



Ephemeriden für Sternfreunde

von Karl-Heinz Bücke

Saturn

Januar 2021 (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	20:16	-20.2	10.92	2.0	0.8	15.2"	13.7"	34.4"	12.3"	20.2	20.9
6	20:18	-20.0	10.94	1.6	0.8	15.1"	13.7"	34.3"	12.1"	20.2	20.7
11	20:20	-19.9	10.96	1.2	0.8	15.1"	13.7"	34.2"	12.0"	20.1	20.5
16	20:23	-19.8	10.98	0.7	0.8	15.1"	13.7"	34.2"	11.9"	20.1	20.3
21	20:25	-19.7	10.99	0.3	0.8	15.1"	13.6"	34.2"	11.7"	20.0	20.1
26	20:28	-19.5	10.99	-0.2	0.8	15.1"	13.6"	34.2"	11.6"	20.0	19.9
31	20:30	-19.4	10.98	-0.6	0.8	15.1"	13.6"	34.2"	11.5"	19.9	19.7

Februar 2021 (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	20:31	-19.4	10.98	-0.7	0.8	15.1"	13.6"	34.2"	11.5"	19.9	19.7
6	20:33	-19.2	10.96	-1.1	0.7	15.1"	13.7"	34.2"	11.4"	19.9	19.5
11	20:36	-19.1	10.94	-1.6	0.7	15.1"	13.7"	34.3"	11.3"	19.8	19.2
16	20:38	-18.9	10.92	-2.0	0.7	15.2"	13.7"	34.4"	11.2"	19.8	19.0
21	20:40	-18.8	10.89	-2.4	0.7	15.2"	13.7"	34.5"	11.1"	19.7	18.8
26	20:42	-18.7	10.85	-2.8	0.7	15.3"	13.8"	34.6"	11.1"	19.7	18.6

März 2021 (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	20:44	-18.6	10.82	-3.0	0.7	15.3"	13.8"	34.7"	11.0"	19.7	18.5
6	20:46	-18.5	10.77	-3.4	0.6	15.4"	13.9"	34.8"	11.0"	19.6	18.3
11	20:48	-18.3	10.72	-3.7	0.6	15.4"	13.9"	35.0"	10.9"	19.6	18.2
16	20:50	-18.2	10.66	-4.1	0.6	15.5"	14.0"	35.2"	10.9"	19.5	18.0
21	20:52	-18.1	10.60	-4.4	0.6	15.6"	14.1"	35.4"	10.8"	19.5	17.8
26	20:54	-18.0	10.54	-4.7	0.6	15.7"	14.2"	35.6"	10.8"	19.4	17.7
31	20:55	-17.9	10.47	-4.9	0.5	15.8"	14.3"	35.9"	10.8"	19.4	17.5

April 2021 (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	20:56	-17.9	10.45	-5.0	0.5	15.8"	14.3"	35.9"	10.8"	19.4	17.5
6	20:57	-17.8	10.38	-5.2	0.5	15.9"	14.4"	36.2"	10.8"	19.3	17.3
11	20:59	-17.7	10.30	-5.4	0.5	16.1"	14.5"	36.4"	10.8"	19.3	17.2
16	21:00	-17.6	10.22	-5.5	0.5	16.2"	14.6"	36.7"	10.8"	19.2	17.1
21	21:01	-17.5	10.14	-5.7	0.4	16.3"	14.7"	37.0"	10.8"	19.2	17.0
26	21:02	-17.5	10.06	-5.7	0.4	16.4"	14.8"	37.3"	10.9"	19.1	16.9

Mai 2021 (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	21:03	-17.4	9.98	-5.8	0.4	16.6"	15.0"	37.6"	10.9"	19.1	16.9
6	21:03	-17.4	9.89	-5.8	0.4	16.7"	15.1"	37.9"	11.0"	19.0	16.8
11	21:04	-17.4	9.81	-5.8	0.4	16.9"	15.2"	38.3"	11.0"	19.0	16.8
16	21:04	-17.4	9.73	-5.7	0.4	17.0"	15.3"	38.6"	11.1"	18.9	16.8
21	21:04	-17.4	9.65	-5.6	0.3	17.2"	15.5"	38.9"	11.2"	18.9	16.7
26	21:04	-17.4	9.57	-5.4	0.3	17.3"	15.6"	39.2"	11.3"	18.8	16.8
31	21:04	-17.4	9.49	-5.2	0.3	17.4"	15.7"	39.6"	11.4"	18.8	16.8

Juni 2021 (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	21:04	-17.4	9.48	-5.2	0.3	17.5"	15.7"	39.6"	11.4"	18.8	16.8
6	21:04	-17.4	9.40	-4.9	0.3	17.6"	15.9"	39.9"	11.6"	18.7	16.8
11	21:03	-17.5	9.33	-4.7	0.3	17.7"	16.0"	40.2"	11.7"	18.7	16.9
16	21:03	-17.6	9.27	-4.3	0.3	17.8"	16.1"	40.5"	11.8"	18.6	17.0
21	21:02	-17.6	9.21	-4.0	0.3	18.0"	16.2"	40.8"	12.0"	18.5	17.1
26	21:01	-17.7	9.16	-3.6	0.3	18.1"	16.3"	41.0"	12.1"	18.5	17.2

Juli 2021 (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	21:00	-17.8	9.11	-3.2	0.3	18.2"	16.4"	41.2"	12.2"	18.4	17.3
6	20:59	-17.9	9.07	-2.7	0.3	18.3"	16.5"	41.4"	12.4"	18.4	17.4
11	20:57	-18.0	9.03	-2.3	0.3	18.3"	16.5"	41.6"	12.5"	18.3	17.5
16	20:56	-18.1	9.00	-1.8	0.3	18.4"	16.6"	41.7"	12.7"	18.3	17.7
21	20:55	-18.2	8.98	-1.3	0.3	18.4"	16.6"	41.8"	12.8"	18.2	17.8
26	20:53	-18.3	8.96	-0.8	0.4	18.5"	16.7"	41.9"	12.9"	18.2	18.0
31	20:52	-18.4	8.96	-0.2	0.4	18.5"	16.7"	41.9"	13.0"	18.1	18.1

August 2021 (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	20:52	-18.4	8.96	-0.1	0.4	18.5"	16.7"	41.9"	13.1"	18.1	18.1
6	20:50	-18.5	8.96	0.4	0.4	18.5"	16.7"	41.9"	13.2"	18.1	18.3
11	20:49	-18.6	8.97	0.9	0.4	18.5"	16.7"	41.9"	13.2"	18.0	18.4
16	20:47	-18.7	8.98	1.4	0.4	18.4"	16.7"	41.8"	13.3"	18.0	18.6
21	20:46	-18.8	9.01	1.9	0.5	18.4"	16.6"	41.7"	13.4"	17.9	18.7
26	20:44	-18.9	9.04	2.4	0.5	18.3"	16.6"	41.5"	13.4"	17.9	18.8
31	20:43	-19.0	9.07	2.9	0.5	18.2"	16.5"	41.4"	13.4"	17.8	19.0

September 2021 (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	20:43	-19.0	9.08	3.0	0.5	18.2"	16.5"	41.3"	13.4"	17.8	19.0
6	20:42	-19.1	9.13	3.4	0.5	18.1"	16.4"	41.1"	13.4"	17.7	19.1
11	20:41	-19.2	9.18	3.8	0.6	18.0"	16.3"	40.9"	13.4"	17.7	19.2
16	20:40	-19.2	9.24	4.2	0.6	17.9"	16.2"	40.6"	13.4"	17.6	19.3
21	20:39	-19.3	9.30	4.5	0.6	17.8"	16.1"	40.4"	13.4"	17.6	19.3
26	20:39	-19.3	9.36	4.8	0.7	17.7"	16.0"	40.1"	13.3"	17.5	19.4

Oktober 2021 (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	20:38	-19.3	9.43	5.0	0.7	17.5"	15.9"	39.8"	13.2"	17.5	19.4
6	20:38	-19.3	9.51	5.3	0.7	17.4"	15.7"	39.5"	13.1"	17.4	19.4
11	20:38	-19.3	9.59	5.4	0.7	17.3"	15.6"	39.2"	13.0"	17.4	19.5
16	20:38	-19.3	9.67	5.6	0.8	17.1"	15.5"	38.8"	12.9"	17.3	19.4
21	20:38	-19.3	9.75	5.7	0.8	17.0"	15.4"	38.5"	12.8"	17.3	19.4
26	20:38	-19.3	9.83	5.7	0.8	16.8"	15.2"	38.2"	12.7"	17.2	19.4
31	20:39	-19.3	9.91	5.7	0.8	16.7"	15.1"	37.9"	12.5"	17.1	19.3

November 2021 (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	20:39	-19.2	9.93	5.7	0.8	16.7"	15.1"	37.8"	12.5"	17.1	19.3
6	20:40	-19.2	10.01	5.7	0.8	16.5"	15.0"	37.5"	12.4"	17.1	19.2
11	20:41	-19.1	10.09	5.6	0.9	16.4"	14.8"	37.2"	12.2"	17.0	19.2
16	20:42	-19.1	10.17	5.5	0.9	16.3"	14.7"	36.9"	12.0"	17.0	19.1
21	20:43	-19.0	10.25	5.3	0.9	16.1"	14.6"	36.6"	11.9"	16.9	18.9
26	20:45	-18.9	10.33	5.1	0.9	16.0"	14.5"	36.3"	11.7"	16.9	18.8

Dezember 2021 (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	20:46	-18.8	10.40	4.9	0.9	15.9"	14.4"	36.1"	11.6"	16.8	18.7
6	20:48	-18.7	10.47	4.7	0.9	15.8"	14.3"	35.8"	11.4"	16.7	18.5
11	20:50	-18.6	10.54	4.4	0.9	15.7"	14.2"	35.6"	11.2"	16.7	18.4
16	20:52	-18.5	10.60	4.1	0.9	15.6"	14.1"	35.4"	11.1"	16.6	18.2
21	20:54	-18.3	10.66	3.8	0.9	15.5"	14.0"	35.2"	10.9"	16.6	18.0
26	20:56	-18.2	10.71	3.4	0.9	15.4"	14.0"	35.1"	10.7"	16.5	17.8
31	20:58	-18.0	10.76	3.0	0.9	15.4"	13.9"	34.9"	10.6"	16.5	17.6