S1 Array configuration and array transfer function
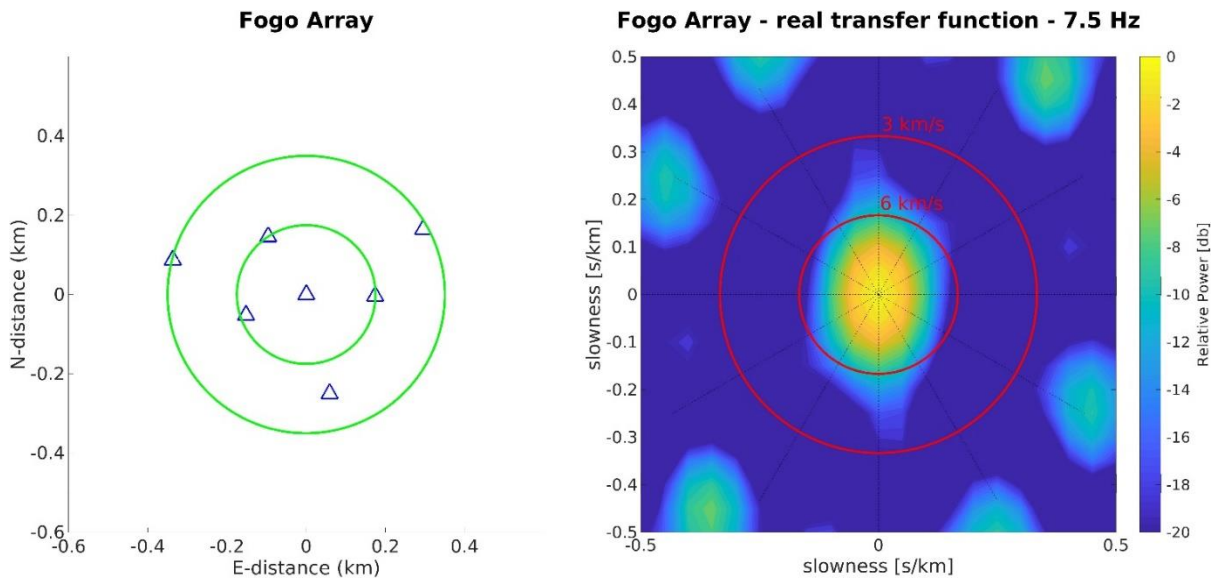
Figure S1: *Left: configuration of the array which was operated from October 2015 to December 2016. Green circles: diameter of 700 m and 350 m. Triangles: short period 4.5-Hz geophone stations. Right: resulting array transfer function for signals with a frequency of 7.5 Hz. Red circles: apparent velocities of 3 km/s and 6 km/s which represent the range of expected apparent velocities of incoming wavefronts from local events*

S2 Network configuration of the follow-up study from Jan. 2017 – Jan. 2018
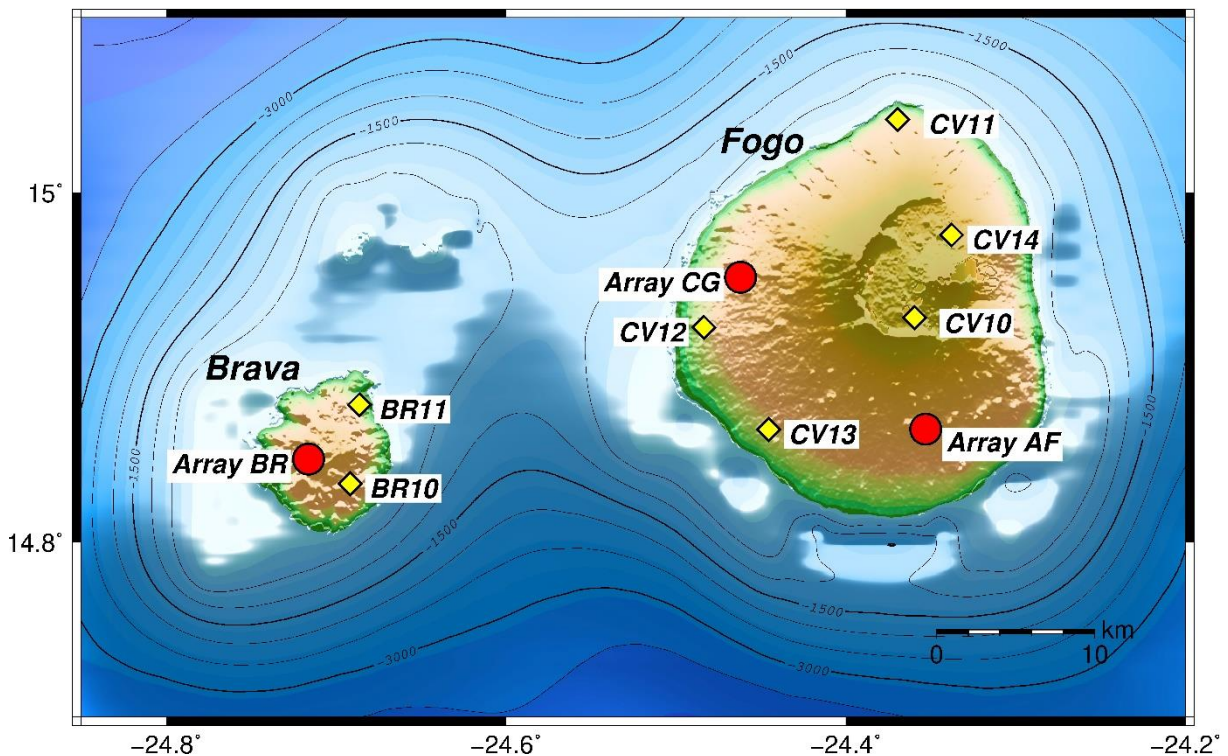
Figure S2: *Station setup of the main study from January 2017 to January 2018. Red circles: arrays, yellow diamonds: short–period single stations. Topographic and bathymetry data are from Ryan et al. (2009).*

S3 Aberration vectors of the array AF

To determine the aberration of the array used during the pilot study from October 2015 to December 2016, it is necessary to compare slowness and backazimuth values to those from earthquakes with otherwise known locations (e.g. Schweitzer et al., 2012). In our main study in 2017 we installed two arrays on Fogo, one on Brava and additionally seven short-period single stations (five on Fogo, two on Brava). Each array was equipped with four broadband Trillium Compact sensors and six 4.5 Hz geophones. The array AF (Fig. S2) is located and shaped in the same way as the array used during the pilot study. To draw conclusions on the aberration of the array of the pilot study, it is thus useful to determine the aberration of array AF. We are especially interested in deducing the possible aberrations with respect to the slowness determination of events within our study area around Brava.

For this purpose, we use the whole network of 2017 to locate events within the network, where the standard localization method based on the code HYPOCENTER (Lienert et al., 1986), can be applied. Additionally, the error and rms of the standard localization analysis must not exceed a certain level to ensure a sufficiently precise localization of the related event. These criteria are applied to 13 events from January 2017 to December 2017 for which the backazimuth and slowness values were determined. The slowness can be estimated using the velocity model of Vales et al. (2014) for Cape Verde that we modified so that the velocity increases in 0.1 km steps with depth. The angle of incidence at the source for each station is provided by the localization code. Now the ray path is estimated by applying Snell's law, until it reaches the ray turning point. The velocity at this depth corresponds to the apparent velocity determined from the array analysis ($v_a = 1/|s|$).

Figure S3 shows the resulting aberration vectors. For events originating beneath Brava, the vectors show a mean deviation of the backazimuth of about 6.5° to the south.
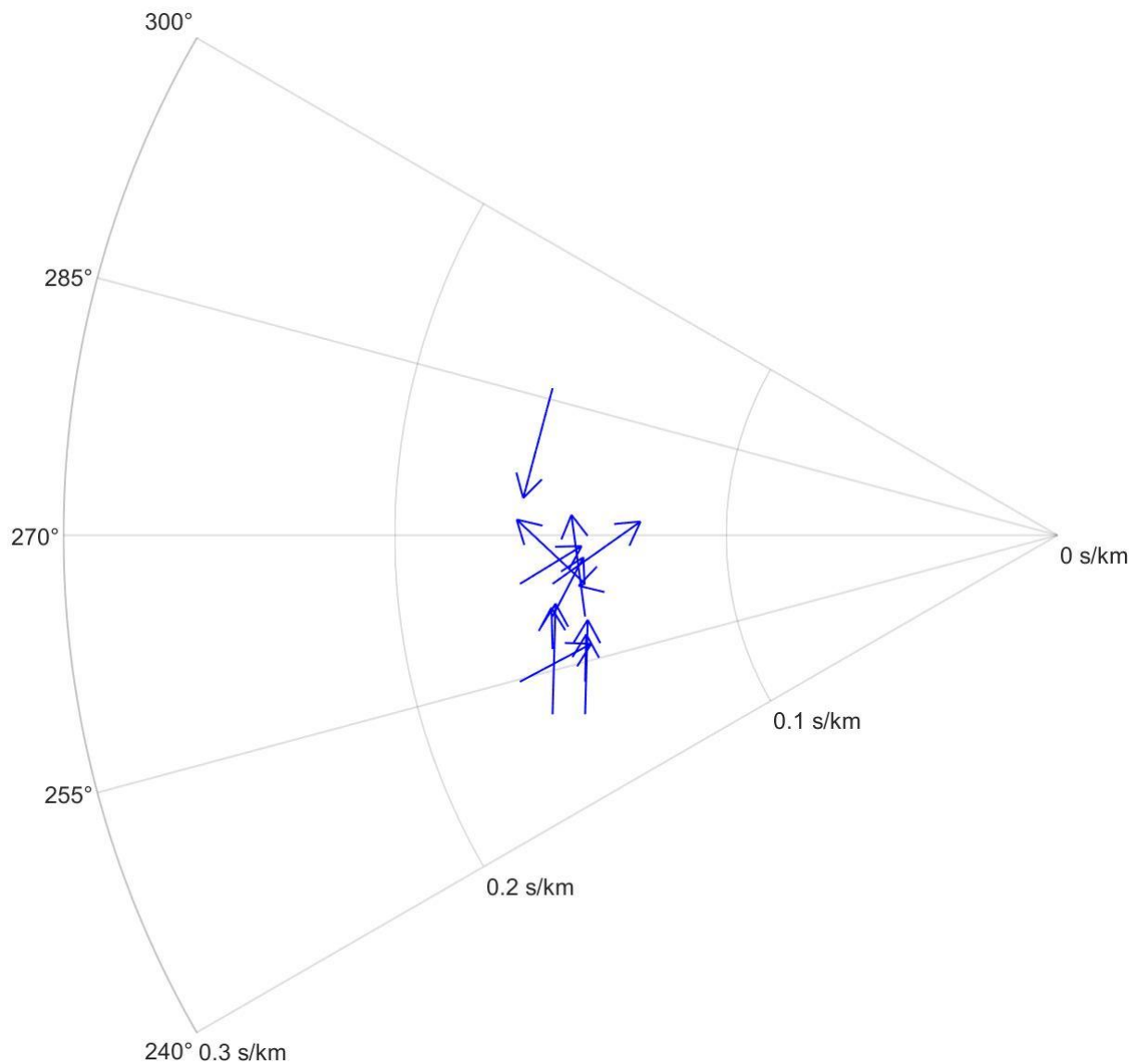
Figure S3: *Aberration vectors of array AF deployed from January 2017 to January 2018 during the main study. Shape and location are the same for the array of the pilot study. Vectors are pointing from the backazimuth and slowness values of the array analysis to the respective values of the standard localization.*

References

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Schweitzer, J., Fyen, J., Mykkeltveit, S., Gibbons, S. J., Pirli, M., Kühn, D., and Kværna, T.: Seismic Arrays, in: Bormann, P. (Ed.), New Manual of Seismological Observatory Practice 2 (NMSOP–2), Potsdam: Deutsches GeoForschungsZentrum GFZ, 1–80, doi:10.2312/GFZ.NMSOP-2_ch9, 2012.

S4 Table of results from the array analysis

Table S1: Table of analyzed events of 2015

Date	Time	Lat.	Long.	Mag.	Backaz.	Backaz. error	app. velocity	Vel. error	Dist.	Dist. error
[yymmdd]	[hh:mm]	[°]	[°]		[°]	[°]	[km/s]	[km/s]	[km]	[km]
151008	20:05	14.8015	-24.7561	2.6912	260.8624	14.3628	6.4776	0.725	44.1039	4.4104
151008	21:49	14.8503	-24.7601	1.2976	267.9124	27.3748	7.5284	1.308	43.9941	4.3994
151009	01:37	14.7067	-24.7213	0.78958	246.2681	13.9755	7.4485	1.2182	43.4916	4.3492
151009	02:16	14.5757	-24.0848	0.76348	138.0687	8.4536	3.8793	0.7477	43.0265	4.3026
151009	02:42	14.7759	-24.7568	2.079	257.298	14.7104	6.4003	0.6477	44.7199	4.4720
151009	04:19	14.7973	-24.7554	0.96772	260.2436	15.6979	6.9121	1.1039	44.1067	4.4107
151009	21:54	14.9318	-24.7494	0.935	279.8193	7.8109	6.9108	0.512	43.434	4.3434
151009	22:14	14.9276	-24.7501	0.70821	279.1967	7.3178	6.4765	0.5328	43.4323	4.3432
151009	23:20	14.9328	-24.7553	1.2006	279.8193	7.9404	6.9108	0.576	44.0783	4.4078
151010	00:50	14.9352	-24.7698	0.94533	279.8193	7.8109	6.9108	0.512	45.6607	4.8026
151010	01:43	14.9057	-24.7553	1.0926	275.9415	4.5899	6.9759	0.5522	43.6721	4.3672
151010	01:44	14.9058	-24.757	1.4635	275.9415	7.6669	6.9759	0.5771	43.8551	4.3855
151010	19:48	14.9058	-24.7565	1.2216	275.9415	7.6669	6.9759	0.5522	43.8016	4.3802
151011	03:35	14.9303	-24.7407	0.95686	279.8193	7.9404	6.9108	0.6113	42.4834	4.2483
151011	20:50	14.9053	-24.7511	0.98615	275.9415	7.6669	6.9759	0.5522	43.218	4.3218
151012	03:03	14.9045	-24.7439	1.213	275.9415	7.6669	6.9759	0.5522	42.4383	4.2438
151012	22:37	14.9805	-24.7341	0.98539	287.2802	11.3387	6.697	0.7095	43.0859	4.3086
151012	22:46	14.9322	-24.7523	1.6707	279.8193	7.8109	6.9108	0.576	43.749	4.3749
151012	23:01	14.9311	-24.7455	1.0187	279.8193	7.8109	6.9108	0.6173	43.0074	4.3007
151012	23:07	14.9318	-24.7495	1.0018	279.8193	7.4609	6.9108	0.6113	43.4446	4.3445
151012	23:33	14.9339	-24.762	0.88845	279.8193	7.9404	6.9108	0.512	44.8093	4.4809
151013	03:48	14.906	-24.7586	1.2571	275.9415	7.6669	6.9759	0.5522	44.0287	4.4029
151013	09:26	14.905	-24.7485	1.1138	275.9415	8.0291	6.9759	0.5525	42.9363	4.2936
151013	20:59	14.9313	-24.7464	1.1709	279.8193	11.9069	6.9108	0.6176	43.1065	4.3107
151014	00:22	14.8779	-24.7624	0.77644	271.8789	10.8808	6.5573	0.9711	44.2305	4.4230
151014	03:55	14.9052	-24.7508	0.86015	275.9415	7.8852	6.9759	0.5771	43.1847	4.3185
151014	05:05	14.9322	-24.7521	1.5072	279.8193	7.8109	6.9108	0.576	43.7278	4.3728
151015	00:09	14.7983	-24.7491	0.97899	260.2436	29.799	6.9121	1.2149	43.4195	4.3420
151015	00:42	14.9278	-24.752	0.88049	279.1967	11.1404	6.4765	0.7793	43.6377	4.3638
151015	00:43	14.9281	-24.7536	0.79098	279.1967	7.0286	6.4765	0.7793	43.8129	4.3813
151015	00:48	14.9276	-24.7503	0.65017	279.1967	7.0286	6.4765	0.8497	43.4536	4.3454
151019	16:41	14.7997	-24.7413	2.4001	260.2436	8.6577	6.9121	1.0672	42.5657	4.2566
151020	15:38	16.7926	-25.8821	3.1681	322.6562	14.1992	9.4972	2.7743	269.011	26.9011
151021	06:43	14.8009	-24.7337	2.093	260.2436	11.6353	6.9121	0.7741	41.737	4.1737
151021	06:44	14.7846	-24.6943	1.8506	256.4528	10.1847	6.8184	0.8381	37.9492	3.7949
151021	09:15	14.7997	-24.7407	2.1551	260.2436	8.0483	6.9121	0.7741	42.5021	4.2502
151021	14:29	14.8291	-24.7333	1.2007	264.4996	8.0468	6.5306	0.4461	41.2744	4.1274
151023	02:51	14.9091	-24.759	1.0044	276.3784	10.9018	7.4868	1.3491	44.1076	4.4108
151029	13:08	14.9389	-24.7313	1.0562	281.3409	9.6767	5.6972	0.8601	41.662	4.1662
151031	01:03	14.8778	-24.7589	1.4432	271.8789	7.7563	6.5573	0.8054	43.8537	4.3854
151106	07:01	14.907	-24.7686	1.0256	275.9415	27.2905	6.9759	1.795	45.1103	4.5110
151111	20:53	14.9691	-24.3004	0.90109	25.5773	14.2385	7.9664	3.0776	12.7512	1.2751
151113	04:07	14.8771	-24.7089	2.0818	272.0084	15.2718	7.0093	1.3121	38.4734	3.8473
151114	06:43	14.8758	-24.7407	2.2448	271.6642	7.1646	5.8082	0.7224	41.8895	4.1890
151114	20:28	14.8779	-24.7624	1.8133	271.8789	11.6353	6.5573	0.9305	44.2305	4.4230
151115	03:18	14.8276	-24.7495	1.4035	264.4996	9.0099	6.5306	0.7625	43.026	4.3026
151115	05:32	14.874	-24.6721	1.2423	271.6642	10.8018	5.8082	0.7493	34.5046	3.4505
151115	12:06	14.942	-24.7475	1.0414	281.3409	6.4129	5.6972	0.4402	43.4383	4.3438
151115	21:24	14.8272	-24.7782	1.0812	264.8312	12.0523	6.138	0.7741	46.1055	4.6105
151116	05:00	14.8365	-24.6749	1.0763	264.8312	8.3784	6.138	0.7741	34.9393	3.4939
151124	02:34	14.8767	-24.7748	1.2115	271.6642	10.8018	5.8082	1.1685	45.5604	4.5560
151124	03:47	14.8761	-24.7255	0.439	271.765	11.5214	6.1601	0.8494	40.2554	4.0255
151127	02:11	14.9429	-24.609	0.99688	287.2802	11.3387	6.697	1.3574	29.0005	2.9001
151202	19:40	14.8367	-24.6538	1.2127	264.4996	10.4284	6.5306	0.7414	32.6763	3.2676
151203	01:47	14.9173	-24.7061	2.2131	278.6477	10.5914	6.093	0.9165	38.5795	3.8580
151203	01:53	14.9201	-24.3286	1.0216	22.184	5.975	6.9673	0.7914	6.5627	0.6563
151203	22:11	14.8791	-24.8011	1.2224	271.8789	11.6353	6.5573	0.8601	48.3971	4.8397
151204	18:26	14.9048	-24.7464	1.7075	275.9415	17.8533	6.9759	2.613	42.7093	4.2709

151206	23:28	14.8777	-24.7549	1.0639	271.8789	11.6353	6.5573	0.8601	43.4231	4.3423
151207	07:24	14.8777	-24.7821	2.0435	271.765	7.2654	6.1601	0.4082	46.3488	4.6349
151207	07:27	14.8518	-24.7726	0.77059	268.1817	7.9381	6.5575	0.7683	45.3325	4.5333
151208	23:04	14.9005	-24.7526	1.1308	275.2252	7.0435	6.1374	0.4402	43.3279	4.3328
151209	04:08	14.919	-24.7179	1.2286	278.6477	10.5914	6.093	0.9165	39.863	3.9863
151210	09:44	14.7298	-24.965	2.0338	257.298	9.4467	6.4003	0.7474	67.7104	6.7710
151211	18:29	14.964	-24.7124	1.4065	285.7798	10.8518	5.018	0.7712	40.3304	4.0330
151217	13:29	16.0858	-24.1704	2.6678	8.1676	10.2527	9.5743	2.6901	136.459	13.6459

Table S2: *Table of analyzed events of 2016*

Date [yymmdd]	Time [hh:mm]	Lat. [°]	Long. [°]	Mag.	Backaz. [°]	Backaz error [°]	app. velocity [km/s]	Vel. error [km/s]	Dist. [km]	Dist. error [km]
160116	3:09	14.672	-24.6543	1.4976	236.7761	14.806	5.8671	0.7598	38.9734	6.9558
160118	0:34	14.9142	-24.7729	1.4039	276.8843	8.8026	8.0778	1.1670	45.6576	4.5658
160118	2:05	14.8521	-24.764	0.93686	268.1817	4.0591	6.5575	0.4520	44.4064	4.4406
160120	5:47	14.738	-24.7666	1.6383	252.5696	6.7372	5.5439	0.6989	46.8377	4.6838
160128	5:22	14.8755	-24.75	2.1411	271.5742	6.1502	5.4944	0.3140	42.8891	4.2889
160204	23:09	14.8004	-24.7893	1.0011	261.408	4.11	6.0939	0.3956	47.6531	4.7653
160206	3:36	14.8219	-24.6624	0.85187	261.8925	7.1283	5.7526	1.1595	33.7917	3.3792
160207	4:18	14.8524	-24.802	1.3502	268.3895	6.497	5.8084	0.5957	48.493	4.8493
160207	4:23	14.8253	-24.7994	1.0784	264.8312	14.3505	6.1380	0.6435	48.397	4.8397
160207	5:09	14.7129	-24.7509	0.71416	248.651	15.0394	8.2376	1.0899	46.1703	4.6170
160207	6:28	14.7847	-24.7876	0.6657	259.3068	6.0809	5.4010	0.3516	47.767	4.7767
160207	7:23	14.8525	-24.7976	1.263	268.3895	6.9815	5.8084	0.3519	48.0193	4.8019
160207	7:39	14.8527	-24.7934	1.3413	268.3895	9.6788	5.8084	0.3612	47.5668	4.7567
160208	18:31	14.8762	-24.7528	1.3728	271.6642	3.3723	5.8082	0.6093	43.1923	4.3192
160210	4:08	14.7784	-24.7459	0.82808	257.298	7.8273	6.4003	0.702	43.5143	4.3514
160210	4:15	14.7741	-24.7653	1.5436	257.298	4.11	6.4003	0.4539	45.6564	4.5656
160213	0:32	14.6154	-25.0259	2.9126	249.2453	8.0527	6.5584	0.8901	77.6893	7.7689
160213	21:25	14.8532	-24.7536	1.7267	268.2919	7.4295	6.1603	0.8164	43.2837	4.3284
160213	21:29	14.7146	-24.7199	1.1017	247.264	12.3913	6.0510	0.5074	43.0069	4.3007
160218	0:18	14.8523	-24.8062	2.2889	268.3895	6.497	5.8084	0.5957	48.9451	4.8945
160218	14:10	14.8769	-24.7826	1.4286	271.6642	3.2747	5.8082	0.3299	46.4001	4.6400
160218	22:57	14.8258	-24.7939	1.7161	264.8312	6.9338	6.1380	0.4195	47.8024	4.7802
160218	22:59	14.8259	-24.7936	1.565	264.8312	7.5332	6.1380	0.8387	47.7693	4.7769
160219	22:14	14.8533	-24.7949	1.3424	268.4765	6.4515	5.4945	0.6658	47.7262	4.7726
160219	23:03	14.8538	-24.7545	1.8407	268.3895	11.0915	5.8084	0.7491	43.3785	4.8490
160219	23:07	14.8768	-24.7775	0.8958	271.6642	10.8018	5.8082	0.7493	45.8512	4.5851
160220	1:48	14.8546	-24.7258	1.3711	268.3895	6.9815	5.8084	0.3519	40.2885	4.0288
160220	6:08	14.8526	-24.7968	2.2732	268.3895	6.9815	5.8084	0.7491	47.9329	4.7933
160221	6:26	14.7927	-24.6811	0.90445	257.298	7.5332	6.4003	1.0078	36.361	3.6361
160221	6:47	14.8055	-24.7793	1.268	261.8925	14.6285	5.7526	0.725	46.5053	4.6505
160227	18:01	14.8559	-24.6631	1.4088	268.2919	8.0483	6.1603	0.8492	33.5393	3.3539
160301	0:12	14.91	-24.6936	0.71882	277.7244	3.6165	5.4466	0.6908	37.1342	3.7134
160301	21:10	14.7697	-24.7849	1.6342	257.298	10.9939	6.4003	0.6477	47.8221	4.7822
160309	11:33	16.0835	-25.6128	2.3501	315.0553	10.6182	8.4553	1.7866	191.023	19.102
160312	6:11	14.8309	-24.7147	0.98357	264.4996	11.7207	6.5306	1.4487	39.2625	3.9263
160314	2:07	14.839	-24.6464	0.5922	264.8312	8.3784	6.1380	0.8387	31.8594	3.1859
160316	5:10	14.8069	-24.7689	1.3992	261.8925	3.8472	5.7526	0.3854	45.3752	4.5375
160316	5:31	14.8249	-24.7505	0.94772	264.1226	13.9002	6.9767	1.1024	43.1632	4.3163
160317	4:50	14.6572	-24.9135	1.3842	249.2453	8.0527	6.5584	0.5074	64.7272	6.4727
160317	21:15	14.8757	-24.7344	1.6344	271.6642	7.1646	5.8082	0.7493	41.2115	4.1212
160319	2:48	14.8533	-24.7931	1.3731	268.4765	6.584	5.4945	0.3139	47.5326	4.7533
160319	3:09	14.8522	-24.8104	2.0053	268.3895	7.5271	5.8084	0.7491	49.3973	4.9397
160322	13:31	14.7928	-24.6806	2.4331	257.298	7.5332	6.4003	0.7722	36.306	3.6306
160407	3:40	14.6494	-24.6663	0.79371	234.8727	9.432	6.1614	0.6271	41.4495	4.1450
160407	20:09	14.6902	-24.7246	1.9494	244.3047	12.1481	6.7885	0.7373	44.5802	4.4580
160407	21:57	14.7208	-24.742	2.1866	249.2453	11.6171	6.5584	0.7347	44.9609	4.4961
160407	22:01	14.7634	-24.7541	1.34	255.4897	11.185	7.2931	0.7347	44.7655	4.4765
160407	22:05	14.7183	-24.7217	1.052	247.8513	12.3923	6.9775	0.5768	43.0291	4.3029

160407	22:35	14.7965	-24.76	1.7298	260.2436	15.9389	6.9121	0.5757	44.6097	4.4610
160408	1:54	14.7123	-24.7367	1.7044	247.8513	12.3923	6.9775	0.679	44.7755	4.4776
160408	2:01	14.7123	-24.7365	1.9595	247.8513	12.3923	6.9775	0.7472	44.7556	4.4756
160408	2:18	14.7707	-24.7528	1.2946	256.4528	12.1481	6.8184	0.5897	44.4324	4.4432
160409	3:15	14.7641	-24.7514	0.99789	255.4897	12.4227	7.2931	0.786	44.4646	4.4465
160409	6:38	14.7246	-24.7058	1.0095	247.8513	12.9786	6.9775	0.9263	41.1804	4.1180
160410	4:11	14.6291	-24.7213	0.71657	236.7761	12.4692	5.8671	0.9214	47.6118	4.7612
160410	23:11	14.5935	-24.6546	2.4272	227.3876	10.4259	5.9880	0.4905	44.3635	4.4363
160411	5:31	14.7629	-24.7562	1.2133	255.4897	12.5666	7.2931	0.786	44.9982	4.4998
160413	3:46	14.7457	-24.7467	1.2841	252.7789	11.8217	6.6992	0.5939	44.5381	4.4538
160414	3:55	14.6994	-24.7312	1.7467	245.8693	11.4287	6.4007	0.747	44.7942	4.4794
160416	21:38	15.6985	-26.9677	3.5846	288.5101	29.7718	12.8649	3.8981	295.7287	29.5729
160419	0:56	14.664	-24.6796	0.90798	237.8135	14.9654	6.3757	1.2808	41.7439	4.1744
160419	1:58	14.6973	-24.7094	0.96227	244.3047	9.432	6.7885	0.7373	42.7644	4.2764
160419	2:16	14.751	-24.729	0.70199	252.7789	11.7207	6.6992	0.5939	42.5441	4.2544
160420	3:10	16.261	-27.1061	2.9745	297.9633	31.2779	10.5717	2.9639	333.3834	33.3383
160425	0:45	14.45	-24.9771	3.3239	235.7925	20.6652	6.7289	1.8539	81.5471	8.1547
160425	14:21	14.6893	-24.6082	1.4709	234.8727	14.3726	6.1614	0.8161	33.7909	3.3791
160425	14:37	14.7237	-24.6324	1.777	242.6625	10.1164	6.2303	0.4771	34.0409	3.4041
160426	22:38	14.6266	-24.9762	2.2991	248.651	23.6786	8.2376	1.8619	72.2491	7.2249
160427	3:32	14.7787	-24.7191	1.1207	256.4528	15.7043	6.8184	1.1609	40.6978	4.0698
160427	15:59	14.8015	-24.7306	1.4263	260.2436	15.6979	6.9121	0.6163	41.3968	4.1397
160429	0:28	14.5675	-25.0444	2.1146	246.2681	21.2681	7.4485	1.5016	81.5542	8.1554
160430	3:12	14.6212	-24.7336	0.58001	236.7761	13.7046	5.8671	0.5336	49.1992	10.5157
160501	2:40	14.8233	-24.7657	0.70121	264.1226	12.5367	6.9767	0.5517	44.8088	4.4809
160501	2:59	14.7325	-25.0297	1.5095	258.719	22.6343	7.9793	1.2801	74.4589	7.4459
160502	0:30	14.7501	-24.732	1.8755	252.7789	11.3437	6.6992	0.6482	42.8821	4.2882
160502	1:07	14.7749	-24.7353	1.0957	256.4528	15.4956	6.8184	0.8381	42.4919	4.2492
160502	3:22	14.6808	-24.7174	0.85013	242.6625	10.5327	6.2303	0.7472	44.3526	4.4353
160503	1:56	14.6761	-24.6479	1.1942	236.7761	10.4879	5.8671	0.5978	38.1481	3.8148
160507	5:16	16.116	-26.3605	2.7058	302.9694	22.8983	10.0416	2.4764	256.1618	25.6162
160507	6:24	14.6892	-24.7267	0.77695	244.3047	8.5122	6.7885	0.66	44.832	4.4832
160508	22:59	14.7445	-24.7505	1.533	252.7789	11.8217	6.6992	0.9573	44.9682	4.4968
160509	7:21	14.7442	-24.7516	2.384	252.7789	11.3437	6.6992	0.5939	45.0912	4.5091
160510	2:04	14.7789	-24.7436	1.3455	257.298	14.6355	6.4003	0.5764	43.2606	4.3261
160510	2:13	14.7707	-24.753	1.1011	256.4528	11.6035	6.8184	0.4747	44.4534	4.4453
160510	2:27	14.7713	-24.7505	0.97197	256.4528	12.1481	6.8184	0.6694	44.1761	4.4176
160510	4:09	14.7837	-24.7219	1.3623	257.298	16.0273	6.4003	0.7891	40.8648	4.0865
160510	5:06	14.7013	-24.7267	1.1291	245.8693	10.9966	6.4007	0.747	44.266	4.4266
160510	5:13	14.6482	-24.6681	2.0503	234.8727	14.3726	6.1614	0.8161	41.6845	4.1685
160510	15:04	14.7833	-24.7235	1.5259	257.298	14.5809	6.4003	0.4939	41.0426	4.1043
160512	1:05	14.7283	-24.6867	1.3869	247.264	10.7813	6.0510	0.5074	39.1236	3.9124
160512	3:05	14.7711	-24.7512	0.72021	256.4528	13.7903	6.8184	0.5881	44.2546	4.4255
160513	0:57	14.7876	-24.7042	1.3475	257.298	11.4287	6.4003	0.6092	38.911	3.8911
160515	0:30	16.5893	-26.8019	3.4321	306.3244	32.4438	10.9304	4.6784	324.5913	32.4591
160517	11:14	14.4216	-24.8458	2.9875	227.3876	28.1021	5.9880	2.2496	72.4082	7.2408
160521	5:26	14.6263	-24.69	0.96131	234.0961	7.1746	5.6810	0.3702	45.0135	4.5013
160522	12:50	14.7068	-24.7504	1.527	247.8513	15.3385	6.9775	1.1016	46.3715	4.6372
160522	19:45	14.6831	-24.6705	1.7319	239.6309	20.6127	6.0512	1.2419	39.8071	3.9807
160522	22:31	14.6812	-24.6736	1.1024	239.6309	20.6127	6.0512	1.6053	40.2014	4.0201
160523	22:38	15.7492	-25.8772	3.6953	301.0374	49.4347	11.6244	4.1014	190.8191	19.0819
160524	0:44	15.2044	-26.1221	1.7345	281.3822	24.324	13.2999	2.3119	194.0513	19.4051
160525	2:52	14.5579	-24.9527	1.9433	242.3708	20.2327	8.5828	1.1737	73.1187	7.3119
160526	19:16	14.498	-24.9285	2.1857	236.8986	21.8204	7.4091	1.1737	74.2382	7.4238
160529	22:08	18.4015	-24.2123	3.5022	2.1545	7.0326	7.5190	4.4058	391.6305	39.1631
160530	4:01	15.7194	-26.0248	3.0876	297.9633	31.2779	10.5717	4.0327	203.0461	20.3046
160530	6:10	14.6888	-24.7016	2.295	242.6625	13.7903	6.2303	0.7472	42.4344	4.2434
160530	21:14	14.7771	-24.7518	1.0707	257.298	14.5809	6.4003	0.5764	44.1656	4.4166
160601	22:40	14.7086	-24.7347	1.3086	247.264	17.2356	6.0510	0.7674	44.7335	4.4734
160602	11:33	14.7238	-24.734	2.1872	249.2453	14.3726	6.5584	0.7347	44.0377	4.4038
160602	11:59	14.7585	-24.7043	1.5432	252.7789	19.2295	6.6992	0.8321	39.7581	3.9758
160602	22:52	15.1236	-24.0391	1.532	49.5709	11.3627	5.7275	1.2395	44.1284	4.4128
160604	0:37	14.6538	-24.6827	1.4561	236.7761	12.4692	5.8671	1.1107	42.6358	4.2636
160604	3:40	14.6438	-24.6983	0.91473	236.7761	12.4692	5.8671	0.9214	44.6478	4.4648
160604	5:33	14.6705	-24.7379	1.0948	242.6625	10.5327	6.2303	0.7472	46.8375	4.6837

160605	0:29	14.7771	-24.7261	0.76947	256.4528	13.7903	6.8184	0.6346	41.4719	4.1472
160605	18:49	14.6482	-24.6915	2.6259	236.7761	11.7761	5.8671	0.7338	43.7683	4.3768
160607	1:13	14.7651	-24.7769	0.72306	256.4528	19.4887	6.8184	0.7100	47.1001	4.7100
160607	14:06	15.4714	-25.9852	2.1451	291.1247	25.457	14.6044	2.9800	187.9336	18.7934
160608	16:46	14.7004	-24.7547	1.7682	247.264	15.6779	6.0510	0.6482	47.0707	4.7071
160610	4:48	14.6442	-24.6978	1.8215	236.7761	10.4879	5.8671	0.3717	44.5785	4.4579
160611	18:06	16.6013	-26.4857	3.2148	310.3141	36.4335	11.9383	5.9084	298.689	29.8689
160615	2:51	14.7767	-24.7275	0.98582	256.4528	13.7903	6.8184	0.7674	41.6288	4.1629
160722	22:41	14.8272	-24.7025	1.6353	263.6904	8.4667	7.4878	0.5913	37.9992	3.7999
160723	2:03	16.3241	-25.6611	2.5418	319.1524	18.115	10.2402	2.6192	213.971	21.3971
160725	3:23	16.1843	-25.9016	2.2214	311.4821	8.5127	8.9668	1.9636	221.2609	22.1261
160729	6:49	14.7072	-24.7382	1.3539	247.264	13.5984	6.0510	0.7674	45.141	4.5141
160729	18:14	14.7991	-24.652	1.3231	257.298	7.2016	6.4003	0.5530	33.1493	3.3149
160801	15:04	14.8304	-24.7194	0.95865	264.4996	11.4419	6.5306	0.9978	39.7723	3.9772
160801	15:05	14.7604	-24.698	1.5455	252.7789	11.7207	6.6992	0.9645	39.0499	3.9050
160801	15:07	14.7832	-24.7238	1.2013	257.298	10.034	6.4003	0.7722	41.0782	4.1078
160801	15:18	14.8226	-24.7152	2.1054	263.1898	19.1225	8.0791	1.5978	39.4112	3.9411
160801	17:44	14.9633	-24.722	1.2987	285.2888	13.5238	5.9449	0.9659	41.3023	4.1302
160801	19:21	14.8266	-24.7337	1.4924	264.1226	18.1897	6.9767	1.8592	41.3438	4.1344
160801	21:06	14.8056	-24.73	1.4563	260.8624	7.3193	6.4776	0.5312	41.2590	4.1259
160801	23:14	14.7811	-24.7335	0.99048	257.298	7.5332	6.4003	0.5118	42.1447	4.2145
160801	23:24	14.7912	-24.6446	0.4982	255.4897	9.6204	7.2931	0.9918	32.5770	5.9298
160802	0:18	14.8329	-24.7579	1.1416	265.3877	6.677	5.4787	0.6593	43.8747	4.3875
160802	1:10	14.8295	-24.7285	2.8076	264.4996	11.7207	6.5306	0.9978	40.7593	4.0759
160802	1:12	14.8313	-24.7102	0.87376	264.4996	7.5088	6.5306	0.4789	38.7735	3.8773
160802	1:12	14.8345	-24.7178	1.4701	265.1253	6.6397	5.7897	0.7678	39.5602	3.9560
160802	1:13	14.8069	-24.7223	1.6018	260.8624	10.3817	6.4776	0.725	40.4163	4.0416
160802	1:15	14.877	-24.7318	0.5466	271.8789	7.9404	6.5573	0.4522	40.9344	4.0934
160802	1:23	14.7802	-24.7129	0.47742	256.4528	44.7829	6.8184	3.1361	40.0132	4.0013
160802	1:43	14.807	-24.7211	0.83266	260.8624	7.3193	6.4776	0.4991	40.2894	4.0289
160802	1:55	14.7837	-24.7215	1.0727	257.298	6.8173	6.4003	0.553	40.8212	4.0821
160802	2:10	14.7851	-24.7153	1.6516	257.298	8.0527	6.4003	0.5764	40.1378	4.0138
160802	2:11	14.8316	-24.7301	1.8772	264.8312	10.067	6.1380	0.4397	40.9017	4.0902
160802	2:41	14.8306	-24.718	1.0967	264.4996	10.669	6.5306	0.5012	39.6170	3.9617
160802	2:41	14.8298	-24.7262	2.0286	264.4996	8.0468	6.5306	0.4789	40.5067	4.0507
160802	2:43	14.7846	-24.7175	1.1435	257.298	11.4287	6.4003	0.5764	40.3814	4.0381
160802	2:44	14.8298	-24.7256	1.0907	264.4996	8.0468	6.5306	0.4461	40.4419	4.0442
160802	2:48	14.8065	-24.7249	0.83602	260.8624	8.0835	6.4776	0.5319	40.6986	4.0699
160804	0:18	14.914	-24.7854	1.8981	276.6566	5.302	4.6973	0.2665	46.9909	4.6991
160804	9:38	14.7505	-24.7045	1.6353	251.5821	3.1821	5.8473	0.3997	40.0509	4.0051
160804	19:05	14.4987	-23.8666	2.7889	127.7594	24.8491	17.8242	5.7959	66.1279	6.6128
160804	19:36	14.7837	-24.7215	1.4182	257.298	6.8173	6.4003	0.4539	40.8228	4.0823
160805	4:20	14.8296	-24.7284	2.6242	264.4996	8.0468	6.5306	0.4789	40.7441	4.0744
160805	4:43	14.8066	-24.7239	1.4587	260.8624	7.0318	6.4776	0.4482	40.5920	4.0592
160805	4:52	14.8539	-24.7297	1.5965	268.2919	6.9333	6.1603	0.3972	40.7104	4.0710
160806	4:16	14.7806	-24.7606	0.5	258.0453	6.7859	6.0294	0.4482	45.0075	4.5008
160807	22:41	14.8534	-24.7444	0.91995	268.2919	3.587	6.1603	0.3972	42.2934	4.2293
160809	22:37	14.8274	-24.7758	1.6137	264.8312	3.5583	6.1380	0.3483	45.8462	4.5846
160809	23:03	14.8262	-24.7902	2.0909	264.8312	3.5583	6.1380	0.3483	47.4018	4.7402
160810	6:01	14.8756	-24.7311	0.78256	271.6642	3.2747	5.8082	0.3519	40.8562	4.0856
160812	6:51	14.8065	-24.7245	1.3916	260.8624	3.6372	6.4776	0.0773	40.6575	4.0658
160812	7:40	14.7404	-24.7124	1.0533	250.4807	6.289	6.1838	0.5154	41.2199	4.1220
160813	1:11	14.8528	-24.7417	1.2132	268.1817	7.3193	6.5575	0.0799	42.0051	4.2005
160813	17:57	14.8287	-24.7371	1.2771	264.4996	7.3793	6.5306	0.3926	41.6858	4.1686
160814	2:55	14.8523	-24.7307	1.7017	268.0563	7.8127	7.0095	0.4789	40.8239	4.0824
160814	4:03	14.7635	-24.6879	0.7106	252.7789	4.5191	6.6992	0.5154	37.9077	3.7908
160815	5:28	14.7381	-24.891	0.24	256.4528	3.7908	6.8184	0.5897	59.7437	5.9744
160815	23:04	14.794	-24.7747	0.55602	260.2436	7.4647	6.9121	0.2129	46.2162	4.6216
160818	1:39	14.8299	-24.7247	1.2392	264.4996	8.0468	6.5306	0.4789	40.3445	4.0345
160820	6:09	14.7688	-24.6305	1.2007	250.4807	6.8173	6.1838	0.5154	31.8584	3.1858
160820	6:18	14.8029	-24.635	1.2685	257.298	6.8173	6.4003	0.5118	31.2716	3.1272
160821	1:10	14.8539	-24.6857	1.2646	268.0563	8.3221	7.0095	0.5189	35.9776	3.5978
160825	19:23	14.8264	-24.7616	2.0132	264.4996	11.7207	6.5306	0.9572	44.3351	4.4335
160828	2:49	14.8145	-24.6742	1.4126	260.8624	7.4295	6.4776	0.4991	35.1711	3.5171
160828	4:46	14.8283	-24.717	1.3333	264.1226	8.6329	6.9767	0.5517	39.5378	3.9538

160830	1:24	16.2166	-26.0218	2.8412	310.0708	12.7363	6.2264	1.7472	233.3716	23.3372
160830	2:30	14.8277	-24.7483	1.0692	264.4996	7.5088	6.5306	0.778	42.8964	4.2896
160901	1:31	14.6433	-24.6877	1.1707	235.8922	9.6767	5.4323	0.4741	43.7291	4.3729
160904	1:41	14.8271	-24.7288	1.8523	264.1226	11.3437	6.9767	0.8387	40.8148	4.0815
160911	19:51	14.7998	-24.7407	1.7303	260.2436	7.4647	6.9121	0.6108	42.5002	4.2500
160912	1:27	15.3747	-25.9371	2.4626	288.5101	26.5525	12.8649	3.8981	179.5081	17.9508
160914	2:25	14.7927	-24.6386	0.84363	255.4897	20.8887	7.2931	0.8924	31.915	3.1915
160915	22:27	14.7639	-24.6864	1.3692	252.7789	8.0835	6.6992	0.7089	37.7404	3.7740
160917	2:59	14.8765	-24.7145	1.1594	271.8789	7.7563	6.5573	0.4522	39.0735	3.9074
160917	3:11	14.724	-24.6748	0.31155	245.8693	10.9966	6.4007	0.5768	38.1384	3.8138
160917	4:54	14.8543	-24.6967	0.44183	268.1817	7.3788	6.5575	0.452	37.1592	3.7159
160918	4:15	16.2398	-25.7758	2.3243	315.0626	12.0932	9.5826	1.6098	215.5796	21.5580
160923	20:55	14.9688	-24.6952	1.3825	287.2802	11.3387	6.6970	0.9642	38.706	4.5816
160924	11:24	14.8744	-24.627	1.4724	272.0084	23.849	7.0093	1.1053	29.6549	2.9655
160925	22:35	14.8782	-24.744	0.69915	272.0084	7.8858	7.0093	0.5328	42.2525	4.2252
160925	22:49	14.8785	-24.7539	1.0187	272.0084	7.8858	7.0093	0.5328	43.3184	4.3318
160925	23:44	14.7262	-24.7275	1.0266	249.2453	11.4318	6.5584	0.6520	43.2891	4.3289
160926	4:00	14.8294	-24.7062	0.8629	264.1226	12.5367	6.9767	0.5764	38.369	3.8369
160926	0:53	14.8526	-24.698	0.77707	267.9124	8.466	7.5284	0.6163	37.3057	3.7306
160928	0:24	14.7753	-24.7336	1.9092	256.4528	8.0468	6.8184	0.5897	42.3036	4.2304
160928	0:45	14.8018	-24.7283	0.842	260.2436	7.4647	6.9121	0.5118	41.1472	4.1147
160928	1:43	14.9564	-24.7404	0.5125	283.6084	7.6669	6.8167	0.6701	43.0336	4.3034
160929	0:41	14.7982	-24.75	0.80886	260.2436	15.9389	6.9121	0.6163	43.5169	4.3517
161020	15:39	14.8348	-24.6729	1.0771	264.4996	7.3793	6.5306	0.4789	34.7428	3.4743
161022	1:56	14.5948	-24.8138	1.8106	239.0473	8.804	6.9778	1.0023	58.0697	5.8070
161022	21:07	14.8229	-24.7695	1.4765	264.1226	12.2558	6.9767	0.5517	45.2202	4.5220
161022	21:41	14.7609	-24.7642	1.2968	255.4897	8.6329	7.2931	0.8928	45.8875	4.5888
161025	1:16	14.7349	-24.7822	0.62112	252.7789	8.0835	6.6992	0.5939	48.5431	4.8543
161027	21:34	14.8778	-24.7043	1.2732	272.1571	8.3743	7.5281	1.0516	37.9814	3.7981
161030	5:14	14.8785	-24.7525	1.5249	272.0084	7.8858	7.0093	0.5191	43.1678	4.3168
161030	5:20	14.8784	-24.7507	1.0167	272.0084	7.8858	7.0093	0.9163	42.9738	4.2974
161107	1:48	14.8537	-24.6925	0.36786	268.0563	7.8127	7.0095	0.4789	36.7097	3.6710
161109	20:13	14.9266	-24.7438	1.88	279.1967	11.2843	6.4765	1.0519	42.7455	4.2746
161110	9:10	14.7261	-24.7279	2.2588	249.2453	4.9406	6.5584	0.5893	43.3333	4.3333
161112	12:19	14.8231	-24.7957	2.0217	264.4996	7.3793	6.5306	0.7222	48.0237	4.8024
161112	20:39	14.7469	-24.7427	1.4597	252.7789	4.9276	6.6992	0.4485	44.0874	4.4087
161112	21:13	14.7761	-24.7561	2.1534	257.298	4.5191	6.4003	0.5118	44.6415	4.4642
161113	1:08	14.7976	-24.7533	0.94753	260.2436	7.9381	6.9121	0.5757	43.8783	4.3878
161113	7:06	14.588	-24.8031	2.6151	237.8135	7.8402	6.3757	0.5086	57.4837	5.7484
161117	10:43	14.7775	-24.6418	1.1971	252.7789	8.4742	6.6992	0.5939	32.7083	3.2708
161117	22:31	14.8311	-24.6893	0.77378	264.1226	8.0345	6.9767	0.5517	36.5402	3.6540
161119	10:45	14.9064	-24.7628	1.4517	275.9415	7.8852	6.9759	0.9478	44.4827	4.4483
161121	2:40	14.7888	-24.8056	1.2315	260.2436	12.3923	6.9121	0.7741	49.5921	4.9592
161122	5:51	14.9334	-24.7593	0.93743	279.8193	7.8109	6.9108	0.5760	44.5137	4.4514
161122	5:52	14.9065	-24.7633	1.3944	275.9415	7.8852	6.9759	0.8829	44.5374	4.4537
161129	18:33	14.8523	-24.7572	1.4232	268.1817	7.3788	6.5575	0.4520	43.6742	4.3674
161129	18:47	14.8522	-24.7611	1.9356	268.1817	7.9381	6.5575	0.4520	44.0941	4.4094
161129	20:57	14.8237	-24.7617	0.99637	264.1226	7.8858	6.9767	0.4461	44.376	4.4376
161129	21:39	14.8781	-24.768	2.1252	271.8789	7.7563	6.5573	0.4522	44.8335	4.4833
161129	22:32	14.879	-24.7669	1.4245	272.0084	7.8858	7.0093	0.5191	44.7184	4.4718
161129	23:31	14.8521	-24.763	1.1757	268.1817	4.0591	6.5575	0.4520	44.2988	4.4299
161129	23:47	14.8795	-24.7832	2.0903	272.0084	7.8858	7.0093	0.5188	46.4733	4.6473
161130	0:11	14.8121	-24.7685	1.8456	262.6035	12.8008	8.7709	1.9229	45.2538	4.5254
161130	3:01	14.8789	-24.7658	1.1364	272.0084	7.8109	7.0093	0.5328	44.5997	4.4600
161130	3:10	14.8786	-24.7552	1.3235	272.0084	11.7648	7.0093	0.8719	43.4585	4.3459
161130	3:16	14.8773	-24.7679	0.55032	271.765	7.2654	6.1601	0.3974	44.8201	4.4820
161130	4:13	14.8789	-24.7646	1.2311	272.0084	7.8109	7.0093	0.8719	44.4706	4.4471
161130	9:47	14.906	-24.7588	1.6889	275.9415	8.0291	6.9759	0.5525	44.0501	4.4050
161130	9:54	14.8778	-24.758	1.4294	271.8789	7.9404	6.5573	0.4643	43.7569	4.3757
161130	10:26	14.8781	-24.7682	2.266	271.8789	7.7563	6.5573	0.4522	44.855	4.4855
161130	10:54	14.8781	-24.7675	2.1991	271.8789	7.7563	6.5573	0.4643	44.7797	4.4780
161130	17:14	14.8787	-24.7605	2.3916	272.0084	7.8858	7.0093	0.5328	44.0289	4.4029
161130	17:16	14.8511	-24.7666	1.638	268.0563	8.5204	7.0095	0.5189	44.6899	4.4690
161130	18:50	14.7966	-24.7592	1.9924	260.2436	15.9389	6.9121	0.9240	44.523	4.4523
161130	19:09	14.8785	-24.7532	2.0159	272.0084	17.5647	7.0093	1.4669	43.2431	4.3243

161130	20:36	14.8796	-24.7561	1.6592	272.1571	12.6212	7.5281	0.6173	43.5592	4.3559
161130	23:43	14.8789	-24.7661	1.519	272.0084	7.8858	7.0093	0.5191	44.632	4.4632
161201	1:44	14.878	-24.7649	1.2082	271.8789	7.7563	6.5573	0.4522	44.4997	4.4500
161201	1:59	14.8788	-24.7631	1.3859	272.0084	7.8858	7.0093	0.5328	44.3089	4.4309
161201	5:10	14.7448	-24.655	1.1595	247.8513	12.3923	6.9775	0.6790	35.2712	3.5271
161202	2:37	14.8508	-24.7736	1.1481	268.0563	7.8127	7.0095	0.5189	45.4439	4.5444
161202	4:08	14.878	-24.7663	1.1319	271.8789	7.7563	6.5573	0.4522	44.6503	4.4650
161202	13:13	14.7782	-24.7468	1.348	257.298	10.8837	6.4003	0.5764	43.6137	4.3614
161202	13:18	14.8265	-24.7604	1.4347	264.4996	8.0468	6.5306	0.4789	44.2055	4.4206
161202	13:25	14.7979	-24.7515	2.039	260.2436	7.4647	6.9121	0.5118	43.6817	4.3682
161202	13:38	14.8228	-24.7712	2.6892	264.1226	12.2558	6.9767	1.1683	45.4034	4.5403
161202	17:30	14.8265	-24.7602	1.3703	264.4996	7.2016	6.5306	0.4461	44.1841	4.4184
161203	7:35	14.7702	-24.7827	1.8923	257.298	9.4467	6.4003	0.8928	47.5788	4.7579
161204	20:55	14.7814	-24.732	1.6477	257.298	8.0527	6.4003	0.5118	41.9815	4.1981
161204	21:13	14.7767	-24.7274	1.2584	256.4528	8.6015	6.8184	0.6346	41.6184	4.1618
161204	21:14	14.805	-24.7342	1.2279	260.8624	7.4295	6.4776	0.4991	41.7148	4.1715
161205	11:13	14.7729	-24.7707	2.1377	257.298	11.4287	6.4003	0.4539	46.2528	4.6253
161205	22:40	14.7709	-24.7797	1.2534	257.298	9.4467	6.4003	0.8928	47.2467	4.7247
161207	4:25	14.879	-24.7673	0.55589	272.0084	7.8109	7.0093	0.5328	44.7614	4.4761
161207	19:27	14.8065	-24.7009	1.919	260.2436	7.9381	6.9121	0.5757	38.1522	3.8152
161212	12:55	14.7217	-24.713	1.7891	247.8513	10.0378	6.9775	0.9263	42.0195	4.2020
161213	4:16	14.8775	-24.7482	1.393	271.8789	7.7563	6.5573	0.4522	42.7017	4.2702
161215	0:27	14.8252	-24.7743	0.96214	264.4996	7.3793	6.5306	0.4461	45.7086	4.5709
161219	21:45	16.2826	-25.6656	2.581	318.2318	9.8871	7.9728	1.6098	210.8596	21.0860
161221	3:24	14.7125	-24.7011	1.0243	245.8693	6.9096	6.4007	0.7895	41.2433	4.1243
161221	6:17	14.6573	-24.9131	1.4193	249.2453	9.6144	6.5584	0.6520	64.683	6.4683
161226	6:13	14.784	-24.7205	1.4551	257.298	10.9939	6.4003	0.6477	40.7105	4.0710
161226	9:32	14.8316	-24.7295	1.5875	264.8312	7.5332	6.1380	0.6593	40.8411	4.0841
161226	13:45	14.6222	-24.9627	2.7285	247.8513	11.6846	6.9775	1.4850	71.0812	7.1081
161227	3:54	14.7636	-24.6876	1.1065	252.7789	8.4742	6.6992	0.5939	37.8736	3.7874
161228	3:05	14.8027	-24.7233	1.6371	260.2436	8.6577	6.9121	0.5118	40.5998	4.0600
161228	6:04	14.7838	-24.6737	1.0153	255.4897	9.2216	7.2931	0.8928	35.8199	3.5820
161229	9:13	14.8287	-24.7126	2.023	264.1226	8.6329	6.9767	1.1024	39.0622	3.9062