
31	ALT	Alert, Nunavut	82.4508	-62.5072	185	ECCC	alt_surface-insitu_6_allvalid
32	FSD	Fraserdale	49.8752	-81.57	210	ECCC	fsd_surface-insitu_6_allvalid
33	CPS	Chapais,Quebec	49.8223	-74.9753	391	ECCC	cps_surface-insitu_6_allvalid
34	TAO	Toronto Atmospheric Observatory, University of Toronto, Ontario	43.66	-79.4	100	ECCC	tao_surface-insitu_6_allvalid
35	TPD	Turkey Point, Ontario	42.6354	-80.5577	231	ECCC	tpd_surface-insitu_6_allvalid
36	BRA	Bratt\'s Lake Saskatchewan	50.2017	-104.7113	595	ECCC	bra_surface-insitu_6_allvalid
37	CHL	Churchill, Manitoba	58.7379	-93.8194	29	ECCC	chl_surface-insitu_6_allvalid
38	ETL	East Trout Lake, Saskatchewan	54.3541	-104.9868	493	ECCC	etl_surface-insitu_6_allvalid
39	LLB	Lac La Biche, Alberta	54.9538	-112.4666	540	ECCC	llb_surface-insitu_6_allvalid
40	INU	Inuvik,Northwest Territories	68.3178	-133.5342	113	ECCC	inu_surface-insitu_6_allvalid
41	EST	Esther, Alberta	51.6707	-110.206	707	ECCC	est_surface-insitu_6_allvalid
42	CBY	Cambridge Bay, Nunavut Territory	69.1284	-105.0577	35	ECCC	cby_surface-insitu_6_allvalid
43	BCK	Behchoko, Northwest Territories	62.7981	-115.9194	160	ECCC	bck_surface-insitu_6_allvalid
44	ESP	Estevan Point, British Columbia	49.383	-126.5441	7	ECCC	esp_surface-insitu_6_allvalid
45	WSA	Sable Island, Nova Scotia	43.9322	-60.0093	5	ECCC	wsa_surface-insitu_6_allvalid
46	BLK	Baker Lake, Nunavut	64.3317	-96.0104	51	ECCC	blk_surface-insitu_6_allvalid
47	JFJ	Jungfrauoch	46.55	7.987	3570	EMPA	jfj_surface-insitu_5_allvalid
48	LHW	Laegern-Hochwacht	47.4822	8.3973	840	EMPA,ICOS RI	lhw_surface-insitu_5_allvalid
49	JAR	Järvselja	58.2776	27.3082	36	EMU,ICOS RI	jar_tower-insitu_475_allvalid-110magl
50	GHG09	United Telephone Mutual Aid Corp, Munich, ND	48.6661	-98.8414	485.85	EN	ghg09_surface-insitu_112_allvalid
51	GHG03	Robert D Summey - Nickelsville, Dublin, GA	32.6542	-83.0297	107.9	EN	ghg03_surface-insitu_112_allvalid
52	GHG06	City of Bagley, Bagley, MN	47.5206	-95.4256	453.24	EN	ghg06_surface-insitu_112_allvalid
53	THD	Trinidad Head, California	41.0541	-124.151	107	EN,SIO	thd_surface-insitu_112_allvalid
54	LMP	Lampedusa	35.5181	12.6322	45	ENEA,ICOS RI,ICOS-ATC	lmp_surface-insitu_28_allvalid
55	UTO	Uto	59.7839	21.3672	8	FMI,ICOS RI,ICOS-ATC	uto_surface-insitu_30_allvalid
56	PAL	Pallas-Sammaltunturi, GAW Station	67.9733	24.1157	565	FMI,ICOS RI,ICOS-ATC	pal_surface-insitu_30_allvalid
57	PAL	Pallas-Sammaltunturi, GAW Station	67.9733	24.1157	565	FMI,ICOS RI,ICOS-ATC	pal_surface-insitu_30_nonlocal
58	PAL	Pallas-Sammaltunturi, GAW Station	67.9733	24.1157	565	FMI,ICOS RI,ICOS-ATC	pal_surface-insitu_30_continental
59	PAL	Pallas-Sammaltunturi, GAW Station	67.9733	24.1157	565	FMI,ICOS RI,ICOS-ATC	pal_surface-insitu_30_marine
60	PUI	Puijo	62.9096	27.6549	232	FMI,ICOS RI,ICOS-ATC	pui_tower-insitu_30_allvalid-84magl
61	HUN	Hegyhatsal	46.9559	16.6521	248	HMS	hun_tower-insitu_35_allvalid-115magl
62	GIC	Sierra de Gredos	40.3457	-5.1755	1436	ICTA-UAB	gic_surface-insitu_431_allvalid
63	DEC	Delta de l'Ebre	40.7439	0.7867	5	ICTA-UAB	dec_surface-insitu_431_allvalid

64	EEC	El Estrecho	36.0586	-5.664	20	ICTA-UAB	eec_surface-insitu_431_allvalid
65	VAC	Valderejo	42.8786	-3.2139	1102	ICTA-UAB	vac_surface-insitu_431_allvalid
66	SGC	Sierra de Grazalema	36.6956	-5.3975	850	ICTA-UAB	sgc_surface-insitu_431_allvalid
67	LMU	La Muela	41.5941	-1.1003	571	ICTA-UAB	lmu_surface-insitu_431_allvalid
68	CBW	Cabauw	51.9703	4.9264	0	IMAU	cbw_surface-insitu_118_allvalid
69	LUT	Lutjewad	53.4037	6.3529	1	IMAU	lut_surface-insitu_118_allvalid
70	KRK	Krakow	50.067	19.913	220	IMAU	krk_surface-insitu_118_allvalid
71	IPR	Ispra	45.807	8.63	223	JRC,ICOS RI,ICOS-ATC	ipr_tower-insitu_103_allvalid-100magl
72	GSN	Gosan, Cheju Island	33.28	126.15	72	KMA	gsn_surface-insitu_61_allvalid
73	AMY	Anmyeon-do	36.5389	126.3295	47	KMA	amy_surface-insitu_61_allvalid
74	ULD	Ulleungdo	37.48	130.9	220.9	KMA	uld_surface-insitu_61_allvalid
75	MKN	Mt. Kenya	-0.0622	37.2972	3644	KMD	mkn_surface-insitu_701_allvalid
76	BRM	Beromunster	47.1896	8.1755	797	KUP	brm_tower-insitu_49_allvalid-212magl
77	CRA	Centre de Recherches Atmosphériques	43.1298	0.3692	600	LA,ICOS RI,ICOS-ATC	cra_tower-insitu_188_allvalid-60magl
78	MLH	Malin Head	55.355	-7.333	22	LATMOS,ICOS RI	mlh_surface-insitu_468_allvalid
79	OLI	Oliktok Point, Alaska	70.4953	-149.8869	2	LBNL-ARM	oli_surface-insitu_64_allvalid-10magl
80	ENA	Eastern North Atlantic, Graciosa, Azores	39.0916	-28.0257	30.48	LBNL-ARM	ena_surface-insitu_64_allvalid-10magl
81	SGP	Southern Great Plains, Oklahoma	36.607	-97.489	314	LBNL-ARM	sgp_surface-insitu_64_allvalid-60magl
82	PDM	Pic Du Midi	42.9372	0.1411	2877	LSCE	pdm_surface-insitu_11_allvalid
83	FKL	Finokalia, Crete	35.3378	25.6694	250	LSCE	fkl_surface-insitu_11_allvalid
84	MHD	Mace Head, County Galway	53.326	-9.899	5	LSCE	mhd_surface-insitu_11_allvalid
85	BIS	Biscarrosse	44.3781	-1.2311	167	LSCE,ICOS RI	bis_surface-insitu_11_allvalid
86	ERS	ERSA	42.9692	9.3801	533	LSCE,ICOS RI	ers_surface-insitu_11_allvalid
87	TRN	Trainou	47.9647	2.1125	131	LSCE,ICOS RI,ICOS-ATC	trn_tower-insitu_11_allvalid-180magl
88	SAC	Saclay	48.7227	2.142	160	LSCE,ICOS RI,ICOS-ATC	sac_tower-insitu_11_allvalid-100magl
89	ROC	Roc'h Trédudon	48.4133	-3.8895	362	LSCE,ICOS RI,ICOS-ATC	roc_tower-insitu_11_allvalid-140magl
90	PUY	Puy de Dome	45.7719	2.9658	1465	LSCE,ICOS-ATC,ICOS RI	puy_surface-insitu_11_allvalid
91	OPE	Observatoire perenne de l'environnement	48.5619	5.5036	390	LSCE,ICOS-ATC,ICOS RI	ope_tower-insitu_11_allvalid-120magl
92	HTM	Hyltemossa	56.0976	13.4189	198.4	LUND-CEC,ICOS-ATC,ICOS RI	htm_tower-insitu_424_allvalid-150magl
93	NOR	Norunda	60.0864	17.4794	46	LUND-CEC,ICOS-ATC,ICOS RI	nor_tower-insitu_424_allvalid-100magl
94	TIK	Hydrometeorological Observatory of Tiksi	71.5965	128.8887	19	MGO,FMI,ICOS RI,ICOS-ATC	tik_surface-insitu_55_allvalid
95	ALT	Alert, Nunavut	82.4508	-62.5072	185	MPI-BGC	alt_surface-flask_45_representative
96	SIS	Shetland Islands	60.089	-1.255	30	MPI-BGC	sis_surface-flask_45_representative
97	KJN	Kjolnes	70.85	29.23	0	MPI-BGC	kjn_surface-flask_45_representative
98	NAM	Gobabeb	-23.56	15.05	410	MPI-BGC	nam_surface-flask_45_representative
99	JFJ	Jungfrauoch	46.55	7.987	3570	MPI-BGC	jfj_surface-flask_45_representative
100	OXK	Ochsenkopf	50.0301	11.8084	1022	MPI-BGC	oxk_surface-flask_45_representative
101	CVO	Cape Verde Observatory	16.864	-24.8675	10	MPI-BGC	cvo_surface-flask_45_representative
102	ZOT	Zotino, Siberia	60.75	89.38	111	MPI-BGC	zot_surface-flask_45_representative
103	CGO	Cape Grim, Tasmania	-40.683	144.69	94	MPI-BGC	cgo_surface-flask_45_representative
104	BIK	Bialystok	53.2	22.75	183	MPI-BGC	bik_surface-flask_45_representative
105	GVN	Neumayer Station	-70.67	-8.27	40	MPI-BGC	gvn_surface-flask_45_representative
106	VRS	Villum Research Station; Station Nord	81.58	-16.64	24	MPI-BGC	vrs_surface-flask_45_representative
107	BIK	Bialystok	53.2	22.75	183	MPI-BGC,ICOS RI,ICOS-ATC	bik_tower-insitu_45_allvalid-300magl
108	BIR	Birkenes Observatory	58.3886	8.2519	215	NILU,ICOS RI,ICOS-ATC	bir_tower-insitu_56_allvalid-75magl
109	ZEP	Ny-Alesund, Svalbard	78.9067	11.8883	474	NILU,ICOS-ATC,ICOS RI	zep_surface-insitu_56_allvalid
110	BHD	Baring Head Station	-41.4083	174.871	85	NIWA	bhd_surface-insitu_15_baseline
111	SMO	Tutuila	-14.2474	-170.5644	42	NOAA	smo_surface-flask_1_representative
112	CRV	Carbon in Arctic Reservoirs Vulnerability Experiment (CARVE)	64.9863	-147.598	611.43	NOAA	crv_tower-insitu_1_allvalid-32magl
113	BRW	Barrow Atmospheric Baseline Observatory	71.323	-156.6114	11	NOAA	brw_surface-insitu_1_allvalid
114	DRP	Drake Passage	-59	-64.69	0	NOAA	drp_shipboard-flask_1_representative
115	MLO	Mauna Loa, Hawaii	19.5362	-155.5763	3397	NOAA	mlo_surface-insitu_1_allvalid
116	ZEP	Ny-Alesund, Svalbard	78.9067	11.8883	474	NOAA	zep_surface-flask_1_representative
117	HUN	Hegyhatsal	46.9559	16.6521	248	NOAA	hun_surface-flask_1_representative
118	CBA	Cold Bay, Alaska	55.21	-162.72	21.34	NOAA	cba_surface-flask_1_representative
119	CRV	Carbon in Arctic Reservoirs Vulnerability Experiment (CARVE)	64.9863	-147.598	611.43	NOAA	crv_surface-pfp_1_allvalid-32magl
120	SPO	South Pole, Antarctica	-89.98	-24.8	2810	NOAA	spo_surface-flask_1_representative
121	TAP	Tae-ahn Peninsula	36.7376	126.1328	16	NOAA	tap_surface-flask_1_representative
122	PAL	Pallas-Sammaltunturi, GAW Station	67.9733	24.1157	565	NOAA	pal_surface-flask_1_representative
123	NAT	Farol De Mae Luiza Lighthouse	-5.7952	-35.1853	50	NOAA	nat_surface-flask_1_representative
124	ALT	Alert, Nunavut	82.4508	-62.5072	185	NOAA	alt_surface-flask_1_representative
125	NMB	Gobabeb	-23.58	15.03	456	NOAA	nmb_surface-flask_1_representative
126	AZR	Terceira Island, Azores	38.766	-27.375	19	NOAA	azr_surface-flask_1_representative
127	SGP	Southern Great Plains, Oklahoma	36.607	-97.489	314	NOAA	sgp_surface-flask_1_representative
128	LEW	Lewisburg, Pennsylvania	40.9446	-76.8789	166	NOAA	lew_surface-pfp_1_allvalid-95magl
129	PSA	Palmer Station, Antarctica	-64.7742	-64.0527	10	NOAA	psa_surface-flask_1_representative

130	THD	Trinidad Head, California	41.0541	-124.151	107	NOAA	thd_surface-flask_1_representative
131	WKT	Moody, Texas	31.3149	-97.3269	251	NOAA	wkt_surface-pfp_1_allvalid-457magl
132	EIC	Easter Island	-27.1597	-109.4284	47	NOAA	eic_surface-flask_1_representative
133	ASK	Assekrem	23.2625	5.6322	2710	NOAA	ask_surface-flask_1_representative
134	ASC	Ascension Island	-7.9667	-14.4	85	NOAA	asc_surface-flask_1_representative
135	NWR	Niwot Ridge, Colorado	40.0531	-105.5864	3523	NOAA	nwr_surface-pfp_1_allvalid-3magl
136	SHM	Shemya Island, Alaska	52.7112	174.126	23	NOAA	shm_surface-flask_1_representative
137	HPB	Hohenpeissenberg	47.8011	11.0245	985	NOAA	hpb_surface-flask_1_representative
138	HBA	Halley Station, Antarctica	-75.605	-26.21	30	NOAA	hba_surface-flask_1_representative
139	KUM	Cape Kumukahi, Hawaii	19.5608	-154.8883	8	NOAA	kum_surface-flask_1_representative
140	HSU	Humboldt State University	41.0588	-124.75	0	NOAA	hsu_surface-flask_1_representative
141	BKT	Bukit Kototabang	-0.202	100.318	845	NOAA	bkt_surface-flask_1_representative
142	ICE	Storhofdi, Vestmannaeyjar	63.3998	-20.2884	118	NOAA	ice_surface-flask_1_representative
143	MHD	Mace Head, County Galway	53.326	-9.899	5	NOAA	mhd_surface-flask_1_representative
144	MWO	Mt. Wilson Observatory	34.2246	-118.0586	1729.33	NOAA	mwo_surface-pfp_1_allvalid-46magl
145	KEY	Key Biscayne, Florida	25.6654	-80.158	1	NOAA	key_surface-flask_1_representative
146	NWR	Niwot Ridge, Colorado	40.0531	-105.5864	3523	NOAA	nwr_surface-flask_1_representative
147	MLO	Mauna Loa, Hawaii	19.5362	-155.5763	3397	NOAA	mlo_surface-flask_1_representative
148	MID	Sand Island, Midway	28.2186	-177.3678	4.6	NOAA	mid_surface-flask_1_representative
149	BAO	Boulder Atmospheric Observatory, Colorado	40.05	-105.004	1578.7	NOAA	bao_surface-pfp_1_allvalid-300magl
150	BRW	Barrow Atmospheric Baseline Observatory	71.323	-156.6114	11	NOAA	brw_surface-flask_1_representative
151	WLG	Mt. Waliguan	36.2879	100.8964	3810	NOAA	wlg_surface-flask_1_representative
152	DSI	Dongsha Island	20.6992	116.7297	3	NOAA	dsi_surface-flask_1_representative
153	TIK	Hydrometeorological Observatory of Tiksi	71.5965	128.8887	19	NOAA	tik_surface-flask_1_representative
154	GMI	Mariana Islands	13.386	144.656	0	NOAA	gmi_surface-flask_1_representative
155	SDZ	Shangdianzi	40.65	117.117	293	NOAA	sdz_surface-flask_1_representative
156	UUM	Ulaan Uul	44.4516	111.0956	1007	NOAA	uum_surface-flask_1_representative
157	CIB	Centro de Investigacion de la Baja Atmosfera (CIBA)	41.81	-4.93	845	NOAA	cib_surface-flask_1_representative
158	RPB	Ragged Point	13.165	-59.432	15	NOAA	rpb_surface-flask_1_representative
159	OXK	Ochsenkopf	50.0301	11.8084	1022	NOAA	oxk_surface-flask_1_representative
160	WBI	West Branch, Iowa	41.7248	-91.3529	241.7	NOAA	wbi_surface-pfp_1_allvalid-379magl
161	USH	Ushuaia	-54.8484	-68.3106	12	NOAA	ush_surface-flask_1_representative
162	AMT	Argyle, Maine	45.0345	-68.6821	52.4	NOAA	amt_surface-pfp_1_allvalid-107magl
163	CGO	Cape Grim, Tasmania	-40.683	144.69	94	NOAA	cgo_surface-flask_1_representative
164	SYO	Syowa Station, Antarctica	-69.0125	39.59	14	NOAA	syo_surface-flask_1_representative
165	AMY	Anmyeon-do	36.5389	126.3295	47	NOAA	amy_surface-flask_1_representative
166	TAC	Tacolneston	52.5177	1.1386	56	NOAA	tac_surface-flask_1_representative
167	LMP	Lampedusa	35.5181	12.6322	45	NOAA	lmp_surface-flask_1_representative
168	SUM	Summit	72.5962	-38.422	3209.54	NOAA	sum_surface-flask_1_representative
169	IZO	Izana, Tenerife, Canary Islands	28.309	-16.499	2372.9	NOAA	izo_surface-flask_1_representative
170	WIS	Weizmann Institute of Science at the Arava Institute, Ketura	29.9646	35.0605	151	NOAA	wis_surface-flask_1_representative
171	BMW	Tudor Hill, Bermuda	32.2647	-64.8788	30	NOAA	bmw_surface-flask_1_representative
172	LLN	Lulin	23.47	120.87	2862	NOAA	lln_surface-flask_1_representative
173	UTA	Wendover, Utah	39.9018	-113.7181	1327	NOAA	uta_surface-flask_1_representative
174	MEX	High Altitude Global Climate Observation Center	18.9841	-97.311	4464	NOAA	mex_surface-flask_1_representative
175	CRZ	Crozet Island	-46.4337	51.8478	197	NOAA	crz_surface-flask_1_representative
176	SEY	Mahe Island	-4.6824	55.5325	2	NOAA	sey_surface-flask_1_representative
177	CPT	Cape Point	-34.3523	18.4891	230	NOAA	cpt_surface-flask_1_representative
178	POC	Pacific Ocean	-1E+34	-1E+34	0	NOAA	poc_shipboard-flask_1_representative
179	MBO	Mt. Bachelor Observatory	43.9775	-121.6861	2731	NOAA	mbo_surface-pfp_1_allvalid-11magl
180	BHD	Baring Head Station	-41.4083	174.871	85	NOAA	bhd_surface-flask_1_representative
181	MRC	Marcellus Pennsylvania	41.4662	-76.4188	592	NOAA	mrc_surface-pfp_1_allvalid-east
182	MRC	Marcellus Pennsylvania	41.4662	-76.4188	592	NOAA	mrc_surface-pfp_1_allvalid-south
183	LEF	Park Falls, Wisconsin	45.9451	-90.2732	472	NOAA	lef_surface-flask_1_representative
184	CHR	Christmas Island	1.7	-157.1518	0	NOAA	chr_surface-flask_1_representative
185	MSH	Mashpee, Massachusetts	41.6567	-70.4975	32	NOAA	msh_surface-pfp_1_allvalid-46magl
186	SGP	Southern Great Plains, Oklahoma	36.607	-97.489	314	NOAA	sgp_surface-pfp_1_allvalid-60magl
187	RVRB	R/V Ron Brown	-1E+34	-1E+34	0	NOAA	rvr_shipboard-insitu_1_allvalid
188	MKO	Mauna Kea, Hawaii	19.8228	-155.4693	4199	NOAA	mko_surface-insitu_1_allvalid
189	WGC	Walnut Grove, California	38.2645	-121.4904	2	NOAA,LBNL	wgc_tower-insitu_1_allvalid-483magl
190	WGC	Walnut Grove, California	38.2645	-121.4904	2	NOAA,LBNL	wgc_surface-pfp_1_allvalid-484magl
191	STR	Sutro Tower, San Francisco, California	37.7553	-122.4528	254	NOAA,LBNL	str_surface-pfp_1_allvalid-232magl
192	WGC	Walnut Grove, California	38.2645	-121.4904	2	NOAA,LBNL	wgc_surface-pfp_1_allvalid-89magl
193	SCT	Beech Island, South Carolina	33.4057	-81.8334	115.2	NOAA,SRNL	sct_surface-pfp_1_allvalid-305magl
194	SCT	Beech Island, South Carolina	33.4057	-81.8334	115.2	NOAA,SRNL	sct_tower-insitu_1_allvalid-305magl
195	LEF	Park Falls, Wisconsin	45.9451	-90.2732	472	NOAA,UoFWI	lef_tower-insitu_1_allvalid-396magl

196	LEF	Park Falls, Wisconsin	45.9451	-90.2732	472	NOAA,UofWI	lef_surface-pfp_1_allvalid-396magl
197	CRP	Carnsore Point	52.18	-6.37	9	NUI-Galway,ICOS RI	crp_surface-insitu_137_allvalid
198	MRC	Marcellus Pennsylvania	41.4662	-76.4188	592	PSU	mrc_tower-insitu_60_allvalid-south
199	GCI03	Magee, Mississippi	31.8869	-89.7276	132	PSU	gci03_tower-insitu_60_allvalid
200	DVV	Danville, Virginia	36.7058	-79.4369	277	PSU	dvv_tower-insitu_60_allvalid
201	GCI02	Grenada, Mississippi	33.7525	-89.8539	105	PSU	gci02_tower-insitu_60_allvalid
202	WSD	Wessington, South Dakota	44.0502	-98.588	592	PSU	wsd_tower-insitu_60_allvalid
203	GCI04	Millerville, AL	33.1759	-85.8911	328	PSU	gci04_tower-insitu_60_allvalid
204	GCI01	Monroe, Louisana	32.469	-92.2829	65	PSU	gci01_tower-insitu_60_allvalid
205	NOTR	Notrees	31.9657	102.7699	1015	PSU	notr_surface-insitu_60_allvalid-91magl
206	HOBBS	Hobbs	32.7135	-103.0913	1103	PSU	hobb_surface-insitu_60_allvalid-91magl
207	FORT	Fort Stockton	30.8666	-102.815	987	PSU	fort_surface-insitu_60_allvalid-128magl
208	CARL	Carlsbad Caverns National Park	32.1783	-104.4406	1349	PSU	carl_surface-insitu_60_allvalid-9magl
209	MALJ	Maljamar	32.8671	-103.7608	1310	PSU	malj_surface-insitu_60_allvalid-134magl
210	PRS	Plateau Rosa Station	45.93	7.7	3480	RSE,ICOS RI,ICOS-ATC	prs_surface-insitu_21_allvalid
211	LUT	Lutjewad	53.4037	6.3529	1	RUG,ICOS RI,ICOS-ATC	lut_surface-insitu_44_allvalid
212	CPT	Cape Point	-34.3523	18.4891	230	SAWS	cpt_surface-insitu_36_marine
213	SVB	Svartberget	64.256	19.775	235	SLU,ICOS-ATC,ICOS RI	svb_tower-insitu_440_allvalid-150magl
214	CBW	Cabauw	51.9703	4.9264	0	TNO,ICOS RI	cbw_tower-insitu_445_allvalid-207magl
215	SYO	Syowa Station, Antarctica	-69.0125	39.59	14	TU,NIPR	syo_surface-insitu_8_representative
216	ZSF	Zugspitze / Schneefernerhaus	47.4165	10.9796	2666	UBA-Germany,ICOS-ATC	zsf_surface-insitu_25_allvalid
217	WES	Westerland	55	8	8	UBA-Germany,ICOS-ATC	wes_surface-insitu_25_allvalid
218	WAO	Weybourne, Norfolk	52.9502	1.1219	29	UEA,ICOS RI,ICOS-ATC	wao_surface-insitu_13_allvalid
219	HEI	Heidelberg	49.417	8.674	116	UHEI-IUP	hei_surface-insitu_22_allvalid
220	SMR	Hyttiala	61.8474	24.2948	181	UHELs,ICOS-ATC,ICOS RI	smr_tower-insitu_421_allvalid-125magl
221	CMN	Mt. Cimone Station	44.1936	10.6999	2165	UNIURB	cmn_surface-insitu_106_allvalid
222	TAC	Tacolneston	52.5177	1.1386	56	UNIVBRIS	tac_tower-insitu_160_allvalid-185magl
223	BSD	Bilsdale	54.359	-1.15	380	UNIVBRIS,ICOS RI	bsd_tower-insitu_160_allvalid-248magl
224	RGL	Ridge Hill	51.9976	-2.54	204	UNIVBRIS,ICOS RI,ICOS-ATC	rgl_tower-insitu_160_allvalid-90magl
JMA							
225	MNM	Minamitorishima	24.28	153.98	8	JMA	insitu
226	RYO	Ryori	39.03	141.82	260	JMA	insitu
227	YON	Yonagunijima	24.47	123.02	30	JMA	insitu
NIES							
JR-STATION							
228	AZV	Azovo	54.705	73.0292	110	NIES	insitu
229	BRZ	Berezorechka	56.15	84.3333	168	NIES	insitu
230	DEM	Demyanskoe	59.7914	70.8711	63	NIES	insitu
231	KRS	Karasevoe	58.2456	82.4244	76	NIES	insitu
232	NOY	Noyabrsk	63.4292	75.78	108	NIES	insitu
233	VGN	Vaganovo	54.4972	62.3247	192	NIES	insitu
Japan sites							
234	COI	Cape Ochi-Ishi	43.1603	145.4974	94	NIES	insitu
235	HAT	Hateruma	24.0608	123.8093	47.3	NIES	insitu
236	HPO	Mt. Happa Observatory	36.7	137.8	1856	NIES	insitu
237	MFJ	Mt. Fuji	35.3609	138.7271	3780	NIES	flask
Asian sites							
238	CLA	Comilla	23.434	91.184	30	NIES	flask
239	NTL	Nainital	29.36	79.46	1940	NIES	flask
240	DMV	Danum Valley	4.98	117.84	530	NIES	flask
Ship Obsrvation							
241	NC2	New Century 2	-1E+34	-1E+34	-1E+34	NIES	insitu
242	TF5	Trans Future 5	-1E+34	-1E+34	-1E+34	NIES	insitu
243	TH1	Trans Harmony 1	-1E+34	-1E+34	-1E+34	NIES	insitu
244	NC2	New Century 2	-1E+34	-1E+34	-1E+34	NIES	flask
245	TF5	Trans Future 5	-1E+34	-1E+34	-1E+34	NIES	flask
246	Mirai	Mirai	-1E+34	-1E+34	-1E+34	NIES	Insitu