



Supplement of

A comparison of gap-filling algorithms for eddy covariance fluxes and their drivers

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Alice Springs Mulga (Fc):

Table S1. The values of RMSE for Fc gap-filling based on the window length and algorithm for Alice Springs Mulga.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.019	0.028	0.019	0.026	0.019	0.021	0.019	0.032	0.019
5 days	0.020	0.024	0.020	0.028	0.020	0.021	0.020	0.033	0.023
10 days	0.020	0.034	0.020	0.030	0.021	0.021	0.020	0.033	0.024
20 days	0.020	0.024	0.020	0.031	0.021	0.020	0.021	0.033	0.025
30 days	0.021	0.025	0.021	0.035	0.023	0.020	0.023	0.034	0.030
60 days	0.026	0.034	0.027	0.053	0.027	0.021	0.027	0.035	0.030
90 days	0.027	0.026	0.029	0.064	0.030	0.021	0.029	0.038	0.029
180 days	0.028	0.034	0.031	0.068	0.033	0.024	0.032	0.036	0.033
365 days	0.029	0.033	0.031	0.068	0.036	0.025	0.035	0.038	0.034

Table S2. The values of R-squared for Fc gap-filling based on the window length and algorithm for Alice Springs Mulga.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.458	0.257	0.440	0.091	0.405	0.359	0.399	0.391	0.306
5 days	0.436	0.290	0.415	0.097	0.378	0.343	0.372	0.375	0.319
10 days	0.429	0.209	0.415	0.102	0.367	0.333	0.361	0.366	0.261
20 days	0.405	0.308	0.389	0.092	0.340	0.329	0.335	0.343	0.319
30 days	0.406	0.289	0.385	0.120	0.328	0.317	0.323	0.352	0.287
60 days	0.335	0.237	0.319	0.211	0.287	0.295	0.283	0.318	0.270
90 days	0.331	0.297	0.310	0.225	0.283	0.299	0.278	0.336	0.287
180 days	0.312	0.346	0.285	0.255	0.284	0.009	0.280	0.360	0.305
365 days	0.290	0.324	0.278	0.253	0.277	0.001	0.273	0.349	0.293

Table S3. The values of MBE for Fc gap-filling based on the window length and algorithm for Alice Springs Mulga.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	-0.001	-0.003	-0.002	0.009	-0.002	-0.003	-0.002	0.000	-0.003
5 days	-0.001	-0.004	-0.001	0.006	-0.002	-0.002	-0.002	-0.001	-0.003
10 days	-0.001	-0.006	-0.001	0.007	-0.002	-0.001	-0.002	-0.001	-0.004
20 days	-0.001	-0.007	-0.001	0.003	-0.002	-0.001	-0.002	-0.001	-0.005
30 days	-0.001	-0.002	0.000	0.002	-0.001	0.001	-0.001	-0.001	-0.002
60 days	0.000	0.004	0.000	0.001	0.000	0.003	0.000	-0.002	0.001
90 days	0.000	-0.004	0.001	-0.005	0.000	0.003	0.000	-0.014	-0.001
180 days	0.000	0.007	0.002	0.006	-0.001	0.004	-0.001	-0.009	0.002
365 days	0.000	0.006	0.001	0.006	-0.002	0.006	-0.002	-0.005	0.001

Alice Springs Mulga (Fe):

Table S4. The values of RMSE for Fe gap-filling based on the window length and algorithm for Alice Springs Mulga.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	11.173	14.931	11.465	19.527	14.995	17.109	14.994	22.369	14.473
5 days	11.482	14.818	11.733	19.817	15.298	17.387	15.297	24.535	14.736
10 days	11.792	14.705	12.002	20.106	15.601	17.665	15.600	24.971	14.920
20 days	12.229	14.593	12.399	20.505	16.071	18.132	16.071	26.840	15.315
30 days	12.698	14.480	12.829	20.929	16.582	18.643	16.582	28.507	15.613
60 days	15.229	14.678	15.899	25.021	20.949	22.682	20.940	33.614	18.700
90 days	14.834	16.122	15.940	28.272	22.574	24.231	22.567	36.966	20.745
180 days	15.621	22.464	16.420	31.962	24.970	26.900	24.532	41.214	24.932
365 days	15.996	21.416	16.490	32.864	26.963	28.631	26.953	50.727	25.999

Table S5. The values of R-squared for Fe gap-filling based on the window length and algorithm for Alice Springs Mulga.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.740	0.386	0.729	0.321	0.479	0.276	0.479	0.254	0.457
5 days	0.725	0.412	0.718	0.314	0.469	0.269	0.469	0.194	0.456
10 days	0.730	0.449	0.726	0.314	0.472	0.269	0.473	0.161	0.440
20 days	0.692	0.460	0.692	0.297	0.449	0.254	0.449	0.026	0.431
30 days	0.656	0.470	0.659	0.280	0.425	0.239	0.425	0.034	0.417
60 days	0.619	0.444	0.632	0.222	0.398	0.232	0.398	0.043	0.413
90 days	0.620	0.439	0.629	0.185	0.379	0.240	0.379	0.053	0.399
180 days	0.610	0.357	0.649	0.184	0.368	0.246	0.369	0.062	0.365
365 days	0.627	0.393	0.641	0.196	0.340	0.239	0.340	0.072	0.357

Table S6. The values of MBE for Fe gap-filling based on the window length and algorithm for Alice Springs Mulga.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	-2.324	-3.100	-2.507	-10.683	-3.440	-4.906	-3.451	-0.894	-3.213
5 days	-2.527	-3.232	-2.715	-11.073	-3.678	-5.080	-3.690	-0.914	-3.380
10 days	-2.730	-3.363	-2.922	-11.463	-3.916	-5.254	-3.928	-0.934	-3.547
20 days	-2.933	-3.495	-3.129	-11.853	-4.154	-5.428	-4.166	-0.954	-3.714
30 days	-3.136	-3.626	-3.337	-12.243	-4.392	-5.602	-4.405	-0.974	-3.882
60 days	-3.014	-2.502	-3.931	-14.977	-5.556	-6.452	-5.559	2.548	-4.538
90 days	-2.838	-4.367	-4.167	-18.567	-5.940	-7.316	-5.950	6.992	-5.416
180 days	-3.602	-10.131	-4.589	-22.623	-6.121	-8.612	-6.182	8.592	-7.457
365 days	-4.255	-10.045	-4.688	-23.293	-6.880	-9.437	-6.888	10.191	-7.935

Alice Springs Mulga (Fh):

Table S7. The values of RMSE for Fh gap-filling based on the window length and algorithm for Alice Springs Mulga.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	28.102	28.835	28.975	29.928	33.765	34.212	34.693	52.261	31.732
5 days	28.135	29.416	29.086	30.343	33.918	34.361	34.879	53.724	32.195
10 days	28.181	29.776	29.262	31.058	34.792	35.321	34.901	55.187	32.278
20 days	28.422	30.028	29.519	32.131	34.915	35.444	35.025	56.650	32.383
30 days	28.206	30.130	29.038	33.579	35.197	34.679	35.203	58.349	32.465
60 days	28.897	30.648	30.289	32.601	35.662	35.915	35.475	60.181	32.624
90 days	28.654	31.385	29.758	34.639	32.754	32.686	33.305	68.537	32.798
180 days	28.686	32.264	29.526	35.704	34.009	33.942	34.925	70.518	34.946
365 days	29.920	33.106	31.456	34.175	36.554	36.203	36.527	78.764	35.308

Table S8. The values of R-squared for Fh gap-filling based on the window length and algorithm for Alice Springs Mulga.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.972	0.969	0.970	0.970	0.959	0.957	0.957	0.868	0.964
5 days	0.972	0.968	0.970	0.970	0.959	0.957	0.957	0.865	0.963
10 days	0.972	0.967	0.970	0.964	0.957	0.954	0.957	0.864	0.962
20 days	0.972	0.964	0.969	0.964	0.956	0.954	0.955	0.860	0.962
30 days	0.971	0.964	0.968	0.956	0.955	0.952	0.953	0.858	0.961
60 days	0.971	0.964	0.967	0.963	0.955	0.953	0.954	0.816	0.961
90 days	0.970	0.964	0.967	0.953	0.960	0.960	0.959	0.807	0.961
180 days	0.970	0.962	0.968	0.951	0.959	0.959	0.957	0.862	0.957
365 days	0.970	0.960	0.966	0.962	0.952	0.953	0.953	0.837	0.956

Table S9. The values of MBE for Fh gap-filling based on the window length and algorithm for Alice Springs Mulga.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	-1.360	-2.881	-2.461	-6.498	-3.381	2.398	-3.385	1.775	-3.048
5 days	-1.377	-2.917	-2.492	-6.580	-3.303	2.343	-3.308	1.734	-3.046
10 days	-2.752	-2.717	-3.039	-6.666	-3.304	2.367	-3.232	1.691	-2.912
20 days	-2.791	-2.755	-3.082	-6.444	-3.194	-4.103	-3.070	1.649	-2.901
30 days	-0.844	-0.103	-0.296	-1.906	0.144	1.290	0.122	1.608	-0.020
60 days	-2.614	-2.054	-2.720	-5.900	-2.226	-2.821	-2.917	1.566	-2.169
90 days	-0.306	-1.224	0.471	0.132	1.359	3.127	0.549	5.914	0.498
180 days	-0.056	3.108	0.677	-0.698	1.515	4.581	0.608	30.308	2.046
365 days	-2.619	4.566	-2.125	-7.588	-0.699	0.895	-0.634	31.262	1.056

Calperum (Fc):

Table S10. The values of RMSE for Fc gap-filling based on the window length and algorithm for Calperum.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	1.047	1.070	1.069	1.253	1.369	1.441	1.405	1.524	1.154
5 days	1.053	1.096	1.075	1.262	1.372	1.439	1.411	1.526	1.147
10 days	1.060	1.099	1.077	1.255	1.362	1.428	1.399	1.510	1.164
20 days	1.062	1.104	1.079	1.237	1.340	1.427	1.369	1.475	1.212
30 days	1.064	1.106	1.086	1.243	1.346	1.454	1.375	1.483	1.246
60 days	1.068	1.113	1.122	1.321	1.375	1.497	1.398	1.472	1.300
90 days	1.068	1.153	1.125	1.309	1.395	1.544	1.421	1.550	1.367
180 days	1.071	1.201	1.197	1.360	1.397	1.435	1.444	1.629	1.382
365 days	1.160	1.210	1.205	1.377	1.423	1.486	1.468	1.709	1.416

Table S11. The values of R-squared for Fc gap-filling based on the window length and algorithm for Calperum.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.728	0.713	0.723	0.602	0.488	0.430	0.494	0.398	0.627
5 days	0.714	0.691	0.707	0.596	0.486	0.434	0.492	0.396	0.597
10 days	0.712	0.689	0.705	0.591	0.483	0.429	0.489	0.395	0.603
20 days	0.710	0.687	0.703	0.588	0.478	0.398	0.484	0.393	0.587
30 days	0.708	0.687	0.701	0.619	0.502	0.391	0.508	0.408	0.584
60 days	0.701	0.683	0.689	0.580	0.483	0.356	0.489	0.386	0.574
90 days	0.700	0.681	0.684	0.606	0.487	0.345	0.493	0.378	0.544
180 days	0.696	0.680	0.682	0.611	0.498	0.458	0.504	0.363	0.526
365 days	0.696	0.672	0.673	0.610	0.494	0.432	0.500	0.353	0.503

Table S12. The values of MBE for Fc gap-filling based on the window length and algorithm for Calperum.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.008	0.059	0.047	0.023	0.010	0.160	0.010	-0.073	-0.169
5 days	0.016	0.056	0.050	0.032	0.013	0.170	0.013	-0.076	-0.503
10 days	0.014	0.046	0.053	0.039	0.014	0.191	0.014	-0.079	-0.292
20 days	-0.033	0.044	0.071	0.062	0.021	0.214	0.021	-0.081	-0.342
30 days	-0.044	0.112	0.095	0.090	0.040	0.227	0.040	-0.092	-0.283
60 days	-0.027	0.206	0.201	0.264	0.090	0.082	0.091	-0.152	-0.421
90 days	-0.016	0.348	0.203	0.228	0.149	0.070	0.151	-0.220	-0.529
180 days	-0.066	0.350	0.271	0.228	0.225	0.204	0.228	-0.288	-0.482
365 days	0.185	0.120	0.246	0.273	0.142	0.177	0.144	-0.356	-0.208

Calperum (Fe):

Table S13. The values of RMSE for Fe gap-filling based on the window length and algorithm for Calperum.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	17.417	18.620	18.131	20.328	19.914	20.181	19.960	21.873	18.482
5 days	17.550	18.641	18.134	20.450	19.936	20.198	20.003	22.036	18.932
10 days	17.750	18.653	18.298	20.631	19.970	20.241	20.031	22.249	19.285
20 days	18.081	18.735	18.393	20.842	20.198	20.491	20.258	22.767	19.973
30 days	18.104	18.846	18.521	20.891	20.492	20.781	20.520	23.787	20.339
60 days	18.451	19.076	18.849	21.694	23.213	24.197	23.237	28.180	21.892
90 days	18.667	19.424	19.110	22.240	23.492	25.636	23.494	30.338	22.699
180 days	18.987	20.132	19.968	24.100	24.806	24.683	24.847	35.633	23.983
365 days	20.787	21.103	21.171	25.984	25.633	25.480	25.463	43.315	25.260

Table S14. The values of R-squared for Fe gap-filling based on the window length and algorithm for Calperum.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.690	0.634	0.655	0.572	0.598	0.585	0.596	0.571	0.629
5 days	0.685	0.632	0.655	0.565	0.597	0.584	0.593	0.565	0.620
10 days	0.692	0.648	0.664	0.571	0.612	0.597	0.608	0.574	0.633
20 days	0.661	0.625	0.639	0.546	0.592	0.577	0.589	0.548	0.610
30 days	0.637	0.598	0.616	0.532	0.571	0.557	0.570	0.508	0.579
60 days	0.625	0.591	0.607	0.528	0.559	0.528	0.558	0.491	0.567
90 days	0.623	0.589	0.607	0.528	0.550	0.529	0.550	0.442	0.564
180 days	0.615	0.585	0.602	0.501	0.537	0.529	0.535	0.441	0.556
365 days	0.613	0.580	0.598	0.518	0.553	0.546	0.546	0.440	0.547

Table S15. The values of MBE for Fe gap-filling based on the window length and algorithm for Calperum.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	1.744	0.431	-0.112	-3.323	-0.336	0.456	-0.290	0.100	1.008
5 days	1.878	0.665	-0.086	-3.332	-0.306	0.475	-0.267	0.148	1.985
10 days	1.522	0.518	0.117	-3.300	-0.298	0.479	-0.277	0.126	2.743
20 days	1.256	0.638	0.052	-3.179	-0.303	0.479	-0.338	-0.029	2.424
30 days	1.801	0.210	0.488	-3.057	-0.284	0.399	-0.348	0.451	1.712
60 days	0.996	0.472	0.101	-2.809	-0.595	0.110	-0.537	0.508	0.536
90 days	0.792	-1.290	-0.947	-4.709	-1.526	-0.736	-1.507	-1.470	1.607
180 days	0.438	-3.205	-2.975	-7.613	-4.750	-3.986	-4.792	7.012	-2.277
365 days	-4.544	-6.070	-5.403	-11.686	-6.640	-6.740	-6.751	29.120	-6.374

Calperum (Fh):

Table S16. The values of RMSE for Fh gap-filling based on the window length and algorithm for Calperum.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	30.620	31.592	31.336	39.731	31.704	31.631	31.653	72.643	32.685
5 days	30.625	31.818	31.425	40.240	31.848	31.769	31.822	72.892	32.798
10 days	30.644	31.888	31.583	41.146	32.669	32.656	31.843	73.269	32.878
20 days	30.906	32.061	31.726	41.201	32.782	32.691	32.707	73.454	32.922
30 days	31.254	32.466	31.918	41.464	32.976	32.844	32.907	74.066	33.281
60 days	31.535	32.957	32.295	41.750	33.232	33.048	33.119	74.800	33.978
90 days	31.773	33.131	32.434	49.858	33.405	33.229	33.273	76.247	34.728
180 days	32.258	33.664	33.092	51.105	33.804	33.629	34.251	82.658	34.628
365 days	34.625	36.130	35.020	51.630	37.219	37.336	37.336	83.959	37.053

Table S17. The values of R-squared for Fh gap-filling based on the window length and algorithm for Calperum.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.958	0.955	0.956	0.932	0.955	0.955	0.955	0.742	0.951
5 days	0.958	0.954	0.955	0.932	0.955	0.955	0.955	0.740	0.951
10 days	0.958	0.954	0.955	0.927	0.953	0.953	0.955	0.738	0.951
20 days	0.957	0.953	0.954	0.926	0.952	0.952	0.953	0.735	0.951
30 days	0.957	0.952	0.954	0.926	0.952	0.952	0.952	0.733	0.942
60 days	0.956	0.951	0.954	0.926	0.951	0.952	0.951	0.731	0.940
90 days	0.956	0.951	0.954	0.910	0.951	0.951	0.951	0.723	0.939
180 days	0.956	0.951	0.953	0.899	0.951	0.951	0.951	0.680	0.938
365 days	0.954	0.951	0.953	0.893	0.951	0.951	0.949	0.660	0.935

Table S18. The values of MBE for Fh gap-filling based on the window length and algorithm for Calperum.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	-0.104	1.068	-0.487	-11.384	0.771	0.191	0.740	-0.440	0.609
5 days	-0.094	1.207	-0.556	-11.399	0.737	0.114	0.531	-0.397	1.127
10 days	-0.203	-0.259	-0.633	-11.603	0.737	0.030	0.433	-0.356	1.860
20 days	-0.134	0.152	-0.698	-11.524	0.686	-0.044	0.168	-0.312	0.840
30 days	-0.471	-1.336	-1.433	-16.070	0.155	0.048	0.124	-0.270	0.657
60 days	-1.629	-2.445	-1.463	-16.649	0.026	-0.069	-0.115	-0.227	1.041
90 days	-0.710	-0.162	-0.157	-12.363	0.823	0.100	0.461	0.942	0.924
180 days	1.346	-0.219	1.597	-9.392	3.652	3.290	3.805	-3.912	1.947
365 days	3.726	8.354	4.035	-7.585	3.817	4.001	4.000	-4.481	2.431

Gingin (Fc):

Table S19. The values of RMSE for Fc gap-filling based on the window length and algorithm for Gingin.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	2.864	2.869	2.902	3.110	2.971	3.208	2.964	3.184	2.925
5 days	2.930	2.886	2.925	3.256	2.983	3.351	2.977	3.211	3.037
10 days	2.973	2.895	2.927	3.242	3.038	3.327	3.031	3.185	3.048
20 days	3.011	2.953	3.003	3.175	3.041	3.219	3.035	3.136	3.060
30 days	3.034	2.968	3.007	3.273	3.054	3.453	3.047	3.155	3.066
60 days	3.052	2.975	3.021	3.225	3.070	3.459	3.063	3.219	3.105
90 days	3.087	3.016	3.061	3.332	3.097	3.578	3.091	3.896	3.110
180 days	3.116	3.072	3.117	3.396	3.150	3.684	3.144	4.679	3.125
365 days	3.155	3.127	3.174	3.460	3.204	3.791	3.198	5.301	3.140

Table S20. The values of R-squared for Fc gap-filling based on the window length and algorithm for Gingin.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.584	0.573	0.554	0.195	0.538	0.427	0.537	0.423	0.535
5 days	0.571	0.552	0.538	0.216	0.517	0.420	0.516	0.464	0.528
10 days	0.564	0.549	0.536	0.200	0.515	0.418	0.514	0.459	0.526
20 days	0.557	0.547	0.535	0.196	0.514	0.426	0.513	0.445	0.525
30 days	0.556	0.547	0.525	0.151	0.506	0.356	0.505	0.487	0.522
60 days	0.539	0.531	0.524	0.183	0.500	0.357	0.499	0.469	0.514
90 days	0.538	0.527	0.523	0.432	0.499	0.451	0.498	0.475	0.496
180 days	0.533	0.527	0.523	0.308	0.481	0.386	0.480	0.481	0.507
365 days	0.528	0.523	0.515	0.329	0.481	0.382	0.480	0.487	0.505

Table S21. The values of MBE for Fc gap-filling based on the window length and algorithm for Gingin.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	-0.726	-0.305	-0.278	-0.588	-0.233	-0.468	-0.233	0.047	-0.282
5 days	-0.911	-0.448	-0.448	-0.999	-0.395	-0.623	-0.394	0.074	-0.431
10 days	-0.923	-0.485	-0.414	-1.026	-0.419	-0.695	-0.418	0.076	-0.464
20 days	-0.959	-0.570	-0.429	-1.052	-0.463	-0.672	-0.462	0.136	-0.536
30 days	-0.954	-0.493	-0.504	-1.078	-0.509	-0.860	-0.508	0.150	-0.501
60 days	-1.026	-0.632	-0.655	-1.023	-0.614	-0.876	-0.612	0.177	-0.620
90 days	-1.042	-0.636	-0.699	-1.049	-0.659	-0.958	-0.657	0.214	-0.651
180 days	-1.072	-0.673	-0.779	-1.051	-0.722	-1.031	-0.720	0.246	-0.710
365 days	-1.102	-0.709	-0.859	-1.052	-0.785	-1.104	-0.783	0.277	-0.766

Gingin (Fe):

Table S22. The values of RMSE for Fe gap-filling based on the window length and algorithm for Gingin.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	30.364	33.485	30.679	42.945	33.466	32.792	33.538	38.010	32.500
5 days	30.365	33.486	30.680	42.945	34.098	33.719	34.152	38.010	33.155
10 days	30.366	33.487	30.681	42.946	34.730	34.646	34.765	38.011	33.730
20 days	30.367	33.489	30.681	43.177	35.734	35.948	35.751	38.412	34.879
30 days	30.817	33.679	30.962	43.602	36.827	37.347	36.825	40.174	36.047
60 days	31.606	34.237	31.581	45.555	42.127	43.107	42.138	46.702	39.379
90 days	32.406	34.799	32.207	46.020	42.157	43.118	42.156	48.145	41.743
180 days	33.215	35.366	32.839	46.488	42.186	43.130	42.174	49.589	42.298
365 days	34.034	35.937	33.477	46.957	42.216	43.141	42.192	51.033	44.395

Table S23. The values of R-squared for Fe gap-filling based on the window length and algorithm for Gingin.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.809	0.758	0.801	0.683	0.725	0.690	0.723	0.650	0.750
5 days	0.801	0.753	0.795	0.675	0.724	0.687	0.722	0.644	0.744
10 days	0.818	0.766	0.813	0.706	0.741	0.704	0.741	0.693	0.725
20 days	0.791	0.732	0.784	0.676	0.698	0.660	0.699	0.662	0.689
30 days	0.765	0.707	0.759	0.658	0.674	0.638	0.674	0.614	0.668
60 days	0.738	0.691	0.724	0.602	0.614	0.630	0.611	0.593	0.639
90 days	0.735	0.689	0.724	0.602	0.607	0.611	0.602	0.534	0.629
180 days	0.725	0.684	0.718	0.571	0.604	0.611	0.598	0.532	0.624
365 days	0.674	0.678	0.713	0.590	0.590	0.610	0.585	0.531	0.607

Table S24. The values of MBE for Fe gap-filling based on the window length and algorithm for Gingin.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	-6.587	-5.518	-10.045	-25.988	-14.005	-9.366	-13.858	2.087	-8.070
5 days	-7.094	-8.517	-7.687	-26.059	-12.774	-9.761	-12.765	3.100	-6.911
10 days	-5.748	-6.635	-7.967	-25.810	-12.445	-9.841	-13.258	2.630	-6.219
20 days	-4.744	-8.176	-3.575	-24.862	-12.621	-9.830	-16.153	-0.607	-6.661
30 days	-6.773	-8.375	-7.445	-25.880	-12.580	-8.419	-12.572	5.862	-6.225
60 days	-8.280	-10.041	-9.308	-29.156	-14.716	-11.613	-13.779	2.064	-8.440
90 days	-6.587	-11.551	-9.400	-29.593	-16.236	-13.225	-14.381	-0.530	-9.887
180 days	-5.453	-11.761	-9.981	-30.134	-16.585	-15.692	-16.545	14.579	-7.193
365 days	-6.354	-13.703	-11.630	-35.110	-19.324	-18.283	-19.277	16.987	-8.381

Gingin (Fh):

Table S25. The values of RMSE for Fh gap-filling based on the window length and algorithm for Gingin.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	33.565	35.410	32.617	32.424	46.345	46.335	46.339	77.788	38.077
5 days	33.605	35.700	32.742	32.873	46.555	46.536	46.588	78.054	39.197
10 days	33.660	35.815	32.941	33.647	47.755	47.836	46.617	78.457	40.789
20 days	33.982	36.045	33.124	33.726	47.921	47.888	47.883	78.656	41.706
30 days	34.261	36.390	33.223	33.838	48.204	48.111	48.175	79.312	43.282
60 days	34.395	36.755	33.446	33.901	48.578	48.410	48.486	80.097	44.749
90 days	34.585	36.876	33.523	40.404	48.830	48.675	48.711	81.646	45.563
180 days	34.941	37.284	34.035	41.211	49.414	49.261	50.142	88.511	46.380
365 days	37.731	40.258	36.236	41.886	54.406	54.692	54.659	89.905	51.577

Table S26. The values of R-squared for Fh gap-filling based on the window length and algorithm for Gingin.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.939	0.931	0.941	0.944	0.899	0.897	0.898	0.717	0.923
5 days	0.939	0.930	0.941	0.944	0.898	0.897	0.898	0.715	0.920
10 days	0.939	0.930	0.941	0.938	0.897	0.895	0.898	0.714	0.916
20 days	0.938	0.929	0.940	0.938	0.896	0.894	0.896	0.711	0.913
30 days	0.938	0.928	0.940	0.938	0.895	0.894	0.895	0.709	0.909
60 days	0.937	0.927	0.940	0.937	0.895	0.894	0.895	0.707	0.906
90 days	0.937	0.927	0.939	0.921	0.895	0.894	0.895	0.699	0.904
180 days	0.937	0.927	0.938	0.910	0.895	0.894	0.895	0.657	0.903
365 days	0.935	0.914	0.938	0.904	0.895	0.894	0.893	0.638	0.898

Table S27. The values of MBE for Fh gap-filling based on the window length and algorithm for Gingin.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.221	-1.864	0.557	-2.210	1.204	1.075	1.189	-0.489	-0.788
5 days	0.201	-2.108	0.636	-2.213	1.145	1.101	1.131	-0.442	-0.605
10 days	0.432	0.451	0.724	-2.252	1.135	0.837	1.121	-0.396	0.473
20 days	0.285	-0.266	0.799	-2.237	1.329	1.240	1.817	-0.347	0.240
30 days	1.003	2.332	1.640	-3.119	5.070	3.528	4.365	-0.300	2.217
60 days	3.466	4.268	1.673	-3.232	6.020	4.617	5.698	-0.252	3.216
90 days	1.511	0.283	0.179	-2.400	4.265	1.973	4.200	1.047	1.193
180 days	-2.863	0.383	-1.827	-3.646	6.598	6.504	6.653	-4.348	0.241
365 days	-3.964	-6.427	-4.616	-5.889	7.401	7.627	7.605	-4.980	-3.077

Howard Springs (Fc):

Table S28. The values of RMSE for Fc gap-filling based on the window length and algorithm for Howard Springs.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	3.746	3.866	3.791	4.628	4.950	4.922	4.900	4.612	4.527
5 days	3.780	3.988	3.810	4.643	4.963	4.928	4.913	4.621	4.514
10 days	3.784	4.008	3.827	4.597	4.914	4.872	4.864	4.570	4.521
20 days	3.807	4.138	3.844	4.506	4.804	4.754	4.756	4.473	4.546
30 days	3.820	4.144	3.870	4.510	4.816	4.759	4.767	4.473	4.591
60 days	3.842	4.153	3.881	4.390	4.890	4.843	4.840	4.530	4.722
90 days	3.918	4.167	3.900	4.266	4.964	4.927	4.914	4.587	4.804
180 days	3.960	4.300	3.985	4.786	5.070	4.970	5.019	4.689	4.843
365 days	4.027	4.390	4.054	4.846	5.105	4.996	5.054	4.750	4.861

Table S29. The values of R-squared for Fc gap-filling based on the window length and algorithm for Howard Springs.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.790	0.769	0.785	0.651	0.573	0.572	0.568	0.643	0.654
5 days	0.786	0.759	0.781	0.649	0.571	0.571	0.565	0.642	0.646
10 days	0.767	0.716	0.754	0.648	0.569	0.570	0.563	0.640	0.643
20 days	0.762	0.711	0.751	0.644	0.567	0.569	0.561	0.639	0.642
30 days	0.757	0.710	0.748	0.677	0.594	0.597	0.588	0.670	0.639
60 days	0.752	0.709	0.745	0.664	0.593	0.563	0.587	0.648	0.637
90 days	0.744	0.700	0.745	0.705	0.627	0.632	0.621	0.649	0.637
180 days	0.743	0.682	0.737	0.632	0.715	0.562	0.708	0.632	0.629
365 days	0.739	0.666	0.734	0.632	0.557	0.569	0.552	0.634	0.616

Table S30. The values of MBE for Fc gap-filling based on the window length and algorithm for Howard Springs.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.398	0.467	0.548	0.898	1.079	0.858	1.068	0.239	0.603
5 days	0.424	0.481	0.548	0.915	1.090	0.857	1.079	0.260	0.570
10 days	0.449	0.495	0.548	0.931	1.100	0.856	1.089	0.259	0.578
20 days	0.475	0.509	0.549	0.947	1.111	0.855	1.099	0.346	0.603
30 days	0.519	0.514	0.570	0.947	1.121	0.855	1.110	0.302	0.602
60 days	0.509	0.585	0.464	0.558	0.585	0.855	0.579	-0.193	0.409
90 days	0.249	0.791	0.290	0.197	0.718	0.658	0.710	-0.012	0.521
180 days	0.521	0.451	0.527	1.026	-0.201	0.864	-0.199	0.442	0.336
365 days	0.474	0.101	0.516	1.048	1.150	0.805	1.138	0.486	0.464

Howard Springs (Fe):

Table S31. The values of RMSE for Fe gap-filling based on the window length and algorithm for Howard Springs.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	52.654	57.731	54.860	75.561	66.223	67.260	65.547	67.941	58.003
5 days	53.038	58.988	54.945	76.281	66.525	67.307	65.760	68.188	60.412
10 days	53.421	59.377	55.082	77.001	66.828	67.340	65.973	68.436	61.937
20 days	53.574	59.771	55.546	78.082	67.679	68.120	66.688	69.406	64.087
30 days	54.186	60.600	55.859	79.399	68.840	69.020	67.798	70.908	66.353
60 days	55.186	61.525	56.752	83.634	78.386	77.780	76.876	79.305	72.488
90 days	56.187	62.323	57.472	83.715	78.402	78.289	77.085	80.017	74.799
180 days	56.911	63.121	58.332	87.522	78.486	78.517	77.129	79.883	76.032
365 days	58.563	63.858	59.197	86.747	79.464	78.711	77.877	81.017	79.364

Table S32. The values of R-squared for Fe gap-filling based on the window length and algorithm for Howard Springs.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.921	0.886	0.903	0.824	0.839	0.831	0.843	0.803	0.848
5 days	0.918	0.876	0.902	0.823	0.836	0.829	0.840	0.803	0.842
10 days	0.939	0.898	0.926	0.845	0.857	0.849	0.861	0.824	0.864
20 days	0.907	0.864	0.893	0.817	0.827	0.820	0.831	0.798	0.837
30 days	0.875	0.832	0.861	0.791	0.799	0.792	0.803	0.772	0.807
60 days	0.864	0.813	0.851	0.783	0.787	0.785	0.792	0.765	0.799
90 days	0.860	0.808	0.848	0.780	0.786	0.781	0.792	0.764	0.796
180 days	0.860	0.800	0.844	0.776	0.786	0.779	0.791	0.765	0.793
365 days	0.855	0.796	0.841	0.776	0.781	0.778	0.787	0.762	0.792

Table S33. The values of MBE for Fe gap-filling based on the window length and algorithm for Howard Springs.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	-6.347	-0.325	-3.820	-39.963	-12.073	-11.535	-10.638	-1.743	-3.314
5 days	-6.592	-2.293	-4.454	-40.918	-12.307	-11.567	-10.827	-1.761	-4.576
10 days	-6.837	-4.260	-5.088	-41.873	-12.541	-11.599	-11.015	-1.779	-5.560
20 days	-6.907	-5.087	-5.851	-43.001	-12.702	-11.582	-11.125	-1.796	-6.085
30 days	-7.523	-9.262	-6.200	-43.470	-12.987	-11.666	-11.384	-2.027	-7.973
60 days	-7.704	-11.452	-6.912	-44.847	-13.509	-11.832	-11.836	-1.549	-9.023
90 days	-7.664	-10.916	-7.726	-45.727	-13.309	-11.632	-11.604	-1.779	-8.968
180 days	-8.426	-7.856	-7.972	-49.099	-14.242	-11.899	-12.330	-2.009	-7.984
365 days	-7.299	-12.825	-7.610	-48.143	-14.205	-11.330	-12.081	-9.246	-11.371

Howard Springs (Fh):

Table S34. The values of RMSE for Fh gap-filling based on the window length and algorithm for Howard Springs.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	39.828	47.445	39.941	50.341	51.798	51.964	52.199	78.955	48.506
5 days	39.835	47.784	40.054	50.408	52.033	52.190	52.478	79.226	49.155
10 days	39.860	47.890	40.255	50.524	53.374	53.648	52.512	79.635	50.175
20 days	40.200	48.149	40.438	50.566	53.560	53.706	53.938	79.836	50.726
30 days	40.654	48.757	40.683	54.952	53.877	53.956	54.267	80.502	51.744
60 days	41.613	49.474	42.402	55.383	54.660	55.615	54.462	81.299	52.987
90 days	42.105	50.442	42.965	56.929	54.944	55.919	54.715	82.872	53.727
180 days	44.570	51.842	45.755	62.732	55.601	56.592	56.322	89.840	54.684
365 days	49.116	54.655	49.698	63.650	57.912	58.280	57.149	91.254	57.273

Table S35. The values of R-squared for Fh gap-filling based on the window length and algorithm for Howard Springs.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.864	0.827	0.863	0.762	0.772	0.768	0.777	0.639	0.812
5 days	0.864	0.826	0.863	0.763	0.772	0.768	0.776	0.637	0.808
10 days	0.864	0.825	0.862	0.782	0.770	0.766	0.776	0.636	0.802
20 days	0.863	0.825	0.862	0.791	0.769	0.766	0.775	0.634	0.801
30 days	0.863	0.824	0.862	0.791	0.769	0.765	0.774	0.632	0.800
60 days	0.862	0.822	0.847	0.792	0.792	0.777	0.786	0.630	0.800
90 days	0.862	0.822	0.846	0.792	0.792	0.777	0.786	0.623	0.799
180 days	0.860	0.822	0.846	0.801	0.791	0.777	0.785	0.586	0.796
365 days	0.843	0.800	0.829	0.801	0.782	0.768	0.776	0.568	0.786

Table S36. The values of MBE for Fh gap-filling based on the window length and algorithm for Howard Springs.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	3.266	9.739	5.170	-13.105	13.920	13.484	12.973	-0.051	9.663
5 days	3.377	10.016	5.401	-13.123	13.246	13.804	12.345	-0.046	7.771
10 days	6.081	12.519	6.354	-13.358	13.127	13.494	12.235	-0.042	8.967
20 days	5.657	8.999	11.974	-13.266	12.211	12.286	11.531	-0.036	8.441
30 days	12.195	15.770	13.816	-16.648	8.974	8.878	9.145	-0.032	10.956
60 days	13.448	15.875	13.852	-17.129	18.146	17.266	16.349	-0.026	12.806
90 days	5.862	1.053	13.920	-18.577	18.965	17.843	16.973	0.110	6.903
180 days	11.109	1.424	14.145	-19.906	19.269	18.128	17.414	-0.457	7.049
365 days	17.149	21.419	14.222	-22.889	20.969	18.971	17.814	-0.523	15.617

Tumbarumba (Fc):

Table S37. The values of RMSE for Fc gap-filling based on the window length and algorithm for Tumbarumba.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	7.209	7.200	7.349	7.319	7.507	7.538	7.414	7.583	7.584
5 days	7.217	7.218	7.383	7.389	7.607	7.583	7.513	7.585	7.623
10 days	7.254	7.306	7.460	7.469	7.616	7.647	7.522	7.684	7.631
20 days	7.360	7.379	7.532	7.538	7.738	7.771	7.642	7.776	7.664
30 days	7.422	7.381	7.556	7.550	7.812	7.785	7.715	7.795	7.683
60 days	7.437	7.500	7.604	7.575	7.845	7.868	7.748	7.863	7.733
90 days	7.527	7.554	7.616	7.610	7.895	7.871	7.797	7.863	7.792
180 days	7.546	7.556	7.672	7.635	7.924	7.894	7.826	7.883	7.834
365 days	7.650	7.596	7.820	7.752	8.045	8.007	7.946	7.990	7.860

Table S38. The values of R-squared for Fc gap-filling based on the window length and algorithm for Tumbarumba.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.592	0.593	0.582	0.565	0.532	0.531	0.525	0.519	0.553
5 days	0.572	0.572	0.559	0.540	0.528	0.526	0.522	0.498	0.546
10 days	0.566	0.568	0.556	0.536	0.509	0.501	0.503	0.498	0.545
20 days	0.566	0.568	0.556	0.535	0.506	0.500	0.500	0.496	0.542
30 days	0.566	0.568	0.555	0.534	0.504	0.500	0.498	0.495	0.536
60 days	0.565	0.567	0.554	0.531	0.503	0.500	0.496	0.495	0.528
90 days	0.565	0.567	0.553	0.522	0.502	0.500	0.496	0.493	0.520
180 days	0.565	0.567	0.553	0.520	0.502	0.499	0.496	0.492	0.518
365 days	0.564	0.566	0.552	0.507	0.502	0.487	0.495	0.491	0.517

Table S39. The values of MBE for Fc gap-filling based on the window length and algorithm for Tumbarumba.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	-1.479	-1.897	-1.875	-1.543	-2.133	-1.963	-2.106	-0.355	-1.939
5 days	-1.522	-1.900	-1.870	-1.588	-2.208	-2.014	-2.181	-0.452	-1.671
10 days	-1.551	-1.701	-1.890	-1.533	-2.076	-1.926	-2.050	-0.307	-1.538
20 days	-1.634	-1.670	-1.970	-1.709	-2.244	-1.974	-2.216	-0.399	-1.592
30 days	-1.637	-1.708	-1.880	-1.624	-2.227	-2.027	-2.199	-0.502	-1.607
60 days	-1.627	-1.745	-1.992	-1.265	-1.903	-1.981	-1.880	-0.597	-1.599
90 days	-1.727	-1.554	-1.940	-1.698	-2.266	-2.058	-2.238	-0.619	-1.586
180 days	-1.766	-1.865	-1.982	-1.719	-2.321	-2.097	-2.292	-0.803	-1.769
365 days	-1.846	-1.587	-2.090	-1.755	-2.426	-2.167	-2.396	-0.861	-1.708

Tumbarumba (Fe):

Table S40. The values of RMSE for Fe gap-filling based on the window length and algorithm for Tumbarumba.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	55.447	56.807	55.998	59.444	60.932	61.920	60.933	68.632	56.755
5 days	55.474	56.834	56.011	59.504	60.947	61.945	60.948	69.620	58.150
10 days	55.519	57.009	56.303	59.561	60.951	62.021	60.953	70.609	58.796
20 days	55.533	57.098	56.310	59.902	61.634	62.698	61.624	71.391	60.264
30 days	55.546	57.210	56.316	60.294	62.421	63.518	62.407	72.323	61.400
60 days	56.404	58.296	57.548	62.786	70.345	71.599	70.324	81.520	66.070
90 days	57.044	58.394	58.218	63.228	70.371	71.643	70.343	81.564	67.878
180 days	58.257	59.978	58.896	64.147	71.789	73.147	71.791	81.609	69.763
365 days	59.396	61.439	59.957	64.918	72.706	74.163	72.710	83.336	71.221

Table S41. The values of R-squared for Fe gap-filling based on the window length and algorithm for Tumbarumba.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.808	0.794	0.798	0.785	0.770	0.759	0.769	0.655	0.761
5 days	0.806	0.790	0.797	0.784	0.768	0.756	0.767	0.655	0.757
10 days	0.827	0.809	0.819	0.804	0.788	0.775	0.787	0.672	0.756
20 days	0.799	0.781	0.793	0.779	0.761	0.751	0.761	0.651	0.754
30 days	0.773	0.750	0.761	0.754	0.736	0.726	0.736	0.630	0.746
60 days	0.764	0.741	0.751	0.746	0.728	0.719	0.728	0.624	0.729
90 days	0.764	0.740	0.750	0.746	0.728	0.719	0.728	0.623	0.727
180 days	0.742	0.726	0.722	0.685	0.687	0.678	0.687	0.633	0.696
365 days	0.718	0.721	0.719	0.682	0.686	0.675	0.686	0.630	0.692

Table S42. The values of MBE for Fe gap-filling based on the window length and algorithm for Tumbarumba.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	3.493	0.369	2.957	-8.902	5.529	6.394	5.539	3.914	1.888
5 days	3.627	2.601	3.448	-9.114	5.636	6.412	5.637	3.954	3.628
10 days	3.762	4.833	3.938	-9.327	5.744	6.429	5.736	3.994	4.672
20 days	-3.536	5.983	3.383	-9.537	-0.802	6.661	-0.804	4.034	3.761
30 days	3.746	3.910	3.943	-9.299	5.029	6.545	5.189	4.551	4.262
60 days	-7.047	-2.659	-0.777	-13.104	-5.637	2.195	-5.643	3.478	-1.671
90 days	-7.011	-2.534	-0.868	-13.361	-5.554	2.158	-5.532	3.995	-1.519
180 days	-5.078	3.799	3.885	-9.289	-0.626	5.153	-0.639	4.512	3.088
365 days	-4.399	6.203	3.709	-9.108	-0.624	4.907	-0.626	20.763	7.230

Tumbarumba (Fh):

Table S43. The values of RMSE for Fh gap-filling based on the window length and algorithm for Tumbarumba.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	48.860	49.759	49.268	50.432	52.421	51.801	51.644	59.292	51.262
5 days	48.872	49.934	49.276	50.461	53.024	52.406	52.199	59.297	51.397
10 days	48.883	50.117	49.284	50.489	53.902	54.202	53.032	59.303	52.491
20 days	48.894	50.263	49.292	50.518	53.907	54.223	53.042	59.308	53.616
30 days	49.104	50.369	49.324	50.752	53.912	54.245	53.052	59.527	54.057
60 days	49.385	50.742	49.501	50.989	53.917	54.266	53.062	62.298	54.671
90 days	49.635	51.151	49.938	51.405	54.116	54.400	53.237	64.310	55.249
180 days	49.939	52.038	50.463	51.575	56.634	57.766	56.632	70.048	56.730
365 days	51.716	53.256	51.516	52.563	57.787	58.882	57.780	73.520	57.221

Table S44. The values of R-squared for Fh gap-filling based on the window length and algorithm for Tumbarumba.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	0.866	0.857	0.864	0.856	0.848	0.842	0.846	0.768	0.854
5 days	0.866	0.856	0.863	0.856	0.847	0.842	0.846	0.766	0.853
10 days	0.865	0.856	0.863	0.856	0.846	0.840	0.846	0.764	0.850
20 days	0.865	0.856	0.863	0.835	0.845	0.839	0.844	0.761	0.850
30 days	0.865	0.855	0.862	0.834	0.845	0.839	0.843	0.759	0.841
60 days	0.850	0.847	0.849	0.820	0.807	0.808	0.804	0.757	0.820
90 days	0.843	0.828	0.832	0.820	0.807	0.808	0.804	0.748	0.813
180 days	0.833	0.814	0.821	0.779	0.730	0.714	0.730	0.703	0.753
365 days	0.820	0.796	0.807	0.778	0.729	0.712	0.729	0.683	0.746

Table S45. The values of MBE for Fh gap-filling based on the window length and algorithm for Tumbarumba.

Gap length	XGB	ANN	RF	SVR	CLR	ELN	PD	FBP	MDS
1 day	-7.218	-7.799	-7.696	-11.127	-11.498	-11.215	-11.096	-0.392	-8.504
5 days	-6.918	-8.969	-8.785	-11.142	-10.989	-10.525	-10.855	-0.354	-7.640
10 days	-8.191	-7.559	-10.002	-11.341	-10.995	-10.359	-10.998	-0.318	-7.292
20 days	-7.807	-7.517	-9.675	-11.700	-6.516	-6.376	-6.492	-0.278	-6.325
30 days	-6.256	-7.549	-8.583	-15.721	-6.474	-5.790	-6.437	-0.241	-6.108
60 days	-3.022	-7.572	-6.509	-4.947	-6.365	-2.832	-6.334	-0.202	-5.682
90 days	-15.865	-16.265	-15.355	-21.056	-16.874	-15.742	-16.012	0.839	-12.852
180 days	-15.999	-17.524	-15.499	-21.133	-16.999	-15.887	-16.130	-3.487	-14.272
365 days	-3.890	-9.660	-7.563	-5.312	-7.577	-3.482	-7.542	-3.994	-7.729