



Ephemeriden für Sternfreunde
von Karl-Heinz Bücke

www.buecke-info.de

Mars 2016

Datum	α	δ	b	Δ (AE)	E	mv	φ	\varnothing	k	q (")	l	r
1.01.	13:48	-9.6	1.5	1.684	71 W	1.3	34.2	5.56	0.913	0.48	174.3	1.658
4.01.	13:54	-10.1	1.5	1.655	73 W	1.2	34.6	5.66	0.912	0.50	175.7	1.656
7.01.	14:00	-10.7	1.5	1.625	74 W	1.2	34.9	5.76	0.910	0.52	177.0	1.655
10.01.	14:07	-11.3	1.5	1.595	76 W	1.1	35.2	5.87	0.909	0.54	178.3	1.654
13.01.	14:13	-11.8	1.5	1.565	77 W	1.1	35.5	5.98	0.907	0.55	179.6	1.652
16.01.	14:19	-12.3	1.5	1.535	79 W	1.1	35.7	6.10	0.906	0.57	181.0	1.651
19.01.	14:25	-12.9	1.5	1.505	80 W	1.0	36.0	6.22	0.905	0.59	182.3	1.649
22.01.	14:31	-13.4	1.5	1.474	82 W	1.0	36.2	6.35	0.903	0.61	183.6	1.647
25.01.	14:37	-13.8	1.5	1.444	83 W	0.9	36.4	6.48	0.902	0.63	185.0	1.645
28.01.	14:43	-14.3	1.5	1.413	85 W	0.9	36.6	6.62	0.901	0.65	186.3	1.643
31.01.	14:49	-14.8	1.5	1.382	86 W	0.8	36.8	6.77	0.900	0.67	187.7	1.641
3.02.	14:55	-15.2	1.5	1.352	88 W	0.8	36.9	6.93	0.900	0.69	189.0	1.639
6.02.	15:01	-15.6	1.5	1.321	89 W	0.7	37.0	7.09	0.899	0.71	190.4	1.637
9.02.	15:07	-16.0	1.4	1.290	91 W	0.7	37.1	7.26	0.899	0.74	191.7	1.635
12.02.	15:12	-16.4	1.4	1.259	92 W	0.6	37.2	7.43	0.898	0.75	193.1	1.633
15.02.	15:18	-16.8	1.4	1.229	94 W	0.6	37.2	7.62	0.898	0.77	194.5	1.630
18.02.	15:23	-17.2	1.4	1.198	96 W	0.5	37.2	7.81	0.898	0.79	195.8	1.628
21.02.	15:29	-17.5	1.4	1.168	97 W	0.5	37.1	8.01	0.899	0.81	197.2	1.625
24.02.	15:34	-17.8	1.4	1.138	99 W	0.4	37.0	8.23	0.899	0.83	198.6	1.623
27.02.	15:39	-18.1	1.3	1.108	101 W	0.3	36.9	8.45	0.900	0.85	200.0	1.620
1.03.	15:44	-18.4	1.3	1.078	103 W	0.3	36.7	8.69	0.901	0.86	201.4	1.617
4.03.	15:49	-18.7	1.3	1.048	105 W	0.2	36.5	8.93	0.902	0.87	202.8	1.614
7.03.	15:53	-19.0	1.3	1.019	107 W	0.1	36.2	9.19	0.904	0.89	204.2	1.612
10.03.	15:58	-19.2	1.2	0.990	108 W	0.1	35.9	9.46	0.905	0.90	205.6	1.609
13.03.	16:02	-19.5	1.2	0.961	110 W	0.0	35.5	9.74	0.907	0.90	207.0	1.606
16.03.	16:06	-19.7	1.2	0.933	112 W	-0.1	35.0	10.03	0.910	0.91	208.4	1.603
19.03.	16:10	-19.9	1.1	0.905	115 W	-0.2	34.5	10.34	0.912	0.91	209.8	1.599
22.03.	16:13	-20.1	1.1	0.877	117 W	-0.2	33.9	10.67	0.915	0.91	211.2	1.596
25.03.	16:16	-20.3	1.0	0.851	119 W	-0.3	33.2	11.00	0.918	0.90	212.6	1.593
28.03.	16:19	-20.5	1.0	0.824	121 W	-0.4	32.5	11.36	0.922	0.89	214.1	1.590
31.03.	16:22	-20.6	0.9	0.799	124 W	-0.5	31.7	11.72	0.926	0.87	215.5	1.586
3.04.	16:24	-20.8	0.8	0.773	126 W	-0.6	30.7	12.10	0.930	0.85	217.0	1.583
6.04.	16:26	-20.9	0.8	0.749	128 W	-0.7	29.7	12.50	0.934	0.82	218.4	1.580
9.04.	16:27	-21.0	0.7	0.725	131 W	-0.8	28.6	12.90	0.939	0.79	219.9	1.576
12.04.	16:28	-21.2	0.6	0.703	134 W	-0.9	27.4	13.32	0.944	0.75	221.3	1.573
15.04.	16:29	-21.3	0.5	0.681	137 W	-1.0	26.1	13.75	0.949	0.70	222.8	1.569
18.04.	16:29	-21.4	0.4	0.660	139 W	-1.1	24.6	14.19	0.954	0.65	224.3	1.565
21.04.	16:28	-21.5	0.3	0.640	142 W	-1.2	23.1	14.63	0.960	0.59	225.8	1.562
24.04.	16:27	-21.5	0.2	0.621	146 W	-1.2	21.4	15.07	0.966	0.52	227.3	1.558
27.04.	16:26	-21.6	0.1	0.603	149 W	-1.3	19.6	15.51	0.971	0.45	228.8	1.554
30.04.	16:24	-21.7	-0.1	0.587	152 W	-1.4	17.7	15.95	0.976	0.38	230.3	1.551



Datum	α	δ	b	Δ (AE)	E	mv	φ	\varnothing	k	q (")	l	r
3.05.	16:22	-21.7	-0.2	0.572	156 W	-1.5	15.6	16.37	0.982	0.30	231.8	1.547
6.05.	16:19	-21.8	-0.3	0.558	159 W	-1.6	13.5	16.78	0.986	0.23	233.3	1.543
9.05.	16:16	-21.8	-0.5	0.546	163 W	-1.7	11.2	17.15	0.990	0.16	234.8	1.539
12.05.	16:12	-21.8	-0.6	0.535	166 W	-1.8	8.9	17.50	0.994	0.10	236.4	1.535
15.05.	16:08	-21.8	-0.8	0.526	170 W	-1.9	6.4	17.81	0.997	0.06	237.9	1.531
18.05.	16:04	-21.7	-0.9	0.518	174 W	-2.0	3.9	18.07	0.999	0.02	239.5	1.528
21.05.	16:00	-21.7	-1.1	0.512	178 W	-2.0	1.5	18.29	1.000	0.00	241.0	1.524
24.05.	15:55	-21.6	-1.2	0.507	178 O	-2.1	1.6	18.45	1.000	0.00	242.6	1.520
27.05.	15:50	-21.6	-1.4	0.505	174 O	-2.0	4.1	18.55	0.999	0.02	244.2	1.516
30.05.	15:46	-21.5	-1.5	0.503	170 O	-2.0	6.7	18.60	0.997	0.06	245.8	1.512
2.06.	15:42	-21.4	-1.7	0.504	166 O	-2.0	9.3	18.59	0.993	0.12	247.4	1.508
5.06.	15:37	-21.3	-1.8	0.505	162 O	-1.9	11.8	18.52	0.989	0.20	249.0	1.504
8.06.	15:34	-21.2	-1.9	0.509	159 O	-1.9	14.3	18.40	0.985	0.29	250.6	1.500
11.06.	15:30	-21.1	-2.1	0.513	155 O	-1.8	16.7	18.23	0.979	0.39	252.2	1.496
14.06.	15:27	-21.1	-2.2	0.519	151 O	-1.8	19.0	18.02	0.973	0.49	253.8	1.492
17.06.	15:25	-21.0	-2.3	0.526	148 O	-1.7	21.3	17.78	0.966	0.61	255.4	1.488
20.06.	15:22	-21.0	-2.4	0.535	145 O	-1.6	23.4	17.51	0.959	0.72	257.1	1.485
23.06.	15:21	-21.0	-2.4	0.544	141 O	-1.6	25.4	17.21	0.952	0.83	258.7	1.481
26.06.	15:20	-21.0	-2.5	0.554	138 O	-1.5	27.3	16.89	0.944	0.94	260.4	1.477
29.06.	15:19	-21.0	-2.6	0.565	135 O	-1.5	29.0	16.56	0.937	1.04	262.1	1.473
2.07.	15:19	-21.1	-2.6	0.577	132 O	-1.4	30.7	16.22	0.930	1.14	263.8	1.469
5.07.	15:20	-21.2	-2.7	0.590	130 O	-1.3	32.2	15.88	0.923	1.22	265.4	1.466
8.07.	15:21	-21.3	-2.7	0.603	127 O	-1.3	33.6	15.53	0.916	1.30	267.1	1.462
11.07.	15:23	-21.4	-2.8	0.616	125 O	-1.2	35.0	15.19	0.910	1.37	268.8	1.458
14.07.	15:25	-21.6	-2.8	0.630	122 O	-1.1	36.2	14.85	0.904	1.43	270.6	1.455
17.07.	15:27	-21.7	-2.8	0.645	120 O	-1.1	37.3	14.51	0.898	1.48	272.3	1.451
20.07.	15:30	-21.9	-2.8	0.660	118 O	-1.0	38.3	14.19	0.892	1.53	274.0	1.448
23.07.	15:33	-22.1	-2.9	0.675	116 O	-0.9	39.3	13.87	0.887	1.57	275.7	1.444
26.07.	15:37	-22.3	-2.9	0.691	114 O	-0.9	40.1	13.56	0.882	1.60	277.5	1.441
29.07.	15:41	-22.6	-2.9	0.706	112 O	-0.8	40.9	13.25	0.878	1.62	279.2	1.437
1.08.	15:45	-22.8	-2.9	0.722	110 O	-0.8	41.6	12.96	0.874	1.64	281.0	1.434
4.08.	15:50	-23.1	-2.9	0.738	108 O	-0.7	42.3	12.68	0.870	1.65	282.8	1.431
7.08.	15:55	-23.3	-2.9	0.755	107 O	-0.7	42.9	12.40	0.867	1.66	284.6	1.428
10.08.	16:01	-23.5	-2.9	0.771	105 O	-0.6	43.4	12.14	0.863	1.66	286.3	1.425
13.08.	16:06	-23.8	-2.8	0.788	104 O	-0.6	43.8	11.88	0.861	1.66	288.1	1.422
16.08.	16:12	-24.0	-2.8	0.804	102 O	-0.5	44.3	11.64	0.858	1.65	289.9	1.419
19.08.	16:19	-24.3	-2.8	0.821	101 O	-0.5	44.6	11.40	0.856	1.64	291.8	1.416
22.08.	16:25	-24.5	-2.8	0.838	99 O	-0.4	44.9	11.17	0.854	1.63	293.6	1.413
25.08.	16:32	-24.7	-2.8	0.855	98 O	-0.4	45.2	10.95	0.852	1.62	295.4	1.411
28.08.	16:39	-24.9	-2.8	0.872	97 O	-0.3	45.4	10.74	0.851	1.60	297.2	1.408
31.08.	16:46	-25.1	-2.7	0.889	95 O	-0.3	45.6	10.53	0.850	1.58	299.1	1.406



Datum	α	δ	b	Δ (AE)	E	mv	φ	\emptyset	k	q (")	l	r
3.09.	16:53	-25.3	-2.7	0.906	94 O	-0.3	45.8	10.33	0.849	1.56	300.9	1.404
6.09.	17:01	-25.5	-2.7	0.923	93 O	-0.2	45.9	10.14	0.848	1.54	302.8	1.401
9.09.	17:09	-25.6	-2.7	0.940	92 O	-0.2	46.0	9.96	0.847	1.52	304.6	1.399
12.09.	17:17	-25.7	-2.6	0.957	91 O	-0.2	46.1	9.78	0.847	1.50	306.5	1.397
15.09.	17:25	-25.8	-2.6	0.974	90 O	-0.1	46.1	9.61	0.847	1.47	308.3	1.395
18.09.	17:33	-25.9	-2.6	0.992	89 O	-0.1	46.1	9.44	0.847	1.45	310.2	1.394
21.09.	17:41	-25.9	-2.5	1.009	87 O	0.0	46.1	9.28	0.847	1.42	312.1	1.392
24.09.	17:50	-25.9	-2.5	1.026	86 O	0.0	46.1	9.12	0.847	1.40	314.0	1.390
27.09.	17:59	-25.9	-2.5	1.044	85 O	0.0	46.0	8.97	0.847	1.37	315.8	1.389
30.09.	18:07	-25.8	-2.4	1.061	85 O	0.1	45.9	8.82	0.848	1.34	317.7	1.388
3.10.	18:16	-25.8	-2.4	1.079	84 O	0.1	45.8	8.68	0.848	1.32	319.6	1.386
6.10.	18:25	-25.6	-2.3	1.096	83 O	0.1	45.7	8.54	0.849	1.29	321.5	1.385
9.10.	18:34	-25.5	-2.3	1.114	82 O	0.1	45.6	8.40	0.850	1.26	323.4	1.384
12.10.	18:43	-25.3	-2.3	1.131	81 O	0.2	45.4	8.27	0.851	1.23	325.3	1.384
15.10.	18:52	-25.1	-2.2	1.149	80 O	0.2	45.2	8.15	0.852	1.20	327.2	1.383
18.10.	19:01	-24.8	-2.2	1.167	79 O	0.2	45.0	8.02	0.853	1.18	329.1	1.382
21.10.	19:11	-24.6	-2.1	1.185	78 O	0.3	44.8	7.90	0.855	1.15	331.0	1.382
24.10.	19:20	-24.2	-2.1	1.203	77 O	0.3	44.6	7.78	0.856	1.12	332.9	1.382
27.10.	19:29	-23.9	-2.0	1.221	76 O	0.3	44.4	7.67	0.857	1.09	334.8	1.381
30.10.	19:38	-23.5	-2.0	1.239	76 O	0.4	44.1	7.56	0.859	1.07	336.7	1.381
2.11.	19:48	-23.1	-1.9	1.257	75 O	0.4	43.9	7.45	0.860	1.04	338.6	1.381
5.11.	19:57	-22.6	-1.9	1.275	74 O	0.4	43.6	7.34	0.862	1.01	340.5	1.382
8.11.	20:06	-22.1	-1.8	1.294	73 O	0.4	43.3	7.23	0.864	0.98	342.4	1.382
11.11.	20:15	-21.6	-1.8	1.312	72 O	0.5	43.0	7.13	0.866	0.96	344.3	1.382
14.11.	20:24	-21.0	-1.7	1.331	71 O	0.5	42.7	7.03	0.867	0.93	346.2	1.383
17.11.	20:34	-20.5	-1.7	1.349	71 O	0.5	42.4	6.94	0.869	0.91	348.1	1.384
20.11.	20:43	-19.8	-1.6	1.368	70 O	0.5	42.1	6.84	0.871	0.88	350.0	1.385
23.11.	20:52	-19.2	-1.6	1.387	69 O	0.6	41.7	6.75	0.873	0.86	351.9	1.386
26.11.	21:01	-18.5	-1.5	1.406	68 O	0.6	41.4	6.66	0.875	0.83	353.8	1.387
29.11.	21:10	-17.8	-1.5	1.425	67 O	0.6	41.0	6.57	0.877	0.81	355.7	1.388
2.12.	21:19	-17.1	-1.4	1.444	67 O	0.6	40.7	6.48	0.879	0.78	357.6	1.389
5.12.	21:28	-16.4	-1.4	1.463	66 O	0.7	40.3	6.40	0.881	0.76	359.5	1.391
8.12.	21:36	-15.6	-1.3	1.483	65 O	0.7	39.9	6.31	0.883	0.74	361.4	1.392
11.12.	21:45	-14.8	-1.2	1.502	64 O	0.7	39.5	6.23	0.886	0.71	363.3	1.394
14.12.	21:54	-14.0	-1.2	1.522	64 O	0.7	39.1	6.15	0.888	0.69	365.2	1.396
17.12.	22:03	-13.2	-1.1	1.541	63 O	0.8	38.7	6.07	0.890	0.67	367.1	1.398
20.12.	22:11	-12.3	-1.1	1.561	62 O	0.8	38.3	6.00	0.892	0.65	369.0	1.400
23.12.	22:20	-11.5	-1.0	1.581	61 O	0.8	37.9	5.92	0.894	0.62	370.9	1.402
26.12.	22:28	-10.6	-1.0	1.601	60 O	0.8	37.5	5.85	0.897	0.60	372.8	1.404
29.12.	22:37	-9.7	-0.9	1.620	60 O	0.9	37.1	5.78	0.899	0.58	374.7	1.407

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.