

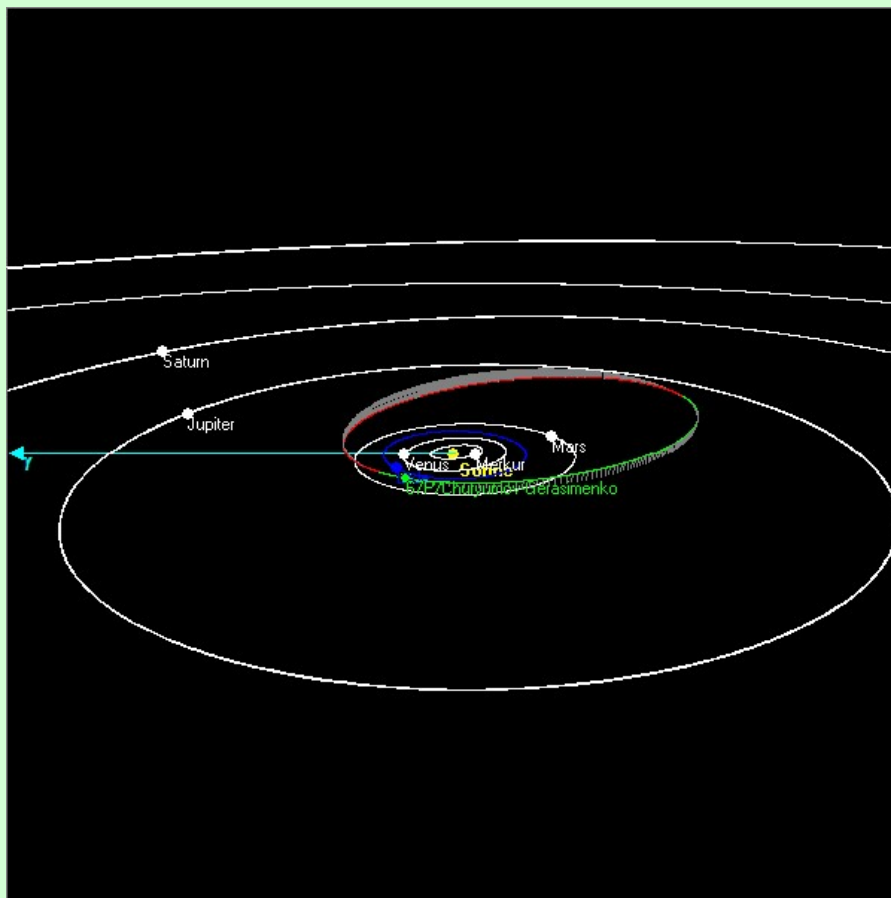
berechnet für den Standort Mitteldeutschland

Periheldurchgang	2021-November- 1.4463000
Bahnexzentrizität	0.6515050
Periheldistanz	1.2046890 aE
große halbe Bahnachse	3.456833 aE
Umlaufzeit in Jahren	6.427259
Länge des aufsteigenden Knotens	36.696500 Grad
Perihellänge	21.895900 Grad
Bahnneigung	3.880600 Grad
Grundhelligkeit	11.0 mag.
Luminiszenzfaktor	4.00

```

ab 28.05.2021 morgens sichtbar mit Helligkeit 16.0 [Komet horizontnah beobachtbar]
               positioniert im Sternbild AQR, Helligkeit 16.0 [Komet horizontnah beobachtbar]
ab 14.06.2021 Übergang ins Sternbild PSC, Helligkeit 15.4
ab 30.06.2021 Übergang ins Sternbild CET, Helligkeit 14.7
ab 04.07.2021 Beginn des Analysezeitraums
ab 21.07.2021 Übergang ins Sternbild PSC, Helligkeit 13.8
ab 13.08.2021 Übergang ins Sternbild CET, Helligkeit 12.7
ab 22.08.2021 Übergang ins Sternbild ARI, Helligkeit 12.3
ab 07.09.2021 Übergang ins Sternbild TAU, Helligkeit 11.5
ab 14.10.2021 Übergang ins Sternbild GEM, Helligkeit 10.2
ab 11.11.2021 Übergang ins Sternbild CNC, Helligkeit 10.0
ab 06.02.2022 abends sichtbar mit Helligkeit 12.5
ab 01.03.2022 Ende des Analysezeitraums

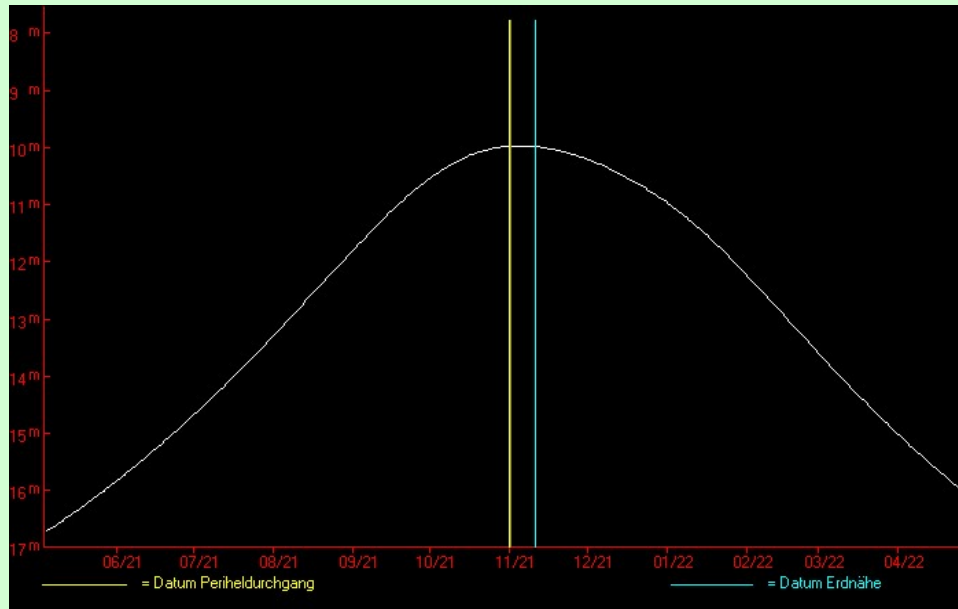
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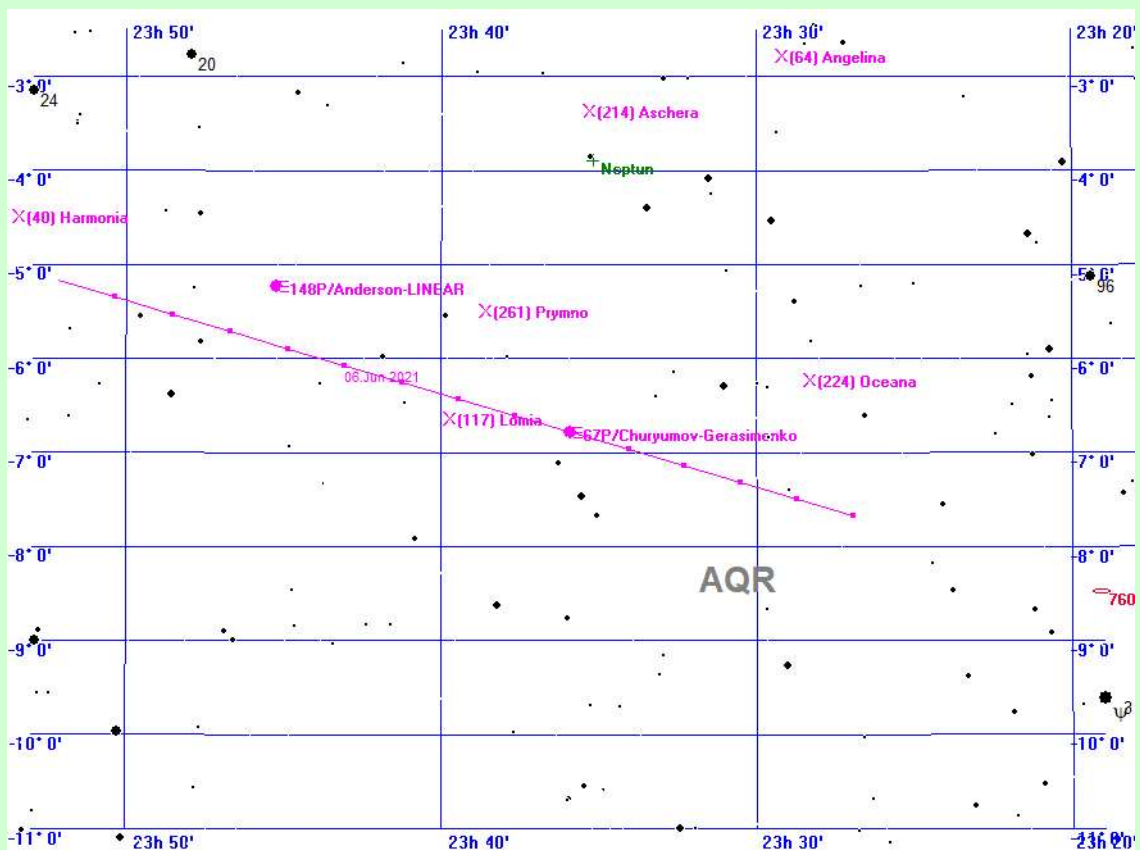
Stargazer's Almanac für Windows 7.23 (C) Andre Wulff 13.07.2020 20:46:29 Seite 1

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



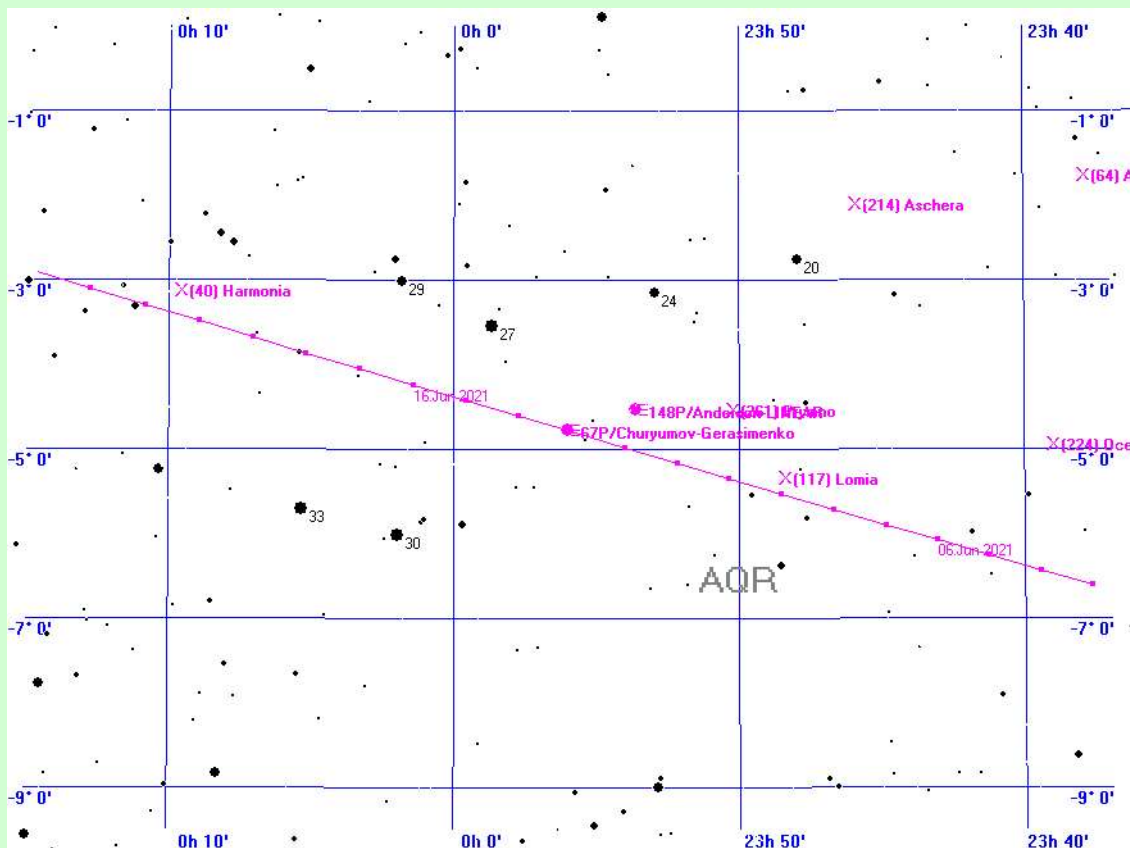
Die Lichtkurve des Kometen 67P/Churyumov-Gerasimenko



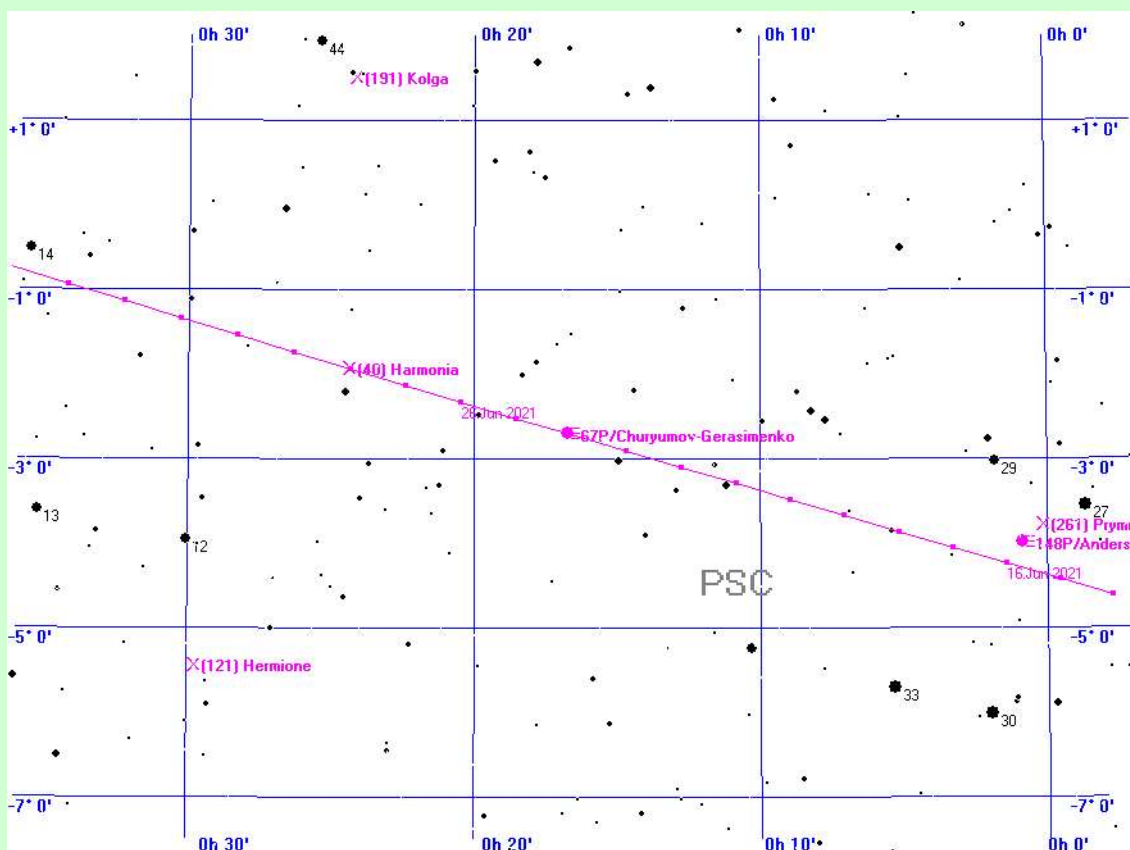
67P/Churyumov-Gerasimenko am 2.6.2021

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



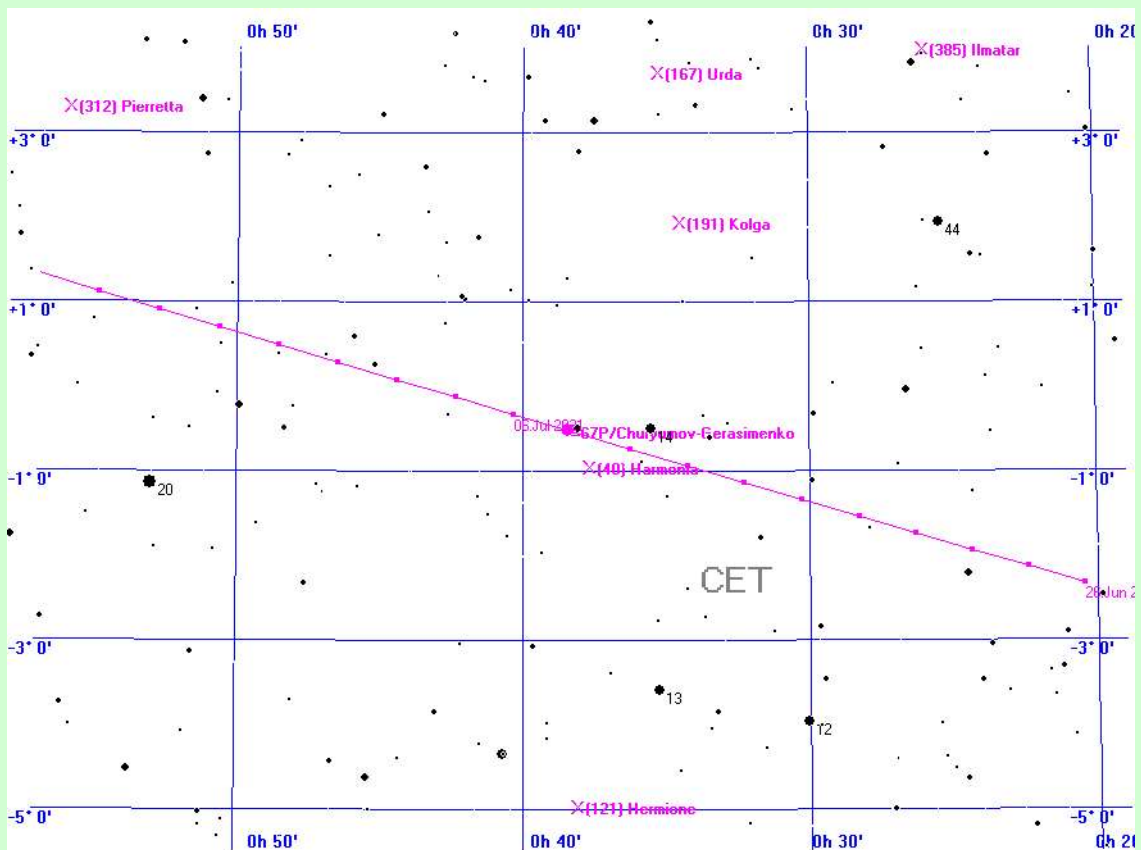
67P/Churyumov-Gerasimenko am 13.6.2021



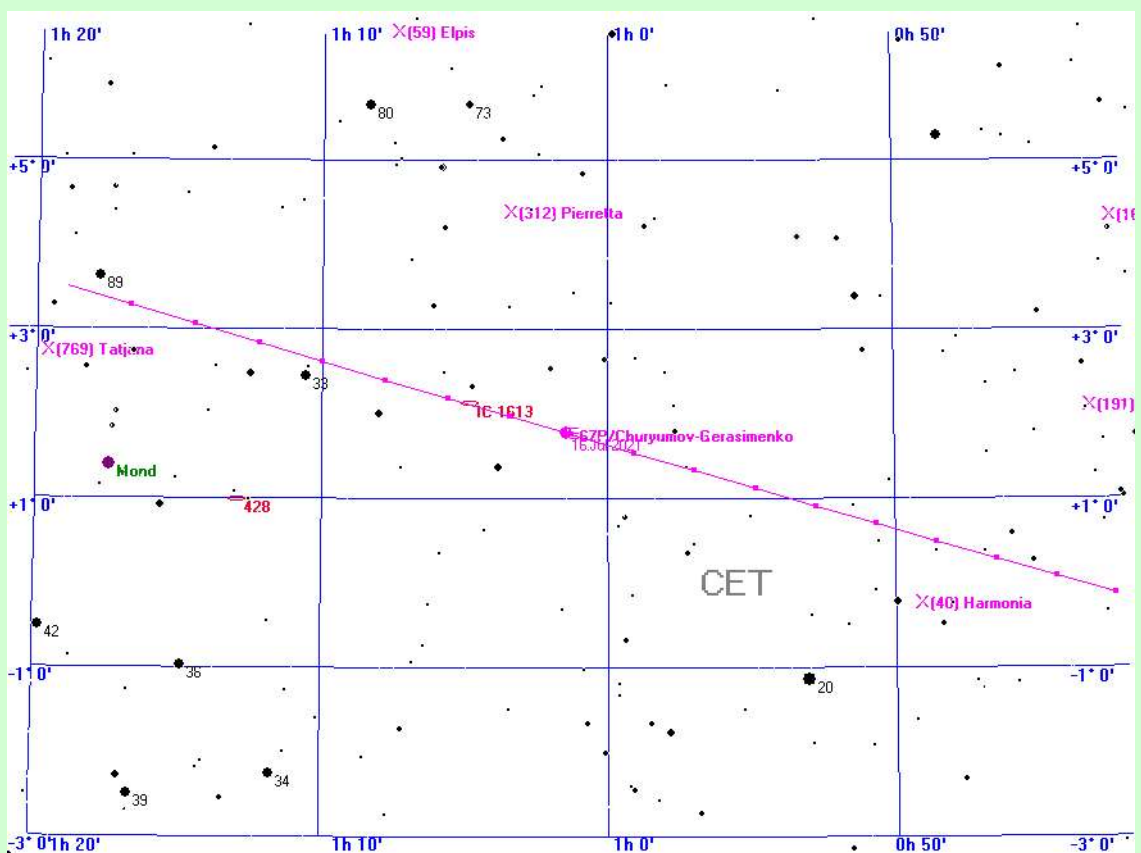
67P/Churyumov-Gerasimenko am 24.6.2021

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



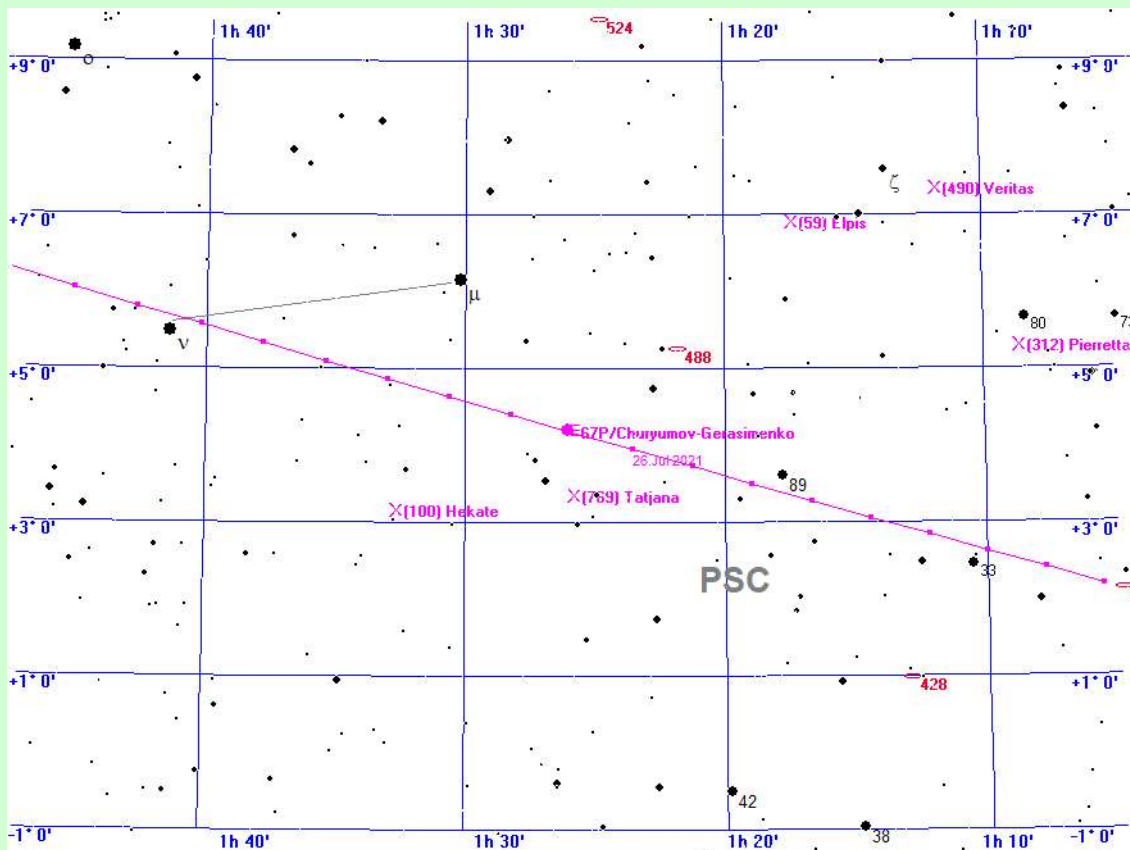
67P/Churyumov-Gerasimenko am 5.7.2021



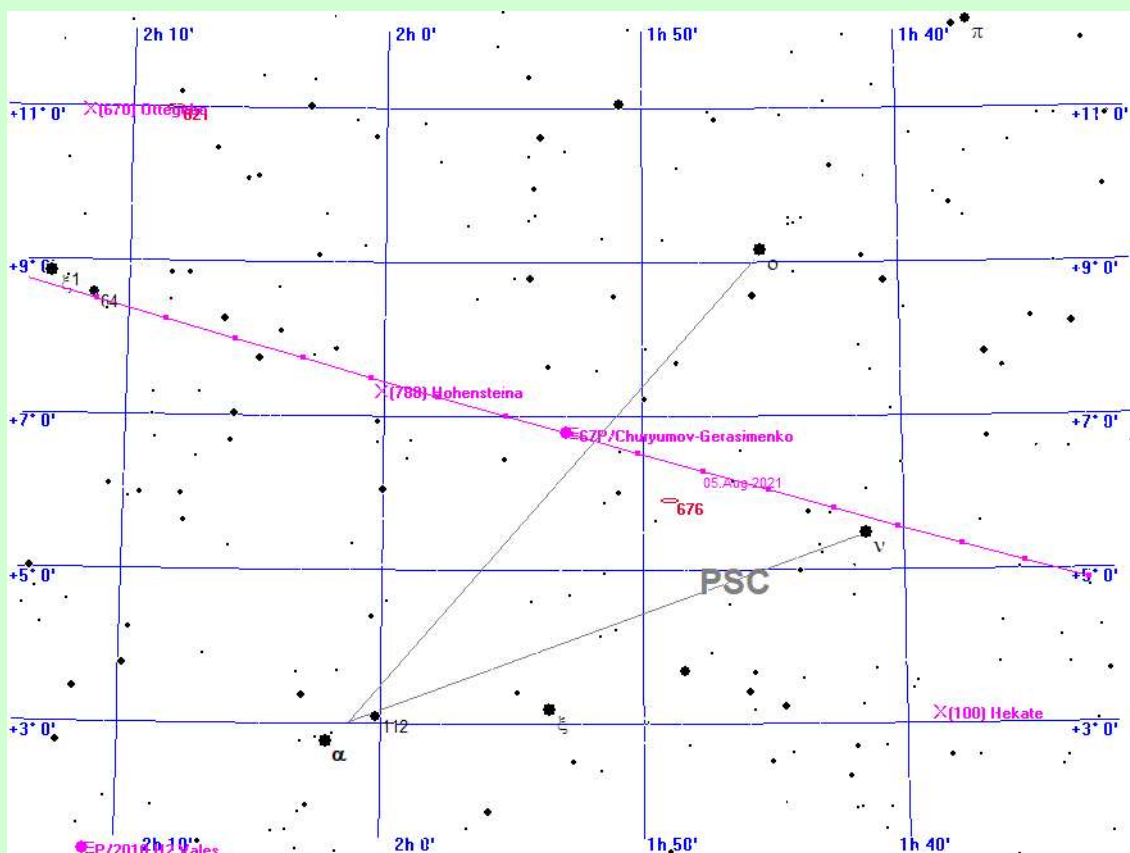
67P/Churyumov-Gerasimenko am 16.7.2021

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



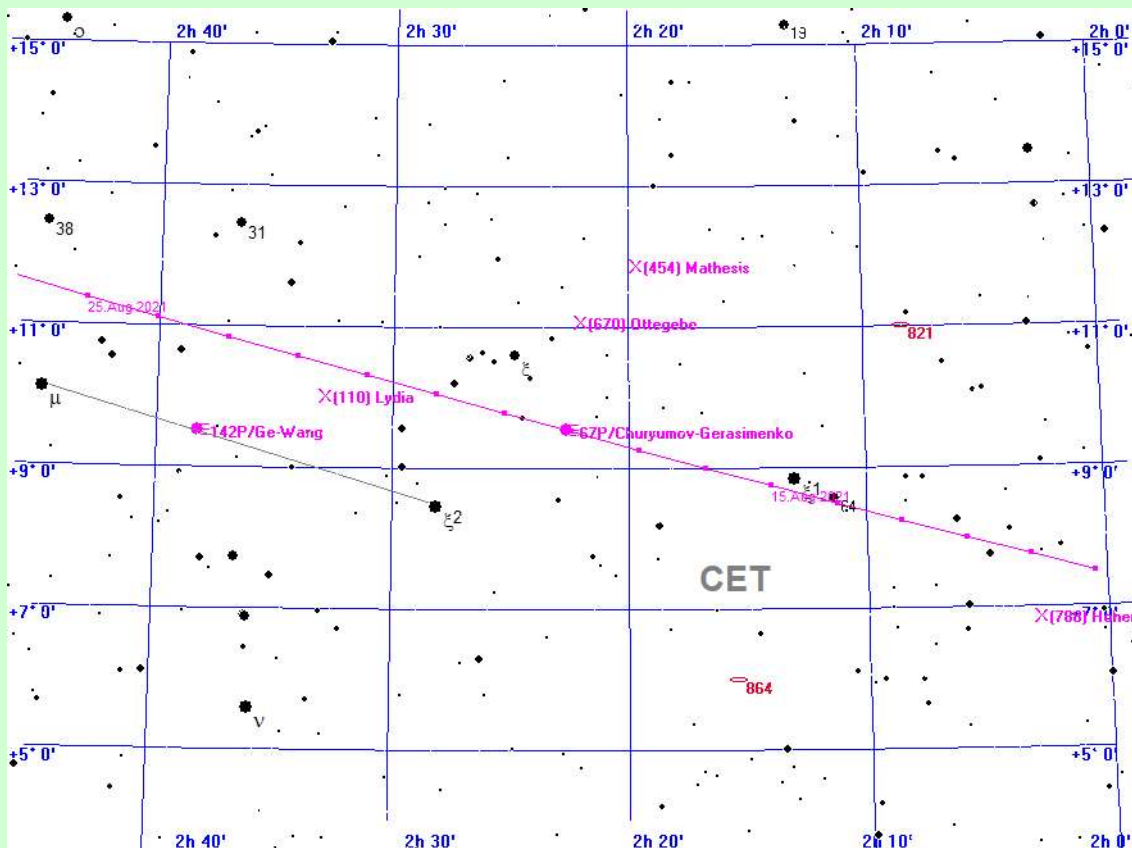
67P/Churyumov-Gerasimenko am 27.7.2021



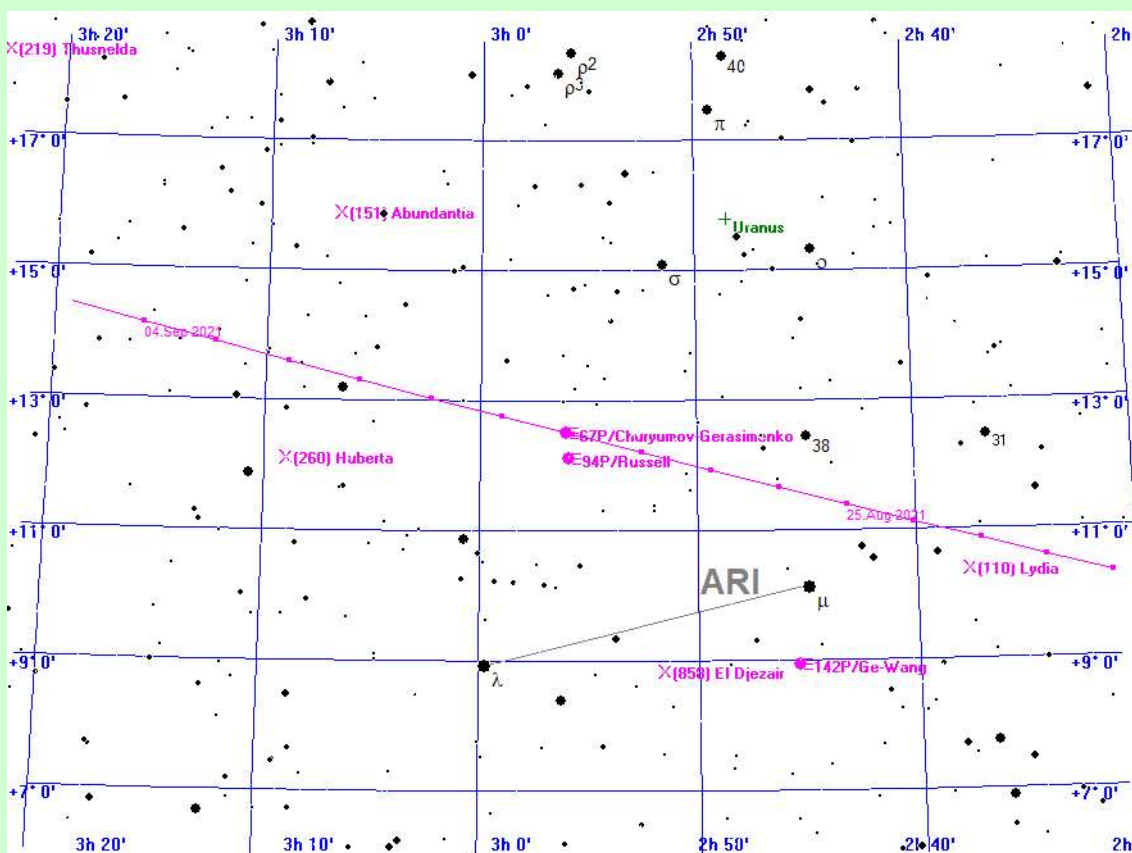
67P/Churyumov-Gerasimenko am 7.8.2021

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



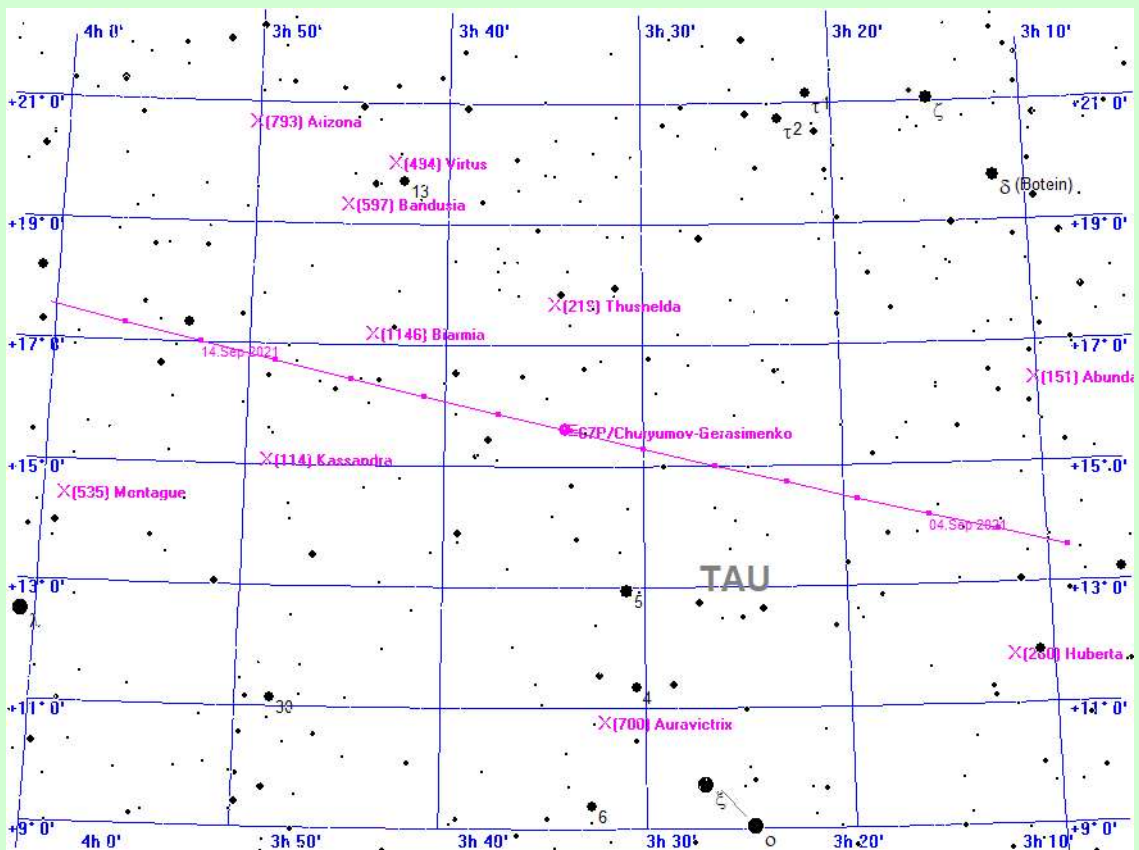
67P/Churyumov-Gerasimenko am 18.8.2021



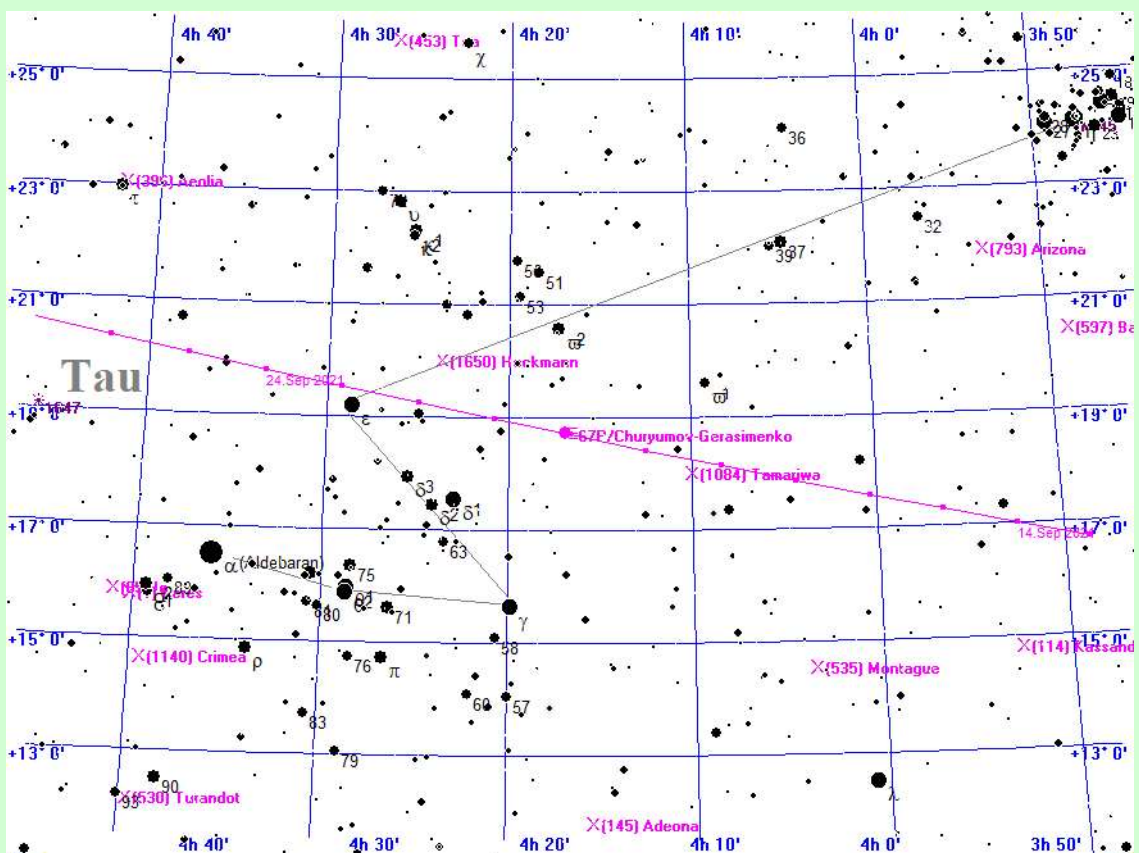
67P/Churyumov-Gerasimenko am 29.8.2021

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland

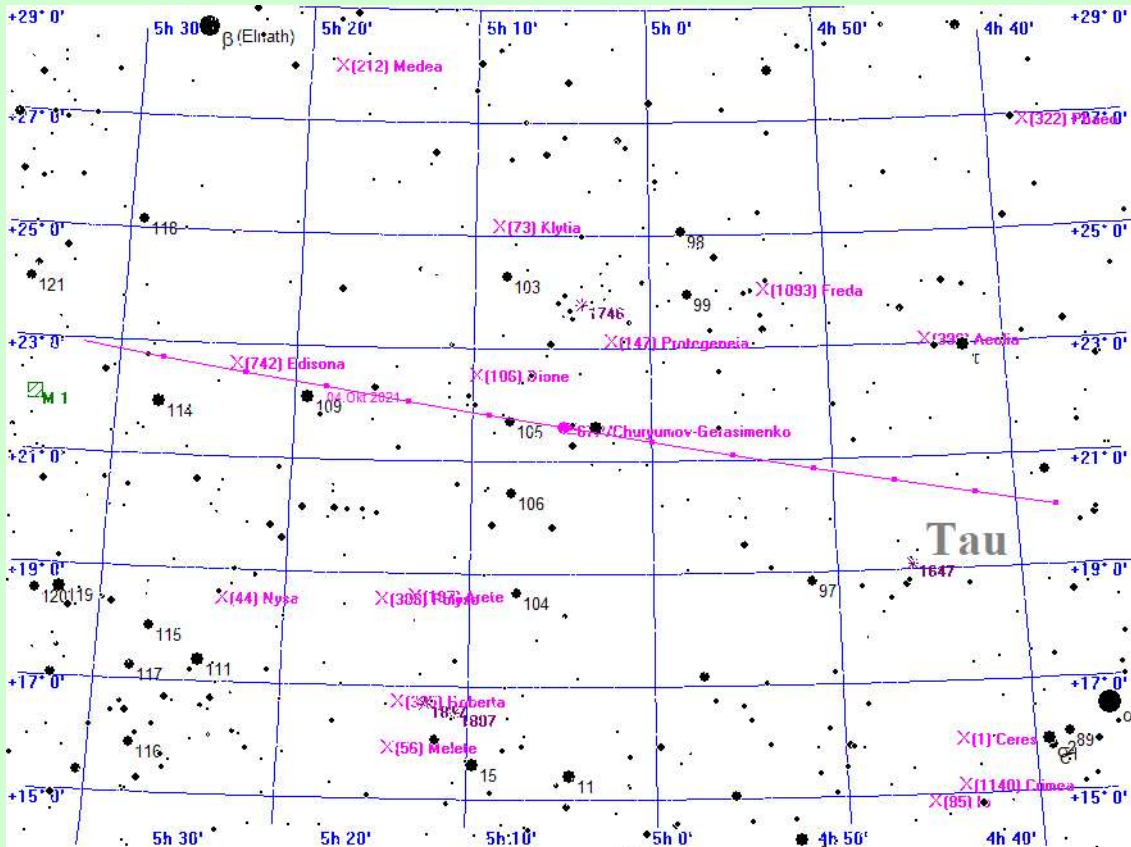


67P/Churyumov-Gerasimenko am 9.9.2021

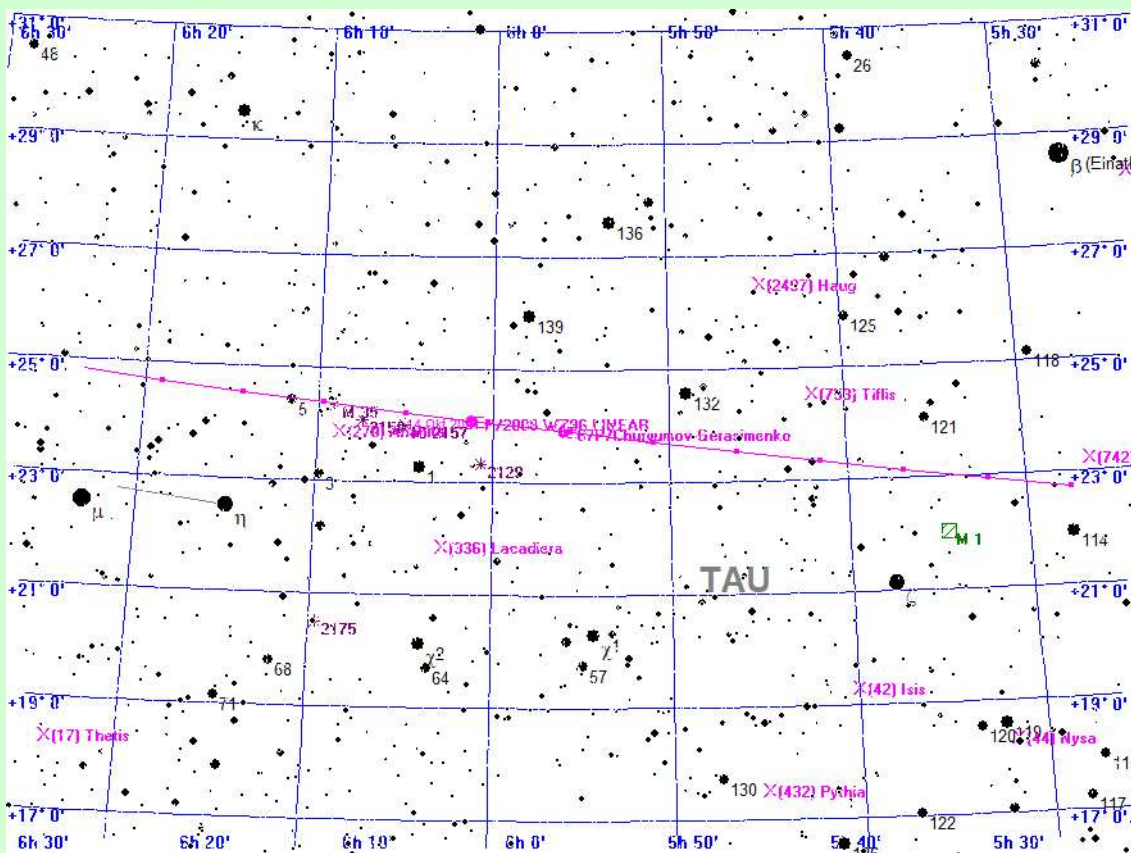


67P/Churyumov-Gerasimenko am 20.9.2021

berechnet für den Standort Mitteldeutschland

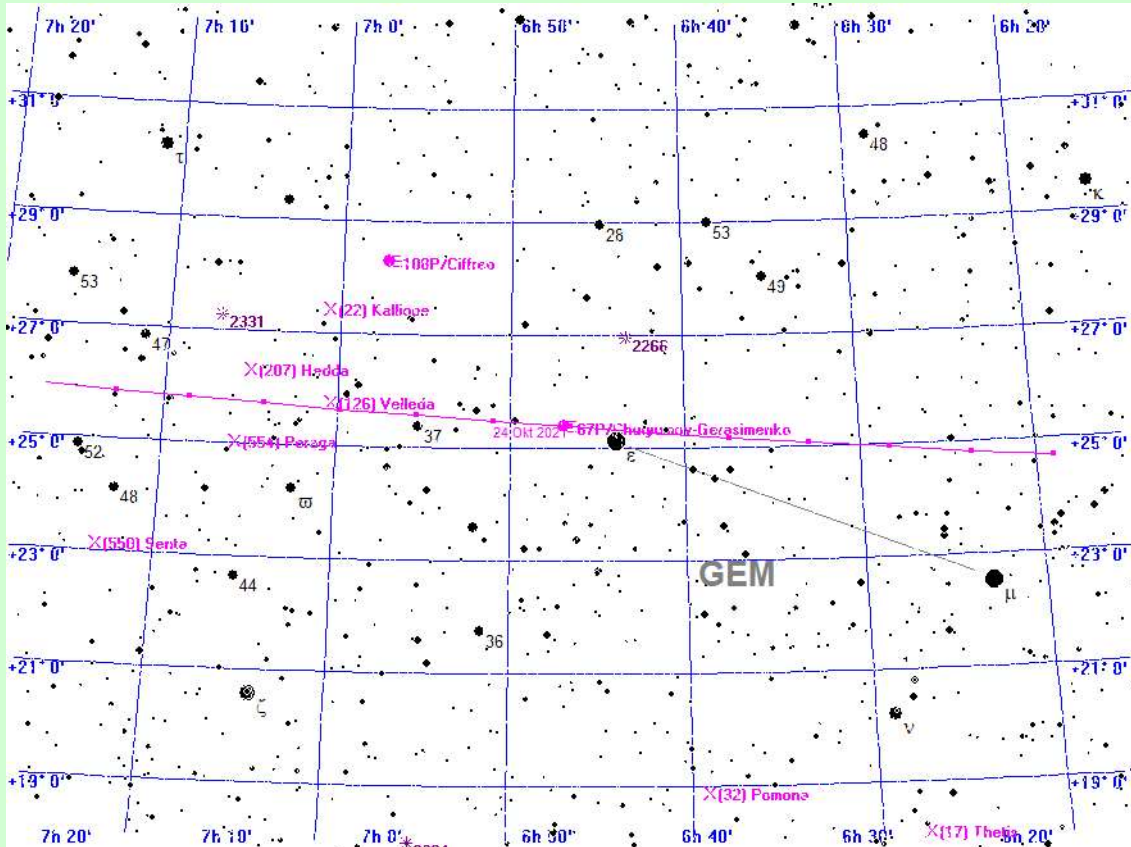


67P/Churyumov-Gerasimenko am 1.10.2021

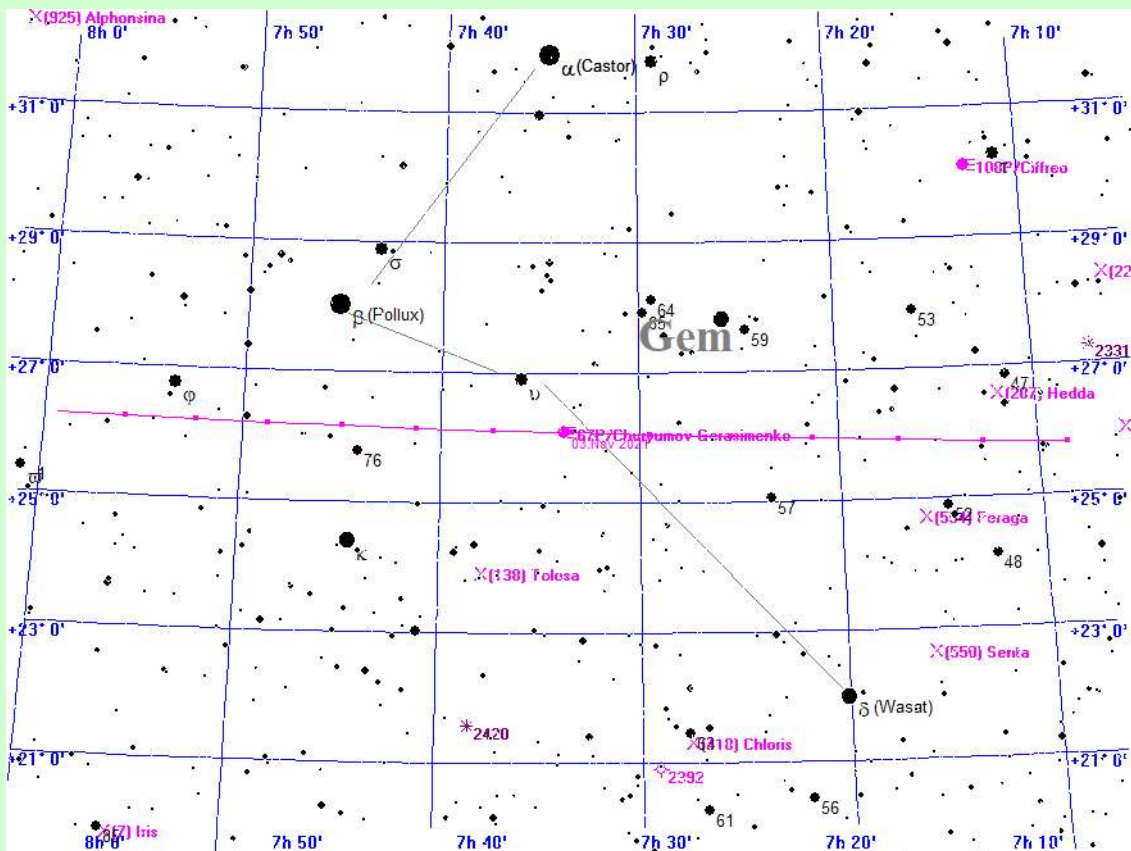


67P/Churyumov-Gerasimenko am 12.10.2021

berechnet für den Standort Mitteldeutschland



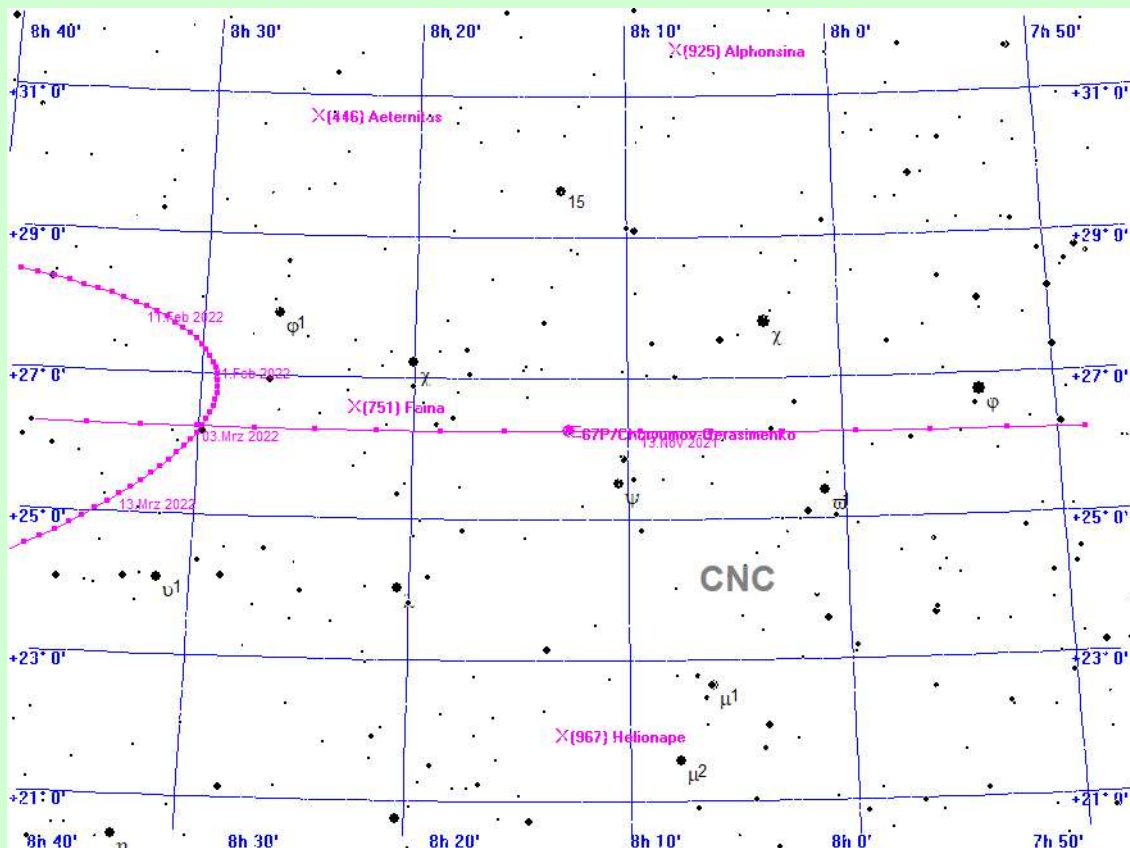
67P/Churyumov-Gerasimenko am 23.10.2021



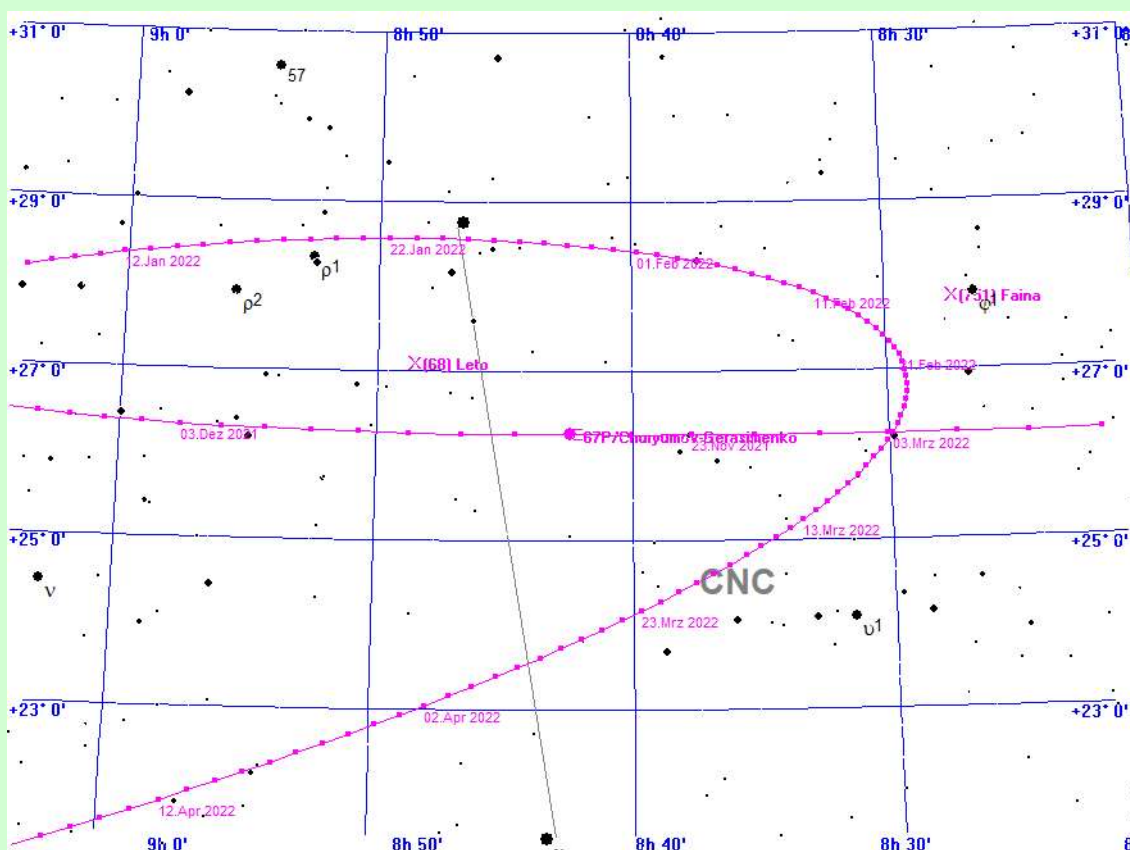
67P/Churyumov-Gerasimenko am 3.11.2021

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



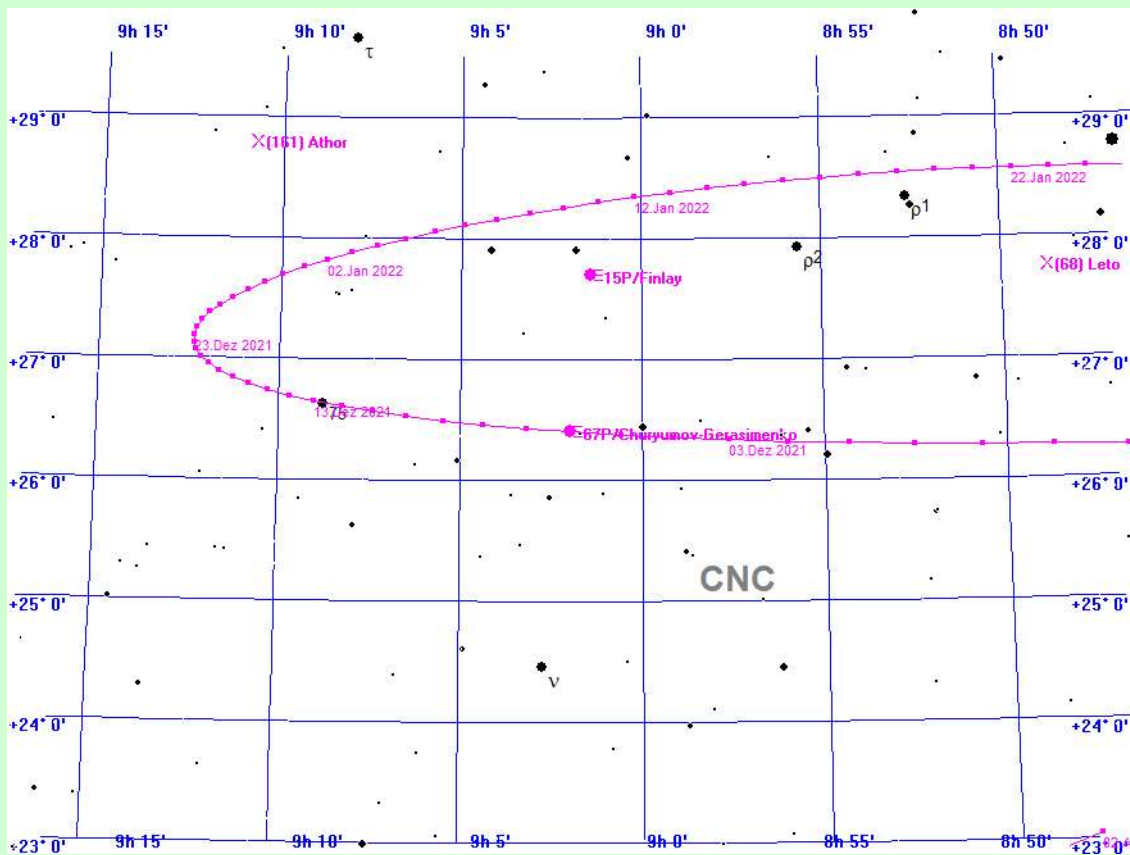
67P/Churyumov-Gerasimenko am 14.11.2021



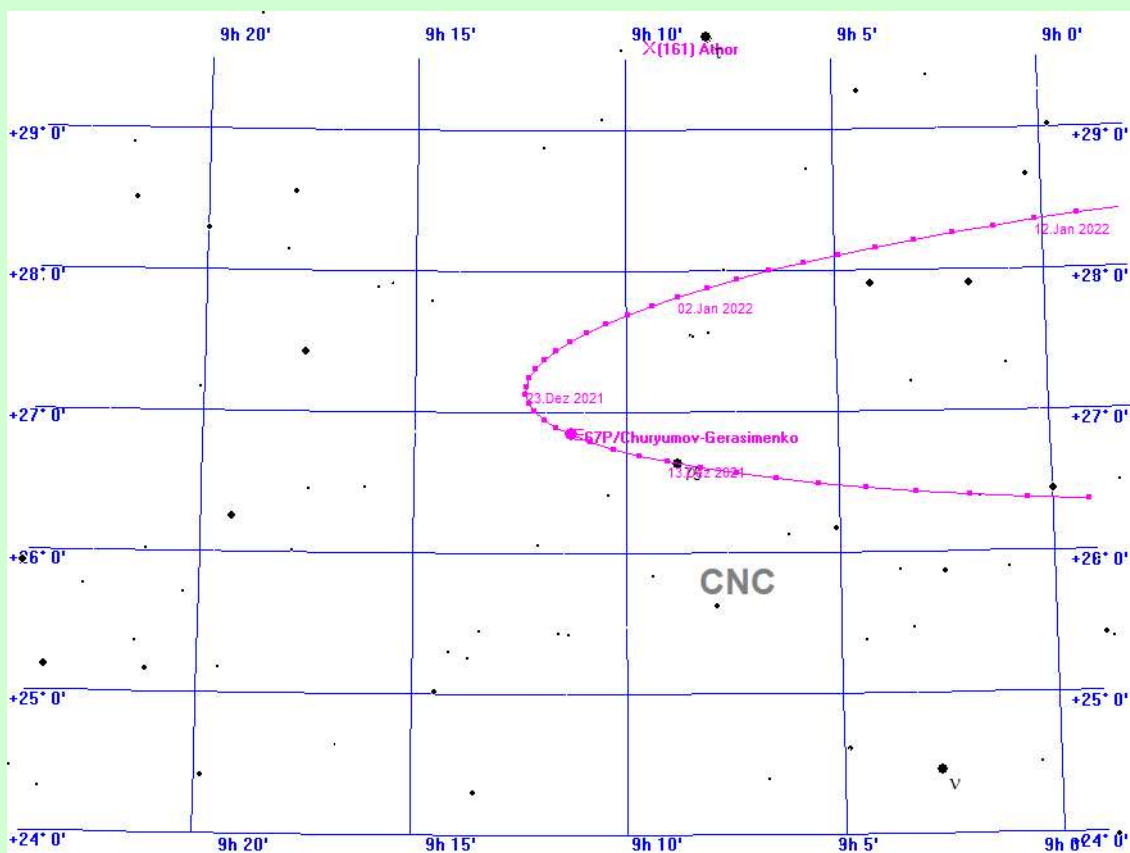
67P/Churyumov-Gerasimenko am 25.11.2021

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



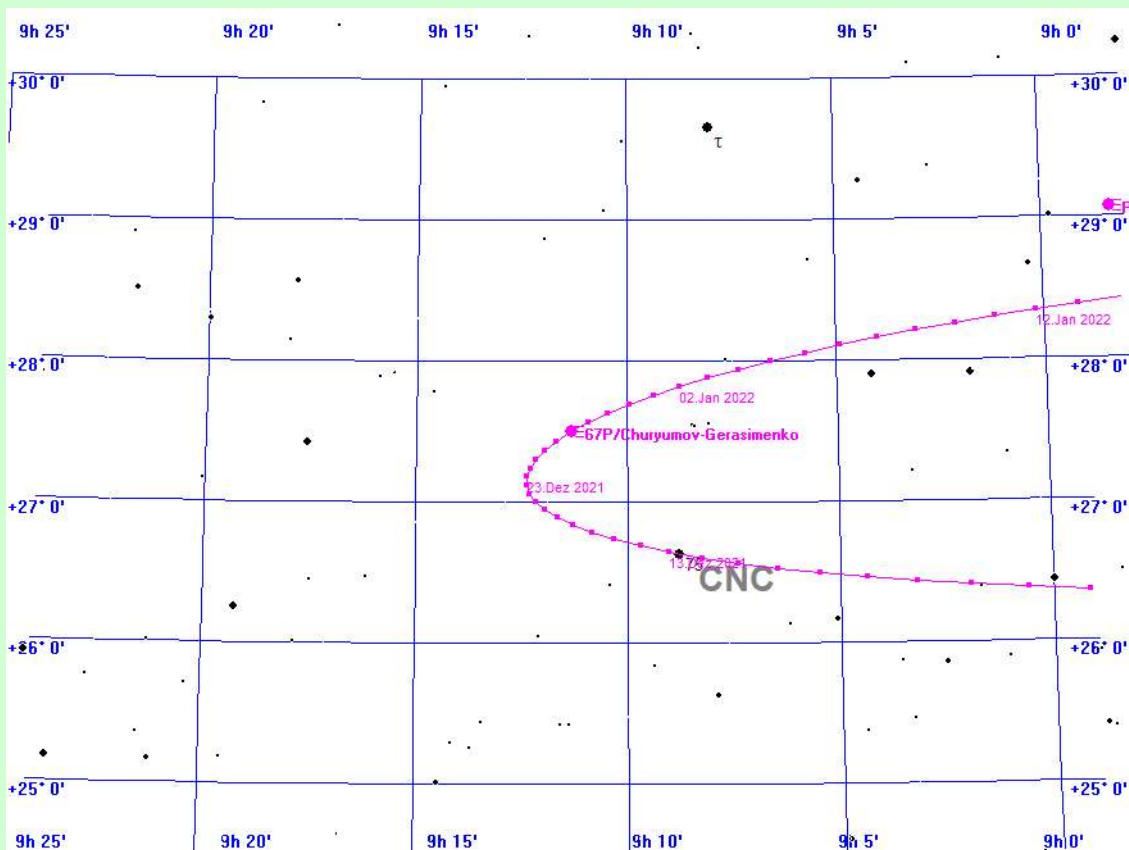
67P/Churyumov-Gerasimenko am 6.12.2021



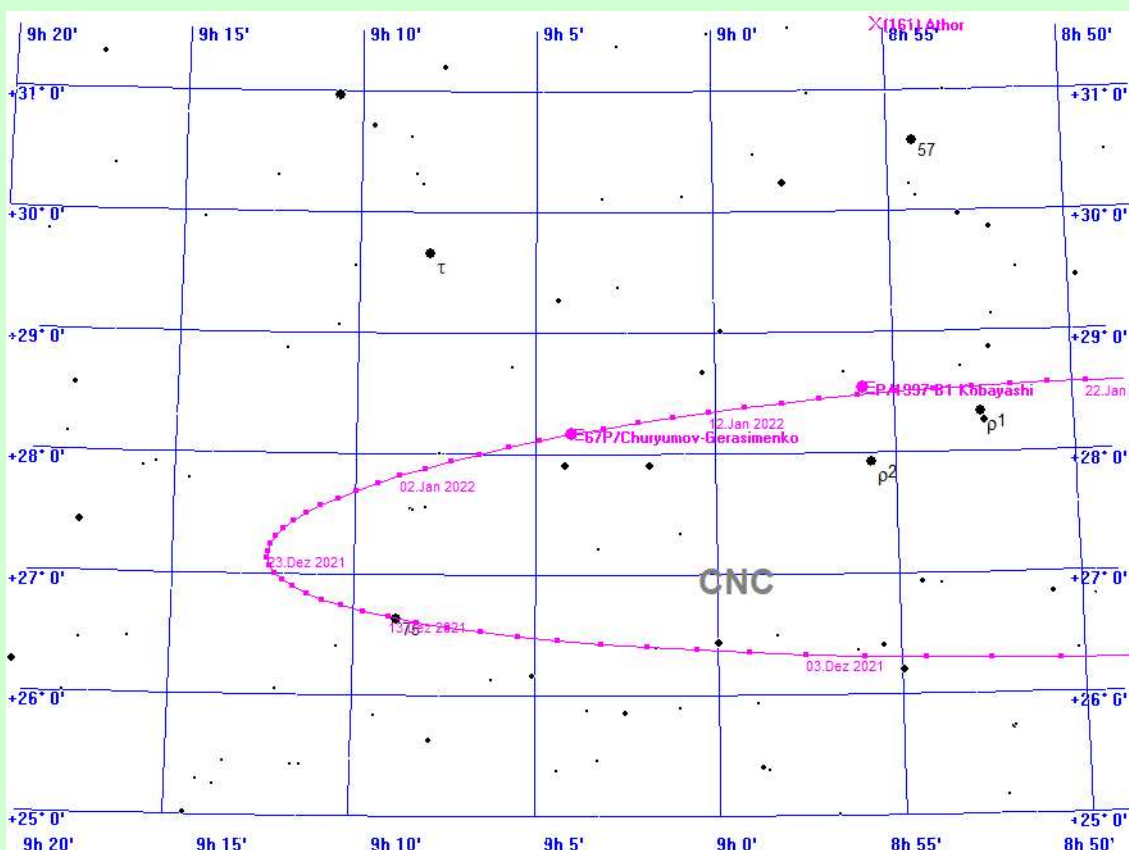
67P/Churyumov-Gerasimenko am 17.12.2021

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



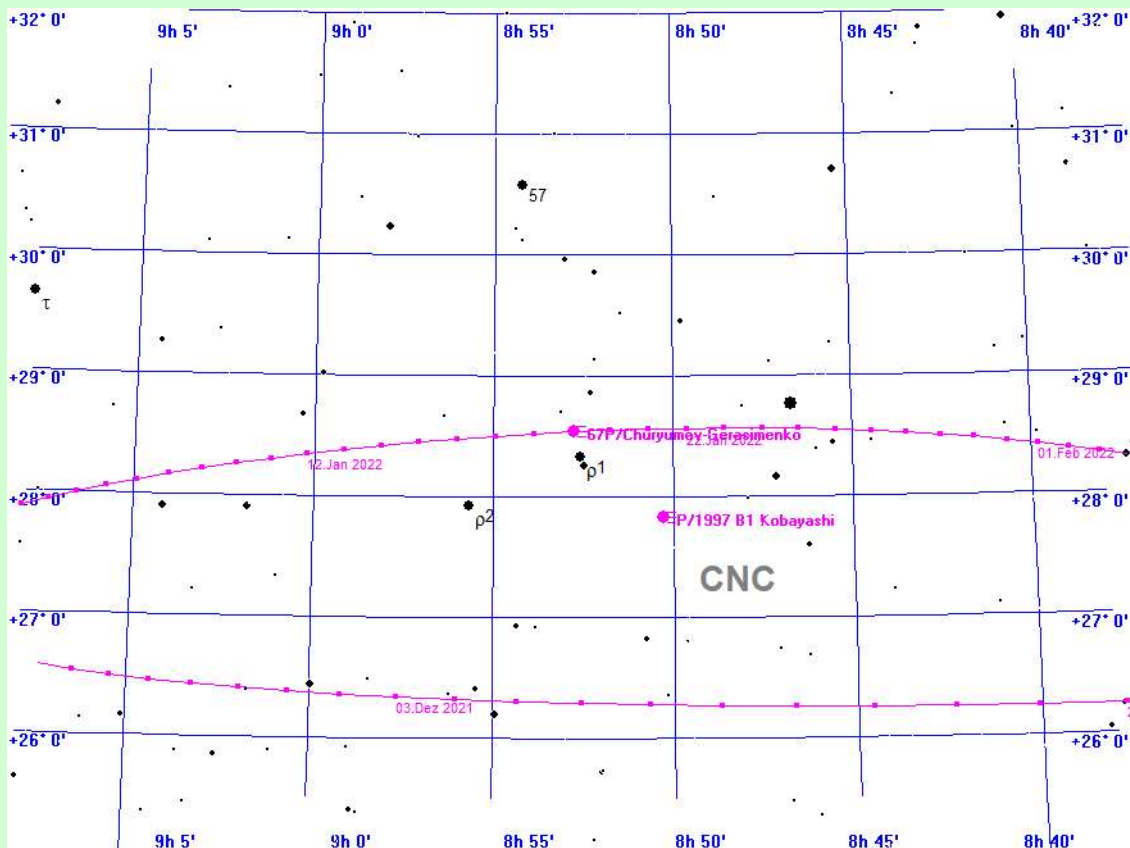
67P/Churyumov-Gerasimenko am 28.12.2021



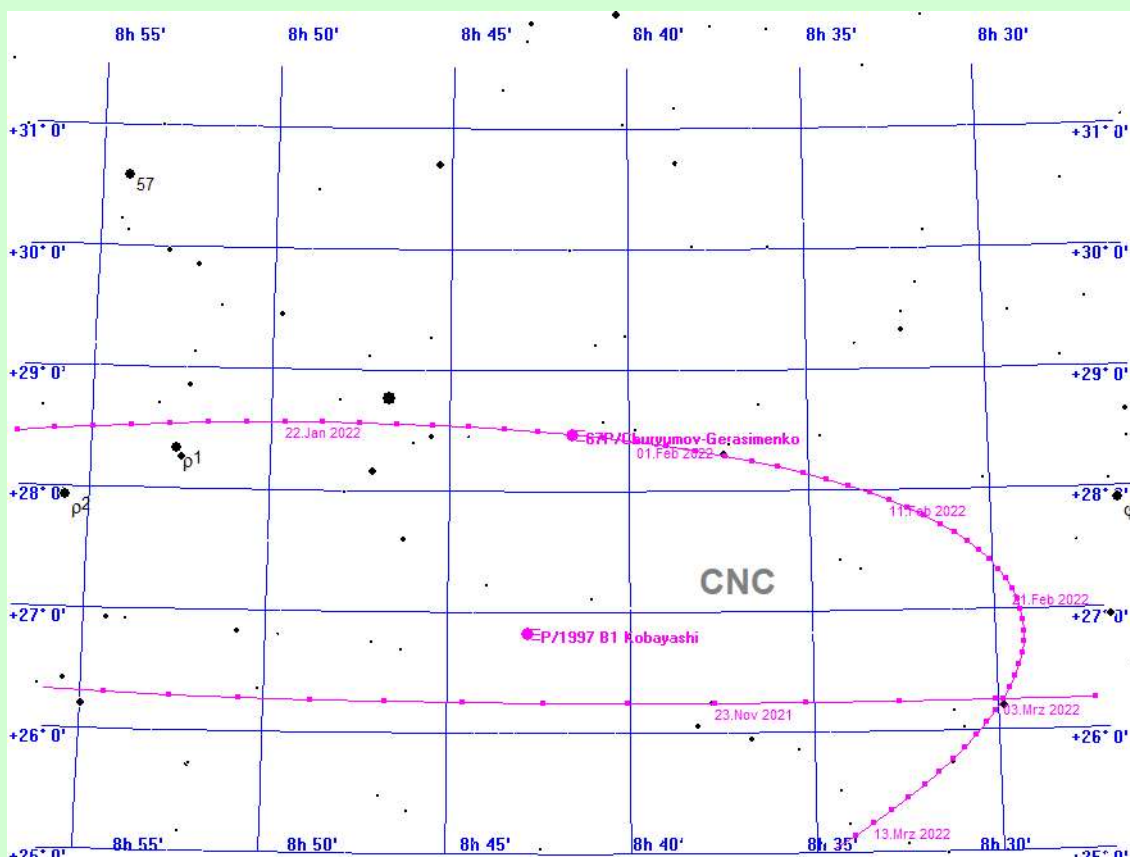
67P/Churyumov-Gerasimenko am 8.1.2022

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



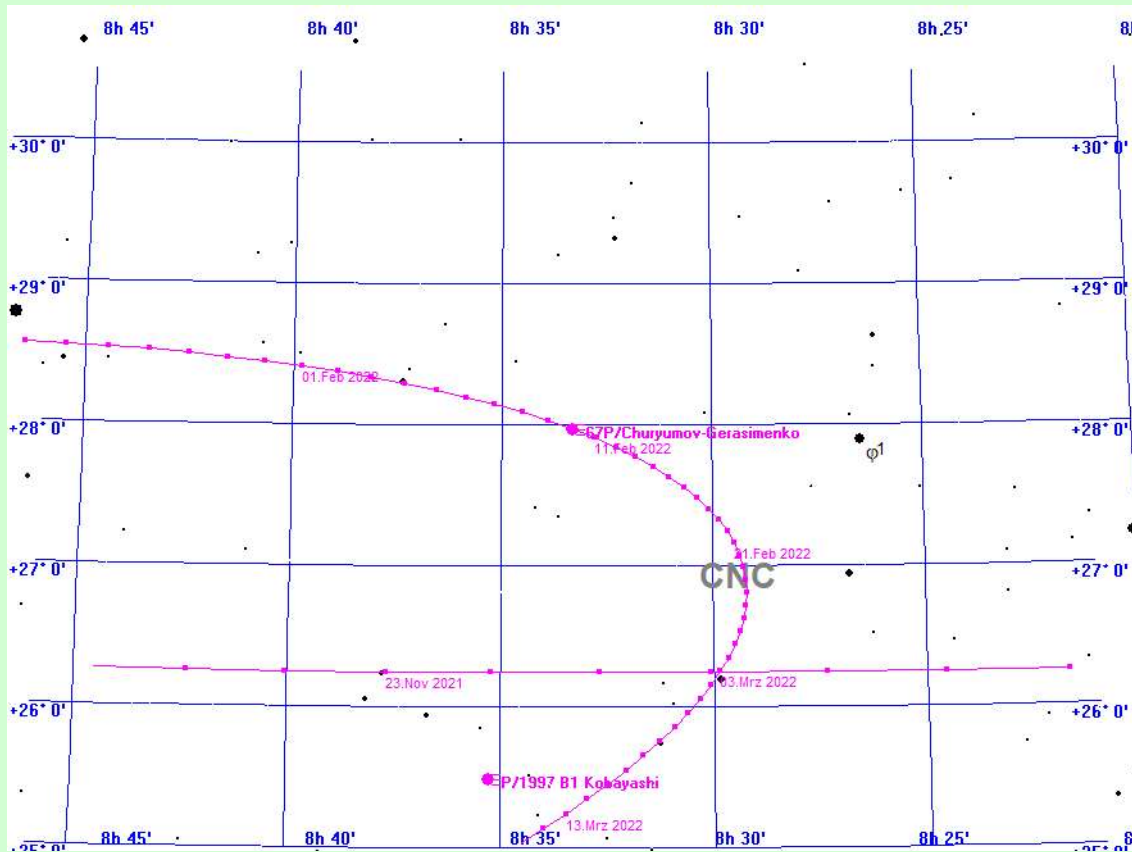
67P/Churyumov-Gerasimenko am 19.1.2022



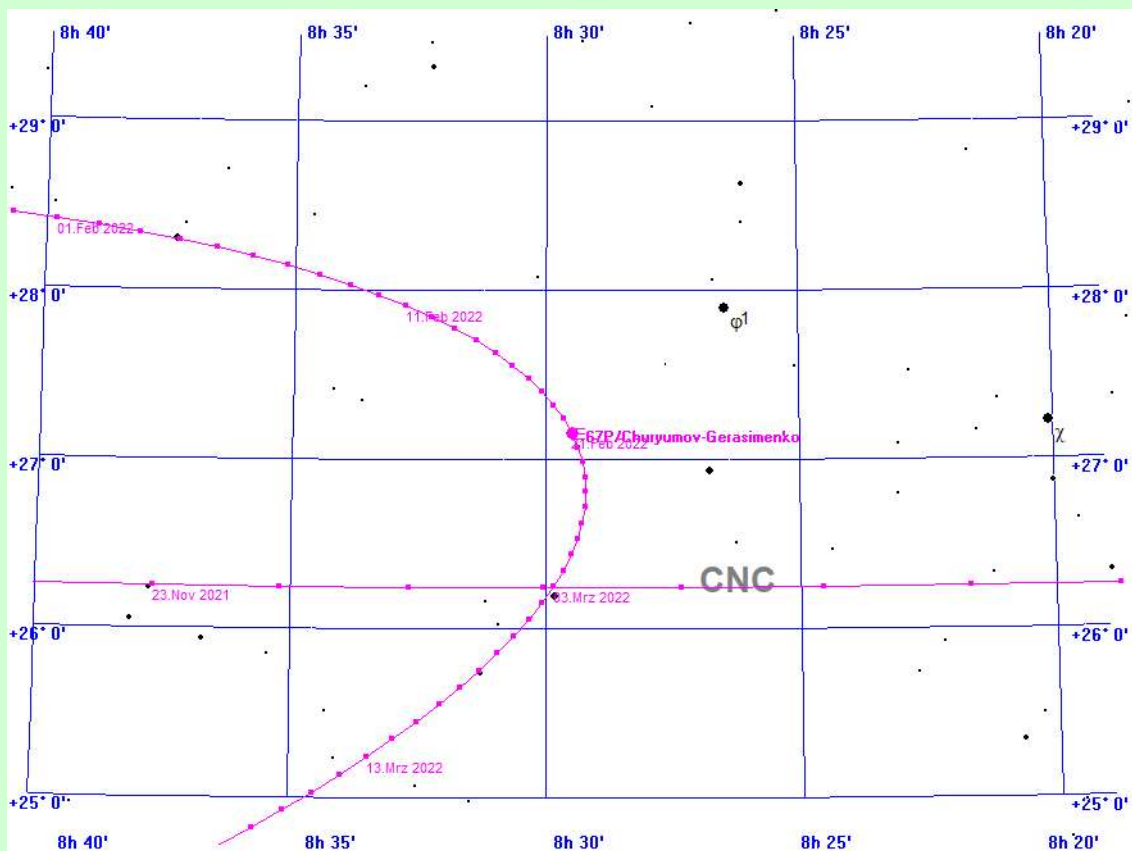
67P/Churyumov-Gerasimenko am 30.1.2022

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



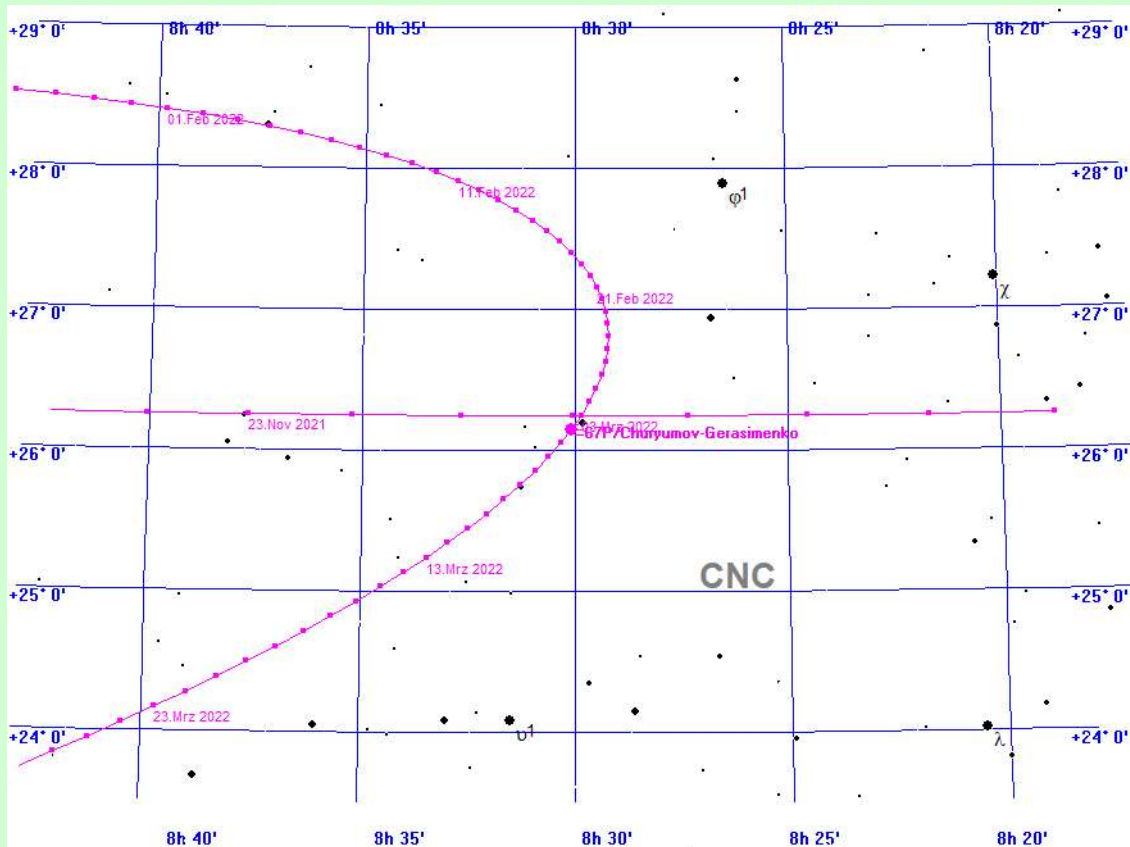
67P/Churyumov-Gerasimenko am 10.2.2022



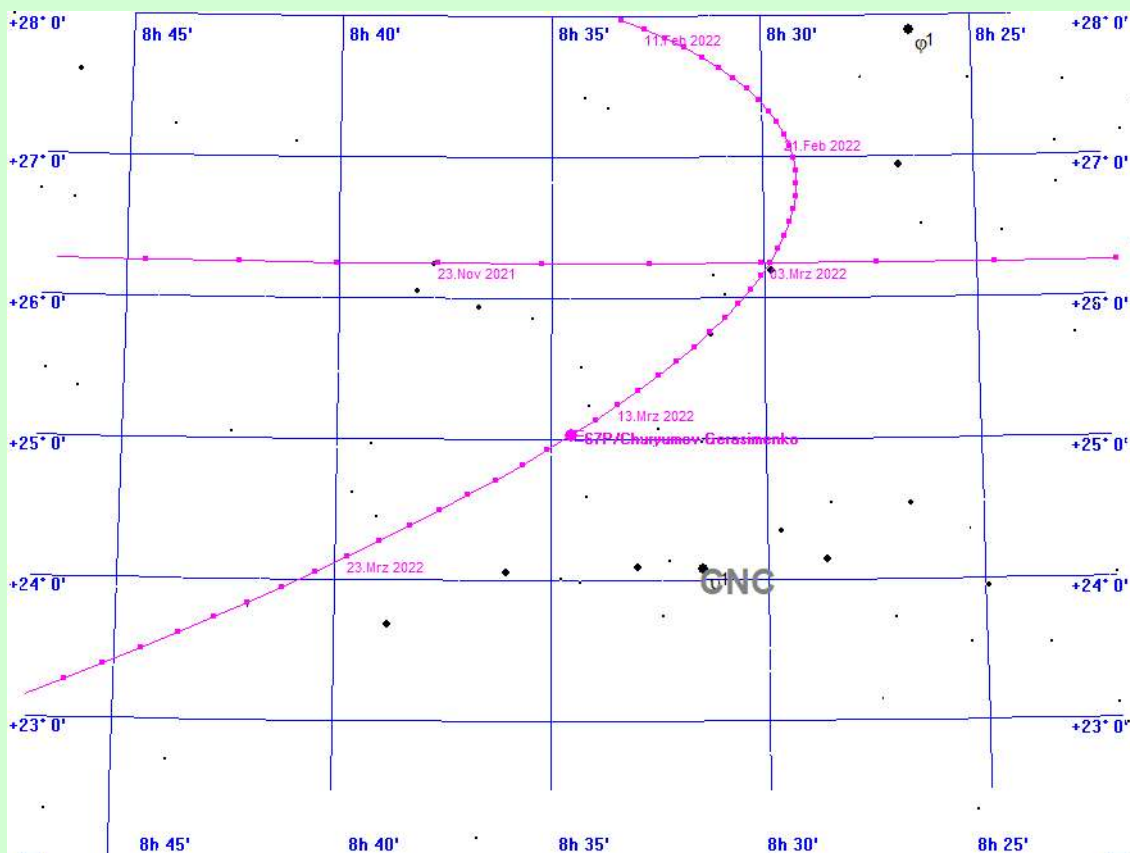
67P/Churyumov-Gerasimenko am 21.2.2022

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



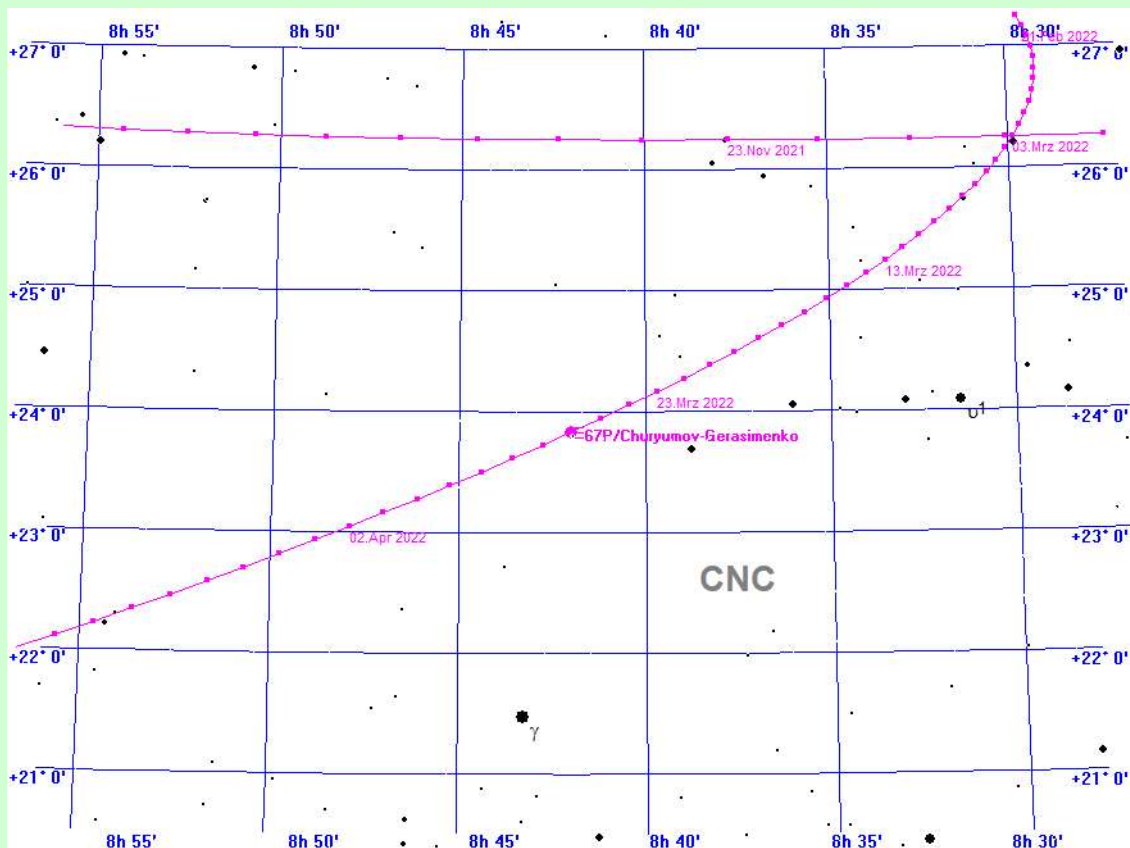
67P/Churyumov-Gerasimenko am 4.3.2022



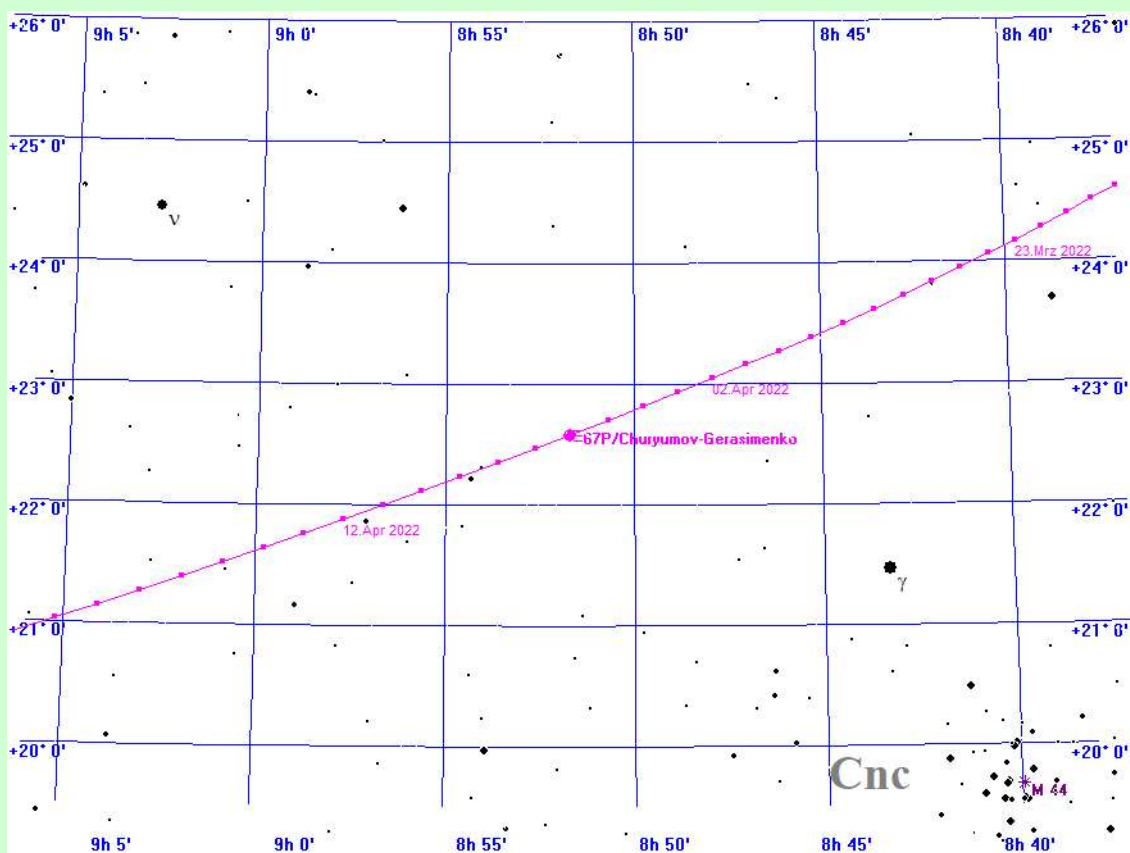
67P/Churyumov-Gerasimenko am 15.3.2022

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



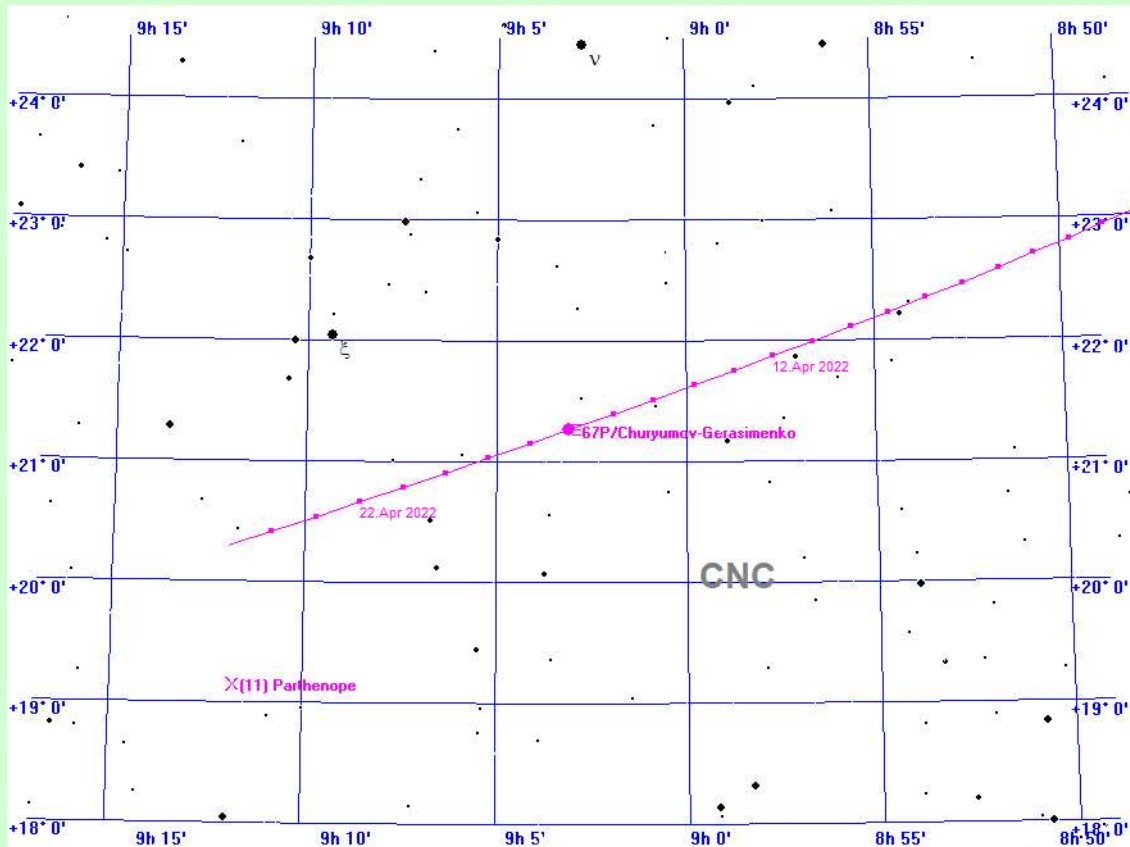
67P/Churyumov-Gerasimenko am 26.3.2022



67P/Churyumov-Gerasimenko am 6.4.2022

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland



67P/Churyumov-Gerasimenko am 17.4.2022

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland

Ephemeride des Kometen 67P/Churyumov-Gerasimenko

	Datum	Rektaszens.	Deklination	r	Delta	Hell.	Aufg.	Untg.	TOpt.	Höhe	Azi	Stb
Fr.	28.Mai 2021	23h26'56.9"	- 7°40'11.7"	2.151 aE	2.136 aE	16.0	02:58	13:51	03:38	+ 6°	O	AQR
Sa.	29.Mai 2021	23h28'43.2"	- 7°29'44.5"	2.144 aE	2.118 aE	15.9	02:54	13:50	03:36	+ 6°	O	AQR
So.	30.Mai 2021	23h30'29.7"	- 7°19'14.8"	2.136 aE	2.100 aE	15.9	02:51	13:48	03:35	+ 6°	O	AQR
Mo.	31.Mai 2021	23h32'16.5"	- 7° 8'42.6"	2.128 aE	2.081 aE	15.9	02:48	13:47	03:33	+ 6°	O	AQR
Di.	01.Jun 2021	23h34' 3.5"	- 6°58' 7.9"	2.120 aE	2.063 aE	15.8	02:45	13:46	03:32	+ 7°	O	AQR
Mi.	02.Jun 2021	23h35'50.9"	- 6°47'30.7"	2.112 aE	2.045 aE	15.8	02:42	13:44	03:31	+ 7°	O	AQR
Do.	03.Jun 2021	23h37'38.5"	- 6°36'51.0"	2.104 aE	2.027 aE	15.8	02:39	13:43	03:30	+ 7°	O	AQR
Fr.	04.Jun 2021	23h39'26.4"	- 6°26' 8.8"	2.096 aE	2.009 aE	15.7	02:36	13:42	03:28	+ 8°	O	AQR
Sa.	05.Jun 2021	23h41'14.5"	- 6°15'24.1"	2.088 aE	1.991 aE	15.7	02:33	13:41	03:27	+ 8°	O	AQR
So.	06.Jun 2021	23h43' 3.0"	- 6° 4'36.9"	2.080 aE	1.973 aE	15.7	02:30	13:39	03:26	+ 8°	O	AQR
Mo.	07.Jun 2021	23h44'51.8"	- 5°53'47.2"	2.072 aE	1.955 aE	15.6	02:27	13:38	03:25	+ 8°	O	AQR
Di.	08.Jun 2021	23h46'40.8"	- 5°42'55.1"	2.064 aE	1.937 aE	15.6	02:24	13:37	03:24	+ 9°	O	AQR
Mi.	09.Jun 2021	23h48'30.2"	- 5°32' 0.4"	2.056 aE	1.919 aE	15.5	02:21	13:36	03:23	+ 9°	O	AQR
Do.	10.Jun 2021	23h50'19.9"	- 5°21' 3.3"	2.048 aE	1.901 aE	15.5	02:18	13:34	03:23	+10°	O	AQR
Fr.	11.Jun 2021	23h52' 9.9"	- 5°10' 3.6"	2.041 aE	1.883 aE	15.5	02:15	13:33	03:22	+10°	O	AQR
Sa.	12.Jun 2021	23h54' 0.3"	- 4°59' 1.4"	2.033 aE	1.865 aE	15.4	02:12	13:32	03:21	+10°	O	AQR
So.	13.Jun 2021	23h55'51.0"	- 4°47'56.7"	2.025 aE	1.847 aE	15.4	02:10	13:31	03:21	+11°	O	AQR
Mo.	14.Jun 2021	23h57'42.1"	- 4°36'49.4"	2.017 aE	1.830 aE	15.4	02:07	13:29	03:20	+11°	O	PSC
Di.	15.Jun 2021	23h59'33.5"	- 4°25'39.6"	2.009 aE	1.812 aE	15.3	02:04	13:28	03:20	+11°	O	PSC
Mi.	16.Jun 2021	0h 1'25.3"	- 4°14'27.2"	2.001 aE	1.795 aE	15.3	02:01	13:27	03:20	+12°	O	PSC
Do.	17.Jun 2021	0h 3'17.5"	- 4° 3'12.1"	1.993 aE	1.777 aE	15.2	01:58	13:26	03:20	+12°	O	PSC
Fr.	18.Jun 2021	0h 5'10.0"	- 3°51'54.3"	1.985 aE	1.759 aE	15.2	01:55	13:25	03:20	+13°	SO	PSC
Sa.	19.Jun 2021	0h 7' 3.0"	- 3°40'33.9"	1.977 aE	1.742 aE	15.2	01:52	13:24	03:20	+13°	SO	PSC
So.	20.Jun 2021	0h 8'56.4"	- 3°29'10.7"	1.969 aE	1.725 aE	15.1	01:49	13:23	03:20	+14°	SO	PSC
Mo.	21.Jun 2021	0h10'50.3"	- 3°17'44.6"	1.961 aE	1.707 aE	15.1	01:46	13:21	03:20	+14°	SO	PSC
Di.	22.Jun 2021	0h12'44.6"	- 3° 6'15.8"	1.953 aE	1.690 aE	15.0	01:43	13:20	03:20	+15°	SO	PSC
Mi.	23.Jun 2021	0h14'39.3"	- 2°54'44.0"	1.945 aE	1.673 aE	15.0	01:40	13:19	03:20	+15°	SO	PSC
Do.	24.Jun 2021	0h16'34.5"	- 2°43' 9.3"	1.937 aE	1.656 aE	15.0	01:37	13:18	03:21	+16°	SO	PSC
Fr.	25.Jun 2021	0h18'30.2"	- 2°31'31.6"	1.929 aE	1.639 aE	14.9	01:34	13:17	03:21	+16°	SO	PSC
Sa.	26.Jun 2021	0h20'26.4"	- 2°19'50.9"	1.921 aE	1.622 aE	14.9	01:31	13:16	03:22	+17°	SO	PSC
So.	27.Jun 2021	0h22'23.2"	- 2° 8' 7.1"	1.913 aE	1.605 aE	14.8	01:28	13:15	03:23	+17°	SO	PSC
Mo.	28.Jun 2021	0h24'20.4"	- 1°56'20.3"	1.906 aE	1.588 aE	14.8	01:25	13:14	03:23	+18°	SO	PSC
Di.	29.Jun 2021	0h26'18.2"	- 1°44'30.3"	1.898 aE	1.571 aE	14.8	01:22	13:13	03:24	+18°	SO	PSC
Mi.	30.Jun 2021	0h28'16.5"	- 1°32'37.2"	1.890 aE	1.555 aE	14.7	01:19	13:12	03:25	+19°	SO	CET
Do.	01.Jul 2021	0h30'15.4"	- 1°20'40.9"	1.882 aE	1.538 aE	14.7	01:17	13:11	03:26	+20°	SO	CET
Fr.	02.Jul 2021	0h32'14.9"	- 1° 8'41.5"	1.874 aE	1.522 aE	14.6	01:14	13:10	03:27	+20°	SO	CET
Sa.	03.Jul 2021	0h34'14.9"	- 0°56'38.9"	1.866 aE	1.505 aE	14.6	01:11	13:09	03:28	+21°	SO	CET
So.	04.Jul 2021	0h36'15.6"	- 0°44'33.0"	1.858 aE	1.489 aE	14.6	01:08	13:08	03:29	+21°	SO	CET
Mo.	05.Jul 2021	0h38'16.8"	- 0°32'23.9"	1.850 aE	1.472 aE	14.5	01:05	13:07	03:31	+22°	SO	CET
Di.	06.Jul 2021	0h40'18.7"	- 0°20'11.4"	1.842 aE	1.456 aE	14.5	01:02	13:06	03:32	+23°	SO	CET
Mi.	07.Jul 2021	0h42'21.2"	- 0° 7'55.7"	1.834 aE	1.440 aE	14.4	00:59	13:05	03:33	+23°	SO	CET
Do.	08.Jul 2021	0h44'24.3"	+ 0° 4'23.5"	1.827 aE	1.424 aE	14.4	00:56	13:04	03:35	+24°	SO	CET
Fr.	09.Jul 2021	0h46'28.1"	+ 0°16'46.0"	1.819 aE	1.408 aE	14.3	00:54	13:03	03:36	+24°	SO	CET
Sa.	10.Jul 2021	0h48'32.6"	+ 0°29'12.0"	1.811 aE	1.392 aE	14.3	00:51	13:02	03:38	+25°	SO	CET
So.	11.Jul 2021	0h50'37.8"	+ 0°41'41.5"	1.803 aE	1.376 aE	14.3	00:48	13:02	03:39	+26°	SO	CET
Mo.	12.Jul 2021	0h52'43.7"	+ 0°54'14.6"	1.795 aE	1.361 aE	14.2	00:45	13:01	03:41	+26°	SO	CET
Di.	13.Jul 2021	0h54'50.3"	+ 1° 6'51.2"	1.787 aE	1.345 aE	14.2	00:42	13:00	03:43	+27°	SO	CET
Mi.	14.Jul 2021	0h56'57.7"	+ 1°19'31.6"	1.779 aE	1.330 aE	14.1	00:39	12:59	03:44	+28°	SO	CET
Do.	15.Jul 2021	0h59' 5.9"	+ 1°32'15.7"	1.772 aE	1.314 aE	14.1	00:37	12:58	03:46	+28°	SO	CET
Fr.	16.Jul 2021	1h 1'14.8"	+ 1°45' 3.6"	1.764 aE	1.299 aE	14.0	00:34	12:58	03:48	+29°	SO	CET
Sa.	17.Jul 2021	1h 3'24.6"	+ 1°57'55.5"	1.756 aE	1.284 aE	14.0	00:31	12:57	03:50	+30°	SO	CET
So.	18.Jul 2021	1h 5'35.2"	+ 2°10'51.4"	1.748 aE	1.268 aE	13.9	00:28	12:56	03:52	+30°	SO	CET
Mo.	19.Jul 2021	1h 7'46.7"	+ 2°23'51.4"	1.741 aE	1.253 aE	13.9	00:25	12:55	03:54	+31°	SO	CET
Di.	20.Jul 2021	1h 9'59.1"	+ 2°36'55.6"	1.733 aE	1.238 aE	13.9	00:23	12:55	03:55	+31°	SO	CET
Mi.	21.Jul 2021	1h12'12.4"	+ 2°50' 4.1"	1.725 aE	1.224 aE	13.8	00:20	12:54	03:57	+32°	SO	PSC
Do.	22.Jul 2021	1h14'26.6"	+ 3° 3'16.9"	1.717 aE	1.209 aE	13.8	00:17	12:53	03:59	+33°	SO	PSC
Fr.	23.Jul 2021	1h16'41.8"	+ 3°16'34.3"	1.710 aE	1.194 aE	13.7	00:14	12:53	04:01	+33°	SO	PSC
Sa.	24.Jul 2021	1h18'58.0"	+ 3°29'56.1"	1.702 aE	1.180 aE	13.7	00:12	12:52	04:03	+34°	SO	PSC
So.	25.Jul 2021	1h21'15.3"	+ 3°43'22.6"	1.694 aE	1.165 aE	13.6	00:09	12:52	04:05	+35°	SO	PSC
Mo.	26.Jul 2021	1h23'33.5"	+ 3°56'53.8"	1.687 aE	1.151 aE	13.6	00:06	12:51	04:07	+35°	SO	PSC
Di.	27.Jul 2021	1h25'52.9"	+ 4°10'29.7"	1.679 aE	1.137 aE	13.5	00:03	12:51	04:09	+36°	SO	PSC
Mi.	28.Jul 2021	1h28'13.3"	+ 4°24'10.4"	1.671 aE	1.123 aE	13.5	23:58	12:50	04:11	+36°	SO	PSC
Do.	29.Jul 2021	1h30'34.9"	+ 4°37'55.9"	1.664 aE	1.109 aE	13.4	23:55	12:50	04:13	+37°	SO	PSC
Fr.	30.Jul 2021	1h32'57.6"	+ 4°51'46.3"	1.656 aE	1.095 aE	13.4	23:53	12:49	04:15	+38°	SO	PSC
Sa.	31.Jul 2021	1h35'21.4"	+ 5° 5'41.6"	1.649 aE	1.081 aE	13.3	23:50	12:49	04:17	+38°	SO	PSC
So.	01.Aug 2021	1h37'46.5"	+ 5°19'42.0"	1.641 aE	1.068 aE	13.3	23:47	12:48	04:19	+39°	SO	PSC
Mo.	02.Aug 2021	1h40'12.7"	+ 5°33'47.3"	1.634 aE	1.054 aE	13.2	23:45	12:48	04:21	+39°	SO	PSC
Di.	03.Aug 2021	1h42'40.3"	+ 5°47'57.8"	1.626 aE	1.041 aE	13.2	23:42	12:48	04:23	+40°	SO	PSC
Mi.	04.Aug 2021	1h45' 9.0"	+ 6° 2'13.4"	1.619 aE	1.028 aE	13.2	23:40	12:47	04:25	+40°	SO	PSC
Do.	05.Aug 2021	1h47'39.1"	+ 6°16'34.1"	1.611 aE	1.015 aE	13.1	23:37	12:47	04:27	+41°	SO	PSC
Fr.	06.Aug 2021	1h50'10.6"	+ 6°31' 0.1"	1.604 aE	1.002 aE	13.1	23:34	12:47	04:29	+42°	SO	PSC
Sa.	07.Aug 2021	1h52'43.4"	+ 6°45'31.3"	1.597 aE	0.989 aE	13.0	23:32	12:47	04:32	+42°	SO	PSC
So.	08.Aug 2021	1h55'17.5"	+ 7° 0' 7.9"	1.589 aE	0.976 aE	13.0	23:29	12:47	04:34	+43°	SO	PSC
Mo.	09.Aug 2021	1h57'53.1"	+ 7°14'49.8"	1.582 aE	0.963 aE	12.9	23:27	12:46	04:36	+43°	SO	PSC
Di.	10.Aug 2021	2h 0'30.2"	+ 7°29'37.2"	1.575 aE	0.951 aE	12.9	23:24	12:46	04:38	+44°	SO	PSC
Mi.	11.Aug 2021	2h 3' 8.8"	+ 7°44'30.0"	1.567 aE	0.938 aE	12.8	23:22	12:46	04:40	+44°	SO	PSC
Do.	12.Aug 2021	2h 5'48.9"	+ 7°59'28.3"	1.560 aE	0.926 aE	12.8	23:19	12:46	04:42	+45°	SO	PSC

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland

Ephemeride des Kometen 67P/Churyumov-Gerasimenko

Datum	Rektaszens.	Deklination	r	Delta	Hell.	Aufg.	Untg.	T _{Opt.}	Höhe	Ri.	Stb
Fr. 13.Aug 2021	2h 8'30.6"	+ 8°14'32.2"	1.553 aE	0.914 aE	12.7	23:17	12:46	04:44	+45°	SO	CET
Sa. 14.Aug 2021	2h11'13.8"	+ 8°29'41.8"	1.546 aE	0.902 aE	12.7	23:14	12:46	04:46	+46°	SO	CET
So. 15.Aug 2021	2h13'58.8"	+ 8°44'57.1"	1.539 aE	0.890 aE	12.6	23:12	12:46	04:48	+46°	SO	CET
Mo. 16.Aug 2021	2h16'45.4"	+ 9° 0'18.1"	1.532 aE	0.879 aE	12.6	23:09	12:47	04:50	+47°	SO	CET
Di. 17.Aug 2021	2h19'33.8"	+ 9°15'44.9"	1.525 aE	0.867 aE	12.5	23:07	12:47	04:52	+47°	SO	CET
Mi. 18.Aug 2021	2h22'24.0"	+ 9°31'17.6"	1.518 aE	0.856 aE	12.5	23:05	12:47	04:53	+48°	SO	CET
Do. 19.Aug 2021	2h25'16.0"	+ 9°46'56.1"	1.511 aE	0.844 aE	12.4	23:02	12:47	04:55	+48°	S	CET
Fr. 20.Aug 2021	2h28' 9.9"	+10° 2'40.4"	1.504 aE	0.833 aE	12.4	23:00	12:48	04:57	+48°	S	CET
Sa. 21.Aug 2021	2h31' 5.6"	+10°18'30.6"	1.497 aE	0.822 aE	12.3	22:58	12:48	04:59	+49°	S	CET
So. 22.Aug 2021	2h34' 3.4"	+10°34'26.5"	1.490 aE	0.811 aE	12.3	22:55	12:48	05:01	+49°	S	ARI
Mo. 23.Aug 2021	2h37' 3.1"	+10°50'28.1"	1.483 aE	0.800 aE	12.2	22:53	12:49	05:03	+50°	S	ARI
Di. 24.Aug 2021	2h40' 4.9"	+11° 6'35.3"	1.476 aE	0.790 aE	12.2	22:51	12:49	05:05	+50°	S	ARI
Mi. 25.Aug 2021	2h43' 8.7"	+11°22'48.0"	1.470 aE	0.779 aE	12.1	22:48	12:50	05:07	+50°	S	ARI
Do. 26.Aug 2021	2h46'14.7"	+11°39' 6.1"	1.463 aE	0.769 aE	12.1	22:46	12:50	05:09	+51°	S	ARI
Fr. 27.Aug 2021	2h49'22.8"	+11°55'29.4"	1.457 aE	0.759 aE	12.0	22:44	12:51	05:11	+51°	S	ARI
Sa. 28.Aug 2021	2h52'33.1"	+12°11'57.8"	1.450 aE	0.749 aE	12.0	22:42	12:52	05:12	+52°	S	ARI
So. 29.Aug 2021	2h55'45.5"	+12°28'30.9"	1.443 aE	0.739 aE	11.9	22:40	12:52	05:14	+52°	S	ARI
Mo. 30.Aug 2021	2h59' 0.3"	+12°45' 8.7"	1.437 aE	0.729 aE	11.9	22:38	12:53	05:16	+52°	S	ARI
Di. 31.Aug 2021	3h 2'17.3"	+13° 1'51.0"	1.431 aE	0.720 aE	11.8	22:36	12:54	05:18	+53°	S	ARI
Mi. 01.Sep 2021	3h 5'36.6"	+13°18'37.3"	1.424 aE	0.710 aE	11.8	22:33	12:55	05:20	+53°	S	ARI
Do. 02.Sep 2021	3h 8'58.3"	+13°35'27.5"	1.418 aE	0.701 aE	11.7	22:31	12:56	05:22	+53°	S	ARI
Fr. 03.Sep 2021	3h12'22.3"	+13°52'21.2"	1.412 aE	0.692 aE	11.7	22:29	12:57	05:23	+54°	S	ARI
Sa. 04.Sep 2021	3h15'48.7"	+14° 9'18.2"	1.406 aE	0.683 aE	11.7	22:27	12:58	05:25	+54°	S	ARI
So. 05.Sep 2021	3h19'17.6"	+14°26'18.0"	1.400 aE	0.674 aE	11.6	22:25	12:59	05:27	+54°	S	ARI
Mo. 06.Sep 2021	3h22'48.9"	+14°43'20.3"	1.394 aE	0.666 aE	11.6	22:24	13:00	05:29	+55°	S	ARI
Di. 07.Sep 2021	3h26'22.7"	+15° 0'24.7"	1.388 aE	0.657 aE	11.5	22:22	13:01	05:30	+55°	S	TAU
Mi. 08.Sep 2021	3h29'58.9"	+15°17'30.8"	1.382 aE	0.649 aE	11.5	22:20	13:03	05:32	+55°	S	TAU
Do. 09.Sep 2021	3h33'37.7"	+15°34'38.1"	1.376 aE	0.641 aE	11.4	22:18	13:04	05:34	+56°	S	TAU
Fr. 10.Sep 2021	3h37'19.1"	+15°51'46.1"	1.370 aE	0.633 aE	11.4	22:16	13:05	05:36	+56°	S	TAU
Sa. 11.Sep 2021	3h41' 3.0"	+16° 8'54.4"	1.364 aE	0.625 aE	11.3	22:14	13:07	05:37	+56°	S	TAU
So. 12.Sep 2021	3h44'49.4"	+16°26' 2.4"	1.359 aE	0.617 aE	11.3	22:13	13:08	05:39	+57°	S	TAU
Mo. 13.Sep 2021	3h48'38.5"	+16°43' 9.6"	1.353 aE	0.610 aE	11.2	22:11	13:10	05:40	+57°	S	TAU
Di. 14.Sep 2021	3h52'30.2"	+17° 0'15.4"	1.348 aE	0.602 aE	11.2	22:09	13:11	05:40	+57°	S	TAU
Mi. 15.Sep 2021	3h56'24.5"	+17°17'19.1"	1.342 aE	0.595 aE	11.2	22:08	13:13	05:40	+57°	S	TAU
Do. 16.Sep 2021	4h 0'21.4"	+17°34'20.0"	1.337 aE	0.588 aE	11.1	22:06	13:14	05:40	+58°	S	TAU
Fr. 17.Sep 2021	4h 4'20.9"	+17°51'17.6"	1.332 aE	0.581 aE	11.1	22:05	13:16	05:40	+58°	S	TAU
Sa. 18.Sep 2021	4h 8'23.1"	+18° 8'10.9"	1.327 aE	0.575 aE	11.0	22:03	13:18	05:40	+58°	S	TAU
So. 19.Sep 2021	4h12'27.8"	+18°24'59.2"	1.322 aE	0.568 aE	11.0	22:02	13:20	05:40	+58°	S	TAU
Mo. 20.Sep 2021	4h16'35.1"	+18°41'41.7"	1.317 aE	0.562 aE	10.9	22:00	13:21	05:41	+59°	S	TAU
Di. 21.Sep 2021	4h20'44.9"	+18°58'17.5"	1.312 aE	0.556 aE	10.9	21:59	13:23	05:41	+59°	S	TAU
Mi. 22.Sep 2021	4h24'57.2"	+19°14'45.7"	1.307 aE	0.549 aE	10.9	21:58	13:25	05:41	+59°	S	TAU
Do. 23.Sep 2021	4h29'12.0"	+19°31' 5.4"	1.302 aE	0.544 aE	10.8	21:56	13:27	05:41	+60°	S	TAU
Fr. 24.Sep 2021	4h33'29.1"	+19°47'15.7"	1.298 aE	0.538 aE	10.8	21:55	13:29	05:42	+60°	S	TAU
Sa. 25.Sep 2021	4h37'48.6"	+20° 3'15.5"	1.293 aE	0.532 aE	10.7	21:54	13:31	05:42	+60°	S	TAU
So. 26.Sep 2021	4h42'10.3"	+20°19' 3.8"	1.289 aE	0.527 aE	10.7	21:53	13:33	05:43	+60°	S	TAU
Mo. 27.Sep 2021	4h46'34.2"	+20°34'39.8"	1.284 aE	0.522 aE	10.7	21:52	13:35	05:43	+61°	S	TAU
Di. 28.Sep 2021	4h51' 0.1"	+20°50' 2.4"	1.280 aE	0.517 aE	10.6	21:51	13:37	05:44	+61°	S	TAU
Mi. 29.Sep 2021	4h55'28.1"	+21° 5'10.7"	1.276 aE	0.512 aE	10.6	21:50	13:40	05:44	+61°	S	TAU
Do. 30.Sep 2021	4h59'57.9"	+21°20' 3.6"	1.272 aE	0.507 aE	10.6	21:49	13:42	05:45	+61°	S	TAU
Fr. 01.Okt 2021	5h 4'29.5"	+21°34'40.1"	1.268 aE	0.502 aE	10.5	21:48	13:44	05:45	+62°	S	TAU
Sa. 02.Okt 2021	5h 9' 2.7"	+21°48'59.4"	1.264 aE	0.498 aE	10.5	21:47	13:46	05:46	+62°	S	TAU
So. 03.Okt 2021	5h13'37.5"	+22° 3' 0.5"	1.261 aE	0.494 aE	10.5	21:46	13:48	05:47	+62°	S	TAU
Mo. 04.Okt 2021	5h18'13.6"	+22°16'42.6"	1.257 aE	0.490 aE	10.4	21:45	13:50	05:47	+62°	S	TAU
Di. 05.Okt 2021	5h22'51.0"	+22°30' 4.7"	1.254 aE	0.486 aE	10.4	21:44	13:52	05:48	+63°	S	TAU
Mi. 06.Okt 2021	5h27'29.4"	+22°43' 6.1"	1.250 aE	0.482 aE	10.4	21:44	13:54	05:49	+63°	S	TAU
Do. 07.Okt 2021	5h32' 8.8"	+22°55'46.0"	1.247 aE	0.478 aE	10.4	21:43	13:57	05:49	+63°	S	TAU
Fr. 08.Okt 2021	5h36'49.0"	+23° 8' 3.7"	1.244 aE	0.475 aE	10.3	21:43	13:59	05:50	+63°	S	TAU
Sa. 09.Okt 2021	5h41'29.8"	+23°19'58.6"	1.241 aE	0.471 aE	10.3	21:42	14:01	05:51	+63°	S	TAU
So. 10.Okt 2021	5h46'11.1"	+23°31'30.0"	1.238 aE	0.468 aE	10.3	21:41	14:03	05:52	+64°	S	TAU
Mo. 11.Okt 2021	5h50'52.7"	+23°42'37.3"	1.235 aE	0.465 aE	10.3	21:41	14:05	05:52	+64°	S	TAU
Di. 12.Okt 2021	5h55'34.4"	+23°53'20.3"	1.232 aE	0.462 aE	10.2	21:41	14:07	05:53	+64°	S	TAU
Mi. 13.Okt 2021	6h 0'16.0"	+24° 3'38.3"	1.230 aE	0.459 aE	10.2	21:40	14:09	05:54	+64°	S	TAU
Do. 14.Okt 2021	6h 4'57.5"	+24°13'31.1"	1.227 aE	0.457 aE	10.2	21:40	14:10	05:54	+64°	S	GEM
Fr. 15.Okt 2021	6h 9'38.5"	+24°22'58.3"	1.225 aE	0.454 aE	10.2	21:39	14:12	05:55	+64°	S	GEM
Sa. 16.Okt 2021	6h14'19.0"	+24°31'59.8"	1.223 aE	0.452 aE	10.1	21:39	14:14	05:56	+65°	S	GEM
So. 17.Okt 2021	6h18'58.7"	+24°40'35.5"	1.221 aE	0.450 aE	10.1	21:39	14:16	05:57	+65°	S	GEM
Mo. 18.Okt 2021	6h23'37.5"	+24°48'45.2"	1.219 aE	0.448 aE	10.1	21:39	14:17	05:57	+65°	S	GEM
Di. 19.Okt 2021	6h28'15.1"	+24°56'29.0"	1.217 aE	0.446 aE	10.1	21:39	14:19	05:58	+65°	S	GEM
Mi. 20.Okt 2021	6h32'51.5"	+25° 3'47.0"	1.215 aE	0.444 aE	10.1	21:38	14:20	05:59	+65°	S	GEM
Do. 21.Okt 2021	6h37'26.2"	+25°10'39.3"	1.213 aE	0.442 aE	10.1	21:38	14:22	05:59	+65°	S	GEM
Fr. 22.Okt 2021	6h41'59.3"	+25°17' 6.3"	1.212 aE	0.440 aE	10.1	21:38	14:23	06:00	+65°	S	GEM
Sa. 23.Okt 2021	6h46'30.5"	+25°23' 8.3"	1.211 aE	0.439 aE	10.0	21:38	14:24	06:00	+65°	S	GEM
So. 24.Okt 2021	6h50'59.6"	+25°28'45.7"	1.210 aE	0.438 aE	10.0	21:38	14:26	06:01	+66°	S	GEM
Mo. 25.Okt 2021	6h55'26.4"	+25°33'58.9"	1.208 aE	0.436 aE	10.0	21:38	14:27	06:02	+66°	S	GEM
Di. 26.Okt 2021	6h59'50.8"	+25°38'48.6"	1.208 aE	0.435 aE	10.0	21:37	14:28	06:02	+66°	S	GEM
Mi. 27.Okt 2021	7h 4'12.5"	+25°43'15.3"	1.207 aE	0.434 aE	10.0	21:37	14:29	06:02	+66°	S	GEM
Do. 28.Okt 2021	7h 8'31.4"	+25°47'19.8"	1.206 aE	0.433 aE	10.0	21:37	14:29	06:03	+66°	S	GEM

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland

Ephemeride des Kometen 67P/Churyumov-Gerasimenko

	Datum	Rektaszens.	Deklination	r	Delta	Hell.	Aufg.	Untg.	TOpt.	Höhe	Ri.	Stb
Fr.	29.Okt 2021	7h12'47.3"	+25°51' 2.8"	1.206 aE	0.432 aE	10.0	21:37	14:30	06:03	+66°	S	GEM
Sa.	30.Okt 2021	7h17' 0.1"	+25°54'25.2"	1.205 aE	0.431 aE	10.0	21:37	14:31	06:03	+66°	S	GEM
So.	31.Okt 2021	7h21'19.9"	+25°57'36.5"	1.205 aE	0.430 aE	10.0	20:37	13:31	05:03	+66°	S	GEM
Mo.	01.Nov 2021	7h25'25.9"	+26° 0'19.5"	1.205 aE	0.430 aE	10.0	20:37	13:32	05:04	+66°	S	GEM
Di.	02.Nov 2021	7h29'28.2"	+26° 2'44.6"	1.205 aE	0.429 aE	10.0	20:36	13:32	05:04	+66°	S	GEM
Mi.	03.Nov 2021	7h33'26.8"	+26° 4'52.9"	1.205 aE	0.429 aE	10.0	20:36	13:32	05:04	+66°	S	GEM
Do.	04.Nov 2021	7h37'21.5"	+26° 6'45.3"	1.205 aE	0.428 aE	10.0	20:36	13:32	05:04	+66°	S	GEM
Fr.	05.Nov 2021	7h41'12.3"	+26° 8'22.9"	1.206 aE	0.428 aE	10.0	20:35	13:32	05:04	+66°	S	GEM
Sa.	06.Nov 2021	7h44'58.9"	+26° 9'46.7"	1.206 aE	0.428 aE	10.0	20:35	13:32	05:03	+66°	S	GEM
So.	07.Nov 2021	7h48'41.5"	+26°10'57.8"	1.207 aE	0.427 aE	10.0	20:35	13:32	05:03	+66°	S	GEM
Mo.	08.Nov 2021	7h52'19.7"	+26°11'57.2"	1.208 aE	0.427 aE	10.0	20:34	13:32	05:03	+66°	S	GEM
Di.	09.Nov 2021	7h55'53.6"	+26°12'45.9"	1.208 aE	0.427 aE	10.0	20:34	13:32	05:02	+66°	S	GEM
Mi.	10.Nov 2021	7h59'23.1"	+26°13'25.1"	1.209 aE	0.427 aE	10.0	20:33	13:31	05:02	+66°	S	GEM
Do.	11.Nov 2021	8h 2'48.1"	+26°13'55.6"	1.211 aE	0.427 aE	10.0	20:32	13:31	05:01	+66°	S	CNC
Fr.	12.Nov 2021	8h 6' 8.6"	+26°14'18.6"	1.212 aE	0.427 aE	10.0	20:32	13:30	05:01	+66°	S	CNC
Sa.	13.Nov 2021	8h 9'24.6"	+26°14'35.0"	1.213 aE	0.427 aE	10.0	20:31	13:29	05:00	+66°	S	CNC
So.	14.Nov 2021	8h12'35.8"	+26°14'45.8"	1.215 aE	0.428 aE	10.0	20:30	13:29	04:59	+66°	S	CNC
Mo.	15.Nov 2021	8h15'42.4"	+26°14'52.1"	1.217 aE	0.428 aE	10.0	20:29	13:28	04:58	+66°	S	CNC
Di.	16.Nov 2021	8h18'44.3"	+26°14'54.7"	1.219 aE	0.428 aE	10.0	20:28	13:27	04:58	+66°	S	CNC
Mi.	17.Nov 2021	8h21'41.3"	+26°14'54.7"	1.221 aE	0.428 aE	10.0	20:27	13:26	04:57	+66°	S	CNC
Do.	18.Nov 2021	8h24'33.6"	+26°14'52.9"	1.223 aE	0.429 aE	10.0	20:26	13:25	04:55	+66°	S	CNC
Fr.	19.Nov 2021	8h27'21.0"	+26°14'50.3"	1.225 aE	0.429 aE	10.0	20:25	13:23	04:54	+66°	S	CNC
Sa.	20.Nov 2021	8h30' 3.5"	+26°14'47.7"	1.227 aE	0.430 aE	10.1	20:24	13:22	04:53	+66°	S	CNC
So.	21.Nov 2021	8h32'41.0"	+26°14'46.1"	1.230 aE	0.430 aE	10.1	20:22	13:21	04:52	+66°	S	CNC
Mo.	22.Nov 2021	8h35'13.6"	+26°14'46.2"	1.232 aE	0.431 aE	10.1	20:21	13:19	04:50	+66°	S	CNC
Di.	23.Nov 2021	8h37'41.2"	+26°14'48.8"	1.235 aE	0.431 aE	10.1	20:19	13:18	04:49	+66°	S	CNC
Mi.	24.Nov 2021	8h40' 3.8"	+26°14'54.7"	1.238 aE	0.432 aE	10.1	20:17	13:16	04:47	+66°	S	CNC
Do.	25.Nov 2021	8h42'21.3"	+26°15' 4.6"	1.241 aE	0.432 aE	10.1	20:16	13:15	04:46	+66°	S	CNC
Fr.	26.Nov 2021	8h44'33.8"	+26°15'19.3"	1.244 aE	0.433 aE	10.1	20:14	13:13	04:44	+66°	S	CNC
Sa.	27.Nov 2021	8h46'41.1"	+26°15'39.3"	1.247 aE	0.434 aE	10.1	20:12	13:11	04:42	+66°	S	CNC
So.	28.Nov 2021	8h48'43.4"	+26°16' 5.4"	1.250 aE	0.434 aE	10.2	20:10	13:09	04:40	+66°	S	CNC
Mo.	29.Nov 2021	8h50'40.5"	+26°16'38.0"	1.253 aE	0.435 aE	10.2	20:08	13:07	04:38	+66°	S	CNC
Di.	30.Nov 2021	8h52'32.4"	+26°17'17.7"	1.257 aE	0.436 aE	10.2	20:06	13:05	04:36	+66°	S	CNC
Mi.	01.Dez 2021	8h54'19.2"	+26°18' 4.9"	1.261 aE	0.437 aE	10.2	20:03	13:03	04:34	+66°	S	CNC
Do.	02.Dez 2021	8h56' 0.8"	+26°19' 0.2"	1.264 aE	0.438 aE	10.2	20:01	13:01	04:32	+66°	S	CNC
Fr.	03.Dez 2021	8h57'37.2"	+26°20' 3.7"	1.268 aE	0.438 aE	10.2	19:58	12:59	04:29	+66°	S	CNC
Sa.	04.Dez 2021	8h59' 8.5"	+26°21'15.9"	1.272 aE	0.439 aE	10.3	19:56	12:56	04:27	+66°	S	CNC
So.	05.Dez 2021	9h 0'34.6"	+26°22'36.9"	1.276 aE	0.440 aE	10.3	19:53	12:54	04:24	+66°	S	CNC
Mo.	06.Dez 2021	9h 1'55.5"	+26°24' 6.8"	1.280 aE	0.441 aE	10.3	19:50	12:52	04:22	+66°	S	CNC
Di.	07.Dez 2021	9h 3'11.4"	+26°25'45.8"	1.284 aE	0.442 aE	10.3	19:47	12:49	04:19	+66°	S	CNC
Mi.	08.Dez 2021	9h 4'22.2"	+26°27'34.0"	1.289 aE	0.443 aE	10.3	19:44	12:47	04:16	+66°	S	CNC
Do.	09.Dez 2021	9h 5'27.9"	+26°29'31.2"	1.293 aE	0.444 aE	10.4	19:41	12:44	04:13	+66°	S	CNC
Fr.	10.Dez 2021	9h 6'28.7"	+26°31'37.4"	1.298 aE	0.446 aE	10.4	19:37	12:41	04:10	+67°	S	CNC
Sa.	11.Dez 2021	9h 7'24.4"	+26°33'52.6"	1.302 aE	0.447 aE	10.4	19:34	12:38	04:07	+67°	S	CNC
So.	12.Dez 2021	9h 8'15.2"	+26°36'16.6"	1.307 aE	0.448 aE	10.4	19:31	12:36	04:04	+67°	S	CNC
Mo.	13.Dez 2021	9h 9' 1.2"	+26°38'49.1"	1.312 aE	0.449 aE	10.4	19:27	12:33	04:01	+67°	S	CNC
Di.	14.Dez 2021	9h 9'42.3"	+26°41'30.0"	1.317 aE	0.451 aE	10.5	19:23	12:30	03:58	+67°	S	CNC
Mi.	15.Dez 2021	9h10'18.5"	+26°44'19.1"	1.322 aE	0.452 aE	10.5	19:20	12:27	03:54	+67°	S	CNC
Do.	16.Dez 2021	9h10'50.1"	+26°47'15.9"	1.327 aE	0.454 aE	10.5	19:16	12:24	03:51	+67°	S	CNC
Fr.	17.Dez 2021	9h11'16.9"	+26°50'20.1"	1.332 aE	0.455 aE	10.5	19:12	12:21	03:48	+67°	S	CNC
Sa.	18.Dez 2021	9h11'39.1"	+26°53'31.4"	1.337 aE	0.457 aE	10.6	19:08	12:17	03:44	+67°	S	CNC
So.	19.Dez 2021	9h11'56.7"	+26°56'49.3"	1.342 aE	0.458 aE	10.6	19:04	12:14	03:40	+67°	S	CNC
Mo.	20.Dez 2021	9h12' 9.7"	+27° 0'13.4"	1.348 aE	0.460 aE	10.6	18:59	12:11	03:37	+67°	S	CNC
Di.	21.Dez 2021	9h12'18.3"	+27° 3'43.1"	1.353 aE	0.462 aE	10.6	18:55	12:07	03:33	+67°	S	CNC
Mi.	22.Dez 2021	9h12'22.5"	+27° 7'17.8"	1.359 aE	0.464 aE	10.7	18:51	12:04	03:29	+67°	S	CNC
Do.	23.Dez 2021	9h12'22.4"	+27°10'57.1"	1.364 aE	0.466 aE	10.7	18:46	12:01	03:25	+67°	S	CNC
Fr.	24.Dez 2021	9h12'18.1"	+27°14'40.2"	1.370 aE	0.468 aE	10.7	18:42	11:57	03:21	+67°	S	CNC
Sa.	25.Dez 2021	9h12' 9.5"	+27°18'26.5"	1.376 aE	0.470 aE	10.7	18:37	11:53	03:17	+67°	S	CNC
So.	26.Dez 2021	9h11'57.0"	+27°22'15.3"	1.382 aE	0.472 aE	10.8	18:32	11:50	03:13	+67°	S	CNC
Mo.	27.Dez 2021	9h11'40.4"	+27°26' 6.0"	1.388 aE	0.475 aE	10.8	18:28	11:46	03:09	+67°	S	CNC
Di.	28.Dez 2021	9h11'20.1"	+27°29'57.8"	1.393 aE	0.477 aE	10.8	18:23	11:42	03:04	+68°	S	CNC
Mi.	29.Dez 2021	9h10'55.9"	+27°33'49.8"	1.399 aE	0.480 aE	10.9	18:18	11:38	03:00	+68°	S	CNC
Do.	30.Dez 2021	9h10'28.2"	+27°37'41.2"	1.406 aE	0.482 aE	10.9	18:13	11:34	02:55	+68°	S	CNC
Fr.	31.Dez 2021	9h 9'57.0"	+27°41'31.3"	1.412 aE	0.485 aE	10.9	18:08	11:30	02:51	+68°	S	CNC
Sa.	01.Jan 2022	9h 9'22.4"	+27°45'19.1"	1.418 aE	0.488 aE	11.0	18:03	11:26	02:47	+68°	S	CNC
So.	02.Jan 2022	9h 8'44.7"	+27°49' 3.8"	1.424 aE	0.491 aE	11.0	17:58	11:22	02:42	+68°	S	CNC
Mo.	03.Jan 2022	9h 8' 3.9"	+27°52'44.4"	1.431 aE	0.494 aE	11.0	17:53	11:18	02:37	+68°	S	CNC
Di.	04.Jan 2022	9h 7'20.3"	+27°56'20.2"	1.437 aE	0.498 aE	11.1	17:48	11:14	02:33	+68°	S	CNC
Mi.	05.Jan 2022	9h 6'34.0"	+27°59'50.1"	1.443 aE	0.501 aE	11.1	17:42	11:10	02:28	+68°	S	CNC
Do.	06.Jan 2022	9h 5'45.2"	+28° 3'13.5"	1.450 aE	0.505 aE	11.1	17:37	11:05	02:23	+68°	S	CNC
Fr.	07.Jan 2022	9h 4'54.2"	+28° 6'29.4"	1.456 aE	0.508 aE	11.2	17:32	11:01	02:18	+68°	S	CNC
Sa.	08.Jan 2022	9h 4' 1.0"	+28° 9'37.2"	1.463 aE	0.512 aE	11.2	17:27	10:57	02:14	+68°	S	CNC
So.	09.Jan 2022	9h 3' 5.8"	+28°12'36.0"	1.470 aE	0.516 aE	11.2	17:21	10:52	02:09	+68°	S	CNC
Mo.	10.Jan 2022	9h 2' 9.0"	+28°15'25.2"	1.476 aE	0.520 aE	11.3	17:16	10:48	02:04	+68°	S	CNC
Di.	11.Jan 2022	9h 1'10.5"	+28°18' 4.2"	1.483 aE	0.525 aE	11.3	17:11	10:43	01:59	+68°	S	CNC
Mi.	12.Jan 2022	9h 0'10.7"	+28°20'32.4"	1.490 aE	0.529 aE	11.3	17:06	10:39	01:54	+68°	S	CNC
Do.	13.Jan 2022	8h59' 9.7"	+28°22'49.3"	1.497 aE	0.534 aE	11.4	17:00	10:34	01:49	+68°	S	CNC

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland

Ephemeride des Kometen 67P/Churyumov-Gerasimenko

Datum	Rektaszens.	Deklination	r	Delta	Hell.	Aufg.	Untg.	T _{Opt.}	Höhe	Ri.	Stb
Fr. 14. Jan 2022	8h58' 7.7"	+28°24'54.4"	1.504 aE	0.539 aE	11.4	16:55	10:29	01:44	+68°	S	CNC
Sa. 15. Jan 2022	8h57' 4.9"	+28°26'47.2"	1.511 aE	0.544 aE	11.5	16:50	10:24	01:39	+68°	S	CNC
So. 16. Jan 2022	8h56' 1.4"	+28°28'27.4"	1.517 aE	0.549 aE	11.5	16:45	10:20	01:34	+68°	S	CNC
Mo. 17. Jan 2022	8h54'57.5"	+28°29'54.6"	1.524 aE	0.554 aE	11.5	16:40	10:15	01:29	+68°	S	CNC
Di. 18. Jan 2022	8h53'53.2"	+28°31' 8.5"	1.532 aE	0.560 aE	11.6	16:34	10:10	01:24	+69°	S	CNC
Mi. 19. Jan 2022	8h52'48.8"	+28°32' 9.0"	1.539 aE	0.565 aE	11.6	16:29	10:05	01:19	+69°	S	CNC
Do. 20. Jan 2022	8h51'44.5"	+28°32'55.9"	1.546 aE	0.571 aE	11.7	16:24	10:00	01:14	+69°	S	CNC
Fr. 21. Jan 2022	8h50'40.3"	+28°33'29.0"	1.553 aE	0.577 aE	11.7	16:19	09:55	01:09	+69°	S	CNC
Sa. 22. Jan 2022	8h49'36.4"	+28°33'48.2"	1.560 aE	0.584 aE	11.8	16:14	09:50	01:04	+69°	S	CNC
So. 23. Jan 2022	8h48'33.1"	+28°33'53.6"	1.567 aE	0.590 aE	11.8	16:09	09:45	00:59	+69°	S	CNC
Mo. 24. Jan 2022	8h47'30.4"	+28°33'45.0"	1.575 aE	0.597 aE	11.9	16:04	09:40	00:54	+69°	S	CNC
Di. 25. Jan 2022	8h46'28.4"	+28°33'22.6"	1.582 aE	0.603 aE	11.9	15:59	09:35	00:49	+69°	S	CNC
Mi. 26. Jan 2022	8h45'27.4"	+28°32'46.4"	1.589 aE	0.610 aE	11.9	15:55	09:30	00:44	+69°	S	CNC
Do. 27. Jan 2022	8h44'27.4"	+28°31'56.5"	1.596 aE	0.618 aE	12.0	15:50	09:25	00:39	+69°	S	CNC
Fr. 28. Jan 2022	8h43'28.6"	+28°30'53.0"	1.604 aE	0.625 aE	12.0	15:45	09:20	00:35	+69°	S	CNC
Sa. 29. Jan 2022	8h42'31.1"	+28°29'36.1"	1.611 aE	0.633 aE	12.1	15:40	09:15	00:30	+68°	S	CNC
So. 30. Jan 2022	8h41'35.1"	+28°28' 5.9"	1.619 aE	0.640 aE	12.1	15:36	09:10	00:25	+68°	S	CNC
Mo. 31. Jan 2022	8h40'40.5"	+28°26'22.6"	1.626 aE	0.648 aE	12.2	15:31	09:05	00:20	+68°	S	CNC
Di. 01. Feb 2022	8h39'47.6"	+28°24'26.6"	1.634 aE	0.657 aE	12.2	15:27	09:00	00:15	+68°	S	CNC
Mi. 02. Feb 2022	8h38'56.5"	+28°22'17.9"	1.641 aE	0.665 aE	12.3	15:22	08:55	00:10	+68°	S	CNC
Do. 03. Feb 2022	8h38' 7.2"	+28°19'57.0"	1.649 aE	0.674 aE	12.3	15:18	08:50	00:06	+68°	S	CNC
Fr. 04. Feb 2022	8h37'19.8"	+28°17'24.2"	1.656 aE	0.682 aE	12.4	15:14	08:45	00:01	+68°	S	CNC
Sa. 05. Feb 2022	8h36'34.4"	+28°14'39.7"	1.664 aE	0.691 aE	12.4	15:09	08:40	00:00	+68°	S	CNC
So. 06. Feb 2022	8h35'51.1"	+28°11'43.9"	1.671 aE	0.700 aE	12.5	15:05	08:35	23:47	+68°	S	CNC
Mo. 07. Feb 2022	8h35' 9.9"	+28° 8'37.3"	1.679 aE	0.710 aE	12.5	15:01	08:30	23:42	+68°	S	CNC
Di. 08. Feb 2022	8h34'30.9"	+28° 5'20.1"	1.687 aE	0.719 aE	12.6	14:57	08:25	23:38	+68°	S	CNC
Mi. 09. Feb 2022	8h33'54.1"	+28° 1'52.9"	1.694 aE	0.729 aE	12.6	14:53	08:20	23:33	+68°	S	CNC
Do. 10. Feb 2022	8h33'19.4"	+27°58'15.8"	1.702 aE	0.739 aE	12.7	14:49	08:15	23:29	+68°	S	CNC
Fr. 11. Feb 2022	8h32'47.1"	+27°54'29.4"	1.710 aE	0.749 aE	12.7	14:45	08:10	23:24	+68°	S	CNC
Sa. 12. Feb 2022	8h32'17.0"	+27°50'34.0"	1.717 aE	0.759 aE	12.8	14:41	08:05	23:20	+68°	S	CNC
So. 13. Feb 2022	8h31'49.3"	+27°46'30.0"	1.725 aE	0.770 aE	12.8	14:37	08:00	23:16	+68°	S	CNC
Mo. 14. Feb 2022	8h31'23.8"	+27°42'17.8"	1.733 aE	0.781 aE	12.8	14:33	07:55	23:11	+68°	S	CNC
Di. 15. Feb 2022	8h31' 0.6"	+27°37'57.7"	1.740 aE	0.792 aE	12.9	14:30	07:50	23:07	+68°	S	CNC
Mi. 16. Feb 2022	8h30'39.7"	+27°33'30.1"	1.748 aE	0.803 aE	12.9	14:26	07:45	23:03	+67°	S	CNC
Do. 17. Feb 2022	8h30'21.1"	+27°28'55.3"	1.756 aE	0.814 aE	13.0	14:22	07:40	22:59	+67°	S	CNC
Fr. 18. Feb 2022	8h30' 4.8"	+27°24'13.8"	1.764 aE	0.825 aE	13.0	14:19	07:35	22:54	+67°	S	CNC
Sa. 19. Feb 2022	8h29'50.7"	+27°19'25.7"	1.772 aE	0.837 aE	13.1	14:15	07:31	22:50	+67°	S	CNC
So. 20. Feb 2022	8h29'38.9"	+27°14'31.5"	1.779 aE	0.849 aE	13.1	14:12	07:26	22:46	+67°	S	CNC
Mo. 21. Feb 2022	8h29'29.3"	+27° 9'31.3"	1.787 aE	0.861 aE	13.2	14:08	07:21	22:42	+67°	S	CNC
Di. 22. Feb 2022	8h29'21.9"	+27° 4'25.6"	1.795 aE	0.873 aE	13.2	14:05	07:17	22:38	+67°	S	CNC
Mi. 23. Feb 2022	8h29'16.7"	+26°59'14.6"	1.803 aE	0.885 aE	13.3	14:02	07:12	22:34	+67°	S	CNC
Do. 24. Feb 2022	8h29'13.6"	+26°53'58.4"	1.811 aE	0.898 aE	13.3	13:58	07:07	22:30	+67°	S	CNC
Fr. 25. Feb 2022	8h29'12.7"	+26°48'37.4"	1.819 aE	0.910 aE	13.4	13:55	07:03	22:26	+67°	S	CNC
Sa. 26. Feb 2022	8h29'13.9"	+26°43'11.7"	1.826 aE	0.923 aE	13.4	13:52	06:58	22:22	+67°	S	CNC
So. 27. Feb 2022	8h29'17.3"	+26°37'41.6"	1.834 aE	0.936 aE	13.5	13:49	06:53	22:19	+67°	S	CNC
Mo. 28. Feb 2022	8h29'22.6"	+26°32' 7.2"	1.842 aE	0.949 aE	13.5	13:46	06:49	22:15	+66°	S	CNC
Di. 01. Mrz 2022	8h29'30.1"	+26°26'28.8"	1.850 aE	0.962 aE	13.6	13:43	06:44	22:11	+66°	S	CNC
Mi. 02. Mrz 2022	8h29'39.6"	+26°20'46.4"	1.858 aE	0.976 aE	13.6	13:40	06:40	22:07	+66°	S	CNC
Do. 03. Mrz 2022	8h29'51.0"	+26°15' 0.3"	1.866 aE	0.990 aE	13.7	13:37	06:35	22:04	+66°	S	CNC
Fr. 04. Mrz 2022	8h30' 4.5"	+26° 9'10.7"	1.874 aE	1.003 aE	13.7	13:34	06:31	22:00	+66°	S	CNC
Sa. 05. Mrz 2022	8h30'19.8"	+26° 3'17.6"	1.882 aE	1.017 aE	13.8	13:31	06:27	21:56	+66°	S	CNC
So. 06. Mrz 2022	8h30'37.1"	+25°57'21.3"	1.890 aE	1.031 aE	13.8	13:28	06:22	21:53	+66°	S	CNC
Mo. 07. Mrz 2022	8h30'56.2"	+25°51'21.8"	1.897 aE	1.046 aE	13.9	13:25	06:18	21:49	+66°	S	CNC
Di. 08. Mrz 2022	8h31'17.1"	+25°45'19.3"	1.905 aE	1.060 aE	13.9	13:22	06:14	21:45	+66°	S	CNC
Mi. 09. Mrz 2022	8h31'39.8"	+25°39'14.0"	1.913 aE	1.075 aE	14.0	13:19	06:09	21:42	+66°	S	CNC
Do. 10. Mrz 2022	8h32' 4.3"	+25°33' 5.9"	1.921 aE	1.089 aE	14.0	13:17	06:05	21:38	+65°	S	CNC
Fr. 11. Mrz 2022	8h32'30.4"	+25°26'55.2"	1.929 aE	1.104 aE	14.1	13:14	06:01	21:35	+65°	S	CNC
Sa. 12. Mrz 2022	8h32'58.2"	+25°20'41.9"	1.937 aE	1.119 aE	14.1	13:11	05:57	21:31	+65°	S	CNC
So. 13. Mrz 2022	8h33'27.6"	+25°14'26.2"	1.945 aE	1.134 aE	14.2	13:08	05:52	21:28	+65°	S	CNC
Mo. 14. Mrz 2022	8h33'58.6"	+25° 8' 8.2"	1.953 aE	1.149 aE	14.2	13:06	05:48	21:25	+65°	S	CNC
Di. 15. Mrz 2022	8h34'31.1"	+25° 1'47.9"	1.961 aE	1.165 aE	14.3	13:03	05:44	21:21	+65°	S	CNC
Mi. 16. Mrz 2022	8h35' 5.2"	+24°55'25.4"	1.969 aE	1.180 aE	14.3	13:01	05:40	21:18	+65°	S	CNC
Do. 17. Mrz 2022	8h35'40.6"	+24°49' 0.9"	1.977 aE	1.196 aE	14.3	12:58	05:36	21:15	+65°	S	CNC
Fr. 18. Mrz 2022	8h36'17.5"	+24°42'34.3"	1.985 aE	1.212 aE	14.4	12:55	05:32	21:11	+65°	S	CNC
Sa. 19. Mrz 2022	8h36'55.7"	+24°36' 5.8"	1.993 aE	1.228 aE	14.4	12:53	05:28	21:08	+65°	S	CNC
So. 20. Mrz 2022	8h37'35.3"	+24°29'35.3"	2.001 aE	1.244 aE	14.5	12:50	05:24	21:05	+64°	S	CNC
Mo. 21. Mrz 2022	8h38'16.2"	+24°23' 3.0"	2.009 aE	1.260 aE	14.5	12:48	05:20	21:02	+64°	S	CNC
Di. 22. Mrz 2022	8h38'58.3"	+24°16'28.9"	2.017 aE	1.276 aE	14.6	12:45	05:16	20:58	+64°	S	CNC
Mi. 23. Mrz 2022	8h39'41.7"	+24° 9'53.0"	2.025 aE	1.292 aE	14.6	12:43	05:12	20:55	+64°	S	CNC
Do. 24. Mrz 2022	8h40'26.2"	+24° 3'15.4"	2.032 aE	1.309 aE	14.7	12:41	05:08	20:52	+64°	S	CNC
Fr. 25. Mrz 2022	8h41'12.0"	+23°56'36.0"	2.040 aE	1.326 aE	14.7	12:38	05:04	20:49	+64°	S	CNC
Sa. 26. Mrz 2022	8h41'58.8"	+23°49'55.0"	2.048 aE	1.342 aE	14.8	12:36	05:00	20:46	+64°	S	CNC
So. 27. Mrz 2022	8h42'44.8"	+23°43'29.3"	2.056 aE	1.358 aE	14.8	13:33	05:56	21:43	+64°	S	CNC
Mo. 28. Mrz 2022	8h43'33.8"	+23°36'44.9"	2.064 aE	1.375 aE	14.8	13:31	05:52	21:39	+64°	S	CNC
Di. 29. Mrz 2022	8h44'23.9"	+23°29'58.9"	2.072 aE	1.392 aE	14.9	13:29	05:48	21:36	+63°	S	CNC
Mi. 30. Mrz 2022	8h45'15.0"	+23°23'11.2"	2.080 aE	1.409 aE	14.9	13:26	05:45	21:33	+63°	S	CNC
Do. 31. Mrz 2022	8h46' 7.1"	+23°16'21.8"	2.088 aE	1.427 aE	15.0	13:24	05:41	21:30	+63°	S	CNC

Der Komet 67P/Churyumov-Gerasimenko im Jahre 2021

berechnet für den Standort Mitteldeutschland

Ephemeride des Kometen 67P/Churyumov-Gerasimenko

	Datum	Rektaszens.	Deklination	r	Delta	Hell.	Aufg.	Untg.	TOpt.	Höhe	Ri.	Stb
Fr.	01.Apr 2022	8h47' 0.2"	+23° 9'30.7"	2.096 aE	1.444 aE	15.0	13:22	05:37	21:27	+63°	S	CNC
Sa.	02.Apr 2022	8h47'54.2"	+23° 2'38.0"	2.104 aE	1.462 aE	15.1	13:20	05:33	21:24	+63°	S	CNC
So.	03.Apr 2022	8h48'49.2"	+22°55'43.6"	2.111 aE	1.479 aE	15.1	13:17	05:29	21:21	+63°	S	CNC
Mo.	04.Apr 2022	8h49'45.1"	+22°48'47.7"	2.119 aE	1.497 aE	15.1	13:15	05:26	21:18	+63°	S	CNC
Di.	05.Apr 2022	8h50'41.8"	+22°41'50.1"	2.127 aE	1.514 aE	15.2	13:13	05:22	21:15	+63°	S	CNC
Mi.	06.Apr 2022	8h51'39.4"	+22°34'50.9"	2.135 aE	1.532 aE	15.2	13:11	05:18	21:14	+62°	S	CNC
Do.	07.Apr 2022	8h52'37.8"	+22°27'50.1"	2.143 aE	1.550 aE	15.3	13:08	05:14	21:15	+62°	S	CNC
Fr.	08.Apr 2022	8h53'36.9"	+22°20'47.7"	2.151 aE	1.568 aE	15.3	13:06	05:11	21:17	+62°	S	CNC
Sa.	09.Apr 2022	8h54'36.9"	+22°13'43.8"	2.159 aE	1.586 aE	15.3	13:04	05:07	21:19	+62°	S	CNC
So.	10.Apr 2022	8h55'37.6"	+22° 6'38.3"	2.167 aE	1.604 aE	15.4	13:02	05:03	21:21	+62°	S	CNC
Mo.	11.Apr 2022	8h56'39.0"	+21°59'31.3"	2.175 aE	1.623 aE	15.4	13:00	05:00	21:23	+61°	S	CNC
Di.	12.Apr 2022	8h57'41.1"	+21°52'22.7"	2.182 aE	1.641 aE	15.5	12:58	04:56	21:25	+61°	S	CNC
Mi.	13.Apr 2022	8h58'43.8"	+21°45'12.6"	2.190 aE	1.659 aE	15.5	12:56	04:52	21:27	+61°	S	CNC
Do.	14.Apr 2022	8h59'47.2"	+21°38' 1.1"	2.198 aE	1.678 aE	15.5	12:53	04:49	21:29	+60°	S	CNC
Fr.	15.Apr 2022	9h 0'51.2"	+21°30'48.0"	2.206 aE	1.696 aE	15.6	12:51	04:45	21:31	+60°	S	CNC
Sa.	16.Apr 2022	9h 1'55.8"	+21°23'33.5"	2.214 aE	1.715 aE	15.6	12:49	04:41	21:33	+60°	SW	CNC
So.	17.Apr 2022	9h 3' 0.9"	+21°16'17.5"	2.222 aE	1.734 aE	15.7	12:47	04:38	21:35	+59°	SW	CNC
Mo.	18.Apr 2022	9h 4' 6.6"	+21° 9' 0.1"	2.230 aE	1.752 aE	15.7	12:45	04:34	21:36	+59°	SW	CNC
Di.	19.Apr 2022	9h 5'12.9"	+21° 1'41.3"	2.237 aE	1.771 aE	15.7	12:43	04:31	21:38	+58°	SW	CNC
Mi.	20.Apr 2022	9h 6'19.7"	+20°54'21.0"	2.245 aE	1.790 aE	15.8	12:41	04:27	21:40	+58°	SW	CNC
Do.	21.Apr 2022	9h 7'26.9"	+20°46'59.3"	2.253 aE	1.809 aE	15.8	12:39	04:23	21:42	+57°	SW	CNC
Fr.	22.Apr 2022	9h 8'34.7"	+20°39'36.1"	2.261 aE	1.828 aE	15.9	12:37	04:20	21:44	+57°	SW	CNC
Sa.	23.Apr 2022	9h 9'42.9"	+20°32'11.5"	2.269 aE	1.847 aE	15.9	12:35	04:16	21:46	+56°	SW	CNC
So.	24.Apr 2022	9h10'51.5"	+20°24'45.4"	2.277 aE	1.866 aE	15.9	12:33	04:13	21:48	+56°	SW	CNC
Mo.	25.Apr 2022	9h12' 0.6"	+20°17'17.9"	2.284 aE	1.885 aE	16.0	12:31	04:09	21:51	+55°	SW	CNC