

Table S1. Details of GNSS stations used within this manuscript.

LongMarkerName	ShortMarkerName	City	Country	Latitude	Longitude	Elevation	X	Y	Z	Antenna Height	Antenna Type
ACOR00ESP	13434M001	A Coruna	Spain	43.3643	-8.39893	67.0	4594489.939	-678368.073	4357065.900	3.0460	Individual
AJAC00FRA	10077M005	Ajaccio	France	41.9274	8.762608	98.8	4696990.000	723994.000	4239678.000	0.0000	Individual
ALAC00ESP	13433M001	Alicante	Spain	38.3389	-0.48123	60.0	5009051.410	-42072.468	3935057.475	3.0350	Individual
ALME00ITA	13437M001	Almeria	Spain	36.8525	-2.45945	127.0	5102520.288	-19278.782	3804386.863	3.0440	Type
AQU100ITA	12757M001	Aquila	Italy	42.3682	13.35024	713.0	4592507.540	1089876.361	4276392.898	0.0000	Type
AXPV00FRA	10057M001	Aix En Provence	France	43.4912	5.333188	229.0	4614667.000	430786.000	4367411.000	0.0000	Type
BELL00ESP	13431M001	Bellmunt de Segarra	Spain	41.5996	1.403136	852.5	4775849.000	116814.000	4213018.000	0.0770	Individual
BOGI00POL	12207M003	Borowa Gora	Poland	52.4749	21.03521	139.9	3633815.700	1387453.900	5035280.800	0.0534	Type
BOGO00POL	12207M002	Borowa Gora	Poland	52.4759	21.03533	149.6	3633739.3	1397433.9	5035353.3	0.0000	Type
BORI00POL	12205M002	Borowiec	Poland	52.2769	17.07345	124.9	3738358.8329	1148173.9626	5021816.1134	0.0622	Type
BRST00FRA	10004M004	Brest	France	48.3804	-4.4966	65.5	4231162.000	-332747.000	4745131.000	2.0431	Type
BRUS00BEL	13101M004	Brussels	Belgium	50.7978	4.359216	149.7	4027893.860	307045.710	4919475.030	3.9702	Type
BSCN00FRA	10028M007	Besancon	France	47.2468	5.983983	358.6	4311439.000	452626.000	4660703.000	0.0000	Type
BUDP00DNK	10101M003	Kobenhavn	Denmark	55.7390	12.50002	94.0	3513638.299	0778956.363	5248216.415	0.0000	Uncalibrated
BZRG00ITA	12751M001	Bolzano - Bozen	Italy	46.4099	11.33668	328.8	4312657.7500	864634.3099	4603844.0502	0.2120	Individual
CACE00ESP	13447M001	Caceres	Spain	39.4789	-6.3418	438.0	4899866	-544567	4033773	0.0600	Type
CAGL00ITA	12723M003	Cagliari	Italy	39.1359	8.9728	238.4	4893378.944	772649.645	4004182.051	0.0450	Type
CANT00ESP	2001-01-21	Santander	Spain	43.4718	-3.7981	99.0	4625924.676	-077096.779	4365771.149	3.0490	Individual
CASC00PRT	13909S001	Cascais	Portugal	38.6934	-9.4185	77.1	4917537.868	-815726.531	3965857.975	1.0210	Type
CHIZ00FRA	2000-11-26	Chize	France	46.1334	-0.40770	113.2	4427603.3211	-31506.1354	4575621.7422	1.0640	Type
COMO00ITA	2004-04-11	Como	Italy	45.8021	9.095619	292.3	4398306.1510	704150.0194	4550154.7748	0.2134	Individual
CRE100FRA	10016M001	Creil	France	49.2629	2.511825	145.6	4166410.0	182771.0	4809803.0	0.0000	Type
CREU00ESP	13432M001	Cadaques	Spain	42.3188	3.315594	132.7	4715420.000	273177.000	4271946.000	0.0770	Individual
DARE00GBR	2003-07-27	Daresbury	United Kingdom	53.3448	-2.64049	87.7	3811965.000	-175800.000	5093615.000	0.1000	Type
DELFL00NLD	13502M004	Delft	Netherlands	51.9861	4.3876	74.4	3924687.742	301132.768	5001910.798	0.0500	Individual
DENT00BEL	13112M001	Dourges	Belgium	50.9337	3.399669	63.9	4020711.600	238850.990	4928949.570	0.7650	Individual
DOUR00BEL	1996-01-14	Dourges	Belgium	50.0948	4.59495	282.7	4086778.260	328451.860	4869782.540	0.7619	Individual
DRES00DEU	14108M001	Dresden	Germany	51.0298	13.7269	202.9	3904724.7	954013.3	4935789.8	0.5660	Individual
EBRE00DEU	13410M001	Roquetes	Spain	40.8208	0.49235	107.3	4833520.000	41536.000	4147461.000	0.0770	Individual
EGLT00FRA	10032M001	Egletes	France	45.4033	2.051994	667.0	4483373.660	160636.510	4159408.930	0.0000	Type
EJJS00NLD	13533M001	Eijsden	Netherlands	50.7582	5.6836	103.8	4023086.533	400394.875	4916655.319	0.0000	Individual
ELBA00ITA	2001-10-14	San Piero Campo	Italy	42.7529	10.2111	269.5	4616531.667	831568.433	4307659.072	0.0000	Type
ESCO00FRA	13435M001	Naut Aran	Spain	42.6935	0.975661	2507.8	4696265.000	79978.000	4304244.000	0.0770	Individual
EUSK00DEU	14258M003	Euskirchen	Germany	50.6741	6.763533	245.3	4022106.370	477010.950	4910840.640	0.0330	Individual
GAIA00PRT	13902M001	Gaia	Portugal	41.106	-8.589	287.8	4759095.617	-718818.801	4171491.317	0.0000	Type
GENO00ITA	12712M002	Genova	Italy	44.4194	8.921116	153.5	4507890.272	707618.974	4441603.008	0.0000	Type
GOPE00CZE	1995-12-31	Ondrejov	Czech Republic	49.9137	14.78562	592.6	3979316.134	1050312.478	4857067.108	0.1114	Type
GRAS00FRA	15002M006	Caussols	France	43.7547	6.920575	1319.3	456114.9720	4389360.8798	0.0350	Type	
GRAZ00AUT	11001M002	Graz	Austria	47.0671	15.4935	538.3	4194423.94	1162702.59	4647245.33	1.9640	Type
GSR100SVN	14501M001	Ljubljana	Slovenia	46.0481	14.54371	351.7	4292609.8067	1113638.9889	4569215.3899	0.0650	Type
GUIP00FRA	10004M001	Guipavas	France	48.4446	-4.41181	154.7	4226392.770	-326080.300	4749929.350	0.0000	Type
HELG00DEU	14264M001	Helgoland Island	Germany	54.1744	7.893088	48.3	3706067.270	513803.750	5148174.300	0.0270	Individual
HERS00GBR	13212M007	Hailsham	United Kingdom	50.8673	0.3362	76.5	4033471.330	23667.860	4924300.350	0.0096	Type
HERT00DEU	1321M010	Hailsham	United Kingdom	50.8674	0.334352	83.3	4033461.0378	23537.6625	4924318.1656	0.0000	Type
HOBU00DEU	2000-06-11	Hohenbuenstorf	Germany	53.0506	10.4763	152.2	3778220.099	698635.225	5074054.027	0.0520	Individual
IENG00ITA	2004-02-01	Torino	Italy	45.0151	7.639402	316.6	4476537.400	0600431.460	4488761.340	0.0000	Type
JOZ200POL	2003-09-14	Jozefoslaw	Poland	52.0978	21.03234	152.5	3664881	1409190	5009618	0.0000	Type
JOZE00POL	1995-12-31	Jozefoslaw	Poland	52.0972	21.03153	141.4	3664940.500	1409153.590	5009571.170	0.1980	Type
KARL00DEU	14216M001	Karlsruhe	Germany	49.0112	8.411255	182.9	4146524.652	613137.816	4791516.951	0.0450	Individual
KLOP00DEU	1999-10-31	Kloppenheim / Frankfurt	Germany	50.2197	8.7299933	222.4	4041875.733	620655.063	4878636.612	0.0660	Individual
KOSG00NLD	13504M003	Koorwijk	Netherlands	52.1784	5.8096	97.9	3892925.2730	396731.8010	5015078.3320	0.1050	Type
KRAW00PRT	2003-01-26	Krakow	Poland	50.0661	19.92047	267.3	3856936	1397750	4867719	0.0000	Type
LAGO00PRT	2001-02-11	Lagos	Portugal	37.0989	-8.66838	62.7	5035246.684	-767657.381	3826194.037	0.0000	Type
LAMA00POL	1995-12-31	Olisztyn	Poland	53.8924	20.66993	186.7	3524523.000	1329693.000	5129846.000	0.0600	Type
LAMP00ITA	1999-06-20	Lampedusa	Italy	35.4994	12.60565	57.8	3073182.337	1134516.388	3683155.965	0.0000	Type
LLIV00ESP	13436M001	Llivia	Spain	42.4784	1.973138	1466.9	4709564.000	162251.000	4285937.000	0.0770	Individual
LROC00FRA	10023M001	La Rochelle	France	46.1589	-1.2193	57.9	4424632.8	-94175.5	4577543.9	0.0000	Type
MAD200ESP	13407S012	Robledo	Spain	40.4291	-4.24965	829.5	4849202.3989	-360328.9943	4114913.1884	0.0254	Type
MADR00ESP	1995-12-31	Robledo	Spain	40.4291	-4.24965	829.5	4849202.394	-360328.993	4114913.186	0.0254	Type
MALL00ESP	2001-01-21	Palma de Mallorca	Spain	39.5526	2.6246	62.0	4919369.645	225499.596	4039849.560	0.0600	Type
MARS00FRA	1998-10-04	Marseille	France	43.2787	5.353783	61.7	4630532.800	433946.100	4350142.600	0.0700	Type
MATE00ITA	1995-12-31	Matera	Italy	40.6491	16.70445	535.6	4641949.709	1393045.298	4133927.333	0.1010	Type
MEDI00ITA	12711M003	Medicina	Italy	44.5199	11.64681	50.0	4461400.894	919593.443	4449504.669	0.0000	Type
MLVL00FRA	2000-10-22	Marne-la-Vallee	France	48.8410	2.587311	160.7	4201577.000	189860.000	4779065.000	0.0750	Type
MOP100SVK	1996-11-17	Modra-Piesok	Slovak Republic	48.3727	17.27386	578.3	4053738.000	1260571.000	4744940.000	0.0870	Uncalibrated

MORP00GBR	MORP	13299M001	2002-11-03	Morpeth	United Kingdom	55.2127	-1.68549	144.4	3645667.9	-107277.3	5215053.5	0.0330	Type
NEWL00GBR	NEWL	13273M103	2004-06-27	Newlyn	United Kingdom	50.1030	-5.54278	64.5	4079954.1	-395930.4	4870196.8	2.9650	Type
NOT100ITA	NOT1	12717M004	2000-09-10	Noto	Italy	36.8761	14.98980	126.2	4934528.669	1321262.251	3806479.508	0.0000	Type
ONSA00SWE	ONSA	10402M004	1995-12-31	Onsala	Sweden	57.3952	11.92551	45.5	3370658.8318	711876.9387	5349786.7450	0.9950	Uncalibrated
PADO00ITA	PADO	12750S001	2001-12-02	Padova	Italy	45.4111	11.89605	64.7	4388882.41	924567.03	4519588.45	0.0000	Type
PENC00HUN	PENC	11206M006	1996-03-03	Penc	Hungary	47.7896	19.28152	291.7	4052449.8	1417680.8	4701406.9	0.0300	Individual
POTS00DEU	POTS	14106M003	1995-12-31	Potsdam	Germany	52.3792	13.06609	144.4	3800689.634	882077.386	5028791.318	0.1206	Individual
PRA100ITA	PRA1	12760M001	2003-07-13	Prato	Italy	43.8855	11.09912	120.0	4518264.433	886376.441	4399019.1254	0.0780	Type
PTBB00DEU	PTBB	14234M001	2000-04-23	Braunschweig	Germany	52.2962	10.4597	130.2	3844060.11	709661.20	5023129.46	0.0562	Type
RAB100MAR	RAB1	35001M002	2001-02-25	Rabat	Morocco	33.9981	-6.85428	90.1	5255617.6800	-631745.6220	3546322.6100	0.0800	Type
REDU00BEL	REDU	13102M001	2003-06-22	Redu	Belgium	50.0015	5.144880	369.9	4091423.462	368380.429	4863179.703	0.1150	Type
SASS00DEU	SASS	14281M001	2003-09-07	Sassnitz Island of Ruegen	Germany	54.5135	13.64328	00068.2	3606146.38	875303.14	470194.74	0.00310	Individual
SFER00ESP	SFER	13402M004	1996-06-09	San Fernando	Spain	36.4643	-6.2056	85.8	5105519.055	-555146.005	3769803.246	1.6260	Type
SJDV00FRA	SJDV	10090M001	1998-07-19	"Saint Jean des Vignes"	France	45.8790	4.676575	432.4	4433469.931	362672.711	4556211.640	0.0000	Type
SMID00DNK	SMID	10114M001	2003-06-29	Smidstrup Vejle	Denmark	55.6406	9.559305	122.8	3557911.265	0599176.649	5242066.426	0.0000	Uncalibrated
SMNE00FRA	SMNE	10001M007	2010-03-28	Saint-Mande	France	48.8444	2.425022	126.2	4201792.080	177945.430	4779286.870	0.1390	Type
SPT000SWE	SPT0	10425M001	2002-07-07	Boras	Sweden	57.7149	12.89134	219.9	3328984.8136	761910.0660	5369033.4748	0.0710	Individual
SULD00DNK	SULD	10113M001	2003-06-29	Suldrup	Denmark	56.8417	9.742155	120.7	3446394.244	0591713.109	5316383.432	0.0000	Uncalibrated
TERS00NLD	TERS	13534M001	1999-06-20	West-Terschelling	Netherlands	53.3628	5.2194	56.1	3798580.870	346993.832	5094780.817	0.0000	Individual
TLMF00FRA	TLMF	10003M010	2010-03-28	Toulouse	France	43.5746	1.375097	220.9	4627009.800	111069.400	4374123.000	0.0000	Type
TLSE00FRA	TLSE	10003M009	2001-03-18	Toulouse	France	43.5606	1.480872	207.2	4627851.899	119638.546	4372993.537	1.0530	Type
TORI00ITA	TORI	12724M002	1999-01-31	Torino	Italy	45.0634	7.6613	310.4	4472544.441	0601634.230	4492545.112	0.0790	Individual
TUBO00CZE	TUBO	11503M001	2001-09-23	Brno	Czech Republic	49.2058	16.59283	324.4	4001470.400	1192345.500	4805795.600	0.3113	Individual
UNPG00ITA	UNPG	12752M001	1999-01-31	Perugia	Italy	43.1193	12.3557	351.2	4555146.157	997822.211	4337432.553	0.1000	Type
VALE00ESP	VALE	13439M001	2001-02-11	Valencia	Spain	39.4808	-0.33764	78.0	4929534.043	-29050.669	4033709.906	3.0390	Individual
VFCH00FRA	VFCH	10046M001	2005-07-03	Villefranche-sur-Cher	France	47.2941	1.719669	154.6	4331863.600	130055.200	4664122.600	0.0000	Type
VILL00ESP	VILL	13406M001	1995-12-31	Villafranca	Spain	40.4436	-3.952	647.5	4849833.874	-335049.255	4116014.809	0.0937	Type
WARE00BEL	WARE	13114M001	1996-01-14	Wareme	Belgium	50.6898	5.245308	187.9	4031947.310	370150.910	4911905.900	0.5180	Individual
WARN00DEU	WARN	14277M002	2003-10-26	Restock-Warmemuende	Germany	54.1697	12.10141	50.7	3658785.93	784470.84	5147870.56	0.0690	Individual
WROC00POL	WROC	12217M001	1996-11-24	Wroclaw	Poland	51.1132	17.06202	180.3	3835751.000	1177249.000	4941605.000	0.0000	Individual
WSRT00NLD	WSRT	13506M005	1997-07-20	Westarboek	Netherlands	52.9146	6.6045	86.0	3828739	443305	5064887	0.3888	Type
WTRZ00DEU	WTRZ	14201M010	1995-12-31	Bad Koetzing	Germany	49.1441	12.87800	666.0	4075580.685	931853.660	4801568.054	0.0710	Individual
YEBE00ESP	YEBE	13420M001	2000-10-22	Yebe	Spain	40.5248	-3.08863	972.8	4848724.950	-261632.509	4123093.952	0.0000	Type
ZIMM00CHE	ZIMM	14001M004	1995-12-31	Zimmerwald	Switzerland	46.8770	7.465272	956.4	4331297.348	567555.640	4633133.728	0.0000	Type
ZOUF00ITA	ZOUF	12763M001	2004-01-11	Cercivento	Italy	46.5572	12.97355	1946.5	4282710.06	986659.42	4609469.77	0.0083	Relative