Supplement of

IWV observations from a network of ground-based GNSS receivers during EUREC^{4}A

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Table S1: Station coordinates (latitude, longitude, ellipsoidal height, and altitude), start and end date of available measurements, root mean square (RMS) of post-fit residuals, percentage of fixed ambiguities, actual number and percentage of expected ZTD estimates, 95% percentile of ZTD formal error, percentage of data rejected by the screening step, final number of ZTD (and IWV) estimates, and mean IWV over the period. Stations with less than 50% of data before screening are highlighted in bold font. Stations with more than 0.5% of data rejected by the screening are underlined.

Table S2: Results of IWV comparison between GNSS and ERA5 hourly data. The columns give: the mean IWV from ERA5, the mean and standard deviation of the difference (GNSS - ERA5) in kg m^{-2} and %, the correlation coefficient, the slope and offset of the linear regression of GNSS onto ERA5 with errors in both coordinates (York et al., 2004) and the number of comparison points.

Table S1

Station ID	Lat (deg)	Lon (deg)	Height (m)	Alt (m)	Start	End	RMS residuals (m)	AMB (%)	NP before	% before	95% Sigma (m)	% reject	NP final	IWV (kg/m2)
abd0	16.47	-61.49	-23	20	01/01/2020	29/02/2020	0.0100±0.0016	68.1±9.9	16473	95.3	0.0019	0.1	16446	32.5
aber	16.47	-61.51	-17	25	07/01/2020	29/02/2020	0.0124±0.0013	65.4±8.6	14367	83.1	0.0019	0.2	14330	32.1
abmf	16.26	-61.53	-26	15	01/01/2020	29/02/2020	0.0105±0.0019	57.4±8.3	17262	99.9	0.0018	0.1	17229	33.3
agpr	18.47	-67.11	73	120	01/01/2020	26/02/2020	0.0095±0.0012	71.5±8.5	14400	83.3	0.0022	0.2	14366	32.5
airs	16.74	-62.21	84	126	01/01/2020	29/02/2020	0.0139±0.0025	42.7±12.6	17210	99.6	0.0024	0.1	17191	31
aopr	18.35	-66.75	320	363	01/01/2020	29/02/2020	0.0096±0.0017	72.0±8.4	17080	98.8	0.0023	0.2	17037	28.5
bcon	13.16	-59.43	-23	25	01/01/2020	29/02/2020	0.0112±0.0014	74.1±9.2	17280	100	0.0017	0	17266	33.2
bcos	13.16	-59.43	-23	25	01/01/2020	29/02/2020	0.0112±0.0013	73.4±9.0	17280	100	0.0018	0	17264	33.2
boul	16.13	-61.77	-27	14	07/01/2020	29/02/2020	0.0138±0.0034	47.0±15.9	14267	82.6	0.0021	0.4	14208	32.4
cbe0	16.07	-61.61	333	374	01/01/2020	29/02/2020	0.0123±0.0013	51.1±8.1	**8626**	**49.9**	0.0026	0.9	8538	28.7
cn00	17.67	-61.79	-22	22	01/01/2020	29/02/2020	0.0100±0.0015	73.6±8.8	17280	100	0.002	0.1	17260	32.7
cro1	17.76	-64.58	-32	13	01/01/2020	29/02/2020	0.0090±0.0013	75.1±8.1	17276	100	0.0024	0	17261	32.9
deha	16.31	-61.8	-36	5	01/01/2020	29/02/2020	0.0141±0.0017	43.6±10.7	17043	98.6	0.0021	0.1	17018	33.7
desi	16.3	-61.07	-33	11	07/01/2020	29/02/2020	0.0115±0.0014	61.1±9.9	14368	83.1	0.002	0.3	14308	32
empr	18.48	-66.53	-35	10	01/01/2020	29/02/2020	0.0090±0.0022	76.4±11.6	16856	97.5	0.0029	0.3	16809	33.6
ffe0	16.22	-61.51	12	53	01/01/2020	29/02/2020	0.0099±0.0018	59.3±10.2	17264	99.9	0.002	0.1	17248	32.8
fft2	14.6	-61.06	-30	10	01/01/2020	29/02/2020	0.0112±0.0019	66.1±9.6	17277	100	0.0019	0.2	17235	32.8
fna0	15.88	-61.58	81	122	01/01/2020	29/02/2020	0.0094±0.0014	65.8±9.2	**5583**	**32.3**	0.0019	1.4	5492	31.1
gosi	16.21	-61.48	8	49	07/01/2020	29/02/2020	0.0116±0.0018	61.5±10.6	13855	80.2	0.0019	0.4	13789	32
gre1	12.22	-61.64	16	54	01/01/2020	29/02/2020	0.0122±0.0012	63.2±10.6	17280	100	0.0019	0	17262	35
gstv	17.9	-62.85	11	54	02/01/2020	29/02/2020	0.0097±0.0016	65.3±8.4	16961	98.2	0.0019	0.2	16918	31.9
habl	14.73	-61.16	311	350	03/02/2020	29/02/2020	0.0132±0.0019	44.0±13.9	**7569**	**43.8**	0.002	0.1	7550	27.7
houe	15.98	-61.7	377	418	01/01/2020	29/02/2020	0.0123±0.0022	50.3±11.6	17102	99	0.0026	0.1	17077	25.9
igpr	17.97	-66.11	-15	27	01/01/2020	29/02/2020	0.0120±0.0012	60.5±7.5	16992	98.3	0.0023	0.1	16966	33.1
ldis	16.3	-61.07	-40	4	01/01/2020	29/02/2020	0.0122±0.0011	63.6±7.2	17199	99.5	0.0021	0.2	17154	32.7
lmmf	14.59	-61	-27	13	01/01/2020	29/02/2020	0.0130±0.0017	52.4±8.1	17169	99.4	0.0018	0.1	17142	33.6
lori	14.82	-61.05	91	131	07/01/2020	29/02/2020	0.0115±0.0020	59.6±10.8	14272	82.6	0.0018	0.5	14183	30.8
maga	15.89	-61.31	22	62	07/01/2020	29/02/2020	0.0120±0.0015	64.8±9.5	14144	81.9	0.0019	0.3	14089	31.6
magt	15.88	-61.31	-28	13	01/01/2020	29/02/2020	0.0102±0.0018	66.5±8.7	17274	100	0.0021	0.5	17188	33
mari	14.47	-60.86	-26	14	07/01/2020	29/02/2020	0.0115±0.0015	64.4±8.3	14283	82.7	0.0021	0.4	14216	33.2
mpom	14.44	-60.86	3	42	01/01/2020	29/02/2020	0.0103±0.0016	70.8±10.0	17021	98.5	0.0019	0.1	16994	32.6
n240	18.46	-66.12	-41	3	01/01/2020	29/02/2020	0.0152±0.0011	57.8±8.6	16704	96.7	0.0019	0.2	16667	33.9
nwbl	16.82	-62.2	147	188	01/01/2020	29/02/2020	0.0103±0.0022	56.1±12.9	17280	100	0.0019	0	17262	30.5
olvn	16.75	-62.23	41	82	01/01/2020	29/02/2020	0.0128±0.0029	47.3±14.7	17183	99.4	0.002	0.1	17160	32.5
p780	18.08	-66.58	154	196	01/01/2020	29/02/2020	0.0108±0.0014	60.7±8.3	17280	100	0.0021	0.1	17246	29.9
pdpr	18.02	-66.02	34	76	01/01/2020	29/02/2020	0.0112±0.0019	60.8±9.6	16374	94.8	0.0022	0.3	16324	32.6
pptg	16.22	-61.53	-40	1	01/01/2020	23/02/2020	0.0120±0.0014	64.4±10.7	15373	89	0.002	0.2	15337	33.2
prmi	17.97	-67.05	-25	17	01/01/2020	29/02/2020	0.0099±0.0014	57.8±8.3	16996	98.4	0.002	0.3	16943	32.8
prsn	18.22	-67.14	-15	28	01/01/2020	29/02/2020	0.0109±0.0013	62.6±9.3	17280	100	0.0027	0.3	17231	33.2
rdon	16.93	-62.35	107	148	01/01/2020	29/02/2020	0.0095±0.0020	72.1±9.4	17280	100	0.0018	0.1	17256	30.9
sab1	17.62	-63.24	279	322	01/01/2020	29/02/2020	0.0100±0.0017	60.8±9.1	17280	100	0.0022	0.3	17219	28.4
sab2	17.65	-63.22	-4	39	01/01/2020	29/02/2020	0.0106±0.0015	65.8±8.6	17279	100	0.0019	0.1	17256	32.3
seus	17.5	-62.98	-6	36	01/01/2020	29/02/2020	0.0121±0.0015	60.2±10.5	17074	98.8	0.0019	0.2	17029	32.9
seut	17.47	-62.98	31	73	01/01/2020	29/02/2020	0.0108±0.0019	60.4±10.7	17279	100	0.0021	0.1	17252	32.2
stvi	18.34	-64.97	-21	24	01/01/2020	29/02/2020	0.0108±0.0014	64.0±8.7	17280	100	0.0021	0.1	17253	33.1
ttuw	10.64	-61.4	-8	35	01/01/2020	14/02/2020	0.0111±0.0017	61.6±11.6	12511	72.4	0.0018	0.1	12500	35
vikh	17.72	-64.8	-6	39	16/01/2020	29/02/2020	0.0117±0.0011	58.2±20.9	**3658**	**21.2**	0.0022	0.5	3628	32.6
vith	18.34	-64.97	4	50	14/01/2020	29/02/2020	0.0110±0.0010	55.7±8.1	13330	77.1	0.0021	0.1	13310	32.6
zsu4	18.43	-65.99	-29	15	01/01/2020	29/02/2020	0.0115±0.0020	54.5±15.9	14866	86	0.0019	0.5	14791	33

Table S2

	Mean ($kg\ m^{-2}$)	Mean diff. ($kg\ m^{-2}$)	Std. diff. ($kg\ m^{-2}$)	Mean diff. (%)	Std. diff. (%)	R	Slope	Offset ($kg\ m^{-2}$)	NP
abd0	32.85	-0.33	2.32	-1.0	7.1	0.896	0.931	1.95	1381
aber	32.15	-0.01	2.29	0.0	7.1	0.892	0.948	1.65	1211
abmf	33.33	-0.08	2.39	-0.2	7.2	0.890	0.951	1.56	1439
agpr	31.64	0.84	2.74	2.7	8.7	0.881	0.953	2.32	1201
airs	31.04	-0.06	2.61	-0.2	8.4	0.883	0.926	2.25	1435
aopr	27.66	0.81	2.66	2.9	9.6	0.887	0.965	1.78	1424
bcon	32.43	0.77	2.05	2.4	6.3	0.930	0.995	0.93	1439
bcos	32.43	0.74	2.07	2.3	6.4	0.930	0.999	0.77	1439
boul	32.48	-0.07	2.91	-0.2	8.9	0.860	1.011	-0.41	1202
cbe0	27.37	1.44	2.35	5.3	8.6	0.899	0.921	3.62	754
cn00	31.96	0.72	2.45	2.2	7.7	0.913	0.952	2.26	1439
cro1	32.56	0.33	2.60	1.0	8.0	0.915	0.962	1.57	1440
deha	33.26	0.43	2.60	1.3	7.8	0.875	0.927	2.85	1423
desi	32.05	-0.06	2.17	-0.2	6.8	0.899	0.980	0.57	1210
empr	33.30	0.29	2.71	0.9	8.1	0.882	0.909	3.31	1406
ffe0	32.68	0.12	2.36	0.4	7.2	0.892	0.956	1.55	1440
fft2	32.61	0.18	2.71	0.6	8.3	0.885	0.913	3.03	1440
fna0	31.51	-0.35	2.12	-1.1	6.7	0.931	0.952	1.17	476
gosi	32.04	0.03	2.32	0.1	7.2	0.892	0.974	0.86	1167
gre1	33.68	1.28	2.55	3.8	7.6	0.913	0.978	2.03	1440
gstv	31.60	0.34	2.77	1.1	8.8	0.886	0.882	4.06	1415
habl	27.10	0.58	2.65	2.1	9.8	0.902	0.924	2.63	631
houe	26.32	-0.38	2.53	-1.4	9.6	0.876	0.950	0.94	1430
igpr	33.40	-0.26	2.54	-0.8	7.6	0.908	1.016	-0.81	1417
ldis	32.73	0.02	2.22	0.1	6.8	0.899	0.954	1.54	1440
lmmf	32.58	1.03	2.61	3.2	8.0	0.892	0.918	3.70	1432
lori	30.18	0.64	2.36	2.1	7.8	0.905	0.927	2.85	1205
maga	31.30	0.34	2.30	1.1	7.3	0.895	0.964	1.47	1193
magt	32.80	0.15	2.40	0.5	7.3	0.887	0.926	2.59	1440
mari	31.98	1.23	2.55	3.8	8.0	0.898	0.910	4.09	1204
mpom	31.91	0.69	2.50	2.2	7.8	0.903	0.922	3.18	1422
n240	33.81	0.07	2.41	0.2	7.1	0.903	0.922	2.71	1394
nwbl	29.92	0.54	2.36	1.8	7.9	0.904	0.950	2.05	1440
olvn	31.81	0.73	2.54	2.3	8.0	0.891	0.931	2.92	1433
p780	30.48	-0.58	2.69	-1.9	8.8	0.893	1.017	-1.10	1440
pdpr	32.37	0.29	2.54	0.9	7.9	0.896	0.953	1.81	1366
pptg	33.82	-0.61	2.41	-1.8	7.1	0.883	0.934	1.62	1281
prmi	32.86	0.01	2.80	0.0	8.5	0.886	1.005	-0.15	1439
prsn	32.70	0.48	2.84	1.5	8.7	0.894	1.059	-1.46	1440
rdon	30.47	0.38	2.37	1.3	7.8	0.910	0.973	1.22	1440
sab1	27.36	1.03	2.65	3.8	9.7	0.899	0.924	3.11	1440
sab2	32.12	0.16	2.71	0.5	8.4	0.900	0.915	2.88	1440
seus	32.22	0.67	2.56	2.1	7.9	0.910	0.902	3.83	1424
seut	31.57	0.60	2.50	1.9	7.9	0.912	0.906	3.56	1440
stvi	32.49	0.67	2.50	2.1	7.7	0.921	0.987	1.08	1440
ttuw	35.15	-0.12	2.73	-0.3	7.8	0.938	1.006	-0.33	1046
vikh	32.08	0.52	2.38	1.6	7.4	0.902	0.949	2.15	306
vith	31.60	1.01	2.47	3.2	7.8	0.923	0.960	2.28	1111
zsu4	33.52	-0.50	2.53	-1.5	7.5	0.903	0.930	1.83	1249