



Ephemeriden für Sternfreunde
von Karl-Heinz Bücke

www.buecke-info.de

Merkur 2024

Datum	α	δ	b	Δ (AE)	E	mv	φ	$\varnothing$	k	q (")	$\Delta\alpha$ (h:m)	$\Delta\delta$ (°)	l	r
1.01.	17:27	-20.2	3.1	0.778	18 W	0.6	117.3	8.64	0.271	6.30	-1:17	2.9	144.3	0.342
4.01.	17:27	-20.4	2.8	0.839	21 W	0.2	102.9	8.01	0.389	4.90	-1:29	2.4	159.1	0.359
7.01.	17:33	-20.9	2.4	0.901	23 W	-0.1	91.0	7.45	0.491	3.79	-1:37	1.6	172.5	0.377
10.01.	17:42	-21.4	2.0	0.963	23 W	-0.2	81.3	6.98	0.576	2.96	-1:41	0.7	184.5	0.394
13.01.	17:54	-21.9	1.5	1.020	24 W	-0.2	73.2	6.59	0.645	2.34	-1:41	-0.3	195.6	0.410
16.01.	18:09	-22.3	1.1	1.075	23 W	-0.2	66.3	6.25	0.701	1.87	-1:40	-1.3	205.8	0.425
19.01.	18:24	-22.7	0.6	1.125	23 W	-0.2	60.2	5.98	0.748	1.51	-1:37	-2.2	215.5	0.437
22.01.	18:41	-22.9	0.2	1.171	22 W	-0.2	54.9	5.74	0.787	1.22	-1:33	-3.1	224.7	0.448
25.01.	18:59	-23.0	-0.2	1.212	21 W	-0.2	50.2	5.54	0.820	1.00	-1:28	-3.8	233.5	0.456
28.01.	19:17	-22.8	-0.6	1.249	20 W	-0.3	45.9	5.38	0.848	0.82	-1:22	-4.5	242.0	0.462
31.01.	19:36	-22.5	-0.9	1.281	18 W	-0.3	41.9	5.25	0.872	0.67	-1:16	-5.0	250.3	0.466
3.02.	19:55	-22.0	-1.2	1.309	17 W	-0.3	38.2	5.13	0.893	0.55	-1:09	-5.3	258.4	0.467
6.02.	20:15	-21.4	-1.5	1.333	16 W	-0.4	34.6	5.04	0.912	0.45	-1:01	-5.5	266.7	0.465
9.02.	20:34	-20.5	-1.7	1.353	14 W	-0.5	31.0	4.97	0.929	0.35	-0:54	-5.6	275.0	0.461
12.02.	20:54	-19.4	-1.9	1.369	12 W	-0.6	27.3	4.91	0.944	0.27	-0:46	-5.5	283.7	0.455
15.02.	21:15	-18.1	-2.0	1.381	10 W	-0.7	23.4	4.87	0.959	0.20	-0:37	-5.2	292.6	0.446
18.02.	21:35	-16.6	-2.1	1.388	8 W	-0.9	19.2	4.84	0.972	0.13	-0:28	-4.7	302.0	0.435
21.02.	21:55	-14.8	-2.1	1.391	6 W	-1.1	14.8	4.83	0.983	0.08	-0:20	-4.0	311.9	0.422
24.02.	22:16	-12.9	-2.0	1.388	4 W	-1.3	10.1	4.84	0.992	0.04	-0:11	-3.2	322.4	0.407
27.02.	22:36	-10.8	-1.9	1.378	2 W	-1.6	5.7	4.88	0.998	0.01	-0:02	-2.2	333.7	0.391
1.03.	22:57	-8.5	-1.7	1.362	2 O	-1.7	5.9	4.94	0.997	0.01	0:08	-1.0	346.1	0.373
4.03.	23:18	-6.0	-1.4	1.336	4 O	-1.6	12.2	5.03	0.989	0.06	0:18	0.3	359.7	0.356
7.03.	23:39	-3.4	-1.0	1.302	7 O	-1.5	21.0	5.16	0.967	0.17	0:27	1.8	14.6	0.339
10.03.	23:59	-0.6	-0.6	1.256	10 O	-1.4	31.3	5.35	0.927	0.39	0:37	3.4	31.0	0.325
13.03.	0:19	2.1	0.0	1.199	12 O	-1.2	43.2	5.60	0.865	0.76	0:46	5.0	48.6	0.314
16.03.	0:38	4.8	0.6	1.133	15 O	-1.1	56.2	5.93	0.778	1.32	0:54	6.5	67.0	0.308
19.03.	0:56	7.3	1.2	1.057	17 O	-0.8	70.1	6.36	0.670	2.10	1:00	7.8	85.9	0.308
22.03.	1:11	9.5	1.9	0.977	18 O	-0.5	84.4	6.88	0.549	3.10	1:04	8.8	104.5	0.313
25.03.	1:22	11.3	2.4	0.896	19 O	-0.1	98.7	7.50	0.424	4.32	1:05	9.4	122.5	0.323
28.03.	1:31	12.6	2.9	0.817	18 O	0.5	112.9	8.22	0.305	5.71	1:02	9.5	139.2	0.337
31.03.	1:35	13.4	3.2	0.747	16 O	1.2	126.7	9.00	0.201	7.19	0:56	9.1	154.5	0.354
3.04.	1:35	13.5	3.3	0.686	14 O	2.1	140.1	9.79	0.116	8.65	0:45	8.1	168.3	0.371
6.04.	1:32	13.1	3.2	0.638	10 O	3.2	153.2	10.53	0.054	9.96	0:31	6.5	180.8	0.389
9.04.	1:27	12.2	2.8	0.604	6 O	4.4	165.6	11.12	0.016	10.95	0:15	4.5	192.1	0.405
12.04.	1:20	10.9	2.2	0.583	2 O	5.5	174.7	11.52	0.002	11.50	-0:03	2.1	202.6	0.420
15.04.	1:12	9.3	1.5	0.576	5 W	4.7	167.5	11.67	0.012	11.53	-0:22	-0.6	212.4	0.433
18.04.	1:06	7.8	0.6	0.581	10 W	3.6	156.6	11.57	0.041	11.09	-0:39	-3.1	221.7	0.444
21.04.	1:02	6.4	-0.2	0.596	15 W	2.7	146.2	11.28	0.085	10.33	-0:55	-5.5	230.7	0.454
24.04.	1:00	5.4	-1.0	0.620	18 W	2.1	136.7	10.84	0.136	9.37	-1:08	-7.5	239.3	0.460
27.04.	1:01	4.8	-1.6	0.650	21 W	1.6	128.3	10.34	0.190	8.37	-1:18	-9.1	247.6	0.465
30.04.	1:05	4.6	-2.2	0.685	23 W	1.2	120.8	9.80	0.244	7.41	-1:26	-10.3	255.8	0.467



Datum	α	δ	b	Δ (AE)	E	mv	φ	$\varnothing$	k	q (")	$\Delta\alpha$ (h:m)	$\Delta\delta$ (°)	l	r
3.05.	1:11	4.7	-2.6	0.725	25 W	1.0	113.9	9.27	0.297	6.51	-1:31	-11.0	264.0	0.466
6.05.	1:18	5.2	-2.9	0.768	26 W	0.7	107.5	8.75	0.349	5.69	-1:35	-11.4	272.3	0.463
9.05.	1:28	5.9	-3.1	0.814	26 W	0.6	101.5	8.26	0.400	4.95	-1:37	-11.5	280.8	0.457
12.05.	1:40	7.0	-3.2	0.862	26 W	0.4	95.6	7.79	0.451	4.28	-1:37	-11.2	289.7	0.449
15.05.	1:52	8.2	-3.2	0.912	26 W	0.3	89.8	7.37	0.502	3.67	-1:36	-10.7	299.0	0.439
18.05.	2:07	9.6	-3.0	0.963	25 W	0.1	84.0	6.98	0.553	3.12	-1:34	-10.0	308.7	0.426
21.05.	2:22	11.2	-2.8	1.015	23 W	-0.1	77.9	6.62	0.605	2.62	-1:30	-9.0	319.0	0.412
24.05.	2:40	12.9	-2.5	1.066	22 W	-0.2	71.5	6.31	0.658	2.16	-1:25	-7.9	330.0	0.396
27.05.	2:59	14.7	-2.2	1.117	20 W	-0.4	64.5	6.02	0.715	1.72	-1:18	-6.6	342.0	0.379
30.05.	3:19	16.5	-1.7	1.166	17 W	-0.7	56.7	5.76	0.774	1.30	-1:10	-5.3	355.1	0.361
2.06.	3:41	18.4	-1.3	1.213	15 W	-0.9	47.8	5.54	0.836	0.91	-0:60	-3.9	9.6	0.344
5.06.	4:06	20.1	-0.7	1.254	11 W	-1.2	37.8	5.36	0.895	0.56	-0:48	-2.5	25.6	0.329
8.06.	4:31	21.7	-0.2	1.288	8 W	-1.5	26.8	5.22	0.946	0.28	-0:35	-1.1	42.8	0.317
11.06.	4:59	23.1	0.4	1.311	5 W	-1.9	15.1	5.13	0.983	0.09	-0:20	-0.0	61.0	0.310
14.06.	5:27	24.1	0.8	1.322	1 W	-2.2	4.0	5.08	0.999	0.01	-0:04	0.8	79.8	0.308
17.06.	5:56	24.7	1.3	1.320	3 O	-2.0	10.2	5.09	0.992	0.04	0:12	1.3	98.6	0.311
20.06.	6:24	24.9	1.6	1.306	7 O	-1.6	21.7	5.14	0.965	0.18	0:28	1.5	116.8	0.320
23.06.	6:52	24.7	1.8	1.282	10 O	-1.3	32.3	5.24	0.923	0.41	0:44	1.3	134.0	0.332
26.06.	7:19	24.1	1.9	1.249	13 O	-1.0	41.9	5.38	0.872	0.69	0:58	0.8	149.7	0.348
29.06.	7:43	23.2	1.9	1.210	16 O	-0.7	50.3	5.55	0.819	1.00	1:10	0.0	164.0	0.365
2.07.	8:06	22.1	1.8	1.168	19 O	-0.5	57.7	5.75	0.767	1.34	1:20	-0.9	176.9	0.383
5.07.	8:27	20.8	1.6	1.124	21 O	-0.3	64.3	5.98	0.717	1.69	1:29	-2.0	188.5	0.400
8.07.	8:46	19.3	1.3	1.079	23 O	-0.1	70.3	6.23	0.669	2.06	1:36	-3.1	199.3	0.415
11.07.	9:04	17.7	1.0	1.032	24 O	0.0	75.9	6.51	0.622	2.46	1:41	-4.3	209.3	0.429
14.07.	9:20	16.1	0.5	0.985	25 O	0.1	81.3	6.82	0.576	2.89	1:45	-5.5	218.8	0.441
17.07.	9:34	14.5	0.0	0.938	26 O	0.3	86.6	7.16	0.530	3.37	1:47	-6.7	227.8	0.451
20.07.	9:46	12.9	-0.5	0.892	27 O	0.4	91.9	7.54	0.483	3.90	1:47	-7.7	236.5	0.458
23.07.	9:57	11.3	-1.1	0.847	27 O	0.5	97.4	7.94	0.436	4.48	1:46	-8.7	244.9	0.464
26.07.	10:06	9.9	-1.7	0.803	27 O	0.7	103.0	8.37	0.387	5.13	1:43	-9.5	253.2	0.466
29.07.	10:12	8.6	-2.3	0.762	26 O	0.8	109.1	8.82	0.336	5.85	1:38	-10.1	261.3	0.466
1.08.	10:16	7.5	-3.0	0.723	24 O	1.1	115.8	9.30	0.282	6.68	1:30	-10.4	269.6	0.464
4.08.	10:18	6.7	-3.6	0.687	22 O	1.4	123.4	9.78	0.225	7.58	1:20	-10.4	278.1	0.459
7.08.	10:17	6.2	-4.1	0.655	19 O	1.8	131.9	10.26	0.166	8.55	1:08	-10.1	286.8	0.452
10.08.	10:13	6.2	-4.5	0.630	16 O	2.4	141.4	10.67	0.109	9.50	0:52	-9.3	295.9	0.442
13.08.	10:06	6.5	-4.8	0.613	12 O	3.2	151.7	10.96	0.060	10.30	0:34	-8.1	305.5	0.430
16.08.	9:58	7.3	-4.8	0.608	7 O	4.1	162.0	11.06	0.024	10.79	0:14	-6.4	315.6	0.417
19.08.	9:49	8.4	-4.5	0.615	5 O	4.8	168.5	10.92	0.010	10.81	-0:06	-4.3	326.3	0.402
22.08.	9:40	9.7	-4.0	0.638	6 W	4.1	162.7	10.54	0.023	10.30	-0:25	-2.0	338.0	0.385
25.08.	9:34	11.0	-3.2	0.675	10 W	2.9	150.3	9.95	0.066	9.30	-0:42	0.3	350.7	0.367
28.08.	9:32	12.1	-2.3	0.728	14 W	1.8	136.2	9.23	0.139	7.94	-0:56	2.5	4.8	0.350
31.08.	9:34	12.9	-1.4	0.795	16 W	0.9	121.3	8.45	0.240	6.42	-1:04	4.4	20.3	0.334



Datum	α	δ	b	Δ (AE)	E	mv	φ	$\emptyset$	k	q (")	$\Delta\alpha$ (h:m)	$\Delta\delta$ (°)	l	r
3.09.	9:41	13.3	-0.5	0.872	18 W	0.2	106.1	7.71	0.361	4.92	-1:08	5.8	37.1	0.321
6.09.	9:52	13.1	0.3	0.954	18 W	-0.4	90.9	7.04	0.493	3.57	-1:08	6.8	55.0	0.312
9.09.	10:08	12.4	0.9	1.037	17 W	-0.7	75.9	6.48	0.622	2.45	-1:03	7.2	73.7	0.308
12.09.	10:25	11.3	1.3	1.116	16 W	-1.0	61.6	6.02	0.738	1.58	-0:56	7.2	92.5	0.309
15.09.	10:45	9.7	1.7	1.188	14 W	-1.1	48.3	5.66	0.833	0.95	-0:47	6.7	111.0	0.316
18.09.	11:06	7.7	1.8	1.250	11 W	-1.2	36.3	5.38	0.903	0.52	-0:38	6.0	128.6	0.328
21.09.	11:26	5.6	1.8	1.302	9 W	-1.3	25.8	5.16	0.950	0.26	-0:28	5.0	144.8	0.343
24.09.	11:47	3.3	1.8	1.342	6 W	-1.4	16.8	5.01	0.979	0.11	-0:18	3.9	159.6	0.360
27.09.	12:07	1.0	1.6	1.373	4 W	-1.5	9.4	4.90	0.993	0.03	-0:09	2.7	172.9	0.377
30.09.	12:26	-1.4	1.4	1.395	2 W	-1.6	3.9	4.82	0.999	0.01	-0:00	1.5	184.9	0.395
3.10.	12:45	-3.7	1.1	1.409	2 O	-1.4	4.8	4.77	0.998	0.01	0:08	0.4	195.9	0.411
6.10.	13:04	-6.0	0.8	1.417	4 O	-1.2	9.2	4.74	0.994	0.03	0:15	-0.7	206.1	0.425
9.10.	13:22	-8.2	0.5	1.419	6 O	-1.0	13.7	4.74	0.986	0.07	0:23	-1.8	215.8	0.437
12.10.	13:40	-10.3	0.1	1.415	8 O	-0.8	17.9	4.75	0.976	0.11	0:30	-2.8	224.9	0.448
15.10.	13:58	-12.3	-0.2	1.406	10 O	-0.7	21.8	4.78	0.964	0.17	0:37	-3.7	233.7	0.456
18.10.	14:16	-14.3	-0.5	1.393	12 O	-0.5	25.6	4.82	0.951	0.24	0:44	-4.5	242.2	0.462
21.10.	14:34	-16.1	-0.9	1.375	13 O	-0.5	29.3	4.89	0.936	0.31	0:50	-5.3	250.5	0.466
24.10.	14:51	-17.7	-1.2	1.353	15 O	-0.4	32.9	4.97	0.920	0.40	0:56	-5.9	258.7	0.467
27.10.	15:09	-19.3	-1.5	1.327	16 O	-0.3	36.7	5.06	0.901	0.50	1:02	-6.4	266.9	0.465
30.10.	15:27	-20.7	-1.8	1.296	18 O	-0.3	40.7	5.19	0.879	0.63	1:08	-6.8	275.3	0.461
2.11.	15:44	-21.9	-2.1	1.259	19 O	-0.3	45.1	5.34	0.853	0.79	1:14	-7.1	283.9	0.454
5.11.	16:02	-23.0	-2.3	1.218	20 O	-0.3	49.9	5.52	0.822	0.98	1:20	-7.3	292.9	0.445
8.11.	16:19	-23.9	-2.5	1.172	21 O	-0.3	55.2	5.73	0.785	1.23	1:25	-7.3	302.3	0.434
11.11.	16:35	-24.7	-2.6	1.121	22 O	-0.3	61.3	5.99	0.740	1.56	1:29	-7.2	312.2	0.421
14.11.	16:50	-25.2	-2.7	1.065	22 O	-0.3	68.2	6.31	0.686	1.98	1:32	-6.9	322.8	0.407
17.11.	17:04	-25.5	-2.6	1.005	23 O	-0.3	76.4	6.69	0.618	2.56	1:34	-6.4	334.1	0.390
20.11.	17:16	-25.5	-2.5	0.941	22 O	-0.2	86.1	7.14	0.534	3.33	1:33	-5.8	346.5	0.373
23.11.	17:24	-25.3	-2.1	0.874	21 O	0.0	97.9	7.69	0.431	4.37	1:28	-4.9	0.1	0.355
26.11.	17:27	-24.9	-1.6	0.807	19 O	0.4	112.3	8.32	0.310	5.74	1:19	-3.9	15.1	0.339
29.11.	17:24	-24.1	-0.9	0.748	15 O	1.2	129.5	8.99	0.182	7.36	1:03	-2.6	31.5	0.324
2.12.	17:14	-23.0	0.0	0.702	9 O	2.6	149.6	9.57	0.069	8.91	0:40	-1.0	49.2	0.314
5.12.	16:59	-21.7	1.0	0.680	3 O	4.7	171.1	9.89	0.006	9.83	0:12	0.7	67.6	0.308
8.12.	16:42	-20.3	1.9	0.685	5 W	3.9	164.1	9.81	0.019	9.62	-0:18	2.5	86.5	0.308
11.12.	16:29	-19.2	2.6	0.717	11 W	2.0	142.5	9.37	0.103	8.40	-0:45	3.8	105.1	0.313
14.12.	16:21	-18.6	2.8	0.770	16 W	0.8	123.0	8.73	0.228	6.74	-1:06	4.6	123.0	0.324
17.12.	16:20	-18.6	2.8	0.834	19 W	0.2	106.3	8.05	0.360	5.15	-1:20	4.8	139.7	0.338
20.12.	16:25	-19.0	2.6	0.903	21 W	-0.1	92.4	7.44	0.479	3.87	-1:29	4.4	155.0	0.354
23.12.	16:34	-19.6	2.3	0.971	22 W	-0.3	80.9	6.92	0.579	2.92	-1:33	3.8	168.7	0.372
26.12.	16:46	-20.4	1.9	1.035	22 W	-0.3	71.5	6.49	0.659	2.22	-1:34	3.0	181.1	0.389
29.12.	17:00	-21.2	1.5	1.094	22 W	-0.4	63.6	6.14	0.722	1.71	-1:33	2.0	192.4	0.406

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