



Merkur 2020

Datum	α	δ	b	Δ (AE)	E	mv	φ	\varnothing	k	q (")	$\Delta\alpha$ (h:m)	$\Delta\delta$ (°)	l	r
1.01.	18:19	-24.6	-1.3	1.434	6 W	-0.9	12.2	4.69	0.989	0.05	-0:24	-1.6	262.4	0.466
4.01.	18:40	-24.6	-1.5	1.438	4 W	-1.0	9.0	4.67	0.994	0.03	-0:17	-1.8	270.7	0.463
7.01.	19:01	-24.4	-1.7	1.438	3 W	-1.1	6.0	4.67	0.997	0.01	-0:09	-2.0	279.2	0.458
10.01.	19:22	-24.0	-1.9	1.432	2 W	-1.2	4.2	4.69	0.999	0.01	-0:00	-1.9	288.0	0.450
13.01.	19:44	-23.3	-2.0	1.421	3 O	-1.2	5.6	4.73	0.998	0.01	0:08	-1.7	297.2	0.441
16.01.	20:05	-22.4	-2.1	1.404	4 O	-1.2	9.3	4.79	0.993	0.03	0:16	-1.4	306.8	0.429
19.01.	20:26	-21.3	-2.1	1.381	6 O	-1.1	14.0	4.86	0.985	0.07	0:25	-0.8	316.9	0.415
22.01.	20:47	-20.0	-2.0	1.352	8 O	-1.1	19.5	4.97	0.971	0.14	0:33	-0.1	327.8	0.399
25.01.	21:08	-18.4	-1.9	1.314	10 O	-1.1	25.9	5.11	0.950	0.26	0:41	0.7	339.6	0.382
28.01.	21:28	-16.7	-1.7	1.268	12 O	-1.1	33.5	5.30	0.917	0.44	0:49	1.7	352.5	0.365
31.01.	21:48	-14.7	-1.3	1.213	14 O	-1.0	42.6	5.54	0.868	0.73	0:56	2.9	6.8	0.347
3.02.	22:06	-12.6	-0.9	1.147	16 O	-1.0	53.3	5.86	0.799	1.18	1:02	4.2	22.5	0.332
6.02.	22:23	-10.4	-0.3	1.074	17 O	-0.9	65.7	6.26	0.706	1.84	1:07	5.4	39.5	0.319
9.02.	22:37	-8.3	0.3	0.993	18 O	-0.7	79.8	6.77	0.589	2.78	1:09	6.6	57.5	0.311
12.02.	22:47	-6.5	1.1	0.909	18 O	-0.3	95.4	7.39	0.453	4.04	1:07	7.4	76.2	0.308
15.02.	22:52	-5.1	1.9	0.828	17 O	0.3	112.2	8.12	0.311	5.60	1:01	7.8	95.1	0.310
18.02.	22:52	-4.3	2.7	0.754	14 O	1.2	129.9	8.91	0.179	7.31	0:49	7.6	113.4	0.318
21.02.	22:46	-4.2	3.3	0.694	10 O	2.5	147.7	9.68	0.077	8.93	0:32	6.6	130.8	0.330
24.02.	22:36	-4.8	3.7	0.653	6 O	4.0	163.9	10.29	0.020	10.09	0:10	4.9	146.9	0.345
27.02.	22:24	-5.9	3.7	0.633	4 W	4.6	168.4	10.62	0.010	10.51	-0:13	2.7	161.4	0.362
1.03.	22:13	-7.3	3.4	0.631	9 W	3.4	156.4	10.65	0.042	10.20	-0:36	0.2	174.5	0.380
4.03.	22:05	-8.7	2.9	0.645	14 W	2.3	143.1	10.42	0.100	9.38	-0:55	-2.3	186.4	0.397
7.03.	22:00	-9.8	2.2	0.671	18 W	1.6	131.1	10.02	0.171	8.31	-1:11	-4.6	197.3	0.413
10.03.	21:59	-10.6	1.5	0.705	22 W	1.1	120.7	9.53	0.245	7.20	-1:23	-6.6	207.4	0.427
13.03.	22:01	-11.2	0.8	0.744	24 W	0.8	111.6	9.03	0.316	6.18	-1:32	-8.3	217.0	0.439
16.03.	22:07	-11.4	0.2	0.787	26 W	0.6	103.7	8.54	0.381	5.28	-1:37	-9.7	226.1	0.449
19.03.	22:15	-11.3	-0.4	0.832	27 W	0.4	96.9	8.08	0.440	4.52	-1:40	-10.8	234.9	0.457
22.03.	22:25	-10.9	-0.9	0.876	28 W	0.3	90.8	7.67	0.493	3.89	-1:41	-11.6	243.3	0.463
25.03.	22:37	-10.2	-1.4	0.920	28 W	0.2	85.4	7.31	0.540	3.36	-1:40	-12.1	251.6	0.466
28.03.	22:50	-9.3	-1.8	0.963	27 W	0.2	80.5	6.98	0.582	2.91	-1:38	-12.4	259.8	0.467
31.03.	23:04	-8.2	-2.1	1.005	27 W	0.1	75.9	6.69	0.622	2.53	-1:35	-12.4	268.0	0.465
3.04.	23:19	-6.9	-2.3	1.046	26 W	0.0	71.4	6.42	0.659	2.19	-1:31	-12.3	276.4	0.460
6.04.	23:35	-5.4	-2.4	1.087	25 W	0.0	66.9	6.18	0.696	1.88	-1:26	-11.9	285.1	0.453
9.04.	23:51	-3.6	-2.5	1.127	23 W	-0.1	62.4	5.96	0.732	1.60	-1:21	-11.3	294.2	0.444
12.04.	0:08	-1.8	-2.5	1.165	21 W	-0.2	57.6	5.77	0.768	1.34	-1:15	-10.6	303.6	0.433
15.04.	0:26	0.2	-2.4	1.201	19 W	-0.4	52.6	5.60	0.804	1.10	-1:08	-9.6	313.6	0.420
18.04.	0:45	2.4	-2.3	1.234	17 W	-0.5	47.2	5.45	0.840	0.87	-1:00	-8.5	324.2	0.404
21.04.	1:04	4.7	-2.1	1.264	15 W	-0.7	41.2	5.32	0.876	0.66	-0:52	-7.3	335.7	0.388
24.04.	1:25	7.1	-1.7	1.289	12 W	-1.0	34.4	5.21	0.913	0.45	-0:43	-5.8	348.2	0.370
27.04.	1:47	9.6	-1.4	1.310	9 W	-1.2	26.5	5.13	0.948	0.27	-0:32	-4.3	2.0	0.353
30.04.	2:10	12.1	-0.9	1.323	6 W	-1.6	17.4	5.08	0.977	0.12	-0:21	-2.7	17.3	0.337



Datum	α	δ	b	Δ (AE)	E	mv	φ	\varnothing	k	q (")	$\Delta\alpha$ (h:m)	$\Delta\delta$ (°)	l	r
3.05.	2:34	14.7	-0.4	1.328	2 W	-2.0	7.1	5.06	0.996	0.02	-0:08	-1.1	33.9	0.323
6.05.	2:59	17.1	0.1	1.320	1 O	-2.2	4.3	5.09	0.999	0.01	0:05	0.5	51.6	0.313
9.05.	3:24	19.3	0.6	1.301	5 O	-1.8	16.5	5.17	0.979	0.11	0:19	1.9	70.2	0.308
12.05.	3:51	21.3	1.1	1.269	9 O	-1.5	29.0	5.30	0.937	0.33	0:34	3.1	89.0	0.309
15.05.	4:16	22.9	1.5	1.225	12 O	-1.2	41.3	5.48	0.875	0.68	0:48	4.0	107.6	0.315
18.05.	4:42	24.1	1.9	1.173	15 O	-1.0	53.1	5.73	0.800	1.14	1:01	4.5	125.3	0.325
21.05.	5:06	25.0	2.1	1.114	18 O	-0.7	63.9	6.03	0.720	1.69	1:13	4.8	141.9	0.340
24.05.	5:28	25.5	2.2	1.053	20 O	-0.4	73.8	6.38	0.639	2.30	1:24	4.7	156.9	0.357
27.05.	5:49	25.7	2.2	0.990	21 O	-0.2	82.7	6.79	0.564	2.96	1:32	4.3	170.4	0.374
30.05.	6:07	25.5	2.1	0.930	23 O	0.1	90.8	7.23	0.493	3.67	1:38	3.7	182.7	0.392
2.06.	6:23	25.2	1.9	0.871	23 O	0.3	98.4	7.72	0.427	4.42	1:42	3.0	193.9	0.408
5.06.	6:36	24.7	1.5	0.815	24 O	0.6	105.7	8.24	0.365	5.24	1:43	2.1	204.2	0.422
8.06.	6:47	24.0	1.0	0.763	23 O	0.9	113.0	8.81	0.305	6.13	1:41	1.1	214.0	0.435
11.06.	6:55	23.2	0.4	0.714	22 O	1.2	120.4	9.41	0.247	7.08	1:37	0.1	223.2	0.446
14.06.	7:01	22.4	-0.3	0.670	21 O	1.6	128.0	10.02	0.192	8.09	1:30	-0.9	232.1	0.455
17.06.	7:03	21.6	-1.1	0.633	18 O	2.0	135.9	10.62	0.141	9.12	1:19	-1.8	240.6	0.461
20.06.	7:02	20.8	-1.9	0.602	16 O	2.6	144.1	11.16	0.095	10.10	1:06	-2.7	248.9	0.465
23.06.	6:59	20.0	-2.7	0.579	12 O	3.3	152.5	11.60	0.056	10.95	0:51	-3.4	257.1	0.467
26.06.	6:53	19.4	-3.5	0.565	9 O	4.1	161.0	11.90	0.027	11.58	0:33	-4.0	265.3	0.466
29.06.	6:46	18.9	-4.1	0.560	5 O	4.8	168.3	12.00	0.010	11.88	0:13	-4.3	273.7	0.462
2.07.	6:38	18.6	-4.6	0.565	5 W	5.0	169.4	11.89	0.009	11.79	-0:07	-4.4	282.3	0.456
5.07.	6:31	18.4	-4.8	0.581	8 W	4.2	162.5	11.56	0.023	11.29	-0:27	-4.3	291.2	0.447
8.07.	6:26	18.5	-4.8	0.608	11 W	3.3	153.2	11.06	0.054	10.46	-0:45	-3.9	300.5	0.437
11.07.	6:23	18.8	-4.6	0.644	14 W	2.5	143.4	10.43	0.099	9.40	-0:60	-3.3	310.3	0.424
14.07.	6:23	19.2	-4.1	0.690	17 W	1.8	133.6	9.74	0.155	8.23	-1:12	-2.5	320.7	0.410
17.07.	6:27	19.7	-3.6	0.744	19 W	1.2	123.7	9.03	0.223	7.02	-1:20	-1.5	331.9	0.393
20.07.	6:34	20.2	-3.0	0.806	20 W	0.7	113.5	8.34	0.300	5.84	-1:25	-0.4	344.0	0.376
23.07.	6:45	20.8	-2.2	0.874	20 W	0.3	102.9	7.69	0.388	4.70	-1:26	0.8	357.4	0.358
26.07.	6:59	21.2	-1.5	0.947	20 W	-0.1	91.6	7.10	0.486	3.65	-1:23	1.8	12.2	0.342
29.07.	7:17	21.5	-0.8	1.022	18 W	-0.5	79.5	6.57	0.591	2.69	-1:18	2.8	28.4	0.327
1.08.	7:37	21.4	-0.1	1.097	17 W	-0.8	66.8	6.13	0.697	1.86	-1:09	3.5	45.8	0.316
4.08.	8:00	21.1	0.5	1.166	14 W	-1.1	53.8	5.76	0.796	1.18	-0:58	3.9	64.1	0.309
7.08.	8:24	20.3	1.0	1.227	11 W	-1.3	40.7	5.48	0.879	0.66	-0:45	4.0	82.9	0.308
10.08.	8:49	19.2	1.4	1.278	8 W	-1.5	28.2	5.26	0.941	0.31	-0:31	3.7	101.7	0.312
13.08.	9:14	17.7	1.6	1.317	5 W	-1.7	16.7	5.10	0.979	0.11	-0:18	3.1	119.7	0.321
16.08.	9:39	15.9	1.7	1.344	2 W	-1.9	7.4	5.00	0.996	0.02	-0:04	2.2	136.7	0.335
19.08.	10:02	13.8	1.8	1.360	2 O	-1.8	6.6	4.94	0.997	0.02	0:08	1.1	152.2	0.351
22.08.	10:25	11.7	1.7	1.367	5 O	-1.5	13.2	4.92	0.987	0.06	0:19	-0.0	166.2	0.368
25.08.	10:46	9.4	1.5	1.366	7 O	-1.2	19.7	4.92	0.971	0.14	0:30	-1.3	178.9	0.386
28.08.	11:06	7.1	1.3	1.358	10 O	-0.9	25.5	4.95	0.951	0.24	0:39	-2.5	190.4	0.403
31.08.	11:25	4.8	1.0	1.346	12 O	-0.7	30.8	4.99	0.930	0.35	0:47	-3.8	201.0	0.418



Datum	α	δ	b	Δ (AE)	E	mv	φ	\emptyset	k	q (")	$\Delta\alpha$ (h:m)	$\Delta\delta$ (°)	l	r
3.09.	11:44	2.5	0.7	1.328	14 O	-0.5	35.5	5.06	0.907	0.47	0:54	-5.0	210.9	0.431
6.09.	12:01	0.2	0.3	1.306	16 O	-0.4	40.0	5.14	0.883	0.60	1:01	-6.1	220.3	0.443
9.09.	12:18	-2.0	0.0	1.281	18 O	-0.3	44.2	5.25	0.858	0.74	1:07	-7.2	229.3	0.452
12.09.	12:34	-4.2	-0.4	1.252	20 O	-0.2	48.3	5.37	0.833	0.90	1:13	-8.3	237.9	0.459
15.09.	12:50	-6.3	-0.8	1.220	21 O	-0.1	52.3	5.51	0.806	1.07	1:17	-9.2	246.3	0.464
18.09.	13:05	-8.3	-1.2	1.186	23 O	-0.1	56.3	5.67	0.778	1.26	1:22	-10.0	254.5	0.467
21.09.	13:19	-10.1	-1.6	1.149	24 O	0.0	60.4	5.85	0.747	1.48	1:25	-10.8	262.7	0.466
24.09.	13:33	-11.9	-2.0	1.108	25 O	0.0	64.8	6.06	0.713	1.74	1:28	-11.3	271.0	0.463
27.09.	13:46	-13.5	-2.3	1.064	25 O	0.0	69.7	6.31	0.673	2.06	1:31	-11.8	279.5	0.458
30.09.	13:59	-15.0	-2.7	1.017	26 O	0.0	75.2	6.61	0.628	2.46	1:32	-12.1	288.3	0.450
3.10.	14:10	-16.3	-3.0	0.968	26 O	0.1	81.3	6.95	0.576	2.95	1:32	-12.2	297.5	0.440
6.10.	14:19	-17.3	-3.2	0.916	25 O	0.2	88.3	7.34	0.514	3.56	1:31	-12.1	307.1	0.428
9.10.	14:27	-18.1	-3.4	0.863	24 O	0.3	96.5	7.79	0.443	4.34	1:27	-11.7	317.3	0.414
12.10.	14:31	-18.5	-3.4	0.811	23 O	0.5	106.1	8.29	0.361	5.30	1:21	-11.0	328.2	0.399
15.10.	14:32	-18.4	-3.3	0.761	20 O	0.8	117.7	8.83	0.268	6.46	1:11	-9.8	340.0	0.382
18.10.	14:29	-17.8	-2.9	0.717	16 O	1.5	131.5	9.37	0.168	7.79	0:56	-8.1	353.0	0.364
21.10.	14:20	-16.5	-2.4	0.684	11 O	2.6	148.1	9.83	0.075	9.09	0:37	-5.8	7.3	0.347
24.10.	14:08	-14.6	-1.5	0.669	4 O	4.4	167.1	10.05	0.013	9.92	0:13	-2.8	23.0	0.331
27.10.	13:55	-12.4	-0.5	0.678	3 W	4.8	171.1	9.92	0.006	9.86	-0:12	0.5	40.0	0.319
30.10.	13:44	-10.3	0.5	0.712	9 W	2.6	149.9	9.44	0.068	8.80	-0:34	3.6	58.1	0.311
2.11.	13:39	-8.9	1.3	0.769	14 W	1.1	129.2	8.74	0.184	7.13	-0:51	6.0	76.8	0.308
5.11.	13:39	-8.3	1.9	0.841	17 W	0.2	110.1	7.99	0.328	5.37	-1:03	7.5	95.7	0.310
8.11.	13:45	-8.5	2.2	0.921	19 W	-0.3	93.2	7.30	0.472	3.85	-1:09	8.1	114.0	0.318
11.11.	13:55	-9.4	2.3	1.001	19 W	-0.6	78.6	6.71	0.599	2.69	-1:11	8.1	131.4	0.330
14.11.	14:08	-10.6	2.2	1.077	19 W	-0.7	66.1	6.24	0.702	1.86	-1:10	7.7	147.4	0.346
17.11.	14:23	-12.1	2.0	1.147	18 W	-0.7	55.7	5.86	0.782	1.28	-1:07	6.9	161.9	0.363
20.11.	14:39	-13.7	1.8	1.208	16 W	-0.7	47.0	5.56	0.841	0.88	-1:04	6.0	174.9	0.380
23.11.	14:57	-15.3	1.5	1.260	15 W	-0.7	39.7	5.33	0.885	0.61	-0:59	5.1	186.8	0.397
26.11.	15:15	-16.9	1.1	1.305	13 W	-0.7	33.4	5.15	0.918	0.42	-0:54	4.1	197.6	0.413
29.11.	15:33	-18.4	0.8	1.344	12 W	-0.7	27.9	5.00	0.942	0.29	-0:48	3.1	207.7	0.427
2.12.	15:52	-19.8	0.4	1.375	10 W	-0.8	23.0	4.89	0.960	0.19	-0:42	2.2	217.3	0.439
5.12.	16:12	-21.0	0.1	1.401	8 W	-0.8	18.6	4.80	0.974	0.12	-0:35	1.4	226.4	0.449
8.12.	16:31	-22.2	-0.3	1.421	7 W	-0.9	14.5	4.73	0.984	0.08	-0:29	0.6	235.1	0.457
11.12.	16:51	-23.1	-0.6	1.436	5 W	-0.9	10.8	4.68	0.991	0.04	-0:22	-0.1	243.6	0.463
14.12.	17:12	-23.9	-0.9	1.445	4 W	-1.0	7.4	4.65	0.996	0.02	-0:15	-0.7	251.9	0.466
17.12.	17:32	-24.5	-1.2	1.449	2 W	-1.1	4.5	4.64	0.998	0.01	-0:08	-1.1	260.0	0.467
20.12.	17:53	-24.9	-1.4	1.447	1 W	-1.2	3.1	4.64	0.999	0.00	-0:00	-1.4	268.3	0.465
23.12.	18:14	-25.1	-1.7	1.441	2 O	-1.1	5.0	4.66	0.998	0.01	0:07	-1.6	276.7	0.460
26.12.	18:35	-25.0	-1.9	1.429	4 O	-1.1	8.4	4.70	0.995	0.02	0:15	-1.7	285.4	0.453
29.12.	18:56	-24.8	-2.0	1.412	6 O	-1.0	12.3	4.76	0.988	0.05	0:23	-1.6	294.4	0.444

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)

Koordinaten für Tagesbeobachtungen:

$\Delta\alpha$ und $\Delta\delta$: Rektaszensions- und Deklinationsdifferenzen (Venus minus Sonne)

Heliozentrische Koordinaten:

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

14.09.2015