



Ephemeriden für Sternfreunde
von Karl-Heinz Bücke

www.buecke-info.de

Mars 2023

Datum	α	δ	b	Δ (AE)	E	mv	φ	$\varnothing$	k	q (")	l	r
1.01.	4:27	24.6	2.8	0.638	149 O	-1.2	19.1	14.66	0.973	0.40	88.1	1.564
4.01.	4:25	24.5	2.8	0.657	145 O	-1.1	21.0	14.25	0.967	0.47	89.6	1.568
7.01.	4:24	24.5	2.8	0.676	142 O	-1.0	22.7	13.84	0.961	0.54	91.0	1.572
10.01.	4:23	24.5	2.8	0.697	139 O	-0.9	24.4	13.43	0.955	0.60	92.5	1.575
13.01.	4:23	24.5	2.8	0.718	136 O	-0.8	25.9	13.03	0.950	0.65	94.0	1.579
16.01.	4:23	24.5	2.8	0.741	133 O	-0.7	27.3	12.63	0.944	0.70	95.4	1.582
19.01.	4:24	24.5	2.8	0.765	130 O	-0.6	28.5	12.24	0.939	0.74	96.9	1.585
22.01.	4:25	24.5	2.8	0.789	127 O	-0.6	29.7	11.86	0.934	0.78	98.3	1.589
25.01.	4:27	24.5	2.8	0.814	124 O	-0.5	30.7	11.49	0.930	0.81	99.8	1.592
28.01.	4:29	24.6	2.7	0.840	122 O	-0.4	31.7	11.14	0.925	0.83	101.2	1.595
31.01.	4:31	24.6	2.7	0.867	119 O	-0.3	32.5	10.80	0.921	0.85	102.6	1.598
3.02.	4:34	24.7	2.7	0.894	117 O	-0.2	33.3	10.47	0.918	0.86	104.0	1.602
6.02.	4:38	24.8	2.7	0.922	114 O	-0.1	34.0	10.16	0.915	0.87	105.4	1.605
9.02.	4:41	24.9	2.6	0.950	112 O	0.0	34.6	9.86	0.912	0.87	106.9	1.608
12.02.	4:45	25.0	2.6	0.978	110 O	0.0	35.1	9.57	0.909	0.87	108.3	1.611
15.02.	4:49	25.0	2.6	1.007	108 O	0.1	35.6	9.30	0.907	0.87	109.7	1.614
18.02.	4:53	25.1	2.5	1.036	106 O	0.2	36.0	9.04	0.905	0.86	111.1	1.616
21.02.	4:58	25.2	2.5	1.065	104 O	0.2	36.3	8.79	0.903	0.85	112.4	1.619
24.02.	5:03	25.3	2.5	1.095	102 O	0.3	36.6	8.55	0.901	0.84	113.8	1.622
27.02.	5:08	25.3	2.4	1.124	100 O	0.4	36.9	8.32	0.900	0.83	115.2	1.624
2.03.	5:13	25.4	2.4	1.154	98 O	0.4	37.1	8.11	0.899	0.82	116.6	1.627
5.03.	5:18	25.5	2.4	1.184	97 O	0.5	37.2	7.90	0.898	0.80	118.0	1.629
8.03.	5:24	25.5	2.3	1.214	95 O	0.6	37.3	7.71	0.898	0.79	119.3	1.632
11.03.	5:30	25.6	2.3	1.244	93 O	0.6	37.4	7.52	0.897	0.77	120.7	1.634
14.03.	5:36	25.6	2.3	1.274	91 O	0.7	37.4	7.34	0.897	0.75	122.0	1.636
17.03.	5:42	25.6	2.2	1.304	90 O	0.7	37.4	7.18	0.897	0.74	123.4	1.639
20.03.	5:48	25.6	2.2	1.334	88 O	0.8	37.3	7.01	0.898	0.72	124.8	1.641
23.03.	5:54	25.6	2.2	1.364	87 O	0.8	37.3	6.86	0.898	0.70	126.1	1.643
26.03.	6:01	25.6	2.1	1.394	85 O	0.9	37.2	6.71	0.898	0.68	127.5	1.645
29.03.	6:07	25.5	2.1	1.424	84 O	0.9	37.1	6.57	0.899	0.66	128.8	1.647
1.04.	6:14	25.5	2.1	1.454	82 O	1.0	36.9	6.44	0.900	0.65	130.1	1.648
4.04.	6:20	25.4	2.0	1.483	81 O	1.0	36.7	6.31	0.901	0.63	131.5	1.650
7.04.	6:27	25.3	2.0	1.512	79 O	1.1	36.5	6.19	0.902	0.61	132.8	1.652
10.04.	6:34	25.2	2.0	1.541	78 O	1.1	36.3	6.07	0.903	0.59	134.1	1.653
13.04.	6:41	25.0	1.9	1.570	77 O	1.1	36.1	5.96	0.904	0.57	135.5	1.655
16.04.	6:48	24.9	1.9	1.599	75 O	1.2	35.9	5.85	0.905	0.55	136.8	1.656
19.04.	6:55	24.7	1.9	1.627	74 O	1.2	35.6	5.75	0.907	0.54	138.1	1.657
22.04.	7:02	24.5	1.9	1.656	73 O	1.2	35.3	5.65	0.908	0.52	139.4	1.659
25.04.	7:09	24.3	1.8	1.684	71 O	1.3	35.0	5.56	0.910	0.50	140.8	1.660
28.04.	7:16	24.1	1.8	1.711	70 O	1.3	34.7	5.47	0.911	0.49	142.1	1.661



Datum	α	δ	b	Δ (AE)	E	mv	φ	$\varnothing$	k	q (")	l	r
1.05.	7:23	23.8	1.8	1.738	69 O	1.3	34.4	5.38	0.913	0.47	143.4	1.662
4.05.	7:30	23.6	1.7	1.765	67 O	1.4	34.0	5.30	0.914	0.45	144.7	1.662
7.05.	7:37	23.3	1.7	1.792	66 O	1.4	33.7	5.22	0.916	0.44	146.0	1.663
10.05.	7:44	23.0	1.7	1.818	65 O	1.4	33.3	5.15	0.918	0.42	147.3	1.664
13.05.	7:51	22.6	1.6	1.844	64 O	1.4	33.0	5.08	0.920	0.41	148.7	1.664
16.05.	7:59	22.3	1.6	1.870	62 O	1.5	32.6	5.01	0.921	0.39	150.0	1.665
19.05.	8:06	21.9	1.6	1.895	61 O	1.5	32.2	4.94	0.923	0.38	151.3	1.665
22.05.	8:13	21.5	1.6	1.920	60 O	1.5	31.8	4.88	0.925	0.37	152.6	1.666
25.05.	8:20	21.1	1.5	1.944	59 O	1.5	31.4	4.81	0.927	0.35	153.9	1.666
28.05.	8:27	20.7	1.5	1.968	58 O	1.6	31.0	4.76	0.929	0.34	155.2	1.666
31.05.	8:34	20.2	1.5	1.992	57 O	1.6	30.5	4.70	0.931	0.33	156.5	1.666
3.06.	8:42	19.7	1.5	2.015	56 O	1.6	30.1	4.64	0.932	0.31	157.8	1.666
6.06.	8:49	19.3	1.4	2.038	54 O	1.6	29.7	4.59	0.934	0.30	159.1	1.666
9.06.	8:56	18.8	1.4	2.060	53 O	1.6	29.2	4.54	0.936	0.29	160.5	1.666
12.06.	9:03	18.2	1.4	2.082	52 O	1.6	28.8	4.50	0.938	0.28	161.8	1.665
15.06.	9:10	17.7	1.3	2.104	51 O	1.7	28.3	4.45	0.940	0.27	163.1	1.665
18.06.	9:17	17.1	1.3	2.125	50 O	1.7	27.9	4.41	0.942	0.26	164.4	1.664
21.06.	9:24	16.6	1.3	2.145	49 O	1.7	27.4	4.36	0.944	0.24	165.7	1.664
24.06.	9:31	16.0	1.3	2.165	48 O	1.7	26.9	4.32	0.946	0.23	167.0	1.663
27.06.	9:38	15.4	1.2	2.185	47 O	1.7	26.4	4.28	0.948	0.22	168.3	1.662
30.06.	9:45	14.8	1.2	2.204	46 O	1.7	26.0	4.25	0.950	0.21	169.6	1.662
3.07.	9:52	14.1	1.2	2.223	45 O	1.7	25.5	4.21	0.951	0.20	171.0	1.661
6.07.	9:59	13.5	1.2	2.241	44 O	1.7	25.0	4.18	0.953	0.20	172.3	1.660
9.07.	10:06	12.8	1.1	2.258	43 O	1.7	24.5	4.14	0.955	0.19	173.6	1.658
12.07.	10:13	12.2	1.1	2.275	42 O	1.7	24.0	4.11	0.957	0.18	174.9	1.657
15.07.	10:20	11.5	1.1	2.292	40 O	1.8	23.5	4.08	0.959	0.17	176.2	1.656
18.07.	10:27	10.8	1.0	2.308	39 O	1.8	23.0	4.06	0.960	0.16	177.6	1.655
21.07.	10:34	10.1	1.0	2.324	38 O	1.8	22.5	4.03	0.962	0.15	178.9	1.653
24.07.	10:41	9.4	1.0	2.339	37 O	1.8	21.9	4.00	0.964	0.14	180.2	1.652
27.07.	10:48	8.7	1.0	2.353	36 O	1.8	21.4	3.98	0.965	0.14	181.6	1.650
30.07.	10:55	7.9	0.9	2.367	35 O	1.8	20.9	3.95	0.967	0.13	182.9	1.648
2.08.	11:01	7.2	0.9	2.381	34 O	1.8	20.4	3.93	0.969	0.12	184.2	1.647
5.08.	11:08	6.4	0.9	2.394	33 O	1.8	19.8	3.91	0.970	0.12	185.6	1.645
8.08.	11:15	5.7	0.9	2.407	32 O	1.8	19.3	3.89	0.972	0.11	186.9	1.643
11.08.	11:22	4.9	0.8	2.418	31 O	1.8	18.8	3.87	0.973	0.10	188.3	1.641
14.08.	11:29	4.2	0.8	2.430	30 O	1.8	18.2	3.85	0.975	0.10	189.6	1.639
17.08.	11:36	3.4	0.8	2.441	29 O	1.8	17.7	3.83	0.976	0.09	191.0	1.636
20.08.	11:43	2.6	0.7	2.451	28 O	1.8	17.2	3.82	0.978	0.08	192.3	1.634
23.08.	11:50	1.8	0.7	2.461	27 O	1.8	16.6	3.80	0.979	0.08	193.7	1.632
26.08.	11:57	1.0	0.7	2.470	26 O	1.8	16.1	3.79	0.980	0.07	195.1	1.629
29.08.	12:04	0.2	0.7	2.479	26 O	1.8	15.5	3.78	0.982	0.07	196.4	1.627



Datum	α	δ	b	Δ (AE)	E	mv	φ	$\emptyset$	k	q (")	l	r
1.09.	12:11	-0.6	0.6	2.487	25 O	1.8	15.0	3.76	0.983	0.06	197.8	1.624
4.09.	12:18	-1.3	0.6	2.495	24 O	1.7	14.4	3.75	0.984	0.06	199.2	1.622
7.09.	12:25	-2.1	0.6	2.502	23 O	1.7	13.8	3.74	0.985	0.05	200.6	1.619
10.09.	12:32	-2.9	0.6	2.509	22 O	1.7	13.3	3.73	0.987	0.05	202.0	1.616
13.09.	12:39	-3.7	0.5	2.515	21 O	1.7	12.7	3.72	0.988	0.05	203.4	1.613
16.09.	12:47	-4.5	0.5	2.521	20 O	1.7	12.2	3.71	0.989	0.04	204.8	1.611
19.09.	12:54	-5.3	0.5	2.526	19 O	1.7	11.6	3.71	0.990	0.04	206.2	1.608
22.09.	13:01	-6.1	0.4	2.531	18 O	1.7	11.0	3.70	0.991	0.03	207.6	1.605
25.09.	13:09	-6.9	0.4	2.535	17 O	1.7	10.5	3.69	0.992	0.03	209.0	1.602
28.09.	13:16	-7.7	0.4	2.539	16 O	1.7	9.9	3.69	0.993	0.03	210.4	1.598
1.10.	13:23	-8.4	0.4	2.542	15 O	1.7	9.3	3.68	0.993	0.02	211.8	1.595
4.10.	13:31	-9.2	0.3	2.544	14 O	1.7	8.7	3.68	0.994	0.02	213.3	1.592
7.10.	13:38	-10.0	0.3	2.546	13 O	1.6	8.2	3.68	0.995	0.02	214.7	1.589
10.10.	13:46	-10.7	0.3	2.548	12 O	1.6	7.6	3.67	0.996	0.02	216.1	1.585
13.10.	13:54	-11.4	0.2	2.549	11 O	1.6	7.0	3.67	0.996	0.01	217.6	1.582
16.10.	14:01	-12.2	0.2	2.550	10 O	1.6	6.4	3.67	0.997	0.01	219.0	1.578
19.10.	14:09	-12.9	0.2	2.550	9 O	1.6	5.9	3.67	0.997	0.01	220.5	1.575
22.10.	14:17	-13.6	0.2	2.550	8 O	1.6	5.3	3.67	0.998	0.01	222.0	1.571
25.10.	14:25	-14.3	0.1	2.549	7 O	1.6	4.7	3.67	0.998	0.01	223.4	1.568
28.10.	14:33	-15.0	0.1	2.548	6 O	1.5	4.1	3.67	0.999	0.00	224.9	1.564
31.10.	14:41	-15.6	0.1	2.546	6 O	1.5	3.5	3.68	0.999	0.00	226.4	1.561
3.11.	14:49	-16.3	0.0	2.544	5 O	1.5	3.0	3.68	0.999	0.00	227.9	1.557
6.11.	14:58	-16.9	0.0	2.541	4 O	1.5	2.4	3.68	1.000	0.00	229.4	1.553
9.11.	15:06	-17.5	0.0	2.538	3 O	1.5	1.8	3.69	1.000	0.00	230.9	1.549
12.11.	15:15	-18.1	-0.1	2.535	2 O	1.5	1.2	3.69	1.000	0.00	232.4	1.546
15.11.	15:23	-18.7	-0.1	2.531	1 O	1.4	0.6	3.70	1.000	0.00	234.0	1.542
18.11.	15:32	-19.2	-0.1	2.527	0 O	1.4	0.1	3.70	1.000	0.00	235.5	1.538
21.11.	15:41	-19.8	-0.1	2.522	1 W	1.4	0.5	3.71	1.000	0.00	237.0	1.534
24.11.	15:49	-20.3	-0.2	2.517	2 W	1.4	1.1	3.72	1.000	0.00	238.6	1.530
27.11.	15:58	-20.7	-0.2	2.511	3 W	1.4	1.7	3.73	1.000	0.00	240.1	1.526
30.11.	16:07	-21.2	-0.2	2.506	4 W	1.4	2.3	3.74	1.000	0.00	241.7	1.522
3.12.	16:16	-21.6	-0.3	2.499	4 W	1.4	2.9	3.74	0.999	0.00	243.3	1.518
6.12.	16:25	-22.0	-0.3	2.493	5 W	1.4	3.4	3.75	0.999	0.00	244.8	1.515
9.12.	16:35	-22.3	-0.3	2.486	6 W	1.4	4.0	3.76	0.999	0.00	246.4	1.511
12.12.	16:44	-22.7	-0.4	2.479	7 W	1.4	4.6	3.78	0.998	0.01	248.0	1.507
15.12.	16:53	-23.0	-0.4	2.472	8 W	1.4	5.2	3.79	0.998	0.01	249.6	1.503
18.12.	17:03	-23.2	-0.4	2.464	9 W	1.4	5.8	3.80	0.997	0.01	251.2	1.499
21.12.	17:12	-23.4	-0.4	2.456	10 W	1.4	6.3	3.81	0.997	0.01	252.9	1.495
24.12.	17:22	-23.6	-0.5	2.447	11 W	1.4	6.9	3.82	0.996	0.01	254.5	1.491
27.12.	17:32	-23.8	-0.5	2.439	11 W	1.4	7.5	3.84	0.996	0.02	256.1	1.487
30.12.	17:41	-23.9	-0.5	2.430	12 W	1.4	8.0	3.85	0.995	0.02	257.8	1.483

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)

Heliozentrische Koordinaten:

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

2018-01-07