



## Ephemeriden für Sternfreunde

von Karl-Heinz Bücke

### Jupiter

Januar 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_V$	$\varnothing_{\Delta}$	$\varnothing_P$	$D_S$	$D_E$	$q$	$l$	$b$	$r$
1	20:19	-20.2	5.99	4.1	-1.5	32.9"	30.7"	-0.6	-0.8	0.0"	306.6	-0.6	5.10
5	20:23	-20.0	6.02	3.6	-1.5	32.7"	30.5"	-0.6	-0.8	0.0"	307.0	-0.6	5.10
9	20:27	-19.7	6.03	3.0	-1.5	32.6"	30.4"	-0.5	-0.7	0.0"	307.3	-0.6	5.09
13	20:31	-19.5	6.05	2.4	-1.5	32.6"	30.4"	-0.5	-0.7	0.0"	307.7	-0.6	5.09
17	20:34	-19.3	6.06	1.8	-1.5	32.5"	30.3"	-0.5	-0.7	0.0"	308.0	-0.6	5.09
21	20:38	-19.1	6.07	1.2	-1.5	32.5"	30.3"	-0.5	-0.6	0.0"	308.4	-0.6	5.09
25	20:42	-18.8	6.07	0.6	-1.5	32.4"	30.2"	-0.5	-0.6	0.0"	308.7	-0.6	5.09
29	20:46	-18.6	6.07	0.0	-1.5	32.4"	30.2"	-0.4	-0.5	0.0"	309.0	-0.6	5.09

Februar 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_V$	$\varnothing_{\Delta}$	$\varnothing_P$	$D_S$	$D_E$	$q$	$l$	$b$	$r$
1	20:49	-18.4	6.07	0.4	-1.5	32.4"	30.2"	-0.4	-0.5	0.0"	309.3	-0.6	5.09
5	20:53	-18.2	6.07	1.0	-1.5	32.5"	30.3"	-0.4	-0.5	0.0"	309.7	-0.6	5.08
9	20:57	-17.9	6.06	1.6	-1.5	32.5"	30.3"	-0.4	-0.4	0.0"	310.0	-0.6	5.08
13	21:00	-17.6	6.05	2.2	-1.5	32.6"	30.4"	-0.4	-0.4	0.0"	310.3	-0.6	5.08
17	21:04	-17.4	6.03	2.8	-1.5	32.7"	30.5"	-0.4	-0.4	0.0"	310.7	-0.7	5.08
21	21:08	-17.1	6.01	3.4	-1.5	32.8"	30.6"	-0.3	-0.3	0.0"	311.0	-0.7	5.08
25	21:12	-16.9	5.99	4.0	-1.5	32.9"	30.7"	-0.3	-0.3	0.0"	311.4	-0.7	5.08

März 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_V$	$\varnothing_{\Delta}$	$\varnothing_P$	$D_S$	$D_E$	$q$	$l$	$b$	$r$
1	21:15	-16.6	5.97	4.6	-1.5	33.0"	30.8"	-0.3	-0.2	-0.1"	311.7	-0.7	5.08
5	21:19	-16.3	5.94	5.1	-1.5	33.2"	31.0"	-0.3	-0.2	-0.1"	312.1	-0.7	5.08
9	21:23	-16.1	5.91	5.7	-1.5	33.3"	31.1"	-0.3	-0.2	-0.1"	312.4	-0.7	5.07
13	21:26	-15.8	5.87	6.2	-1.6	33.5"	31.3"	-0.2	-0.1	-0.1"	312.8	-0.7	5.07
17	21:29	-15.5	5.84	6.7	-1.6	33.7"	31.5"	-0.2	-0.1	-0.1"	313.1	-0.7	5.07
21	21:33	-15.3	5.80	7.2	-1.6	34.0"	31.7"	-0.2	0.0	-0.1"	313.5	-0.7	5.07
25	21:36	-15.0	5.76	7.7	-1.6	34.2"	31.9"	-0.2	0.0	-0.2"	313.8	-0.7	5.07
29	21:39	-14.8	5.71	8.1	-1.6	34.5"	32.2"	-0.2	0.0	-0.2"	314.2	-0.7	5.07

April 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_V$	$\varnothing_{\Delta}$	$\varnothing_P$	$D_S$	$D_E$	$q$	$l$	$b$	$r$
1	21:41	-14.6	5.68	8.5	-1.6	34.7"	32.4"	-0.1	0.1	-0.2"	314.5	-0.7	5.07
5	21:45	-14.3	5.63	8.9	-1.7	35.0"	32.7"	-0.1	0.1	-0.2"	314.8	-0.7	5.07
9	21:47	-14.1	5.58	9.3	-1.7	35.3"	32.9"	-0.1	0.2	-0.2"	315.2	-0.7	5.06
13	21:50	-13.8	5.53	9.6	-1.7	35.6"	33.2"	-0.1	0.2	-0.3"	315.5	-0.7	5.06
17	21:53	-13.6	5.47	10.0	-1.7	36.0"	33.6"	-0.1	0.2	-0.3"	315.9	-0.8	5.06
21	21:56	-13.4	5.41	10.3	-1.7	36.4"	34.0"	-0.1	0.3	-0.3"	316.2	-0.8	5.06
25	21:58	-13.2	5.36	10.6	-1.8	36.8"	34.3"	0.0	0.3	-0.3"	316.6	-0.8	5.06
29	22:00	-13.0	5.30	10.8	-1.8	37.2"	34.7"	0.0	0.3	-0.3"	316.9	-0.8	5.06

## Jupiter

Mai 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_v$	$\varnothing_{\lambda}$	$\varnothing_p$	$D_s$	$D_e$	$q$	$l$	$b$	$r$
1	22:01	-12.9	5.27	10.9	-1.8	37.4"	34.9"	0.0	0.4	-0.3"	317.1	-0.8	5.06
5	22:04	-12.7	5.21	11.1	-1.8	37.8"	35.3"	0.0	0.4	-0.4"	317.4	-0.8	5.06
9	22:06	-12.5	5.15	11.3	-1.9	38.3"	35.7"	0.0	0.4	-0.4"	317.8	-0.8	5.06
13	22:07	-12.4	5.08	11.4	-1.9	38.7"	36.1"	0.1	0.5	-0.4"	318.1	-0.8	5.05
17	22:09	-12.2	5.02	11.5	-1.9	39.2"	36.6"	0.1	0.5	-0.4"	318.5	-0.8	5.05
21	22:11	-12.1	4.96	11.6	-1.9	39.7"	37.1"	0.1	0.5	-0.4"	318.8	-0.8	5.05
25	22:12	-12.0	4.90	11.5	-2.0	40.2"	37.5"	0.1	0.6	-0.4"	319.2	-0.8	5.05
29	22:13	-11.9	4.83	11.5	-2.0	40.7"	38.0"	0.1	0.6	-0.4"	319.5	-0.8	5.05

Juni 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_v$	$\varnothing_{\lambda}$	$\varnothing_p$	$D_s$	$D_e$	$q$	$l$	$b$	$r$
1	22:14	-11.8	4.79	11.4	-2.0	41.1"	38.4"	0.1	0.6	-0.4"	319.8	-0.8	5.05
5	22:15	-11.7	4.72	11.3	-2.0	41.7"	38.9"	0.2	0.6	-0.4"	320.2	-0.8	5.05
9	22:15	-11.7	4.66	11.1	-2.1	42.2"	39.4"	0.2	0.7	-0.4"	320.5	-0.8	5.05
13	22:16	-11.6	4.60	10.9	-2.1	42.8"	39.9"	0.2	0.7	-0.4"	320.9	-0.8	5.04
17	22:16	-11.6	4.55	10.6	-2.1	43.3"	40.4"	0.2	0.7	-0.4"	321.2	-0.8	5.04
21	22:16	-11.6	4.49	10.3	-2.2	43.9"	41.0"	0.2	0.7	-0.4"	321.6	-0.9	5.04
25	22:16	-11.6	4.43	9.9	-2.2	44.4"	41.4"	0.3	0.7	-0.3"	321.9	-0.9	5.04
29	22:16	-11.7	4.38	9.5	-2.2	44.9"	41.9"	0.3	0.8	-0.3"	322.3	-0.9	5.04

Juli 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_v$	$\varnothing_{\lambda}$	$\varnothing_p$	$D_s$	$D_e$	$q$	$l$	$b$	$r$
1	22:16	-11.7	4.36	9.2	-2.2	45.2"	42.2"	0.3	0.8	-0.3"	322.5	-0.9	5.04
5	22:15	-11.8	4.31	8.7	-2.2	45.7"	42.7"	0.3	0.8	-0.3"	322.8	-0.9	5.04
9	22:14	-11.8	4.26	8.1	-2.3	46.2"	43.1"	0.3	0.8	-0.2"	323.2	-0.9	5.04
13	22:13	-11.9	4.22	7.5	-2.3	46.7"	43.6"	0.3	0.8	-0.2"	323.5	-0.9	5.04
17	22:12	-12.0	4.18	6.9	-2.3	47.1"	44.0"	0.4	0.8	-0.2"	323.9	-0.9	5.03
21	22:11	-12.2	4.15	6.2	-2.3	47.5"	44.3"	0.4	0.8	-0.1"	324.2	-0.9	5.03
25	22:09	-12.3	4.11	5.4	-2.3	47.9"	44.7"	0.4	0.8	-0.1"	324.6	-0.9	5.03
29	22:08	-12.5	4.09	4.7	-2.4	48.2"	45.0"	0.4	0.8	-0.1"	324.9	-0.9	5.03

August 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_v$	$\varnothing_{\lambda}$	$\varnothing_p$	$D_s$	$D_e$	$q$	$l$	$b$	$r$
1	22:06	-12.6	4.07	4.1	-2.4	48.4"	45.2"	0.4	0.8	-0.1"	325.2	-0.9	5.03
5	22:05	-12.8	4.05	3.2	-2.4	48.6"	45.4"	0.5	0.8	0.0"	325.6	-0.9	5.03
9	22:03	-12.9	4.03	2.4	-2.4	48.8"	45.5"	0.5	0.8	0.0"	325.9	-0.9	5.03
13	22:01	-13.1	4.02	1.5	-2.4	49.0"	45.7"	0.5	0.8	0.0"	326.3	-0.9	5.03
17	21:59	-13.3	4.02	0.7	-2.4	49.0"	45.7"	0.5	0.8	0.0"	326.6	-0.9	5.03
21	21:57	-13.5	4.01	0.2	-2.4	49.1"	45.8"	0.5	0.8	0.0"	327.0	-0.9	5.03
25	21:55	-13.7	4.02	1.1	-2.4	49.0"	45.7"	0.5	0.7	0.0"	327.3	-0.9	5.02
29	21:53	-13.8	4.03	2.0	-2.4	48.9"	45.6"	0.6	0.7	0.0"	327.7	-1.0	5.02

September 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_v$	$\varnothing_{\lambda}$	$\varnothing_p$	$D_s$	$D_e$	$q$	$l$	$b$	$r$
1	21:51	-14.0	4.03	2.6	-2.4	48.8"	45.5"	0.6	0.7	0.0"	328.0	-1.0	5.02
5	21:49	-14.1	4.05	3.5	-2.4	48.6"	45.4"	0.6	0.7	0.0"	328.3	-1.0	5.02
9	21:48	-14.3	4.07	4.3	-2.4	48.4"	45.2"	0.6	0.7	0.1"	328.7	-1.0	5.02
13	21:46	-14.5	4.10	5.1	-2.4	48.1"	44.9"	0.6	0.7	0.1"	329.0	-1.0	5.02
17	21:44	-14.6	4.13	5.8	-2.3	47.7"	44.5"	0.7	0.6	0.1"	329.4	-1.0	5.02
21	21:43	-14.7	4.16	6.5	-2.3	47.3"	44.1"	0.7	0.6	0.2"	329.7	-1.0	5.02
25	21:42	-14.8	4.20	7.2	-2.3	46.9"	43.8"	0.7	0.6	0.2"	330.1	-1.0	5.02
29	21:41	-14.9	4.24	7.8	-2.3	46.5"	43.4"	0.7	0.6	0.2"	330.5	-1.0	5.02

Oktober 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_V$	$\varnothing_{\Delta}$	$\varnothing_P$	$D_S$	$D_e$	q	l	b	r
1	21:40	-15.0	4.26	8.1	-2.3	46.2"	43.1"	0.7	0.6	0.2"	330.6	-1.0	5.01
5	21:39	-15.0	4.30	8.7	-2.3	45.7"	42.7"	0.7	0.6	0.3"	331.0	-1.0	5.01
9	21:39	-15.1	4.35	9.2	-2.2	45.2"	42.2"	0.8	0.6	0.3"	331.4	-1.0	5.01
13	21:38	-15.1	4.40	9.7	-2.2	44.7"	41.7"	0.8	0.6	0.3"	331.7	-1.0	5.01
17	21:38	-15.1	4.46	10.1	-2.2	44.2"	41.3"	0.8	0.5	0.3"	332.1	-1.0	5.01
21	21:38	-15.1	4.51	10.4	-2.2	43.6"	40.7"	0.8	0.5	0.4"	332.4	-1.0	5.01
25	21:39	-15.1	4.57	10.7	-2.1	43.1"	40.2"	0.8	0.5	0.4"	332.8	-1.0	5.01
29	21:39	-15.1	4.63	10.9	-2.1	42.5"	39.7"	0.9	0.5	0.4"	333.1	-1.0	5.01

November 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_V$	$\varnothing_{\Delta}$	$\varnothing_P$	$D_S$	$D_e$	q	l	b	r
1	21:40	-15.1	4.68	11.1	-2.1	42.1"	39.3"	0.9	0.5	0.4"	333.4	-1.0	5.01
5	21:40	-15.0	4.74	11.2	-2.1	41.6"	38.8"	0.9	0.5	0.4"	333.8	-1.0	5.01
9	21:41	-14.9	4.80	11.3	-2.0	41.0"	38.3"	0.9	0.5	0.4"	334.1	-1.0	5.01
13	21:43	-14.8	4.86	11.4	-2.0	40.5"	37.8"	0.9	0.5	0.4"	334.5	-1.1	5.00
17	21:44	-14.7	4.92	11.4	-2.0	40.0"	37.3"	0.9	0.5	0.4"	334.8	-1.1	5.00
21	21:46	-14.6	4.99	11.3	-1.9	39.5"	36.9"	1.0	0.5	0.4"	335.2	-1.1	5.00
25	21:47	-14.4	5.05	11.3	-1.9	39.0"	36.4"	1.0	0.5	0.4"	335.6	-1.1	5.00
29	21:49	-14.3	5.11	11.1	-1.9	38.5"	35.9"	1.0	0.6	0.4"	335.9	-1.1	5.00

Dezember 2021 (0<sup>h</sup> UT)

Tag	$\alpha$	$\delta$	$\Delta$	$\varphi$	$m_V$	$\varnothing_{\Delta}$	$\varnothing_P$	$D_S$	$D_e$	q	l	b	r
1	21:50	-14.2	5.14	11.0	-1.9	38.3"	35.7"	1.0	0.6	0.4"	336.1	-1.1	5.00
5	21:52	-14.0	5.20	10.9	-1.9	37.9"	35.4"	1.0	0.6	0.3"	336.5	-1.1	5.00
9	21:55	-13.8	5.26	10.6	-1.8	37.4"	34.9"	1.0	0.6	0.3"	336.8	-1.1	5.00
13	21:57	-13.6	5.32	10.4	-1.8	37.0"	34.5"	1.1	0.6	0.3"	337.2	-1.1	5.00
17	22:00	-13.4	5.37	10.1	-1.8	36.7"	34.3"	1.1	0.6	0.3"	337.5	-1.1	5.00
21	22:02	-13.1	5.43	9.7	-1.8	36.3"	33.9"	1.1	0.6	0.3"	337.9	-1.1	5.00
25	22:05	-12.9	5.48	9.4	-1.7	35.9"	33.5"	1.1	0.7	0.2"	338.3	-1.1	4.99
29	22:08	-12.6	5.53	9.0	-1.7	35.6"	33.2"	1.1	0.7	0.2"	338.6	-1.1	4.99