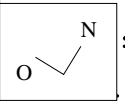


4		8	
5		9	
6		10	
7		11	



Ephemeride des Kleinplaneten (20) Massalia

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	Stb
-----	---	-----	-	-----	---	-----	-----	-----	-----	-----	-----	-----
15 Okt 2017	05h58m06.48s	+22 50' 26.1"	2.1249	1.5393	10.1	112.0	25.8	40.84	105.76	26.75	92.0	Ori
16 Okt 2017	05h58m53.20s	+22 49' 56.6"	2.1239	1.5280	10.1	112.8	25.6	41.30	106.51	25.74	92.2	Ori
17 Okt 2017	05h59m38.17s	+22 49' 26.0"	2.1229	1.5167	10.1	113.7	25.5	41.76	107.27	24.72	92.4	Ori
18 Okt 2017	06h00m21.37s	+22 48' 54.2"	2.1219	1.5055	10.0	114.5	25.3	42.23	108.05	23.68	92.7	Ori
19 Okt 2017	06h01m02.77s	+22 48' 21.4"	2.1210	1.4944	10.0	115.3	25.1	42.70	108.84	22.62	92.9	Gem
20 Okt 2017	06h01m42.33s	+22 47' 47.7"	2.1200	1.4834	10.0	116.2	24.9	43.17	109.65	21.55	93.1	Gem
21 Okt 2017	06h02m20.03s	+22 47' 13.2"	2.1190	1.4724	10.0	117.0	24.7	43.64	110.48	20.46	93.4	Gem
22 Okt 2017	06h02m55.85s	+22 46' 37.9"	2.1181	1.4615	10.0	117.9	24.5	44.11	111.32	19.35	93.7	Gem
23 Okt 2017	06h03m29.75s	+22 46' 02.1"	2.1171	1.4507	9.9	118.7	24.3	44.59	112.18	18.23	94.0	Gem
24 Okt 2017	06h04m01.71s	+22 45' 25.6"	2.1162	1.4400	9.9	119.6	24.1	45.07	113.06	17.10	94.4	Gem
25 Okt 2017	06h04m31.71s	+22 44' 48.7"	2.1153	1.4294	9.9	120.5	23.9	45.54	113.97	15.95	94.8	Gem
26 Okt 2017	06h04m59.73s	+22 44' 11.4"	2.1144	1.4189	9.9	121.4	23.7	46.02	114.89	14.79	95.2	Gem
27 Okt 2017	06h05m25.73s	+22 43' 33.7"	2.1134	1.4085	9.8	122.3	23.4	46.50	115.83	13.62	95.7	Gem
28 Okt 2017	06h05m49.71s	+22 42' 55.9"	2.1125	1.3982	9.8	123.2	23.2	46.98	116.79	12.44	96.3	Gem
29 Okt 2017	06h06m11.63s	+22 42' 17.8"	2.1116	1.3880	9.8	124.1	22.9	47.47	117.78	11.24	97.0	Gem
30 Okt 2017	06h06m31.47s	+22 41' 39.7"	2.1107	1.3780	9.8	125.0	22.7	47.95	118.79	10.04	97.9	Gem
31 Okt 2017	06h06m49.22s	+22 41' 01.6"	2.1099	1.3680	9.7	125.9	22.4	48.43	119.82	8.82	99.0	Gem
1 Nov 2017	06h07m04.85s	+22 40' 23.5"	2.1090	1.3582	9.7	126.9	22.1	48.91	120.88	7.60	100.5	Gem
2 Nov 2017	06h07m18.34s	+22 39' 45.5"	2.1081	1.3484	9.7	127.8	21.8	49.39	121.97	6.37	102.5	Gem
3 Nov 2017	06h07m29.69s	+22 39' 07.7"	2.1073	1.3388	9.7	128.8	21.5	49.87	123.08	5.15	105.6	Gem
4 Nov 2017	06h07m38.86s	+22 38' 30.1"	2.1064	1.3293	9.6	129.7	21.2	50.35	124.23	3.93	110.5	Gem
5 Nov 2017	06h07m45.83s	+22 37' 52.7"	2.1056	1.3200	9.6	130.7	20.9	50.82	125.40	2.76	119.7	Gem
6 Nov 2017	06h07m50.60s	+22 37' 15.6"	2.1047	1.3108	9.6	131.7	20.6	51.30	126.60	1.75	140.9	Gem
7 Nov 2017	06h07m53.14s	+22 36' 38.9"	2.1039	1.3017	9.6	132.7	20.3	51.77	127.84	1.37	188.4	Gem
8 Nov 2017	06h07m53.44s	+22 36' 02.5"	2.1031	1.2928	9.5	133.7	19.9	52.23	129.10	2.02	228.5	Gem
9 Nov 2017	06h07m51.47s	+22 35' 26.4"	2.1023	1.2840	9.5	134.7	19.6	52.69	130.40	3.14	244.8	Gem
10 Nov 2017	06h07m47.23s	+22 34' 50.8"	2.1015	1.2753	9.5	135.7	19.2	53.15	131.74	4.37	252.4	Gem
11 Nov 2017	06h07m40.70s	+22 34' 15.5"	2.1007	1.2668	9.5	136.8	18.8	53.60	133.11	5.66	256.6	Gem
12 Nov 2017	06h07m31.89s	+22 33' 40.7"	2.0999	1.2585	9.4	137.8	18.5	54.05	134.52	6.96	259.2	Gem
13 Nov 2017	06h07m20.77s	+22 33' 06.2"	2.0991	1.2503	9.4	138.8	18.1	54.49	135.97	8.28	261.0	Gem
14 Nov 2017	06h07m07.37s	+22 32' 32.1"	2.0983	1.2423	9.4	139.9	17.7	54.92	137.46	9.60	262.3	Gem
15 Nov 2017	06h06m51.67s	+22 31' 58.3"	2.0976	1.2344	9.4	141.0	17.3	55.35	138.99	10.93	263.3	Gem
16 Nov 2017	06h06m33.69s	+22 31' 24.9"	2.0968	1.2268	9.3	142.1	16.9	55.76	140.56	12.25	264.0	Gem
17 Nov 2017	06h06m13.44s	+22 30' 51.8"	2.0961	1.2193	9.3	143.1	16.4	56.16	142.17	13.56	264.6	Gem
18 Nov 2017	06h05m50.94s	+22 30' 19.0"	2.0953	1.2120	9.3	144.2	16.0	56.56	143.82	14.86	265.1	Gem
19 Nov 2017	06h05m26.20s	+22 29' 46.4"	2.0946	1.2048	9.3	145.3	15.6	56.94	145.52	16.15	265.5	Gem
20 Nov 2017	06h04m59.24s	+22 29' 14.1"	2.0939	1.1979	9.2	146.4	15.1	57.30	147.26	17.43	265.9	Gem
21 Nov 2017	06h04m30.11s	+22 28' 41.9"	2.0932	1.1911	9.2	147.6	14.7	57.65	149.05	18.69	266.1	Gem
22 Nov 2017	06h03m58.82s	+22 28' 09.9"	2.0925	1.1846	9.2	148.7	14.2	57.99	150.88	19.93	266.4	Gem
23 Nov 2017	06h03m25.42s	+22 27' 38.0"	2.0918	1.1782	9.2	149.8	13.7	58.31	152.76	21.15	266.6	Gem
24 Nov 2017	06h02m49.94s	+22 27' 06.0"	2.0911	1.1721	9.1	151.0	13.2	58.61	154.67	22.35	266.7	Gem
25 Nov 2017	06h02m12.43s	+22 26' 34.1"	2.0904	1.1661	9.1	152.1	12.8	58.89	156.63	23.52	266.9	Gem
26 Nov 2017	06h01m32.93s	+22 26' 02.1"	2.0898	1.1604	9.1	153.3	12.3	59.15	158.64	24.66	267.0	Gem
27 Nov 2017	06h00m51.49s	+22 25' 30.0"	2.0891	1.1549	9.0	154.5	11.7	59.39	160.68	25.77	267.1	Gem
28 Nov 2017	06h00m08.18s	+22 24' 57.7"	2.0885	1.1496	9.0	155.6	11.2	59.61	162.76	26.85	267.1	Ori
29 Nov 2017	05h59m23.04s	+22 24' 25.2"	2.0878	1.1445	9.0	156.8	10.7	59.80	164.88	27.89	267.2	Ori
30 Nov 2017	05h58m36.14s	+22 23' 52.4"	2.0872	1.1397	9.0	158.0	10.2	59.97	167.03	28.89	267.3	Ori
1 Dez 2017	05h57m47.55s	+22 23' 19.2"	2.0866	1.1350	8.9	159.2	9.7	60.12	169.21	29.86	267.3	Ori
2 Dez 2017	05h56m57.32s	+22 22' 45.7"	2.0859	1.1306	8.9	160.4	9.1	60.23	171.42	30.79	267.3	Ori
3 Dez 2017	05h56m05.53s	+22 22' 11.7"	2.0853	1.1265	8.9	161.6	8.6	60.32	173.65	31.68	267.4	Ori
4 Dez 2017	05h55m12.26s	+22 21' 37.1"	2.0847	1.1226	8.8	162.9	8.0	60.38	175.91	32.52	267.4	Ori
5 Dez 2017	05h54m17.56s	+22 21' 02.1"	2.0842	1.1189	8.8	164.1	7.5	60.41	178.18	33.32	267.4	Ori
6 Dez 2017	05h53m21.53s	+22 20' 26.4"	2.0836	1.1154	8.8	165.3	6.9	60.40	180.46	34.07	267.4	Ori
7 Dez 2017	05h52m24.24s	+22 19' 50.0"	2.0830	1.1122	8.8	166.5	6.3	60.37	182.75	34.78	267.4	Ori
8 Dez 2017	05h51m25.78s	+22 19' 12.9"	2.0824	1.1092	8.7	167.8	5.8	60.31	185.05	35.43	267.3	Ori
9 Dez 2017	05h50m26.23s	+22 18' 35.1"	2.0819	1.1065	8.7	169.0	5.2	60.22	187.34	36.04	267.3	Ori
10 Dez 2017	05h49m25.69s	+22 17' 56.6"	2.0814	1.1040	8.7	170.2	4.6	60.10	189.63	36.58	267.3	Tau
11 Dez 2017	05h48m24.26s	+22 17' 17.2"	2.0808	1.1018	8.6	171.5	4.0	59.94	191.91	37.06	267.3	Tau
12 Dez 2017	05h47m22.04s	+22 16' 37.0"	2.0803	1.0998	8.6	172.7	3.4	59.76	194.17	37.49	267.2	Tau
13 Dez 2017	05h46m19.10s	+22 15' 55.9"	2.0798	1.0981	8.6	174.0	2.8	59.55	196.42	37.86	267.2	Tau
14 Dez 2017	05h45m15.61s	+22 15' 14.1"	2.0793	1.0967	8.5	175.2	2.3	59.30	198.64	38.15	267.1	Tau
15 Dez 2017	05h44m11.66s	+22 14' 31.6"	2.0788	1.0955	8.5	176.4	1.7	59.03	200.84	38.38	267.1	Tau
16 Dez 2017	05h43m07.37s	+22 13' 48.3"	2.0783	1.0945	8.4	177.6	1.1	58.73	203.01	38.55	267.0	Tau
17 Dez 2017	05h42m02.84s	+22 13' 04.3"	2.0778	1.0938	8.4	178.6	0.7	58.40	205.15	38.64	267.0	Tau
18 Dez 2017	05h40m58.19s	+22 12' 19.7"	2.0774	1.0934	8.4	178.8	0.6	58.05	207.25	38.67	266.9	Tau
19 Dez 2017	05h39m53.54s	+22 11' 34.5"	2.0769	1.0932	8.4	178.0	1.0	57.67	209.31	38.63	266.9	Tau
20 Dez 2017	05h38m49.01s	+22 10' 48.8"	2.0765	1.0933	8.5	176.8	1.5	57.27	211.34	38.52	266.8	Tau
21 Dez 2017	05h37m44.71s	+22 10' 02.6"	2.0760	1.0937	8.5	175.6	2.1	56.85	213.33	38.34	266.8	Tau
22 Dez 2017	05h36m40.76s	+22 09' 16.2"	2.0756	1.0943	8.5	174.4	2.7	56.40	215.27	38.10	266.7	Tau
23 Dez 2017	05h35m37.27s	+22 08' 29.5"	2.0752	1.0951	8.6	173.2	3.2	55.93	217.18	37.79	266.7	Tau
24 Dez 2017	05h34m34.36s	+22 07' 42.6"	2.0747	1.0963	8.6	171.9	3.8	55.45	219.04	37.41	266.6	Tau
25 Dez 2017	05h33m32.13s	+22 06' 55.8"	2.0743	1.0976	8.6	170.7	4.4	54.94	220.85	36.97	266.6	Tau
26 Dez 2017	05h32m30.69s	+22 06' 09.1"	2.0740	1.0993	8.7	169.4	5.0	54.42	222.63	36.47	266.5	Tau
27 Dez 2017	05h31m30.15s	+22 05' 22.7"	2.0736	1.1011	8.7	168.2	5.6	53.89	224.36	35.90	266.5	Tau

Ephemeride des Kleinplaneten (20) Massalia

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	Stb
-----	--	-----	-	-----	---	-----	-----	-----	-----	-----	-----	-----
28 Dez 2017	05h30m30.61s	+22 04' 36.6"	2.0732	1.1033	8.7	166.9	6.2	53.33	226.05	35.28	266.4	Tau
29 Dez 2017	05h29m32.15s	+22 03' 51.1"	2.0728	1.1056	8.7	165.7	6.7	52.77	227.70	34.61	266.4	Tau
30 Dez 2017	05h28m34.89s	+22 03' 06.2"	2.0725	1.1083	8.8	164.4	7.3	52.19	229.30	33.88	266.4	Tau
31 Dez 2017	05h27m38.90s	+22 02' 22.1"	2.0721	1.1111	8.8	163.2	7.9	51.61	230.87	33.10	266.3	Tau
1 Jan 2018	05h26m44.26s	+22 01' 38.9"	2.0718	1.1142	8.8	162.0	8.4	51.01	232.39	32.27	266.3	Tau
2 Jan 2018	05h25m51.06s	+22 00' 56.8"	2.0715	1.1175	8.9	160.8	9.0	50.41	233.88	31.40	266.3	Tau
3 Jan 2018	05h24m59.38s	+22 00' 15.9"	2.0712	1.1211	8.9	159.6	9.5	49.79	235.33	30.48	266.2	Tau
4 Jan 2018	05h24m09.27s	+21 59' 36.2"	2.0709	1.1249	8.9	158.3	10.1	49.17	236.74	29.52	266.2	Tau
5 Jan 2018	05h23m20.82s	+21 58' 58.0"	2.0706	1.1289	8.9	157.1	10.6	48.55	238.12	28.52	266.2	Tau
6 Jan 2018	05h22m34.08s	+21 58' 21.4"	2.0703	1.1332	9.0	155.9	11.2	47.92	239.46	27.48	266.2	Tau
7 Jan 2018	05h21m49.13s	+21 57' 46.5"	2.0700	1.1376	9.0	154.7	11.7	47.28	240.77	26.41	266.2	Tau
8 Jan 2018	05h21m06.03s	+21 57' 13.3"	2.0697	1.1423	9.0	153.6	12.2	46.65	242.05	25.29	266.2	Tau
9 Jan 2018	05h20m24.84s	+21 56' 42.2"	2.0695	1.1472	9.0	152.4	12.7	46.01	243.30	24.15	266.2	Tau
10 Jan 2018	05h19m45.61s	+21 56' 13.0"	2.0692	1.1524	9.1	151.2	13.2	45.36	244.51	22.97	266.2	Tau
11 Jan 2018	05h19m08.40s	+21 55' 46.1"	2.0690	1.1577	9.1	150.1	13.7	44.72	245.70	21.76	266.2	Tau
12 Jan 2018	05h18m33.26s	+21 55' 21.4"	2.0688	1.1632	9.1	148.9	14.2	44.07	246.86	20.52	266.3	Tau
13 Jan 2018	05h18m00.23s	+21 54' 59.2"	2.0685	1.1690	9.1	147.8	14.7	43.43	248.00	19.26	266.3	Tau
14 Jan 2018	05h17m29.35s	+21 54' 39.4"	2.0683	1.1749	9.2	146.6	15.2	42.79	249.10	17.97	266.4	Tau
15 Jan 2018	05h17m00.67s	+21 54' 22.2"	2.0681	1.1810	9.2	145.5	15.6	42.14	250.19	16.66	266.4	Tau
16 Jan 2018	05h16m34.21s	+21 54' 07.7"	2.0679	1.1873	9.2	144.4	16.1	41.50	251.25	15.34	266.6	Tau
17 Jan 2018	05h16m10.01s	+21 53' 55.9"	2.0678	1.1939	9.2	143.3	16.5	40.87	252.28	13.99	266.7	Tau
18 Jan 2018	05h15m48.08s	+21 53' 46.9"	2.0676	1.2005	9.3	142.2	17.0	40.23	253.30	12.64	266.9	Tau
19 Jan 2018	05h15m28.47s	+21 53' 40.8"	2.0674	1.2074	9.3	141.1	17.4	39.60	254.29	11.27	267.1	Tau
20 Jan 2018	05h15m11.17s	+21 53' 37.6"	2.0673	1.2145	9.3	140.0	17.8	38.97	255.26	9.89	267.4	Tau
21 Jan 2018	05h14m56.21s	+21 53' 37.4"	2.0671	1.2217	9.3	138.9	18.2	38.34	256.21	8.51	267.8	Tau
22 Jan 2018	05h14m43.60s	+21 53' 40.2"	2.0670	1.2291	9.4	137.8	18.6	37.72	257.15	7.12	268.3	Tau
23 Jan 2018	05h14m33.33s	+21 53' 45.9"	2.0669	1.2366	9.4	136.8	19.0	37.10	258.06	5.73	269.2	Tau
24 Jan 2018	05h14m25.43s	+21 53' 54.6"	2.0668	1.2443	9.4	135.7	19.4	36.49	258.96	4.34	270.5	Tau
25 Jan 2018	05h14m19.87s	+21 54' 06.4"	2.0667	1.2521	9.4	134.7	19.8	35.88	259.84	2.96	273.2	Tau
26 Jan 2018	05h14m16.67s	+21 54' 21.1"	2.0666	1.2601	9.5	133.7	20.2	35.27	260.70	1.60	280.4	Tau
27 Jan 2018	05h14m15.80s	+21 54' 38.8"	2.0665	1.2683	9.5	132.6	20.5	34.67	261.55	0.46	334.1	Tau
28 Jan 2018	05h14m17.27s	+21 54' 59.4"	2.0664	1.2766	9.5	131.6	20.9	34.08	262.39	1.28	65.5	Tau
29 Jan 2018	05h14m21.05s	+21 55' 22.9"	2.0664	1.2850	9.5	130.6	21.2	33.49	263.21	2.61	75.6	Tau
30 Jan 2018	05h14m27.13s	+21 55' 49.2"	2.0663	1.2935	9.6	129.6	21.5	32.91	264.01	3.95	78.8	Tau
31 Jan 2018	05h14m35.50s	+21 56' 18.3"	2.0663	1.3022	9.6	128.7	21.9	32.33	264.80	5.29	80.4	Tau
1 Feb 2018	05h14m46.13s	+21 56' 50.0"	2.0662	1.3110	9.6	127.7	22.2	31.76	265.58	6.61	81.4	Tau
2 Feb 2018	05h14m59.01s	+21 57' 24.4"	2.0662	1.3200	9.6	126.7	22.5	31.19	266.35	7.93	82.0	Tau
3 Feb 2018	05h15m14.11s	+21 58' 01.2"	2.0662	1.3290	9.6	125.8	22.8	30.63	267.10	9.23	82.5	Tau
4 Feb 2018	05h15m31.42s	+21 58' 40.6"	2.0662	1.3382	9.7	124.8	23.1	30.08	267.84	10.53	82.9	Tau
5 Feb 2018	05h15m50.92s	+21 59' 22.2"	2.0662	1.3474	9.7	123.9	23.3	29.53	268.57	11.81	83.2	Tau
6 Feb 2018	05h16m12.60s	+22 00' 06.2"	2.0662	1.3568	9.7	123.0	23.6	28.99	269.29	13.08	83.4	Tau
7 Feb 2018	05h16m36.42s	+22 00' 52.2"	2.0662	1.3663	9.7	122.0	23.9	28.45	270.00	14.34	83.7	Tau
8 Feb 2018	05h17m02.38s	+22 01' 40.4"	2.0663	1.3759	9.8	121.1	24.1	27.92	270.70	15.59	83.9	Tau
9 Feb 2018	05h17m30.45s	+22 02' 30.5"	2.0663	1.3856	9.8	120.2	24.4	27.40	271.39	16.82	84.0	Tau
10 Feb 2018	05h18m00.61s	+22 03' 22.5"	2.0664	1.3954	9.8	119.3	24.6	26.88	272.07	18.04	84.2	Tau
11 Feb 2018	05h18m32.83s	+22 04' 16.3"	2.0664	1.4053	9.8	118.4	24.8	26.36	272.74	19.25	84.3	Tau
12 Feb 2018	05h19m07.10s	+22 05' 11.6"	2.0665	1.4153	9.8	117.6	25.1	25.86	273.40	20.44	84.5	Tau
13 Feb 2018	05h19m43.39s	+22 06' 08.5"	2.0666	1.4253	9.9	116.7	25.3	25.35	274.05	21.61	84.6	Tau
14 Feb 2018	05h20m21.68s	+22 07' 06.8"	2.0667	1.4355	9.9	115.8	25.5	24.86	274.70	22.78	84.7	Tau
15 Feb 2018	05h21m01.94s	+22 08' 06.4"	2.0668	1.4457	9.9	115.0	25.7	24.37	275.33	23.92	84.9	Tau
16 Feb 2018	05h21m44.14s	+22 09' 07.1"	2.0669	1.4560	9.9	114.1	25.9	23.88	275.96	25.05	85.0	Tau
17 Feb 2018	05h22m28.26s	+22 10' 08.8"	2.0670	1.4664	10.0	113.3	26.0	23.40	276.58	26.16	85.1	Tau
18 Feb 2018	05h23m14.27s	+22 11' 11.5"	2.0672	1.4768	10.0	112.5	26.2	22.93	277.19	27.26	85.2	Tau
19 Feb 2018	05h24m02.14s	+22 12' 14.8"	2.0673	1.4874	10.0	111.6	26.4	22.46	277.80	28.33	85.4	Tau
20 Feb 2018	05h24m51.85s	+22 13' 18.8"	2.0675	1.4979	10.0	110.8	26.6	22.00	278.39	29.39	85.5	Tau
21 Feb 2018	05h25m43.36s	+22 14' 23.2"	2.0676	1.5086	10.0	110.0	26.7	21.54	278.99	30.44	85.6	Tau
22 Feb 2018	05h26m36.64s	+22 15' 28.0"	2.0678	1.5193	10.1	109.2	26.9	21.09	279.57	31.46	85.7	Tau
23 Feb 2018	05h27m31.66s	+22 16' 33.0"	2.0680	1.5301	10.1	108.4	27.0	20.65	280.15	32.46	85.8	Tau
24 Feb 2018	05h28m28.39s	+22 17' 38.0"	2.0682	1.5409	10.1	107.6	27.1	20.21	280.72	33.44	86.0	Tau
25 Feb 2018	05h29m26.80s	+22 18' 42.8"	2.0684	1.5517	10.1	106.9	27.3	19.77	281.28	34.41	86.1	Tau
26 Feb 2018	05h30m26.85s	+22 19' 47.4"	2.0686	1.5627	10.1	106.1	27.4	19.34	281.84	35.35	86.2	Tau
27 Feb 2018	05h31m28.51s	+22 20' 51.6"	2.0688	1.5736	10.1	105.3	27.5	18.91	282.39	36.28	86.3	Tau
28 Feb 2018	05h32m31.75s	+22 21' 55.3"	2.0691	1.5846	10.2	104.6	27.6	18.49	282.94	37.18	86.5	Tau
1 Mar 2018	05h33m36.53s	+22 22' 58.2"	2.0693	1.5957	10.2	103.8	27.7	18.08	283.48	38.07	86.6	Tau