

# Fachgruppe Meteorastronomie

Fachgruppe Meteorastronomie (FMA)  
www.meteorastronomie.ch

## Sonnen-Länge $\lambda \uparrow$ 2018 (J2000)

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01.01.2018	280.264	280.348	280.433	280.518	280.603	280.688	280.773	280.858	280.943	281.028	281.112	281.197
02.01.2018	281.282	281.367	281.452	281.537	281.622	281.707	281.792	281.877	281.961	282.046	282.131	282.216
03.01.2018	282.301	282.386	282.471	282.556	282.641	282.726	282.810	282.895	282.980	283.065	283.150	283.235
04.01.2018	283.320	283.405	283.490	283.575	283.659	283.744	283.829	283.914	283.999	284.084	284.169	284.254
05.01.2018	284.339	284.424	284.508	284.593	284.678	284.763	284.848	284.933	285.018	285.103	285.188	285.273
06.01.2018	285.358	285.442	285.527	285.612	285.697	285.782	285.867	285.952	286.037	286.122	286.207	286.291
07.01.2018	286.376	286.461	286.546	286.631	286.716	286.801	286.886	286.971	287.056	287.141	287.225	287.310
08.01.2018	287.395	287.480	287.565	287.650	287.735	287.820	287.905	287.990	288.075	288.160	288.244	288.329
09.01.2018	288.414	288.499	288.584	288.669	288.754	288.839	288.924	289.009	289.094	289.179	289.263	289.348
10.01.2018	289.433	289.518	289.603	289.688	289.773	289.858	289.943	290.028	290.113	290.197	290.282	290.367
11.01.2018	290.452	290.537	290.622	290.707	290.792	290.877	290.962	291.047	291.132	291.216	291.301	291.386
12.01.2018	291.471	291.556	291.641	291.726	291.811	291.896	291.981	292.066	292.151	292.235	292.320	292.405
13.01.2018	292.490	292.575	292.660	292.745	292.830	292.915	293.000	293.085	293.169	293.254	293.339	293.424
14.01.2018	293.509	293.594	293.679	293.764	293.849	293.934	294.019	294.103	294.188	294.273	294.358	294.443
15.01.2018	294.528	294.613	294.698	294.783	294.868	294.953	295.037	295.122	295.207	295.292	295.377	295.462
16.01.2018	295.547	295.632	295.717	295.801	295.886	295.971	296.056	296.141	296.226	296.311	296.396	296.481
17.01.2018	296.565	296.650	296.735	296.820	296.905	296.990	297.075	297.160	297.244	297.329	297.414	297.499
18.01.2018	297.584	297.669	297.754	297.839	297.923	298.008	298.093	298.178	298.263	298.348	298.433	298.517
19.01.2018	298.602	298.687	298.772	298.857	298.942	299.027	299.111	299.196	299.281	299.366	299.451	299.536
20.01.2018	299.621	299.705	299.790	299.875	299.960	300.045	300.130	300.214	300.299	300.384	300.469	300.554
21.01.2018	300.638	300.723	300.808	300.893	300.978	301.063	301.147	301.232	301.317	301.402	301.487	301.571
22.01.2018	301.656	301.741	301.826	301.911	301.995	302.080	302.165	302.250	302.334	302.419	302.504	302.589
23.01.2018	302.674	302.758	302.843	302.928	303.013	303.097	303.182	303.267	303.352	303.436	303.521	303.606
24.01.2018	303.691	303.776	303.860	303.945	304.030	304.114	304.199	304.284	304.369	304.453	304.538	304.623
25.01.2018	304.708	304.792	304.877	304.962	305.047	305.131	305.216	305.301	305.385	305.470	305.555	305.639
26.01.2018	305.724	305.809	305.894	305.978	306.063	306.148	306.232	306.317	306.402	306.486	306.571	306.656
27.01.2018	306.740	306.825	306.910	306.994	307.079	307.164	307.248	307.333	307.418	307.502	307.587	307.672
28.01.2018	307.756	307.841	307.926	308.010	308.095	308.180	308.264	308.349	308.434	308.518	308.603	308.687
29.01.2018	308.772	308.857	308.941	309.026	309.111	309.195	309.280	309.364	309.449	309.534	309.618	309.703
30.01.2018	309.787	309.872	309.957	310.041	310.126	310.210	310.295	310.380	310.464	310.549	310.633	310.718
31.01.2018	310.802	310.887	310.972	311.056	311.141	311.225	311.310	311.394	311.479	311.564	311.648	311.733
01.02.2018	311.817	311.902	311.986	312.071	312.155	312.240	312.325	312.409	312.494	312.578	312.663	312.747
02.02.2018	312.832	312.916	313.001	313.085	313.170	313.254	313.339	313.423	313.508	313.592	313.677	313.761
03.02.2018	313.846	313.930	314.015	314.099	314.184	314.268	314.353	314.437	314.522	314.606	314.691	314.775
04.02.2018	314.860	314.944	315.029	315.113	315.198	315.282	315.367	315.451	315.536	315.620	315.705	315.789
05.02.2018	315.874	315.958	316.043	316.127	316.211	316.296	316.380	316.465	316.549	316.634	316.718	316.803
06.02.2018	316.887	316.971	317.056	317.140	317.225	317.309	317.394	317.478	317.563	317.647	317.731	317.816
07.02.2018	317.900	317.985	318.069	318.153	318.238	318.322	318.407	318.491	318.576	318.660	318.744	318.829
08.02.2018	318.913	318.998	319.082	319.166	319.251	319.335	319.420	319.504	319.588	319.673	319.757	319.841
09.02.2018	319.926	320.010	320.095	320.179	320.263	320.348	320.432	320.516	320.601	320.685	320.769	320.854
10.02.2018	320.938	321.023	321.107	321.191	321.276	321.360	321.444	321.529	321.613	321.697	321.782	321.866
11.02.2018	321.950	322.035	322.119	322.203	322.288	322.372	322.456	322.541	322.625	322.709	322.793	322.878
12.02.2018	322.962	323.046	323.131	323.215	323.299	323.384	323.468	323.552	323.636	323.721	323.805	323.889
13.02.2018	323.974	324.058	324.142	324.226	324.311	324.395	324.479	324.563	324.648	324.732	324.816	324.900
14.02.2018	324.985	325.069	325.153	325.237	325.322	325.406	325.490	325.574	325.659	325.743	325.827	325.911
15.02.2018	325.995	326.080	326.164	326.248	326.332	326.416	326.501	326.585	326.669	326.753	326.837	326.922
16.02.2018	327.006	327.090	327.174	327.258	327.343	327.427	327.511	327.595	327.679	327.763	327.847	327.932
17.02.2018	328.016	328.100	328.184	328.268	328.352	328.436	328.521	328.605	328.689	328.773	328.857	328.941
18.02.2018	329.025	329.109	329.193	329.278	329.362	329.446	329.530	329.614	329.698	329.782	329.866	329.950
19.02.2018	330.034	330.118	330.202	330.286	330.371	330.455	330.539	330.623	330.707	330.791	330.875	330.959
20.02.2018	331.043	331.127	331.211	331.295	331.379	331.463	331.547	331.631	331.715	331.799	331.883	331.967
21.02.2018	332.051	332.135	332.219	332.303	332.387	332.471	332.555	332.639	332.723	332.807	332.891	332.975
22.02.2018	333.058	333.142	333.226	333.310	333.394	333.478	333.562	333.646	333.730	333.814	333.898	333.982
23.02.2018	334.065	334.149	334.233	334.317	334.401	334.485	334.569	334.653	334.737	334.820	334.904	334.988
24.02.2018	335.072	335.156	335.240	335.323	335.407	335.491	335.575	335.659	335.743	335.826	335.910	335.994
25.02.2018	336.078	336.162	336.245	336.329	336.413	336.497	336.581	336.664	336.748	336.832	336.916	337.000
26.02.2018	337.083	337.167	337.251	337.335	337.418	337.502	337.586	337.670	337.753	337.837	337.921	338.004
27.02.2018	338.088	338.172	338.256	338.339	338.423	338.507	338.590	338.674	338.758	338.841	338.925	339.009
28.02.2018	339.092	339.176	339.260	339.343	339.427	339.511	339.594	339.678	339.762	339.845	339.929	340.013
01.03.2018	340.096	340.180	340.264	340.347	340.431	340.514	340.598	340.682	340.765	340.849	340.932	341.016

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02.03.2018	341.100	341.183	341.267	341.350	341.434	341.518	341.601	341.685	341.768	341.852	341.935	342.019
03.03.2018	342.102	342.186	342.270	342.353	342.437	342.520	342.604	342.687	342.771	342.854	342.938	343.021
04.03.2018	343.105	343.188	343.272	343.355	343.439	343.522	343.606	343.689	343.773	343.856	343.940	344.023
05.03.2018	344.107	344.190	344.274	344.357	344.440	344.524	344.607	344.691	344.774	344.858	344.941	345.025
06.03.2018	345.108	345.191	345.275	345.358	345.442	345.525	345.609	345.692	345.775	345.859	345.942	346.026
07.03.2018	346.109	346.192	346.276	346.359	346.442	346.526	346.609	346.693	346.776	346.859	346.943	347.026
08.03.2018	347.109	347.193	347.276	347.359	347.443	347.526	347.610	347.693	347.776	347.860	347.943	348.026
09.03.2018	348.109	348.193	348.276	348.359	348.443	348.526	348.609	348.693	348.776	348.859	348.943	349.026
10.03.2018	349.109	349.192	349.276	349.359	349.442	349.525	349.609	349.692	349.775	349.859	349.942	350.025
11.03.2018	350.108	350.191	350.275	350.358	350.441	350.524	350.608	350.691	350.774	350.857	350.941	351.024
12.03.2018	351.107	351.190	351.273	351.357	351.440	351.523	351.606	351.689	351.773	351.856	351.939	352.022
13.03.2018	352.105	352.188	352.272	352.355	352.438	352.521	352.604	352.687	352.770	352.854	352.937	353.020
14.03.2018	353.103	353.186	353.269	353.352	353.435	353.519	353.602	353.685	353.768	353.851	353.934	354.017
15.03.2018	354.100	354.183	354.266	354.349	354.433	354.516	354.599	354.682	354.765	354.848	354.931	355.014
16.03.2018	355.097	355.180	355.263	355.346	355.429	355.512	355.595	355.678	355.761	355.844	355.927	356.010
17.03.2018	356.093	356.176	356.259	356.342	356.425	356.508	356.591	356.674	356.757	356.840	356.923	357.006
18.03.2018	357.089	357.172	357.255	357.338	357.421	357.504	357.587	357.669	357.752	357.835	357.918	358.001
19.03.2018	358.084	358.167	358.250	358.333	358.416	358.498	358.581	358.664	358.747	358.830	358.913	358.996
20.03.2018	359.079	359.161	359.244	359.327	359.410	359.493	359.576	359.658	359.741	359.824	359.907	359.990
21.03.2018	0.072	0.155	0.238	0.321	0.404	0.486	0.569	0.652	0.735	0.818	0.900	0.983
22.03.2018	1.066	1.149	1.231	1.314	1.397	1.479	1.562	1.645	1.728	1.810	1.893	1.976
23.03.2018	2.058	2.141	2.224	2.307	2.389	2.472	2.555	2.637	2.720	2.803	2.885	2.968
24.03.2018	3.050	3.133	3.216	3.298	3.381	3.464	3.546	3.629	3.711	3.794	3.877	3.959
25.03.2018	4.042	4.124	4.207	4.290	4.372	4.455	4.537	4.620	4.702	4.785	4.868	4.950
26.03.2018	5.033	5.115	5.198	5.280	5.363	5.445	5.528	5.610	5.693	5.775	5.858	5.940
27.03.2018	6.023	6.105	6.188	6.270	6.353	6.435	6.518	6.600	6.682	6.765	6.847	6.930
28.03.2018	7.012	7.095	7.177	7.259	7.342	7.424	7.507	7.589	7.672	7.754	7.836	7.919
29.03.2018	8.001	8.083	8.166	8.248	8.331	8.413	8.495	8.578	8.660	8.742	8.825	8.907
30.03.2018	8.989	9.072	9.154	9.236	9.319	9.401	9.483	9.566	9.648	9.730	9.812	9.895
31.03.2018	9.977	10.059	10.141	10.224	10.306	10.388	10.471	10.553	10.635	10.717	10.800	10.882
01.04.2018	10.964	11.046	11.128	11.211	11.293	11.375	11.457	11.540	11.622	11.704	11.786	11.868
02.04.2018	11.951	12.033	12.115	12.197	12.279	12.361	12.444	12.526	12.608	12.690	12.772	12.854
03.04.2018	12.936	13.019	13.101	13.183	13.265	13.347	13.429	13.511	13.593	13.676	13.758	13.840
04.04.2018	13.922	14.004	14.086	14.168	14.250	14.332	14.414	14.497	14.579	14.661	14.743	14.825
05.04.2018	14.907	14.989	15.071	15.153	15.235	15.317	15.399	15.481	15.563	15.645	15.727	15.809
06.04.2018	15.891	15.973	16.055	16.137	16.219	16.301	16.383	16.465	16.547	16.629	16.711	16.793
07.04.2018	16.875	16.957	17.039	17.121	17.203	17.285	17.367	17.449	17.531	17.613	17.695	17.777
08.04.2018	17.859	17.941	18.022	18.104	18.186	18.268	18.350	18.432	18.514	18.596	18.678	18.760
09.04.2018	18.842	18.923	19.005	19.087	19.169	19.251	19.333	19.415	19.497	19.579	19.660	19.742
10.04.2018	19.824	19.906	19.988	20.070	20.151	20.233	20.315	20.397	20.479	20.561	20.642	20.724
11.04.2018	20.806	20.888	20.970	21.052	21.133	21.215	21.297	21.379	21.460	21.542	21.624	21.706
12.04.2018	21.788	21.869	21.951	22.033	22.115	22.196	22.278	22.360	22.442	22.523	22.605	22.687
13.04.2018	22.769	22.850	22.932	23.014	23.096	23.177	23.259	23.341	23.422	23.504	23.586	23.667
14.04.2018	23.749	23.831	23.912	23.994	24.076	24.158	24.239	24.321	24.403	24.484	24.566	24.647
15.04.2018	24.729	24.811	24.892	24.974	25.056	25.137	25.219	25.301	25.382	25.464	25.545	25.627
16.04.2018	25.709	25.790	25.872	25.953	26.035	26.116	26.198	26.280	26.361	26.443	26.524	26.606
17.04.2018	26.687	26.769	26.851	26.932	27.014	27.095	27.177	27.258	27.340	27.421	27.503	27.584
18.04.2018	27.666	27.747	27.829	27.910	27.992	28.073	28.155	28.236	28.318	28.399	28.481	28.562
19.04.2018	28.643	28.725	28.806	28.888	28.969	29.051	29.132	29.214	29.295	29.376	29.458	29.539
20.04.2018	29.621	29.702	29.783	29.865	29.946	30.028	30.109	30.190	30.272	30.353	30.434	30.516
21.04.2018	30.597	30.679	30.760	30.841	30.923	31.004	31.085	31.167	31.248	31.329	31.411	31.492
22.04.2018	31.573	31.654	31.736	31.817	31.898	31.980	32.061	32.142	32.223	32.305	32.386	32.467
23.04.2018	32.548	32.630	32.711	32.792	32.873	32.955	33.036	33.117	33.198	33.280	33.361	33.442
24.04.2018	33.523	33.604	33.686	33.767	33.848	33.929	34.010	34.091	34.173	34.254	34.335	34.416
25.04.2018	34.497	34.578	34.660	34.741	34.822	34.903	34.984	35.065	35.146	35.228	35.309	35.390
26.04.2018	35.471	35.552	35.633	35.714	35.795	35.876	35.957	36.038	36.120	36.201	36.282	36.363
27.04.2018	36.444	36.525	36.606	36.687	36.768	36.849	36.930	37.011	37.092	37.173	37.254	37.335
28.04.2018	37.416	37.497	37.578	37.659	37.740	37.821	37.902	37.983	38.064	38.145	38.226	38.307
29.04.2018	38.388	38.469	38.550	38.631	38.712	38.793	38.874	38.955	39.036	39.117	39.198	39.278
30.04.2018	39.359	39.440	39.521	39.602	39.683	39.764	39.845	39.926	40.007	40.088	40.168	40.249
01.05.2018	40.330	40.411	40.492	40.573	40.654	40.735	40.815	40.896	40.977	41.058	41.139	41.220
02.05.2018	41.301	41.381	41.462	41.543	41.624	41.705	41.786	41.866	41.947	42.028	42.109	42.190
03.05.2018	42.270	42.351	42.432	42.513	42.594	42.674	42.755	42.836	42.917	42.998	43.078	43.159
04.05.2018	43.240	43.321	43.401	43.482	43.563	43.644	43.725	43.805	43.886	43.967	44.048	44.128
05.05.2018	44.209	44.290	44.370	44.451	44.532	44.613	44.693	44.774	44.855	44.936	45.016	45.097
06.05.2018	45.178	45.258	45.339	45.420	45.500	45.581	45.662	45.743	45.823	45.904	45.985	46.065
07.05.2018	46.146	46.227	46.307	46.388	46.469	46.549	46.630	46.711	46.791	46.872	46.952	47.033
08.05.2018	47.114	47.194	47.275	47.356	47.436	47.517	47.598	47.678	47.759	47.839	47.920	48.001

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09.05.2018	48.081	48.162	48.242	48.323	48.404	48.484	48.565	48.645	48.726	48.807	48.887	48.968
10.05.2018	49.048	49.129	49.210	49.290	49.371	49.451	49.532	49.612	49.693	49.774	49.854	49.935
11.05.2018	50.015	50.096	50.176	50.257	50.337	50.418	50.498	50.579	50.659	50.740	50.820	50.901
12.05.2018	50.982	51.062	51.143	51.223	51.304	51.384	51.465	51.545	51.626	51.706	51.787	51.867
13.05.2018	51.948	52.028	52.108	52.189	52.269	52.350	52.430	52.511	52.591	52.672	52.752	52.833
14.05.2018	52.913	52.994	53.074	53.154	53.235	53.315	53.396	53.476	53.557	53.637	53.717	53.798
15.05.2018	53.878	53.959	54.039	54.120	54.200	54.280	54.361	54.441	54.522	54.602	54.682	54.763
16.05.2018	54.843	54.923	55.004	55.084	55.165	55.245	55.325	55.406	55.486	55.566	55.647	55.727
17.05.2018	55.807	55.888	55.968	56.049	56.129	56.209	56.289	56.370	56.450	56.530	56.611	56.691
18.05.2018	56.771	56.852	56.932	57.012	57.093	57.173	57.253	57.333	57.414	57.494	57.574	57.655
19.05.2018	57.735	57.815	57.895	57.976	58.056	58.136	58.216	58.297	58.377	58.457	58.537	58.618
20.05.2018	58.698	58.778	58.858	58.939	59.019	59.099	59.179	59.259	59.340	59.420	59.500	59.580
21.05.2018	59.661	59.741	59.821	59.901	59.981	60.061	60.142	60.222	60.302	60.382	60.462	60.542
22.05.2018	60.623	60.703	60.783	60.863	60.943	61.023	61.104	61.184	61.264	61.344	61.424	61.504
23.05.2018	61.584	61.664	61.745	61.825	61.905	61.985	62.065	62.145	62.225	62.305	62.385	62.465
24.05.2018	62.546	62.626	62.706	62.786	62.866	62.946	63.026	63.106	63.186	63.266	63.346	63.426
25.05.2018	63.506	63.586	63.666	63.747	63.827	63.907	63.987	64.067	64.147	64.227	64.307	64.387
26.05.2018	64.467	64.547	64.627	64.707	64.787	64.867	64.947	65.027	65.107	65.187	65.267	65.347
27.05.2018	65.427	65.507	65.587	65.667	65.747	65.827	65.907	65.987	66.067	66.147	66.227	66.307
28.05.2018	66.386	66.466	66.546	66.626	66.706	66.786	66.866	66.946	67.026	67.106	67.186	67.266
29.05.2018	67.346	67.426	67.506	67.585	67.665	67.745	67.825	67.905	67.985	68.065	68.145	68.225
30.05.2018	68.305	68.385	68.464	68.544	68.624	68.704	68.784	68.864	68.944	69.024	69.104	69.183
31.05.2018	69.263	69.343	69.423	69.503	69.583	69.663	69.742	69.822	69.902	69.982	70.062	70.142
01.06.2018	70.222	70.301	70.381	70.461	70.541	70.621	70.701	70.781	70.860	70.940	71.020	71.100
02.06.2018	71.180	71.260	71.339	71.419	71.499	71.579	71.659	71.738	71.818	71.898	71.978	72.058
03.06.2018	72.138	72.217	72.297	72.377	72.457	72.537	72.616	72.696	72.776	72.856	72.936	73.015
04.06.2018	73.095	73.175	73.255	73.335	73.414	73.494	73.574	73.654	73.734	73.813	73.893	73.973
05.06.2018	74.053	74.132	74.212	74.292	74.372	74.452	74.531	74.611	74.691	74.771	74.850	74.930
06.06.2018	75.010	75.090	75.169	75.249	75.329	75.409	75.488	75.568	75.648	75.728	75.807	75.887
07.06.2018	75.967	76.047	76.127	76.206	76.286	76.366	76.445	76.525	76.605	76.685	76.764	76.844
08.06.2018	76.924	77.004	77.083	77.163	77.243	77.323	77.402	77.482	77.562	77.642	77.721	77.801
09.06.2018	77.881	77.960	78.040	78.120	78.200	78.279	78.359	78.439	78.518	78.598	78.678	78.758
10.06.2018	78.837	78.917	78.997	79.076	79.156	79.236	79.316	79.395	79.475	79.555	79.634	79.714
11.06.2018	79.794	79.873	79.953	80.033	80.112	80.192	80.272	80.352	80.431	80.511	80.591	80.670
12.06.2018	80.750	80.830	80.909	80.989	81.069	81.148	81.228	81.308	81.387	81.467	81.547	81.626
13.06.2018	81.706	81.786	81.865	81.945	82.025	82.104	82.184	82.264	82.343	82.423	82.503	82.582
14.06.2018	82.662	82.742	82.821	82.901	82.981	83.060	83.140	83.219	83.299	83.379	83.458	83.538
15.06.2018	83.618	83.697	83.777	83.857	83.936	84.016	84.095	84.175	84.255	84.334	84.414	84.494
16.06.2018	84.573	84.653	84.732	84.812	84.892	84.971	85.051	85.130	85.210	85.290	85.369	85.449
17.06.2018	85.528	85.608	85.688	85.767	85.847	85.926	86.006	86.086	86.165	86.245	86.324	86.404
18.06.2018	86.484	86.563	86.643	86.722	86.802	86.881	86.961	87.041	87.120	87.200	87.279	87.359
19.06.2018	87.438	87.518	87.597	87.677	87.757	87.836	87.916	87.995	88.075	88.154	88.234	88.313
20.06.2018	88.393	88.473	88.552	88.632	88.711	88.791	88.870	88.950	89.029	89.109	89.188	89.268
21.06.2018	89.347	89.427	89.506	89.586	89.665	89.745	89.825	89.904	89.984	90.063	90.143	90.222
22.06.2018	90.302	90.381	90.461	90.540	90.620	90.699	90.779	90.858	90.938	91.017	91.097	91.176
23.06.2018	91.256	91.335	91.415	91.494	91.574	91.653	91.733	91.812	91.892	91.971	92.050	92.130
24.06.2018	92.209	92.289	92.368	92.448	92.527	92.607	92.686	92.766	92.845	92.925	93.004	93.084
25.06.2018	93.163	93.243	93.322	93.401	93.481	93.560	93.640	93.719	93.799	93.878	93.958	94.037
26.06.2018	94.117	94.196	94.276	94.355	94.434	94.514	94.593	94.673	94.752	94.832	94.911	94.991
27.06.2018	95.070	95.149	95.229	95.308	95.388	95.467	95.547	95.626	95.706	95.785	95.864	95.944
28.06.2018	96.023	96.103	96.182	96.262	96.341	96.420	96.500	96.579	96.659	96.738	96.818	96.897
29.06.2018	96.977	97.056	97.135	97.215	97.294	97.374	97.453	97.533	97.612	97.691	97.771	97.850
30.06.2018	97.930	98.009	98.089	98.168	98.247	98.327	98.406	98.486	98.565	98.645	98.724	98.803
01.07.2018	98.883	98.962	99.042	99.121	99.201	99.280	99.359	99.439	99.518	99.598	99.677	99.757
02.07.2018	99.836	99.915	99.995	100.074	100.154	100.233	100.313	100.392	100.471	100.551	100.630	100.710
03.07.2018	100.789	100.869	100.948	101.027	101.107	101.186	101.266	101.345	101.425	101.504	101.584	101.663
04.07.2018	101.742	101.822	101.901	101.981	102.060	102.140	102.219	102.299	102.378	102.457	102.537	102.616
05.07.2018	102.696	102.775	102.855	102.934	103.013	103.093	103.172	103.252	103.331	103.411	103.490	103.570
06.07.2018	103.649	103.729	103.808	103.887	103.967	104.046	104.126	104.205	104.285	104.364	104.444	104.523
07.07.2018	104.603	104.682	104.761	104.841	104.920	105.000	105.079	105.159	105.238	105.318	105.397	105.477
08.07.2018	105.556	105.636	105.715	105.795	105.874	105.953	106.033	106.112	106.192	106.271	106.351	106.430
09.07.2018	106.510	106.589	106.669	106.748	106.828	106.907	106.987	107.066	107.146	107.225	107.305	107.384
10.07.2018	107.463	107.543	107.622	107.702	107.781	107.861	107.940	108.020	108.099	108.179	108.258	108.338
11.07.2018	108.417	108.497	108.576	108.656	108.735	108.815	108.894	108.974	109.053	109.133	109.212	109.292
12.07.2018	109.371	109.451	109.530	109.610	109.689	109.769	109.848	109.928	110.007	110.087	110.166	110.246
13.07.2018	110.325	110.405	110.484	110.564	110.643	110.723	110.802	110.882	110.961	111.041	111.120	111.200
14.07.2018	111.279	111.359	111.438	111.518	111.597	111.677	111.756	111.836	111.915	111.995	112.074	112.154
15.07.2018	112.233	112.313	112.392	112.472	112.552	112.631	112.711	112.790	112.870	112.949	113.029	113.108

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16.07.2018	113.188	113.267	113.347	113.426	113.506	113.585	113.665	113.744	113.824	113.903	113.983	114.062
17.07.2018	114.142	114.221	114.301	114.380	114.460	114.539	114.619	114.699	114.778	114.858	114.937	115.017
18.07.2018	115.096	115.176	115.255	115.335	115.414	115.494	115.573	115.653	115.732	115.812	115.891	115.971
19.07.2018	116.050	116.130	116.210	116.289	116.369	116.448	116.528	116.607	116.687	116.766	116.846	116.925
20.07.2018	117.005	117.084	117.164	117.243	117.323	117.402	117.482	117.562	117.641	117.721	117.800	117.880
21.07.2018	117.959	118.039	118.118	118.198	118.277	118.357	118.436	118.516	118.596	118.675	118.755	118.834
22.07.2018	118.914	118.993	119.073	119.152	119.232	119.311	119.391	119.471	119.550	119.630	119.709	119.789
23.07.2018	119.868	119.948	120.027	120.107	120.186	120.266	120.346	120.425	120.505	120.584	120.664	120.743
24.07.2018	120.823	120.902	120.982	121.062	121.141	121.221	121.300	121.380	121.459	121.539	121.618	121.698
25.07.2018	121.778	121.857	121.937	122.016	122.096	122.175	122.255	122.335	122.414	122.494	122.573	122.653
26.07.2018	122.732	122.812	122.892	122.971	123.051	123.130	123.210	123.290	123.369	123.449	123.528	123.608
27.07.2018	123.687	123.767	123.847	123.926	124.006	124.085	124.165	124.245	124.324	124.404	124.483	124.563
28.07.2018	124.643	124.722	124.802	124.881	124.961	125.041	125.120	125.200	125.280	125.359	125.439	125.518
29.07.2018	125.598	125.678	125.757	125.837	125.917	125.996	126.076	126.155	126.235	126.315	126.394	126.474
30.07.2018	126.554	126.633	126.713	126.793	126.872	126.952	127.032	127.111	127.191	127.271	127.350	127.430
31.07.2018	127.510	127.589	127.669	127.749	127.828	127.908	127.988	128.067	128.147	128.227	128.306	128.386
01.08.2018	128.466	128.545	128.625	128.705	128.784	128.864	128.944	129.024	129.103	129.183	129.263	129.342
02.08.2018	129.422	129.502	129.582	129.661	129.741	129.821	129.900	129.980	130.060	130.140	130.219	130.299
03.08.2018	130.379	130.459	130.538	130.618	130.698	130.778	130.857	130.937	131.017	131.097	131.176	131.256
04.08.2018	131.336	131.416	131.495	131.575	131.655	131.735	131.815	131.894	131.974	132.054	132.134	132.214
05.08.2018	132.293	132.373	132.453	132.533	132.613	132.692	132.772	132.852	132.932	133.012	133.091	133.171
06.08.2018	133.251	133.331	133.411	133.491	133.570	133.650	133.730	133.810	133.890	133.970	134.049	134.129
07.08.2018	134.209	134.289	134.369	134.449	134.529	134.608	134.688	134.768	134.848	134.928	135.008	135.088
08.08.2018	135.168	135.247	135.327	135.407	135.487	135.567	135.647	135.727	135.807	135.887	135.967	136.046
09.08.2018	136.126	136.206	136.286	136.366	136.446	136.526	136.606	136.686	136.766	136.846	136.926	137.006
10.08.2018	137.086	137.165	137.245	137.325	137.405	137.485	137.565	137.645	137.725	137.805	137.885	137.965
11.08.2018	138.045	138.125	138.205	138.285	138.365	138.445	138.525	138.605	138.685	138.765	138.845	138.925
12.08.2018	139.005	139.085	139.165	139.245	139.325	139.405	139.485	139.565	139.645	139.725	139.805	139.885
13.08.2018	139.965	140.045	140.125	140.205	140.285	140.365	140.445	140.525	140.605	140.685	140.765	140.845
14.08.2018	140.925	141.005	141.085	141.165	141.246	141.326	141.406	141.486	141.566	141.646	141.726	141.806
15.08.2018	141.886	141.966	142.046	142.126	142.206	142.286	142.366	142.447	142.527	142.607	142.687	142.767
16.08.2018	142.847	142.927	143.007	143.087	143.167	143.248	143.328	143.408	143.488	143.568	143.648	143.728
17.08.2018	143.808	143.888	143.969	144.049	144.129	144.209	144.289	144.369	144.449	144.529	144.610	144.690
18.08.2018	144.770	144.850	144.930	145.010	145.090	145.171	145.251	145.331	145.411	145.491	145.571	145.652
19.08.2018	145.732	145.812	145.892	145.972	146.052	146.133	146.213	146.293	146.373	146.453	146.533	146.614
20.08.2018	146.694	146.774	146.854	146.934	147.015	147.095	147.175	147.255	147.335	147.416	147.496	147.576
21.08.2018	147.656	147.736	147.817	147.897	147.977	148.057	148.138	148.218	148.298	148.378	148.459	148.539
22.08.2018	148.619	148.699	148.779	148.860	148.940	149.020	149.100	149.181	149.261	149.341	149.422	149.502
23.08.2018	149.582	149.662	149.743	149.823	149.903	149.983	150.064	150.144	150.224	150.305	150.385	150.465
24.08.2018	150.545	150.626	150.706	150.786	150.867	150.947	151.027	151.108	151.188	151.268	151.349	151.429
25.08.2018	151.509	151.590	151.670	151.750	151.831	151.911	151.991	152.072	152.152	152.232	152.313	152.393
26.08.2018	152.473	152.554	152.634	152.714	152.795	152.875	152.956	153.036	153.116	153.197	153.277	153.358
27.08.2018	153.438	153.518	153.599	153.679	153.760	153.840	153.920	154.001	154.081	154.162	154.242	154.323
28.08.2018	154.403	154.483	154.564	154.644	154.725	154.805	154.886	154.966	155.047	155.127	155.207	155.288
29.08.2018	155.368	155.449	155.529	155.610	155.690	155.771	155.851	155.932	156.012	156.093	156.173	156.254
30.08.2018	156.334	156.415	156.495	156.576	156.656	156.737	156.817	156.898	156.979	157.059	157.140	157.220
31.08.2018	157.301	157.381	157.462	157.542	157.623	157.704	157.784	157.865	157.945	158.026	158.107	158.187
01.09.2018	158.268	158.348	158.429	158.510	158.590	158.671	158.751	158.832	158.913	158.993	159.074	159.155
02.09.2018	159.235	159.316	159.396	159.477	159.558	159.638	159.719	159.800	159.880	159.961	160.042	160.123
03.09.2018	160.203	160.284	160.365	160.445	160.526	160.607	160.687	160.768	160.849	160.930	161.010	161.091
04.09.2018	161.172	161.253	161.333	161.414	161.495	161.575	161.656	161.737	161.818	161.899	161.979	162.060
05.09.2018	162.141	162.222	162.302	162.383	162.464	162.545	162.626	162.706	162.787	162.868	162.949	163.030
06.09.2018	163.111	163.191	163.272	163.353	163.434	163.515	163.596	163.676	163.757	163.838	163.919	164.000
07.09.2018	164.081	164.162	164.242	164.323	164.404	164.485	164.566	164.647	164.728	164.809	164.890	164.971
08.09.2018	165.051	165.132	165.213	165.294	165.375	165.456	165.537	165.618	165.699	165.780	165.861	165.942
09.09.2018	166.023	166.104	166.185	166.266	166.347	166.428	166.509	166.589	166.670	166.751	166.832	166.913
10.09.2018	166.994	167.075	167.156	167.237	167.318	167.400	167.481	167.562	167.643	167.724	167.805	167.886
11.09.2018	167.967	168.048	168.129	168.210	168.291	168.372	168.453	168.534	168.615	168.696	168.777	168.858
12.09.2018	168.939	169.021	169.102	169.183	169.264	169.345	169.426	169.507	169.588	169.669	169.750	169.832
13.09.2018	169.913	169.994	170.075	170.156	170.237	170.318	170.400	170.481	170.562	170.643	170.724	170.805
14.09.2018	170.886	170.968	171.049	171.130	171.211	171.292	171.373	171.455	171.536	171.617	171.698	171.779
15.09.2018	171.861	171.942	172.023	172.104	172.185	172.267	172.348	172.429	172.510	172.591	172.673	172.754
16.09.2018	172.835	172.916	172.998	173.079	173.160	173.241	173.323	173.404	173.485	173.566	173.648	173.729
17.09.2018	173.810	173.891	173.973	174.054	174.135	174.217	174.298	174.379	174.460	174.542	174.623	174.704
18.09.2018	174.786	174.867	174.948	175.030	175.111	175.192	175.274	175.355	175.436	175.518	175.599	175.680
19.09.2018	175.762	175.843	175.924	176.006	176.087	176.168	176.250	176.331	176.413	176.494	176.575	176.657
20.09.2018	176.738	176.819	176.901	176.982	177.064	177.145	177.226	177.308	177.389	177.471	177.552	177.633
21.09.2018	177.715	177.796	177.878	177.959	178.041	178.122	178.204	178.285	178.366	178.448	178.529	178.611

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22.09.2018	178.692	178.774	178.855	178.937	179.018	179.100	179.181	179.263	179.344	179.426	179.507	179.589
23.09.2018	179.670	179.752	179.833	179.915	179.996	180.078	180.159	180.241	180.322	180.404	180.485	180.567
24.09.2018	180.648	180.730	180.812	180.893	180.975	181.056	181.138	181.219	181.301	181.383	181.464	181.546
25.09.2018	181.627	181.709	181.791	181.872	181.954	182.035	182.117	182.199	182.280	182.362	182.444	182.525
26.09.2018	182.607	182.688	182.770	182.852	182.933	183.015	183.097	183.178	183.260	183.342	183.423	183.505
27.09.2018	183.587	183.668	183.750	183.832	183.914	183.995	184.077	184.159	184.240	184.322	184.404	184.486
28.09.2018	184.567	184.649	184.731	184.813	184.894	184.976	185.058	185.140	185.221	185.303	185.385	185.467
29.09.2018	185.549	185.630	185.712	185.794	185.876	185.958	186.039	186.121	186.203	186.285	186.367	186.449
30.09.2018	186.530	186.612	186.694	186.776	186.858	186.940	187.022	187.103	187.185	187.267	187.349	187.431
01.10.2018	187.513	187.595	187.677	187.759	187.841	187.922	188.004	188.086	188.168	188.250	188.332	188.414
02.10.2018	188.496	188.578	188.660	188.742	188.824	188.906	188.988	189.070	189.152	189.234	189.316	189.398
03.10.2018	189.480	189.562	189.644	189.726	189.808	189.890	189.972	190.054	190.136	190.218	190.300	190.382
04.10.2018	190.464	190.546	190.628	190.710	190.792	190.874	190.957	191.039	191.121	191.203	191.285	191.367
05.10.2018	191.449	191.531	191.613	191.696	191.778	191.860	191.942	192.024	192.106	192.188	192.270	192.353
06.10.2018	192.435	192.517	192.599	192.681	192.763	192.846	192.928	193.010	193.092	193.174	193.257	193.339
07.10.2018	193.421	193.503	193.586	193.668	193.750	193.832	193.914	193.997	194.079	194.161	194.243	194.326
08.10.2018	194.408	194.490	194.573	194.655	194.737	194.819	194.902	194.984	195.066	195.149	195.231	195.313
09.10.2018	195.395	195.478	195.560	195.642	195.725	195.807	195.889	195.972	196.054	196.136	196.219	196.301
10.10.2018	196.384	196.466	196.548	196.631	196.713	196.795	196.878	196.960	197.043	197.125	197.207	197.290
11.10.2018	197.372	197.455	197.537	197.619	197.702	197.784	197.867	197.949	198.032	198.114	198.196	198.279
12.10.2018	198.361	198.444	198.526	198.609	198.691	198.774	198.856	198.939	199.021	199.104	199.186	199.269
13.10.2018	199.351	199.434	199.516	199.599	199.681	199.764	199.846	199.929	200.011	200.094	200.176	200.259
14.10.2018	200.341	200.424	200.506	200.589	200.672	200.754	200.837	200.919	201.002	201.084	201.167	201.249
15.10.2018	201.332	201.415	201.497	201.580	201.662	201.745	201.828	201.910	201.993	202.075	202.158	202.241
16.10.2018	202.323	202.406	202.489	202.571	202.654	202.736	202.819	202.902	202.984	203.067	203.150	203.232
17.10.2018	203.315	203.398	203.480	203.563	203.646	203.728	203.811	203.894	203.976	204.059	204.142	204.224
18.10.2018	204.307	204.390	204.473	204.555	204.638	204.721	204.803	204.886	204.969	205.052	205.134	205.217
19.10.2018	205.300	205.383	205.465	205.548	205.631	205.714	205.796	205.879	205.962	206.045	206.127	206.210
20.10.2018	206.293	206.376	206.459	206.541	206.624	206.707	206.790	206.873	206.955	207.038	207.121	207.204
21.10.2018	207.287	207.369	207.452	207.535	207.618	207.701	207.784	207.866	207.949	208.032	208.115	208.198
22.10.2018	208.281	208.364	208.447	208.529	208.612	208.695	208.778	208.861	208.944	209.027	209.110	209.193
23.10.2018	209.275	209.358	209.441	209.524	209.607	209.690	209.773	209.856	209.939	210.022	210.105	210.188
24.10.2018	210.271	210.354	210.437	210.520	210.602	210.685	210.768	210.851	210.934	211.017	211.100	211.183
25.10.2018	211.266	211.349	211.432	211.515	211.598	211.681	211.764	211.847	211.931	212.014	212.097	212.180
26.10.2018	212.263	212.346	212.429	212.512	212.595	212.678	212.761	212.844	212.927	213.010	213.093	213.176
27.10.2018	213.260	213.343	213.426	213.509	213.592	213.675	213.758	213.841	213.924	214.008	214.091	214.174
28.10.2018	214.257	214.340	214.423	214.506	214.590	214.673	214.756	214.839	214.922	215.005	215.089	215.172
29.10.2018	215.255	215.338	215.421	215.505	215.588	215.671	215.754	215.837	215.921	216.004	216.087	216.170
30.10.2018	216.254	216.337	216.420	216.503	216.587	216.670	216.753	216.836	216.920	217.003	217.086	217.170
31.10.2018	217.253	217.336	217.420	217.503	217.586	217.669	217.753	217.836	217.919	218.003	218.086	218.169
01.11.2018	218.253	218.336	218.419	218.503	218.586	218.670	218.753	218.836	218.920	219.003	219.086	219.170
02.11.2018	219.253	219.337	219.420	219.503	219.587	219.670	219.754	219.837	219.921	220.004	220.087	220.171
03.11.2018	220.254	220.338	220.421	220.505	220.588	220.672	220.755	220.839	220.922	221.005	221.089	221.172
04.11.2018	221.256	221.339	221.423	221.506	221.590	221.673	221.757	221.840	221.924	222.008	222.091	222.175
05.11.2018	222.258	222.342	222.425	222.509	222.592	222.676	222.759	222.843	222.927	223.010	223.094	223.177
06.11.2018	223.261	223.345	223.428	223.512	223.595	223.679	223.763	223.846	223.930	224.013	224.097	224.181
07.11.2018	224.264	224.348	224.432	224.515	224.599	224.682	224.766	224.850	224.933	225.017	225.101	225.184
08.11.2018	225.268	225.352	225.435	225.519	225.603	225.687	225.770	225.854	225.938	226.021	226.105	226.189
09.11.2018	226.272	226.356	226.440	226.524	226.607	226.691	226.775	226.859	226.942	227.026	227.110	227.193
10.11.2018	227.277	227.361	227.445	227.529	227.612	227.696	227.780	227.864	227.947	228.031	228.115	228.199
11.11.2018	228.283	228.366	228.450	228.534	228.618	228.702	228.785	228.869	228.953	229.037	229.121	229.204
12.11.2018	229.288	229.372	229.456	229.540	229.624	229.707	229.791	229.875	229.959	230.043	230.127	230.210
13.11.2018	230.294	230.378	230.462	230.546	230.630	230.714	230.798	230.881	230.965	231.049	231.133	231.217
14.11.2018	231.301	231.385	231.469	231.553	231.636	231.720	231.804	231.888	231.972	232.056	232.140	232.224
15.11.2018	232.308	232.392	232.476	232.559	232.643	232.727	232.811	232.895	232.979	233.063	233.147	233.231
16.11.2018	233.315	233.399	233.483	233.567	233.651	233.735	233.819	233.903	233.987	234.071	234.155	234.239
17.11.2018	234.323	234.407	234.491	234.575	234.659	234.743	234.827	234.911	234.995	235.079	235.163	235.247
18.11.2018	235.331	235.415	235.499	235.583	235.667	235.751	235.835	235.919	236.003	236.087	236.171	236.255
19.11.2018	236.339	236.423	236.507	236.591	236.675	236.759	236.843	236.927	237.011	237.095	237.180	237.264
20.11.2018	237.348	237.432	237.516	237.600	237.684	237.768	237.852	237.936	238.020	238.104	238.189	238.273
21.11.2018	238.357	238.441	238.525	238.609	238.693	238.777	238.861	238.946	239.030	239.114	239.198	239.282
22.11.2018	239.366	239.450	239.535	239.619	239.703	239.787	239.871	239.955	240.039	240.124	240.208	240.292
23.11.2018	240.376	240.460	240.544	240.629	240.713	240.797	240.881	240.965	241.050	241.134	241.218	241.302
24.11.2018	241.386	241.471	241.555	241.639	241.723	241.807	241.892	241.976	242.060	242.144	242.229	242.313
25.11.2018	242.397	242.481	242.565	242.650	242.734	242.818	242.902	242.987	243.071	243.155	243.240	243.324
26.11.2018	243.408	243.492	243.577	243.661	243.745	243.830	243.914	243.998	244.082	244.167	244.251	244.335
27.11.2018	244.420	244.504	244.588	244.673	244.757	244.841	244.926	245.010	245.094	245.179	245.263	245.347
28.11.2018	245.432	245.516	245.600	245.685	245.769	245.853	245.938	246.022	246.106	246.191	246.275	246.360

**Sonnen-Länge  $\lambda$  [°] 2018 (J2000)**

Datum / Zeit	00:00 UT	02:00 UT	04:00 UT	06:00 UT	08:00 UT	10:00 UT	12:00 UT	14:00 UT	16:00 UT	18:00 UT	20:00 UT	22:00 UT
29.11.2018	246.444	246.528	246.613	246.697	246.781	246.866	246.950	247.035	247.119	247.203	247.288	247.372
30.11.2018	247.457	247.541	247.626	247.710	247.794	247.879	247.963	248.048	248.132	248.217	248.301	248.385
01.12.2018	248.470	248.554	248.639	248.723	248.808	248.892	248.977	249.061	249.146	249.230	249.315	249.399
02.12.2018	249.484	249.568	249.653	249.737	249.822	249.906	249.991	250.075	250.160	250.244	250.329	250.413
03.12.2018	250.498	250.582	250.667	250.751	250.836	250.920	251.005	251.089	251.174	251.258	251.343	251.427
04.12.2018	251.512	251.597	251.681	251.766	251.850	251.935	252.019	252.104	252.189	252.273	252.358	252.442
05.12.2018	252.527	252.611	252.696	252.781	252.865	252.950	253.034	253.119	253.204	253.288	253.373	253.457
06.12.2018	253.542	253.627	253.711	253.796	253.880	253.965	254.050	254.134	254.219	254.304	254.388	254.473
07.12.2018	254.557	254.642	254.727	254.811	254.896	254.981	255.065	255.150	255.235	255.319	255.404	255.489
08.12.2018	255.573	255.658	255.743	255.827	255.912	255.996	256.081	256.166	256.251	256.335	256.420	256.505
09.12.2018	256.589	256.674	256.759	256.843	256.928	257.013	257.097	257.182	257.267	257.351	257.436	257.521
10.12.2018	257.605	257.690	257.775	257.860	257.944	258.029	258.114	258.198	258.283	258.368	258.453	258.537
11.12.2018	258.622	258.707	258.791	258.876	258.961	259.046	259.130	259.215	259.300	259.384	259.469	259.554
12.12.2018	259.639	259.723	259.808	259.893	259.978	260.062	260.147	260.232	260.317	260.401	260.486	260.571
13.12.2018	260.655	260.740	260.825	260.910	260.994	261.079	261.164	261.249	261.333	261.418	261.503	261.588
14.12.2018	261.672	261.757	261.842	261.927	262.012	262.096	262.181	262.266	262.351	262.435	262.520	262.605
15.12.2018	262.690	262.774	262.859	262.944	263.029	263.113	263.198	263.283	263.368	263.453	263.537	263.622
16.12.2018	263.707	263.792	263.876	263.961	264.046	264.131	264.216	264.300	264.385	264.470	264.555	264.639
17.12.2018	264.724	264.809	264.894	264.979	265.063	265.148	265.233	265.318	265.403	265.487	265.572	265.657
18.12.2018	265.742	265.827	265.911	265.996	266.081	266.166	266.251	266.335	266.420	266.505	266.590	266.675
19.12.2018	266.759	266.844	266.929	267.014	267.099	267.183	267.268	267.353	267.438	267.523	267.607	267.692
20.12.2018	267.777	267.862	267.947	268.032	268.116	268.201	268.286	268.371	268.456	268.540	268.625	268.710
21.12.2018	268.795	268.880	268.965	269.049	269.134	269.219	269.304	269.389	269.474	269.558	269.643	269.728
22.12.2018	269.813	269.898	269.983	270.067	270.152	270.237	270.322	270.407	270.492	270.576	270.661	270.746
23.12.2018	270.831	270.916	271.001	271.085	271.170	271.255	271.340	271.425	271.510	271.595	271.679	271.764
24.12.2018	271.849	271.934	272.019	272.104	272.189	272.273	272.358	272.443	272.528	272.613	272.698	272.783
25.12.2018	272.868	272.952	273.037	273.122	273.207	273.292	273.377	273.462	273.546	273.631	273.716	273.801
26.12.2018	273.886	273.971	274.056	274.141	274.226	274.310	274.395	274.480	274.565	274.650	274.735	274.820
27.12.2018	274.905	274.990	275.074	275.159	275.244	275.329	275.414	275.499	275.584	275.669	275.754	275.839
28.12.2018	275.923	276.008	276.093	276.178	276.263	276.348	276.433	276.518	276.603	276.688	276.773	276.857
29.12.2018	276.942	277.027	277.112	277.197	277.282	277.367	277.452	277.537	277.622	277.707	277.792	277.877
30.12.2018	277.961	278.046	278.131	278.216	278.301	278.386	278.471	278.556	278.641	278.726	278.811	278.896
31.12.2018	278.981	279.066	279.151	279.236	279.320	279.405	279.490	279.575	279.660	279.745	279.830	279.915