



Ephemeriden für Sternfreunde

von Karl-Heinz Bücke

Saturn

Januar 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_v	$\varnothing_{\ddot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	20:58	-18.0	10.77	3.0	0.9	15.4"	13.9"	34.9"	10.5"	16.5	17.6
6	21:00	-17.9	10.81	2.6	0.9	15.3"	13.8"	34.7"	10.4"	16.4	17.3
11	21:03	-17.7	10.84	2.2	0.9	15.3"	13.8"	34.6"	10.2"	16.3	17.1
16	21:05	-17.5	10.87	1.7	0.9	15.2"	13.7"	34.5"	10.0"	16.3	16.9
21	21:07	-17.4	10.89	1.3	0.9	15.2"	13.7"	34.5"	9.9"	16.2	16.7
26	21:10	-17.2	10.91	0.9	0.9	15.2"	13.7"	34.4"	9.7"	16.2	16.4
31	21:12	-17.0	10.92	0.4	0.9	15.2"	13.7"	34.4"	9.6"	16.1	16.2

Februar 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_v	$\varnothing_{\ddot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	21:13	-17.0	10.92	0.3	0.9	15.2"	13.7"	34.4"	9.6"	16.1	16.2
6	21:15	-16.8	10.92	-0.1	0.9	15.2"	13.7"	34.4"	9.4"	16.0	15.9
11	21:17	-16.7	10.91	-0.5	0.9	15.2"	13.7"	34.4"	9.3"	16.0	15.7
16	21:20	-16.5	10.90	-1.0	0.8	15.2"	13.7"	34.4"	9.2"	15.9	15.4
21	21:22	-16.3	10.88	-1.4	0.8	15.2"	13.7"	34.5"	9.0"	15.9	15.2
26	21:24	-16.1	10.86	-1.8	0.8	15.2"	13.7"	34.6"	8.9"	15.8	15.0

März 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_v	$\varnothing_{\ddot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	21:26	-16.0	10.84	-2.1	0.8	15.3"	13.7"	34.6"	8.9"	15.8	14.8
6	21:28	-15.9	10.81	-2.5	0.8	15.3"	13.8"	34.7"	8.8"	15.7	14.6
11	21:30	-15.7	10.77	-2.9	0.8	15.4"	13.8"	34.9"	8.7"	15.7	14.4
16	21:32	-15.5	10.72	-3.3	0.7	15.4"	13.9"	35.0"	8.6"	15.6	14.2
21	21:34	-15.4	10.67	-3.6	0.7	15.5"	13.9"	35.2"	8.5"	15.5	14.0
26	21:36	-15.2	10.62	-4.0	0.7	15.6"	14.0"	35.4"	8.4"	15.5	13.8
31	21:38	-15.1	10.56	-4.3	0.7	15.7"	14.1"	35.6"	8.3"	15.4	13.6

April 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_v	$\varnothing_{\ddot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	21:39	-15.1	10.54	-4.4	0.7	15.7"	14.1"	35.6"	8.3"	15.4	13.5
6	21:40	-14.9	10.48	-4.7	0.7	15.8"	14.2"	35.8"	8.3"	15.4	13.3
11	21:42	-14.8	10.41	-4.9	0.6	15.9"	14.3"	36.1"	8.2"	15.3	13.2
16	21:43	-14.7	10.34	-5.2	0.6	16.0"	14.4"	36.3"	8.2"	15.2	13.0
21	21:45	-14.6	10.26	-5.4	0.6	16.1"	14.5"	36.6"	8.2"	15.2	12.9
26	21:46	-14.5	10.18	-5.5	0.6	16.2"	14.6"	36.9"	8.1"	15.1	12.7

Mai 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_V	$\varnothing_{\dot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	21:47	-14.4	10.10	-5.7	0.6	16.4"	14.7"	37.2"	8.1"	15.1	12.6
6	21:48	-14.3	10.02	-5.8	0.5	16.5"	14.8"	37.5"	8.1"	15.0	12.5
11	21:49	-14.3	9.94	-5.8	0.5	16.6"	14.9"	37.8"	8.1"	14.9	12.5
16	21:50	-14.2	9.86	-5.9	0.5	16.8"	15.1"	38.1"	8.2"	14.9	12.4
21	21:50	-14.2	9.77	-5.8	0.5	16.9"	15.2"	38.4"	8.2"	14.8	12.3
26	21:51	-14.2	9.69	-5.8	0.5	17.1"	15.3"	38.7"	8.3"	14.8	12.3
31	21:51	-14.2	9.61	-5.7	0.5	17.2"	15.5"	39.1"	8.3"	14.7	12.3

Juni 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_V	$\varnothing_{\dot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	21:51	-14.2	9.59	-5.7	0.5	17.2"	15.5"	39.1"	8.3"	14.7	12.3
6	21:51	-14.2	9.51	-5.5	0.5	17.4"	15.6"	39.5"	8.4"	14.6	12.3
11	21:51	-14.2	9.44	-5.3	0.4	17.5"	15.7"	39.8"	8.5"	14.6	12.3
16	21:51	-14.2	9.36	-5.1	0.4	17.7"	15.9"	40.1"	8.6"	14.5	12.4
21	21:51	-14.3	9.29	-4.8	0.4	17.8"	16.0"	40.4"	8.7"	14.5	12.4
26	21:50	-14.4	9.22	-4.5	0.4	17.9"	16.1"	40.7"	8.8"	14.4	12.5

Juli 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_V	$\varnothing_{\dot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	21:49	-14.4	9.16	-4.2	0.4	18.1"	16.2"	41.0"	8.9"	14.3	12.6
6	21:48	-14.5	9.11	-3.8	0.4	18.2"	16.3"	41.2"	9.1"	14.3	12.7
11	21:47	-14.6	9.05	-3.4	0.4	18.3"	16.4"	41.5"	9.2"	14.2	12.8
16	21:46	-14.7	9.01	-3.0	0.4	18.4"	16.5"	41.7"	9.4"	14.2	13.0
21	21:45	-14.8	8.97	-2.5	0.4	18.4"	16.6"	41.9"	9.5"	14.1	13.1
26	21:44	-14.9	8.94	-2.0	0.4	18.5"	16.6"	42.0"	9.6"	14.0	13.3
31	21:43	-15.1	8.91	-1.5	0.4	18.6"	16.7"	42.1"	9.8"	14.0	13.4

August 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_V	$\varnothing_{\dot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	21:42	-15.1	8.91	-1.4	0.4	18.6"	16.7"	42.1"	9.8"	14.0	13.5
6	21:41	-15.2	8.89	-0.9	0.5	18.6"	16.7"	42.2"	9.9"	13.9	13.6
11	21:40	-15.4	8.88	-0.4	0.5	18.6"	16.7"	42.3"	10.1"	13.8	13.8
16	21:38	-15.5	8.88	0.1	0.5	18.6"	16.8"	42.3"	10.2"	13.8	14.0
21	21:37	-15.6	8.88	0.7	0.5	18.6"	16.7"	42.3"	10.3"	13.7	14.1
26	21:35	-15.7	8.90	1.2	0.5	18.6"	16.7"	42.2"	10.4"	13.7	14.3
31	21:34	-15.8	8.92	1.7	0.6	18.6"	16.7"	42.1"	10.5"	13.6	14.4

September 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_V	$\varnothing_{\dot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	21:34	-15.9	8.92	1.8	0.6	18.5"	16.7"	42.1"	10.5"	13.6	14.5
6	21:32	-16.0	8.95	2.3	0.6	18.5"	16.6"	41.9"	10.6"	13.5	14.6
11	21:31	-16.1	8.99	2.8	0.6	18.4"	16.6"	41.8"	10.6"	13.5	14.7
16	21:30	-16.2	9.03	3.2	0.6	18.3"	16.5"	41.6"	10.7"	13.4	14.9
21	21:29	-16.3	9.08	3.6	0.7	18.2"	16.4"	41.4"	10.7"	13.3	15.0
26	21:28	-16.3	9.13	4.0	0.7	18.1"	16.3"	41.1"	10.7"	13.3	15.1

Oktober 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_V	$\varnothing_{\dot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	21:27	-16.4	9.19	4.4	0.7	18.0"	16.2"	40.8"	10.7"	13.2	15.2
6	21:26	-16.4	9.26	4.7	0.7	17.9"	16.1"	40.6"	10.6"	13.1	15.2
11	21:26	-16.5	9.32	5.0	0.8	17.7"	16.0"	40.3"	10.6"	13.1	15.3
16	21:26	-16.5	9.40	5.2	0.8	17.6"	15.9"	39.9"	10.5"	13.0	15.3
21	21:25	-16.5	9.47	5.4	0.8	17.5"	15.7"	39.6"	10.5"	13.0	15.3
26	21:25	-16.5	9.55	5.6	0.8	17.3"	15.6"	39.3"	10.4"	12.9	15.3
31	21:26	-16.5	9.63	5.7	0.9	17.2"	15.5"	39.0"	10.3"	12.8	15.3

November 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_V	$\varnothing_{\dot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	21:26	-16.5	9.65	5.7	0.9	17.1"	15.4"	38.9"	10.2"	12.8	15.3
6	21:26	-16.4	9.73	5.7	0.9	17.0"	15.3"	38.6"	10.1"	12.8	15.2
11	21:27	-16.4	9.81	5.8	0.9	16.9"	15.2"	38.3"	10.0"	12.7	15.2
16	21:27	-16.3	9.90	5.7	0.9	16.7"	15.0"	37.9"	9.9"	12.6	15.1
21	21:28	-16.2	9.98	5.7	0.9	16.6"	14.9"	37.6"	9.7"	12.6	15.0
26	21:29	-16.2	10.06	5.6	1.0	16.4"	14.8"	37.3"	9.6"	12.5	14.9

Dezember 2022 (0^h UT)

Tag	α	δ	Δ	φ	m_V	$\varnothing_{\dot{A}}$	\varnothing_P	R- \varnothing_g	R- \varnothing_k	D_s	D_e
1	21:30	-16.1	10.14	5.4	1.0	16.3"	14.7"	37.0"	9.4"	12.4	14.7
6	21:32	-15.9	10.22	5.3	1.0	16.2"	14.6"	36.7"	9.3"	12.4	14.6
11	21:33	-15.8	10.29	5.0	1.0	16.1"	14.5"	36.5"	9.1"	12.3	14.4
16	21:35	-15.7	10.36	4.8	1.0	16.0"	14.4"	36.2"	8.9"	12.2	14.3
21	21:36	-15.6	10.43	4.5	1.0	15.9"	14.3"	36.0"	8.8"	12.2	14.1
26	21:38	-15.4	10.49	4.2	1.0	15.8"	14.2"	35.8"	8.6"	12.1	13.9
31	21:40	-15.2	10.55	3.9	1.0	15.7"	14.1"	35.6"	8.4"	12.1	13.7