



Ephemeriden für Sternfreunde
von Karl-Heinz Bücke

www.buecke-info.de

Merkur 2017

Datum	α	δ	b	Δ (AE)	E	mv	φ	\varnothing	k	q (")	$\Delta\alpha$ (h:m)	$\Delta\delta$ (°)	l	r
1.01.	18:14	-20.4	3.0	0.685	8 W	3.0	154.5	9.81	0.049	9.33	-0:33	2.6	117.0	0.320
4.01.	18:01	-20.2	3.2	0.719	14 W	1.6	135.2	9.35	0.145	7.99	-0:58	2.5	134.1	0.333
7.01.	17:55	-20.3	3.1	0.769	18 W	0.7	118.4	8.74	0.262	6.45	-1:18	2.0	149.9	0.348
10.01.	17:55	-20.6	2.8	0.826	21 W	0.3	104.5	8.13	0.375	5.08	-1:31	1.3	164.1	0.366
13.01.	18:00	-21.1	2.4	0.886	23 W	0.0	93.0	7.59	0.474	3.99	-1:38	0.4	177.0	0.383
16.01.	18:09	-21.5	1.9	0.945	24 W	-0.1	83.5	7.11	0.556	3.15	-1:42	-0.6	188.6	0.400
19.01.	18:21	-21.9	1.4	1.001	24 W	-0.1	75.6	6.71	0.624	2.52	-1:43	-1.6	199.3	0.416
22.01.	18:35	-22.2	0.9	1.054	24 W	-0.2	68.8	6.37	0.681	2.03	-1:42	-2.6	209.3	0.429
25.01.	18:50	-22.4	0.5	1.104	24 W	-0.2	62.9	6.09	0.728	1.66	-1:40	-3.5	218.8	0.441
28.01.	19:07	-22.5	0.0	1.149	23 W	-0.2	57.6	5.85	0.768	1.36	-1:35	-4.3	227.8	0.451
31.01.	19:24	-22.4	-0.4	1.191	22 W	-0.2	53.0	5.64	0.801	1.12	-1:30	-5.0	236.5	0.458
3.02.	19:42	-22.1	-0.8	1.228	21 W	-0.2	48.7	5.47	0.830	0.93	-1:25	-5.6	245.0	0.464
6.02.	20:01	-21.6	-1.1	1.261	19 W	-0.2	44.8	5.33	0.855	0.77	-1:18	-6.0	253.2	0.466
9.02.	20:19	-21.0	-1.4	1.290	18 W	-0.3	41.0	5.21	0.877	0.64	-1:11	-6.3	261.4	0.466
12.02.	20:39	-20.1	-1.6	1.315	17 W	-0.4	37.4	5.11	0.897	0.53	-1:04	-6.4	269.6	0.464
15.02.	20:58	-19.0	-1.8	1.336	15 W	-0.4	33.7	5.03	0.916	0.42	-0:56	-6.4	278.1	0.459
18.02.	21:18	-17.8	-2.0	1.354	13 W	-0.5	29.9	4.96	0.934	0.33	-0:48	-6.1	286.8	0.452
21.02.	21:38	-16.3	-2.1	1.368	11 W	-0.7	25.8	4.91	0.950	0.25	-0:40	-5.7	296.0	0.442
24.02.	21:58	-14.6	-2.1	1.377	9 W	-0.8	21.5	4.88	0.965	0.17	-0:31	-5.2	305.5	0.430
27.02.	22:18	-12.8	-2.1	1.381	7 W	-1.0	16.9	4.86	0.978	0.11	-0:22	-4.4	315.6	0.417
2.03.	22:38	-10.7	-2.0	1.380	5 W	-1.3	11.9	4.87	0.989	0.05	-0:13	-3.5	326.4	0.401
5.03.	22:59	-8.5	-1.8	1.373	3 W	-1.6	6.7	4.90	0.997	0.02	-0:04	-2.4	338.1	0.384
8.03.	23:20	-6.0	-1.6	1.358	2 O	-1.8	4.9	4.95	0.998	0.01	0:06	-1.1	350.8	0.367
11.03.	23:41	-3.4	-1.3	1.334	4 O	-1.7	11.2	5.04	0.990	0.05	0:16	0.3	4.9	0.349
14.03.	0:02	-0.7	-0.8	1.300	7 O	-1.6	20.3	5.17	0.969	0.16	0:26	1.9	20.4	0.334
17.03.	0:23	2.1	-0.4	1.255	10 O	-1.4	31.1	5.35	0.928	0.39	0:36	3.5	37.3	0.320
20.03.	0:43	4.9	0.2	1.199	12 O	-1.3	43.3	5.60	0.864	0.76	0:45	5.1	55.2	0.311
23.03.	1:03	7.6	0.8	1.133	15 O	-1.1	56.5	5.93	0.776	1.33	0:54	6.6	73.9	0.308
26.03.	1:20	10.1	1.4	1.059	17 O	-0.8	70.2	6.35	0.669	2.10	1:01	7.9	92.7	0.309
29.03.	1:36	12.2	2.0	0.979	18 O	-0.5	84.2	6.86	0.550	3.09	1:05	8.8	111.2	0.316
1.04.	1:49	13.9	2.5	0.899	19 O	-0.1	98.1	7.48	0.430	4.27	1:07	9.4	128.7	0.328
4.04.	1:58	15.2	2.9	0.822	19 O	0.4	111.6	8.18	0.316	5.59	1:05	9.5	144.9	0.343
7.04.	2:03	15.9	3.1	0.752	17 O	1.1	124.6	8.94	0.216	7.01	0:60	9.1	159.7	0.360
10.04.	2:05	16.1	3.2	0.691	15 O	1.9	137.2	9.72	0.133	8.43	0:51	8.2	173.0	0.378
13.04.	2:04	15.8	3.0	0.642	12 O	2.9	149.6	10.47	0.069	9.75	0:38	6.7	185.0	0.395
16.04.	2:00	15.0	2.6	0.605	7 O	4.0	161.7	11.11	0.025	10.83	0:23	4.9	195.9	0.411
19.04.	1:53	13.8	2.0	0.581	3 O	5.3	173.1	11.57	0.004	11.53	0:06	2.6	206.2	0.425
22.04.	1:46	12.3	1.2	0.569	3 W	5.3	172.9	11.80	0.004	11.75	-0:13	0.1	215.8	0.438
25.04.	1:40	10.8	0.3	0.570	8 W	4.1	162.2	11.79	0.024	11.51	-0:31	-2.4	225.0	0.448
28.04.	1:35	9.4	-0.5	0.581	12 W	3.2	151.7	11.56	0.060	10.87	-0:47	-4.8	233.8	0.456



Datum	α	δ	b	Δ (AE)	E	mv	φ	\varnothing	k	q (")	$\Delta\alpha$ (h:m)	$\Delta\delta$ (°)	l	r
1.05.	1:32	8.3	-1.3	0.602	16 W	2.4	142.1	11.17	0.105	9.99	-1:01	-6.8	242.3	0.462
4.05.	1:32	7.6	-2.0	0.629	20 W	1.9	133.5	10.68	0.156	9.01	-1:12	-8.4	250.5	0.466
7.05.	1:35	7.3	-2.5	0.663	22 W	1.5	125.7	10.14	0.208	8.03	-1:21	-9.6	258.7	0.467
10.05.	1:40	7.3	-2.9	0.701	24 W	1.1	118.5	9.58	0.261	7.08	-1:28	-10.3	266.9	0.465
13.05.	1:47	7.7	-3.2	0.744	25 W	0.9	111.8	9.03	0.314	6.19	-1:33	-10.7	275.3	0.461
16.05.	1:55	8.3	-3.3	0.790	26 W	0.7	105.4	8.50	0.367	5.38	-1:36	-10.8	284.0	0.454
19.05.	2:06	9.3	-3.3	0.840	26 W	0.5	99.3	8.00	0.420	4.64	-1:37	-10.5	293.0	0.445
22.05.	2:18	10.4	-3.3	0.891	25 W	0.3	93.1	7.54	0.473	3.98	-1:37	-10.0	302.4	0.434
25.05.	2:32	11.8	-3.1	0.943	25 W	0.1	87.0	7.12	0.526	3.37	-1:35	-9.2	312.3	0.421
28.05.	2:48	13.2	-2.8	0.997	23 W	0.0	80.6	6.74	0.581	2.82	-1:32	-8.2	322.8	0.406
31.05.	3:05	14.8	-2.5	1.051	22 W	-0.2	73.8	6.40	0.639	2.31	-1:27	-7.1	334.2	0.390
3.06.	3:24	16.5	-2.1	1.104	20 W	-0.4	66.4	6.09	0.700	1.83	-1:20	-5.8	346.6	0.373
6.06.	3:45	18.2	-1.6	1.157	17 W	-0.7	58.1	5.81	0.764	1.37	-1:11	-4.4	0.2	0.355
9.06.	4:08	19.9	-1.1	1.206	14 W	-0.9	48.7	5.57	0.830	0.95	-1:01	-3.1	15.3	0.338
12.06.	4:33	21.4	-0.5	1.250	11 W	-1.2	38.2	5.37	0.893	0.57	-0:49	-1.7	31.7	0.324
15.06.	4:59	22.7	0.0	1.286	8 W	-1.5	26.8	5.23	0.946	0.28	-0:35	-0.6	49.3	0.314
18.06.	5:27	23.8	0.5	1.311	4 W	-1.9	14.8	5.13	0.983	0.09	-0:19	0.4	67.8	0.308
21.06.	5:56	24.4	1.0	1.323	1 W	-2.2	4.1	5.08	0.999	0.01	-0:03	1.0	86.7	0.308
24.06.	6:24	24.7	1.4	1.323	3 O	-2.0	10.6	5.08	0.991	0.04	0:13	1.3	105.3	0.314
27.06.	6:53	24.5	1.7	1.311	7 O	-1.6	21.6	5.13	0.965	0.18	0:29	1.2	123.2	0.324
30.06.	7:20	24.0	1.8	1.288	10 O	-1.2	31.8	5.22	0.925	0.39	0:44	0.8	139.9	0.338
3.07.	7:46	23.1	1.9	1.258	13 O	-0.9	40.9	5.34	0.878	0.65	0:57	0.1	155.1	0.354
6.07.	8:10	21.9	1.8	1.222	16 O	-0.7	48.8	5.50	0.829	0.94	1:09	-0.8	168.8	0.372
9.07.	8:32	20.6	1.7	1.183	18 O	-0.5	55.8	5.68	0.781	1.24	1:19	-1.8	181.2	0.389
12.07.	8:53	19.0	1.5	1.142	21 O	-0.3	62.0	5.89	0.735	1.56	1:27	-2.9	192.5	0.406
15.07.	9:12	17.4	1.2	1.099	23 O	-0.2	67.7	6.12	0.690	1.90	1:34	-4.1	202.9	0.421
18.07.	9:29	15.7	0.8	1.054	24 O	0.0	73.1	6.37	0.646	2.26	1:39	-5.4	212.7	0.434
21.07.	9:45	13.9	0.4	1.009	25 O	0.1	78.2	6.66	0.602	2.65	1:43	-6.6	222.1	0.445
24.07.	9:59	12.2	-0.1	0.963	26 O	0.2	83.3	6.98	0.558	3.08	1:45	-7.7	231.0	0.454
27.07.	10:11	10.4	-0.7	0.918	27 O	0.3	88.4	7.32	0.514	3.56	1:46	-8.8	239.6	0.461
30.07.	10:22	8.8	-1.2	0.874	27 O	0.4	93.6	7.69	0.468	4.09	1:45	-9.7	247.9	0.465
2.08.	10:31	7.3	-1.8	0.830	27 O	0.6	99.1	8.09	0.421	4.69	1:42	-10.5	256.1	0.467
5.08.	10:38	5.9	-2.4	0.788	26 O	0.7	105.0	8.52	0.370	5.37	1:38	-11.0	264.3	0.466
8.08.	10:43	4.8	-3.0	0.748	25 O	0.9	111.6	8.98	0.316	6.15	1:31	-11.3	272.6	0.462
11.08.	10:46	4.0	-3.6	0.710	23 O	1.2	119.1	9.47	0.257	7.04	1:22	-11.3	281.2	0.457
14.08.	10:45	3.4	-4.1	0.675	21 O	1.5	127.5	9.95	0.195	8.01	1:11	-10.9	290.0	0.448
17.08.	10:42	3.3	-4.5	0.647	17 O	2.1	137.1	10.39	0.134	9.00	0:56	-10.1	299.3	0.438
20.08.	10:36	3.7	-4.7	0.626	13 O	2.8	147.6	10.73	0.078	9.89	0:39	-8.7	309.0	0.426
23.08.	10:28	4.5	-4.7	0.617	8 O	3.8	158.7	10.89	0.034	10.52	0:20	-6.9	319.4	0.411
26.08.	10:19	5.8	-4.4	0.620	5 O	4.7	168.0	10.83	0.011	10.71	-0:00	-4.7	330.4	0.395
29.08.	10:10	7.2	-3.8	0.639	5 W	4.4	165.4	10.51	0.016	10.34	-0:20	-2.1	342.4	0.378



Datum	α	δ	b	Δ (AE)	E	mv	φ	\emptyset	k	q (")	$\Delta\alpha$ (h:m)	$\Delta\delta$ (°)	l	r
1.09.	10:03	8.7	-3.0	0.675	9 W	3.1	152.8	9.96	0.055	9.41	-0:38	0.4	355.7	0.361
4.09.	10:00	10.0	-2.1	0.727	13 W	1.9	137.9	9.24	0.129	8.05	-0:52	2.8	10.3	0.344
7.09.	10:01	10.9	-1.1	0.793	16 W	0.9	122.2	8.47	0.233	6.49	-1:02	4.8	26.3	0.328
10.09.	10:07	11.3	-0.2	0.871	18 W	0.1	106.4	7.72	0.359	4.95	-1:06	6.3	43.5	0.317
13.09.	10:18	11.1	0.5	0.954	18 W	-0.4	90.7	7.05	0.494	3.57	-1:06	7.3	61.8	0.309
16.09.	10:33	10.3	1.1	1.037	17 W	-0.7	75.5	6.48	0.625	2.43	-1:02	7.6	80.6	0.308
19.09.	10:50	9.0	1.5	1.117	16 W	-1.0	61.2	6.02	0.741	1.56	-0:56	7.5	99.3	0.311
22.09.	11:09	7.3	1.8	1.189	14 W	-1.1	48.1	5.65	0.834	0.94	-0:47	7.0	117.5	0.320
25.09.	11:29	5.3	1.9	1.251	11 W	-1.2	36.5	5.37	0.902	0.53	-0:38	6.2	134.6	0.333
28.09.	11:49	3.1	1.8	1.302	9 W	-1.3	26.4	5.16	0.948	0.27	-0:29	5.2	150.3	0.349
1.10.	12:09	0.9	1.7	1.344	6 W	-1.4	17.8	5.00	0.976	0.12	-0:20	4.0	164.5	0.366
4.10.	12:28	-1.5	1.5	1.375	4 W	-1.4	10.6	4.89	0.991	0.04	-0:11	2.9	177.3	0.384
7.10.	12:48	-3.8	1.3	1.398	2 W	-1.5	4.8	4.81	0.998	0.01	-0:03	1.7	189.0	0.401
10.10.	13:06	-6.0	1.0	1.414	1 O	-1.5	3.1	4.75	0.999	0.00	0:05	0.6	199.6	0.416
13.10.	13:25	-8.2	0.7	1.423	3 O	-1.2	7.0	4.72	0.996	0.02	0:12	-0.5	209.6	0.430
16.10.	13:43	-10.4	0.4	1.426	5 O	-1.0	11.3	4.71	0.990	0.05	0:19	-1.5	219.1	0.442
19.10.	14:02	-12.4	0.0	1.424	7 O	-0.9	15.4	4.72	0.982	0.08	0:26	-2.4	228.1	0.451
22.10.	14:20	-14.3	-0.3	1.417	9 O	-0.7	19.3	4.74	0.972	0.13	0:33	-3.3	236.8	0.459
25.10.	14:38	-16.1	-0.7	1.405	11 O	-0.6	23.0	4.78	0.960	0.19	0:40	-4.1	245.2	0.464
28.10.	14:56	-17.8	-1.0	1.388	12 O	-0.5	26.6	4.84	0.947	0.26	0:46	-4.7	253.5	0.466
31.10.	15:14	-19.4	-1.3	1.367	14 O	-0.4	30.3	4.92	0.932	0.34	0:53	-5.3	261.6	0.466
3.11.	15:32	-20.8	-1.6	1.341	15 O	-0.4	34.1	5.01	0.914	0.43	0:59	-5.7	269.9	0.464
6.11.	15:50	-22.0	-1.9	1.311	17 O	-0.4	38.2	5.13	0.893	0.55	1:05	-6.1	278.4	0.459
9.11.	16:08	-23.1	-2.1	1.275	18 O	-0.3	42.6	5.27	0.868	0.69	1:12	-6.3	287.1	0.451
12.11.	16:26	-24.1	-2.3	1.234	19 O	-0.3	47.4	5.45	0.838	0.88	1:18	-6.4	296.3	0.442
15.11.	16:44	-24.8	-2.5	1.187	20 O	-0.3	52.9	5.66	0.802	1.12	1:23	-6.3	305.8	0.430
18.11.	17:01	-25.3	-2.6	1.136	21 O	-0.3	59.0	5.92	0.757	1.44	1:28	-6.1	316.0	0.416
21.11.	17:17	-25.7	-2.6	1.080	22 O	-0.3	66.1	6.22	0.702	1.85	1:31	-5.8	326.8	0.401
24.11.	17:32	-25.8	-2.5	1.018	22 O	-0.3	74.5	6.60	0.634	2.42	1:33	-5.2	338.4	0.384
27.11.	17:44	-25.7	-2.3	0.952	22 O	-0.2	84.6	7.06	0.547	3.19	1:33	-4.5	351.3	0.366
30.11.	17:53	-25.3	-1.9	0.882	21 O	0.0	96.8	7.62	0.441	4.26	1:28	-3.7	5.4	0.349
3.12.	17:56	-24.8	-1.3	0.814	18 O	0.4	111.5	8.26	0.316	5.65	1:19	-2.7	20.9	0.333
6.12.	17:53	-24.0	-0.6	0.751	15 O	1.1	129.2	8.94	0.184	7.29	1:03	-1.5	37.8	0.320
9.12.	17:44	-23.0	0.4	0.704	9 O	2.5	149.5	9.54	0.069	8.88	0:40	-0.2	55.8	0.311
12.12.	17:28	-21.8	1.4	0.680	3 O	4.7	170.6	9.88	0.007	9.81	0:11	1.2	74.5	0.308
15.12.	17:11	-20.7	2.2	0.683	5 W	3.9	163.7	9.83	0.020	9.63	-0:19	2.5	93.3	0.309
18.12.	16:57	-19.9	2.8	0.714	11 W	2.0	142.5	9.42	0.103	8.45	-0:46	3.5	111.8	0.317
21.12.	16:49	-19.5	3.0	0.764	16 W	0.9	123.4	8.79	0.225	6.81	-1:07	4.0	129.2	0.328
24.12.	16:48	-19.5	2.9	0.826	20 W	0.2	107.1	8.14	0.353	5.27	-1:22	3.9	145.4	0.344
27.12.	16:52	-19.9	2.6	0.892	21 W	-0.1	93.7	7.53	0.468	4.01	-1:31	3.5	160.1	0.361
30.12.	17:00	-20.5	2.3	0.958	22 W	-0.2	82.6	7.02	0.564	3.06	-1:36	2.7	173.3	0.378

Die Ephemeriden gelten für 0 Uhr Weltzeit.

Geozentrische Koordinaten:

α und δ : Rektaszension und Deklination zum Äquinoktium des Datums. b: ekliptikale Breite; Δ : Abstand von der Erde.

E: Elongation (Winkel zwischen Planet und Sonnenmitte); mv: visuelle Helligkeit; φ : Phasenwinkel

Physische Ephemeriden (für Beobachtungen am Teleskop):

\emptyset : scheinbarer Durchmesser;

k: beleuchteter Teil; q: Phasendefekt (Beleuchtungsdefekt)

Koordinaten für Tagesbeobachtungen:

$\Delta\alpha$ und $\Delta\delta$: Rektaszensions- und Deklinationsdifferenzen (Venus minus Sonne)

Heliozentrische Koordinaten:

l: Länge zum Äquinoktium des Datums; r: Abstand von der Sonne.

14.09.2015