Ephemeriden für Sternfreunde
von Karl-Heinz Bücke

www.buecke-info.de

Venus 2018

Datum	α	δ	b	Δ (AE)	E	mv	φ	∅	k	q (")	Δα(h:m)	Δδ(°)	l	r
1.01.	18:37	-23.6	-0.5	1.709	2 W	-3.9	2.7	9.76	0.999	0.01	-0:08	-0.6	275.9	0.727
4.01.	18:53	-23.4	-0.6	1.710	1 W	-3.9	1.9	9.75	1.000	0.00	-0:05	-0.7	280.6	0.728
7.01.	19:10	-23.2	-0.7	1.711	1 W	-3.9	1.2	9.75	1.000	0.00	-0:02	-0.8	285.4	0.728
10.01.	19:26	-22.7	-0.8	1.711	1 O	-3.9	1.1	9.75	1.000	0.00	0:01	-0.8	290.1	0.728
13.01.	19:42	-22.2	-0.9	1.711	1 O	-3.9	1.7	9.75	1.000	0.00	0:04	-0.7	294.8	0.728
16.01.	19:58	-21.6	-1.0	1.711	2 O	-3.9	2.5	9.75	1.000	0.00	0:08	-0.7	299.6	0.728
19.01.	20:14	-20.9	-1.1	1.710	3 O	-3.9	3.5	9.76	0.999	0.01	0:11	-0.6	304.3	0.728
22.01.	20:30	-20.1	-1.1	1.709	3 O	-3.9	4.4	9.76	0.999	0.01	0:14	-0.4	309.1	0.728
25.01.	20:45	-19.2	-1.2	1.707	4 O	-3.9	5.3	9.77	0.998	0.02	0:17	-0.2	313.8	0.728
28.01.	21:01	-18.3	-1.3	1.705	5 O	-3.9	6.3	9.78	0.997	0.03	0:20	-0.0	318.6	0.728
31.01.	21:16	-17.2	-1.3	1.703	5 O	-3.9	7.3	9.79	0.996	0.04	0:22	0.2	323.3	0.728
3.02.	21:31	-16.1	-1.4	1.701	6 O	-3.9	8.2	9.81	0.995	0.05	0:25	0.5	328.1	0.728
6.02.	21:46	-14.9	-1.4	1.698	7 O	-3.9	9.2	9.83	0.994	0.06	0:28	0.8	332.8	0.728
9.02.	22:00	-13.7	-1.4	1.694	8 O	-3.9	10.2	9.84	0.992	0.08	0:31	1.1	337.6	0.728
12.02.	22:15	-12.4	-1.5	1.691	8 O	-3.9	11.2	9.87	0.991	0.09	0:33	1.4	342.3	0.728
15.02.	22:29	-11.0	-1.5	1.687	9 O	-3.9	12.2	9.89	0.989	0.11	0:36	1.8	347.1	0.727
18.02.	22:43	-9.6	-1.5	1.682	10 O	-3.9	13.2	9.92	0.987	0.13	0:38	2.1	351.8	0.727
21.02.	22:57	-8.2	-1.4	1.677	10 O	-3.9	14.2	9.94	0.985	0.15	0:41	2.5	356.6	0.727
24.02.	23:11	-6.7	-1.4	1.672	11 O	-3.9	15.2	9.97	0.983	0.17	0:43	2.8	1.4	0.726
27.02.	23:25	-5.2	-1.4	1.667	12 O	-3.9	16.2	10.01	0.980	0.20	0:46	3.2	6.2	0.726
2.03.	23:39	-3.7	-1.4	1.661	13 O	-3.9	17.2	10.04	0.978	0.22	0:48	3.6	10.9	0.726
5.03.	23:53	-2.2	-1.3	1.654	13 O	-3.9	18.2	10.08	0.975	0.25	0:51	4.0	15.7	0.725
8.03.	0:06	-0.6	-1.2	1.648	14 O	-3.9	19.3	10.12	0.972	0.28	0:53	4.3	20.5	0.725
11.03.	0:20	0.9	-1.2	1.640	15 O	-3.9	20.3	10.17	0.969	0.32	0:56	4.7	25.3	0.725
14.03.	0:33	2.5	-1.1	1.633	15 O	-3.9	21.4	10.22	0.966	0.35	0:58	5.1	30.1	0.724
17.03.	0:47	4.0	-1.0	1.625	16 O	-3.9	22.5	10.27	0.962	0.39	1:01	5.4	34.9	0.724
20.03.	1:01	5.5	-0.9	1.616	17 O	-3.9	23.5	10.32	0.958	0.43	1:03	5.8	39.7	0.723
23.03.	1:14	7.0	-0.8	1.607	18 O	-3.9	24.6	10.38	0.955	0.47	1:06	6.1	44.5	0.723
26.03.	1:28	8.5	-0.7	1.598	18 O	-3.9	25.7	10.44	0.951	0.52	1:09	6.4	49.3	0.723
29.03.	1:42	10.0	-0.6	1.588	19 O	-3.9	26.8	10.50	0.946	0.56	1:12	6.7	54.1	0.722
1.04.	1:56	11.4	-0.5	1.578	20 O	-3.9	27.9	10.57	0.942	0.62	1:15	6.9	58.9	0.722
4.04.	2:10	12.7	-0.4	1.567	21 O	-3.9	29.1	10.64	0.937	0.67	1:18	7.2	63.7	0.721
7.04.	2:24	14.1	-0.2	1.556	21 O	-3.9	30.2	10.72	0.932	0.73	1:21	7.3	68.6	0.721
10.04.	2:38	15.4	-0.1	1.545	22 O	-3.9	31.3	10.80	0.927	0.79	1:24	7.5	73.4	0.721
13.04.	2:53	16.6	0.0	1.532	23 O	-3.9	32.5	10.88	0.922	0.85	1:28	7.6	78.2	0.720
16.04.	3:07	17.7	0.2	1.520	23 O	-3.9	33.7	10.97	0.916	0.92	1:31	7.7	83.1	0.720
19.04.	3:22	18.8	0.3	1.507	24 O	-3.9	34.8	11.07	0.910	0.99	1:35	7.8	87.9	0.720
22.04.	3:37	19.9	0.4	1.493	25 O	-3.9	36.0	11.17	0.904	1.07	1:39	7.8	92.8	0.720
25.04.	3:52	20.8	0.6	1.480	26 O	-3.9	37.2	11.27	0.898	1.15	1:42	7.7	97.6	0.719
28.04.	4:07	21.7	0.7	1.465	26 O	-3.9	38.4	11.38	0.892	1.23	1:46	7.6	102.5	0.719

Venus 2018

Datum	α	δ	b	Δ (AE)	E	mv	φ	∅	k	q (")	Δα(h:m)	Δδ(°)	l	r
1.05.	4:22	22.4	0.9	1.450	27 O	-3.9	39.7	11.50	0.885	1.32	1:50	7.4	107.3	0.719
4.05.	4:38	23.1	1.0	1.435	28 O	-3.9	40.9	11.62	0.878	1.42	1:54	7.2	112.2	0.719
7.05.	4:54	23.7	1.1	1.419	29 O	-3.9	42.1	11.75	0.871	1.52	1:58	7.0	117.1	0.719
10.05.	5:09	24.2	1.2	1.403	29 O	-3.9	43.4	11.89	0.863	1.62	2:02	6.6	121.9	0.718
13.05.	5:25	24.5	1.3	1.386	30 O	-4.0	44.6	12.03	0.856	1.74	2:06	6.2	126.8	0.718
16.05.	5:41	24.8	1.5	1.369	31 O	-4.0	45.9	12.18	0.848	1.85	2:10	5.8	131.7	0.718
19.05.	5:57	25.0	1.6	1.352	31 O	-4.0	47.2	12.34	0.840	1.98	2:14	5.3	136.6	0.718
22.05.	6:12	25.1	1.7	1.334	32 O	-4.0	48.5	12.51	0.832	2.11	2:18	4.7	141.4	0.718
25.05.	6:28	25.0	1.7	1.316	33 O	-4.0	49.8	12.68	0.823	2.24	2:22	4.1	146.3	0.719
28.05.	6:44	24.9	1.8	1.297	33 O	-4.0	51.1	12.86	0.814	2.39	2:25	3.4	151.2	0.719
31.05.	7:00	24.6	1.9	1.278	34 O	-4.0	52.4	13.06	0.805	2.54	2:29	2.7	156.1	0.719
3.06.	7:15	24.2	1.9	1.258	35 O	-4.0	53.7	13.26	0.796	2.70	2:32	2.0	160.9	0.719
6.06.	7:30	23.8	2.0	1.238	36 O	-4.0	55.0	13.47	0.787	2.87	2:35	1.2	165.8	0.719
9.06.	7:46	23.2	2.0	1.218	36 O	-4.0	56.4	13.69	0.777	3.05	2:38	0.3	170.7	0.719
12.06.	8:01	22.6	2.0	1.197	37 O	-4.0	57.7	13.93	0.767	3.24	2:40	-0.6	175.5	0.720
15.06.	8:15	21.8	2.0	1.177	37 O	-4.0	59.1	14.18	0.757	3.44	2:43	-1.4	180.4	0.720
18.06.	8:30	21.0	2.0	1.155	38 O	-4.0	60.4	14.44	0.747	3.66	2:45	-2.4	185.3	0.720
21.06.	8:44	20.1	2.0	1.134	39 O	-4.0	61.8	14.71	0.736	3.88	2:47	-3.3	190.1	0.721
24.06.	8:58	19.1	1.9	1.112	39 O	-4.0	63.2	15.00	0.726	4.12	2:48	-4.3	194.9	0.721
27.06.	9:12	18.1	1.9	1.090	40 O	-4.0	64.6	15.30	0.715	4.37	2:50	-5.2	199.8	0.721
30.06.	9:26	17.0	1.8	1.068	40 O	-4.1	66.0	15.62	0.704	4.63	2:51	-6.2	204.6	0.722
3.07.	9:39	15.8	1.7	1.045	41 O	-4.1	67.4	15.96	0.692	4.91	2:52	-7.2	209.4	0.722
6.07.	9:52	14.6	1.6	1.022	42 O	-4.1	68.8	16.31	0.681	5.21	2:52	-8.1	214.3	0.723
9.07.	10:05	13.3	1.5	0.999	42 O	-4.1	70.3	16.69	0.669	5.53	2:53	-9.1	219.1	0.723
12.07.	10:18	12.0	1.4	0.976	43 O	-4.1	71.7	17.08	0.657	5.86	2:53	-10.0	223.9	0.723
15.07.	10:30	10.6	1.2	0.953	43 O	-4.1	73.2	17.50	0.645	6.22	2:54	-10.9	228.7	0.724
18.07.	10:43	9.3	1.1	0.930	43 O	-4.1	74.7	17.94	0.632	6.60	2:54	-11.8	233.5	0.724
21.07.	10:55	7.8	0.9	0.906	44 O	-4.1	76.2	18.41	0.619	7.01	2:54	-12.7	238.3	0.725
24.07.	11:06	6.4	0.7	0.882	44 O	-4.2	77.7	18.91	0.606	7.44	2:54	-13.5	243.0	0.725
27.07.	11:18	5.0	0.5	0.858	45 O	-4.2	79.3	19.43	0.593	7.91	2:53	-14.3	247.8	0.725
30.07.	11:29	3.5	0.2	0.835	45 O	-4.2	80.9	19.99	0.579	8.41	2:53	-15.1	252.6	0.726
2.08.	11:41	2.0	0.0	0.811	45 O	-4.2	82.5	20.58	0.566	8.94	2:53	-15.8	257.3	0.726
5.08.	11:52	0.5	-0.3	0.787	45 O	-4.2	84.1	21.21	0.551	9.52	2:52	-16.5	262.1	0.726
8.08.	12:02	-0.9	-0.6	0.763	46 O	-4.3	85.8	21.87	0.537	10.13	2:51	-17.1	266.8	0.727
11.08.	12:13	-2.4	-0.9	0.739	46 O	-4.3	87.5	22.59	0.522	10.80	2:51	-17.7	271.6	0.727
14.08.	12:24	-3.9	-1.2	0.715	46 O	-4.3	89.3	23.34	0.506	11.52	2:50	-18.3	276.3	0.727
17.08.	12:34	-5.3	-1.5	0.691	46 O	-4.3	91.1	24.15	0.491	12.30	2:49	-18.8	281.1	0.728
20.08.	12:44	-6.7	-1.8	0.667	46 O	-4.3	93.0	25.02	0.474	13.15	2:48	-19.3	285.8	0.728
23.08.	12:54	-8.1	-2.1	0.643	46 O	-4.4	94.9	25.95	0.457	14.08	2:46	-19.6	290.6	0.728
26.08.	13:03	-9.5	-2.5	0.619	46 O	-4.4	96.9	26.94	0.440	15.08	2:45	-20.0	295.3	0.728
29.08.	13:13	-10.8	-2.8	0.596	45 O	-4.4	99.0	28.00	0.422	16.18	2:43	-20.3	300.1	0.728

Venus 2018

Datum	α	δ	b	Δ (AE)	E	mv	φ	∅	k	q (")	Δα(h:m)	Δδ(°)	l	r
1.09.	13:22	-12.1	-3.2	0.572	45 O	-4.4	101.1	29.14	0.403	17.38	2:42	-20.5	304.8	0.728
4.09.	13:30	-13.4	-3.6	0.549	45 O	-4.5	103.4	30.37	0.384	18.70	2:39	-20.6	309.6	0.728
7.09.	13:39	-14.5	-4.0	0.526	44 O	-4.5	105.8	31.69	0.364	20.15	2:37	-20.7	314.3	0.728
10.09.	13:47	-15.7	-4.3	0.504	43 O	-4.5	108.3	33.11	0.343	21.75	2:34	-20.7	319.0	0.728
13.09.	13:54	-16.8	-4.7	0.482	43 O	-4.5	110.9	34.63	0.321	23.50	2:30	-20.7	323.8	0.728
16.09.	14:01	-17.8	-5.1	0.460	42 O	-4.5	113.7	36.27	0.299	25.43	2:26	-20.5	328.5	0.728
19.09.	14:07	-18.7	-5.5	0.439	40 O	-4.6	116.7	38.02	0.275	27.56	2:22	-20.3	333.3	0.728
22.09.	14:12	-19.5	-5.8	0.418	39 O	-4.6	119.9	39.90	0.251	29.90	2:16	-19.9	338.0	0.728
25.09.	14:17	-20.3	-6.2	0.398	37 O	-4.6	123.3	41.90	0.225	32.46	2:10	-19.5	342.8	0.728
28.09.	14:20	-20.9	-6.5	0.379	35 O	-4.6	127.0	44.01	0.199	35.24	2:03	-19.0	347.6	0.727
1.10.	14:22	-21.4	-6.8	0.361	33 O	-4.5	130.9	46.22	0.172	38.25	1:54	-18.3	352.3	0.727
4.10.	14:23	-21.8	-7.1	0.344	31 O	-4.5	135.2	48.51	0.145	41.46	1:45	-17.5	357.1	0.727
7.10.	14:23	-22.0	-7.3	0.328	28 O	-4.5	139.7	50.83	0.119	44.80	1:33	-16.6	1.9	0.726
10.10.	14:22	-22.0	-7.4	0.314	25 O	-4.4	144.6	53.13	0.092	48.22	1:21	-15.4	6.6	0.726
13.10.	14:19	-21.8	-7.5	0.301	21 O	-4.4	149.8	55.33	0.068	51.57	1:07	-14.1	11.4	0.726
16.10.	14:15	-21.4	-7.4	0.291	18 O	-4.3	155.2	57.33	0.046	54.69	0:52	-12.6	16.2	0.725
19.10.	14:10	-20.8	-7.2	0.283	14 O	-4.2	160.7	59.03	0.028	57.38	0:36	-10.9	21.0	0.725
22.10.	14:04	-20.0	-6.9	0.277	10 O	-4.1	166.1	60.31	0.015	59.43	0:18	-9.1	25.8	0.725
25.10.	13:58	-19.0	-6.5	0.273	7 O	-4.0	170.4	61.09	0.007	60.66	0:01	-7.0	30.6	0.724
28.10.	13:51	-17.9	-6.0	0.272	6 W	-4.0	171.2	61.28	0.006	60.92	-0:17	-4.8	35.4	0.724
31.10.	13:45	-16.7	-5.4	0.274	9 W	-4.1	167.8	60.89	0.011	60.21	-0:35	-2.6	40.2	0.723
3.11.	13:40	-15.4	-4.7	0.278	13 W	-4.2	162.6	59.94	0.023	58.58	-0:52	-0.5	45.0	0.723
6.11.	13:36	-14.2	-3.9	0.285	17 W	-4.3	157.0	58.51	0.040	56.19	-1:08	1.7	49.8	0.723
9.11.	13:33	-13.1	-3.2	0.294	20 W	-4.4	151.5	56.70	0.061	53.25	-1:23	3.6	54.6	0.722
12.11.	13:31	-12.2	-2.4	0.305	24 W	-4.5	146.1	54.63	0.085	49.98	-1:37	5.5	59.4	0.722
15.11.	13:31	-11.3	-1.7	0.318	27 W	-4.5	141.0	52.41	0.111	46.57	-1:49	7.1	64.2	0.721
18.11.	13:32	-10.7	-1.0	0.333	30 W	-4.6	136.2	50.11	0.139	43.14	-2:01	8.4	69.1	0.721
21.11.	13:34	-10.3	-0.4	0.349	33 W	-4.6	131.8	47.81	0.167	39.83	-2:11	9.6	73.9	0.721
24.11.	13:38	-10.0	0.2	0.366	35 W	-4.6	127.6	45.57	0.195	36.70	-2:20	10.5	78.7	0.720
27.11.	13:42	-9.8	0.7	0.384	37 W	-4.6	123.8	43.41	0.222	33.77	-2:28	11.2	83.6	0.720
30.11.	13:48	-9.9	1.2	0.403	39 W	-4.7	120.2	41.35	0.248	31.08	-2:36	11.7	88.4	0.720
3.12.	13:54	-10.0	1.6	0.423	41 W	-4.7	116.9	39.42	0.274	28.62	-2:42	12.1	93.3	0.719
6.12.	14:01	-10.3	2.0	0.444	42 W	-4.6	113.7	37.60	0.299	26.37	-2:48	12.2	98.1	0.719
9.12.	14:09	-10.6	2.3	0.464	43 W	-4.6	110.8	35.91	0.322	24.34	-2:53	12.2	103.0	0.719
12.12.	14:18	-11.1	2.6	0.486	44 W	-4.6	108.1	34.33	0.345	22.49	-2:58	12.0	107.8	0.719
15.12.	14:27	-11.6	2.8	0.508	45 W	-4.6	105.5	32.86	0.367	20.81	-3:02	11.7	112.7	0.719
18.12.	14:37	-12.2	3.0	0.530	45 W	-4.6	103.0	31.50	0.387	19.30	-3:06	11.2	117.6	0.719
21.12.	14:47	-12.8	3.2	0.552	46 W	-4.6	100.7	30.23	0.407	17.92	-3:09	10.6	122.4	0.718
24.12.	14:57	-13.5	3.3	0.574	46 W	-4.5	98.5	29.05	0.426	16.66	-3:11	9.9	127.3	0.718
27.12.	15:08	-14.2	3.4	0.597	47 W	-4.5	96.3	27.95	0.445	15.52	-3:14	9.2	132.2	0.718
30.12.	15:20	-14.8	3.4	0.620	47 W	-4.5	94.3	26.92	0.462	14.47	-3:16	8.3	137.1	0.718

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):
∅: scheinbarer Durchmesser;
k: beleuchteter Teil; q: Phasendefekt (Beleuchtungsdefekt)

Koordinaten für Tagesbeobachtungen:
Δα und Δδ: Rektaszensions- und Deklinationsdifferenzen (Venus minus Sonne)

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

14.09.2015