Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

Die Bahnelemente:

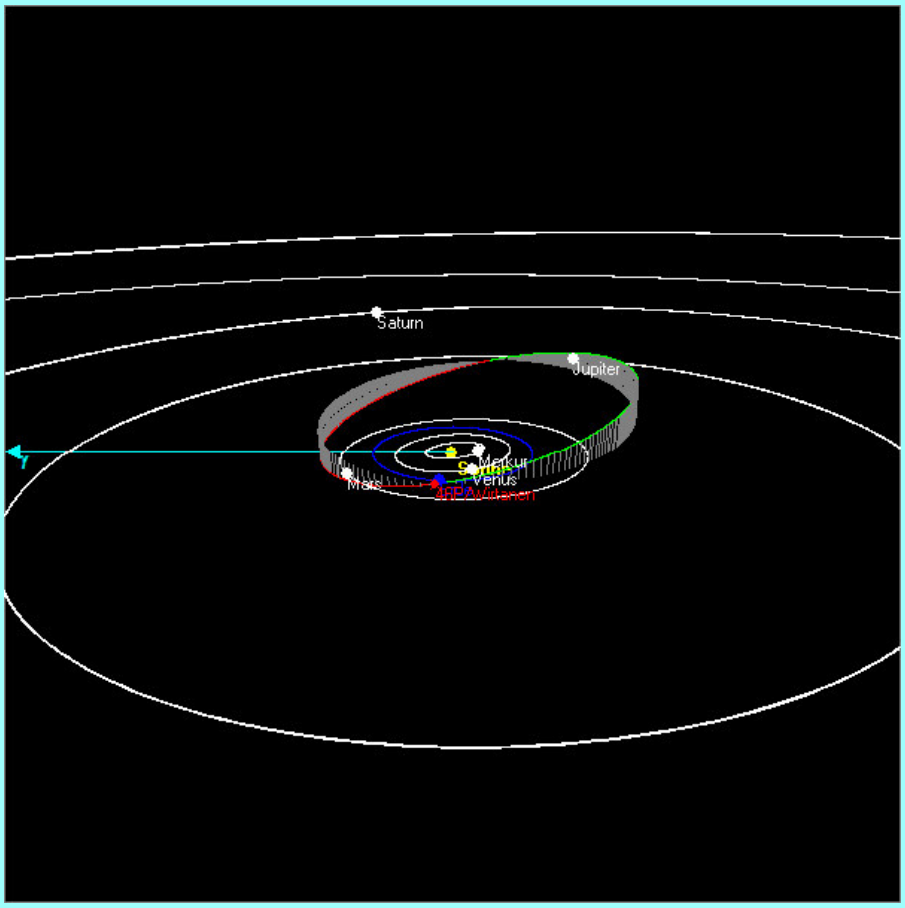
Perihelduchgang	2018-Dezember-13.0077000
Bahnexzentrizität	0.6585430
Perihelldistanz	1.0548470 aE
große halbe Bahnachse	3.089253 aE
Länge des aufsteigenden Knotens	82.172300 Grad
Perihellänge	356.351100 Grad
Bahnneigung	11.747900 Grad
Grundhelligkeit	9.0 mag.
Luminiszenzfaktor	6.00

Details zur Sichtbarkeit

größte Sonnennähe:	1.05485 aE am 13.12.2018
größte Erdnähe :	0.07734 aE am 17.12.2018
größte Helligkeit:	3.8 am 16.12.2018

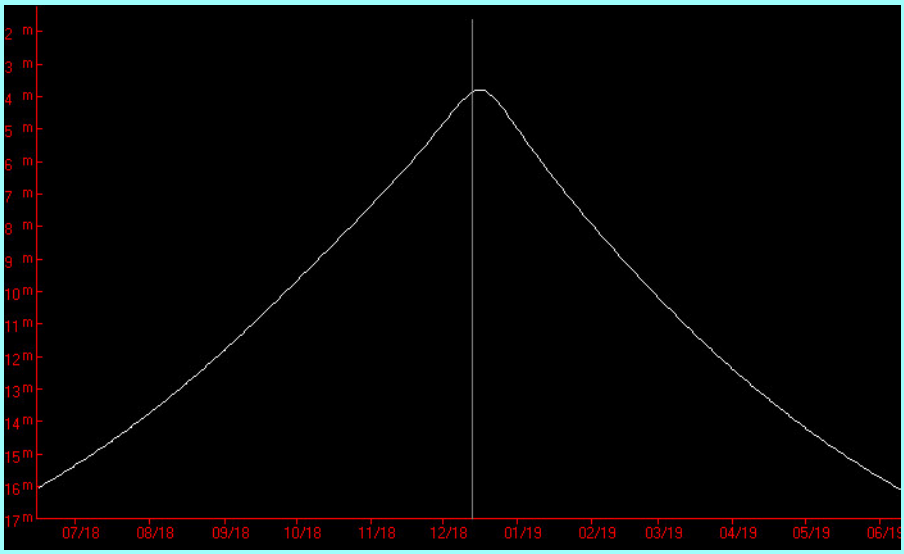
Grenzgröße der Analyse: 12.0

```
ab 30.08.2018 morgens sichtbar mit Helligkeit 11.9
              positioniert im Sternbild CET, Helligkeit 11.9
ab 27.09.2018 Übergang ins Sternbild FOR, Helligkeit 10.0
ab 31.10.2018 abends sichtbar mit Helligkeit  7.4 [Komet horizontnah beobachtbar]
ab 27.11.2018 Übergang ins Sternbild CET, Helligkeit  5.2
ab 02.12.2018 Übergang ins Sternbild ERI, Helligkeit  4.7
ab 10.12.2018 Übergang ins Sternbild CET, Helligkeit  4.1
ab 11.12.2018 Übergang ins Sternbild TAU, Helligkeit  4.0
ab 19.12.2018 Übergang ins Sternbild PER, Helligkeit  3.8
ab 20.12.2018 Übergang ins Sternbild AUR, Helligkeit  3.9
ab 22.12.2018 zirkumpolar mit Helligkeit  4.0
ab 29.12.2018 Übergang ins Sternbild LYN, Helligkeit  4.6
ab 10.01.2019 Übergang ins Sternbild UMA, Helligkeit  5.9
ab 11.03.2019 Übergang ins Sternbild LMI, Helligkeit 10.9
ab 20.03.2019 abends sichtbar mit Helligkeit 11.6
```

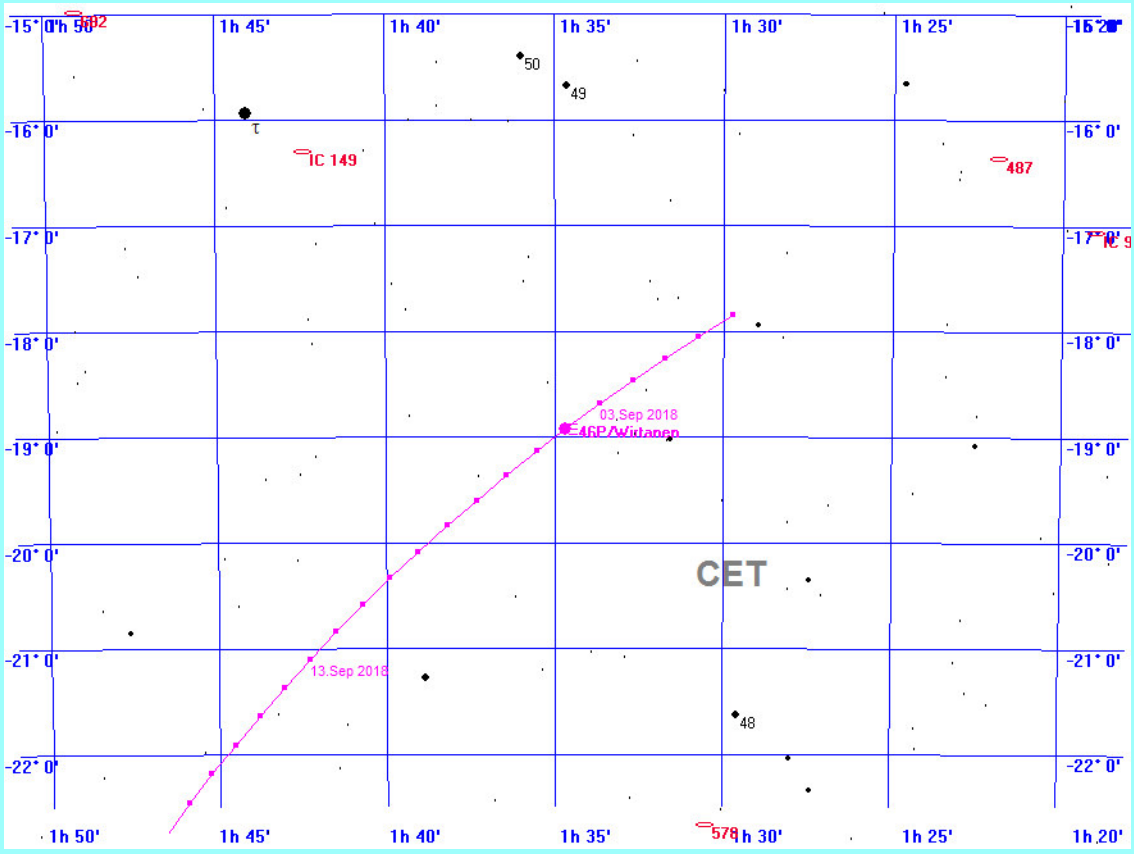


Die Bahn des Kometen 46P/Wirtanen

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

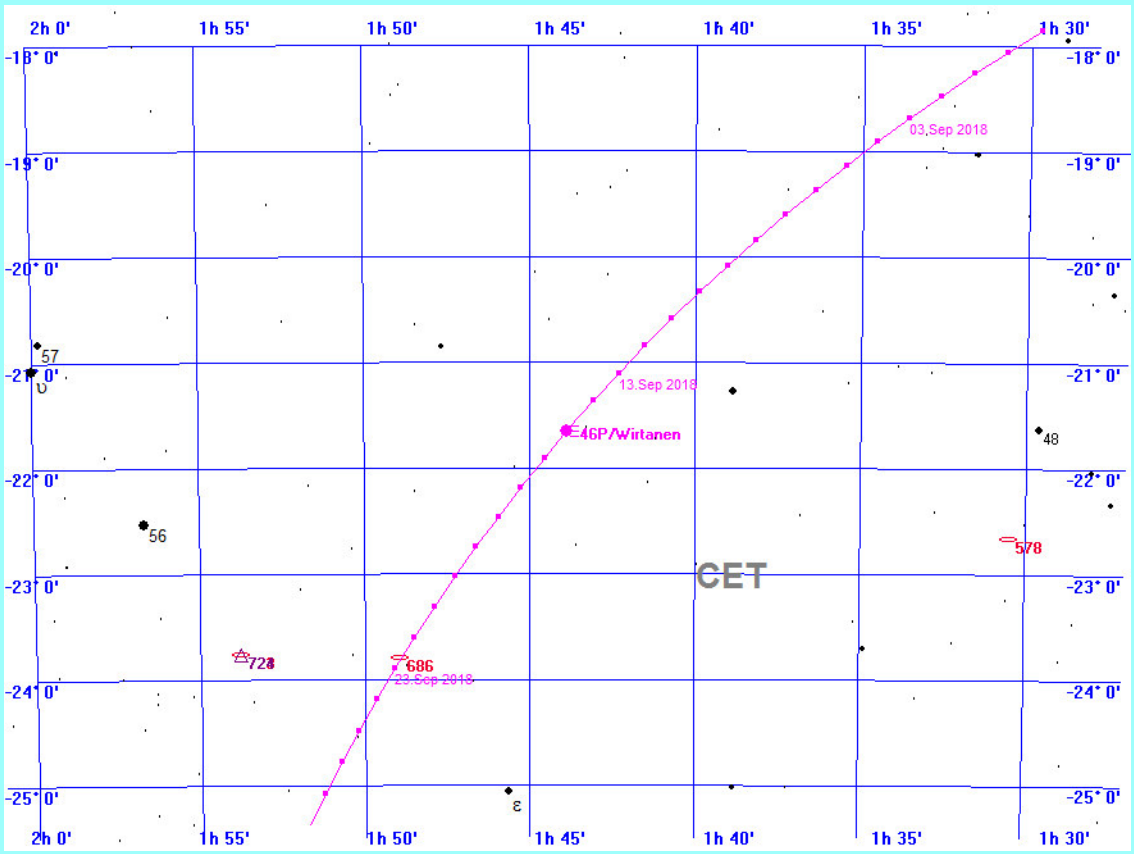


Die Lichtkurve des Kometen 46P/Wirtanen

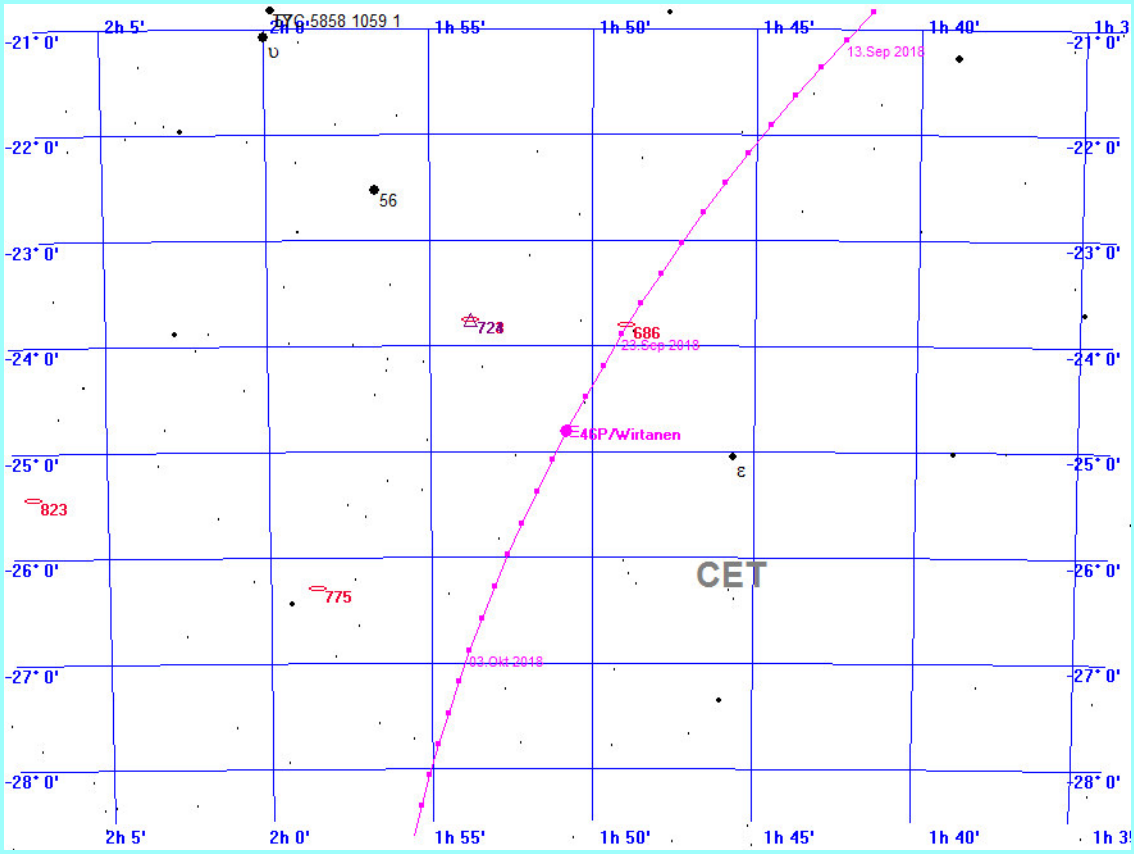


46P/Wirtanen am 4.9.2018

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

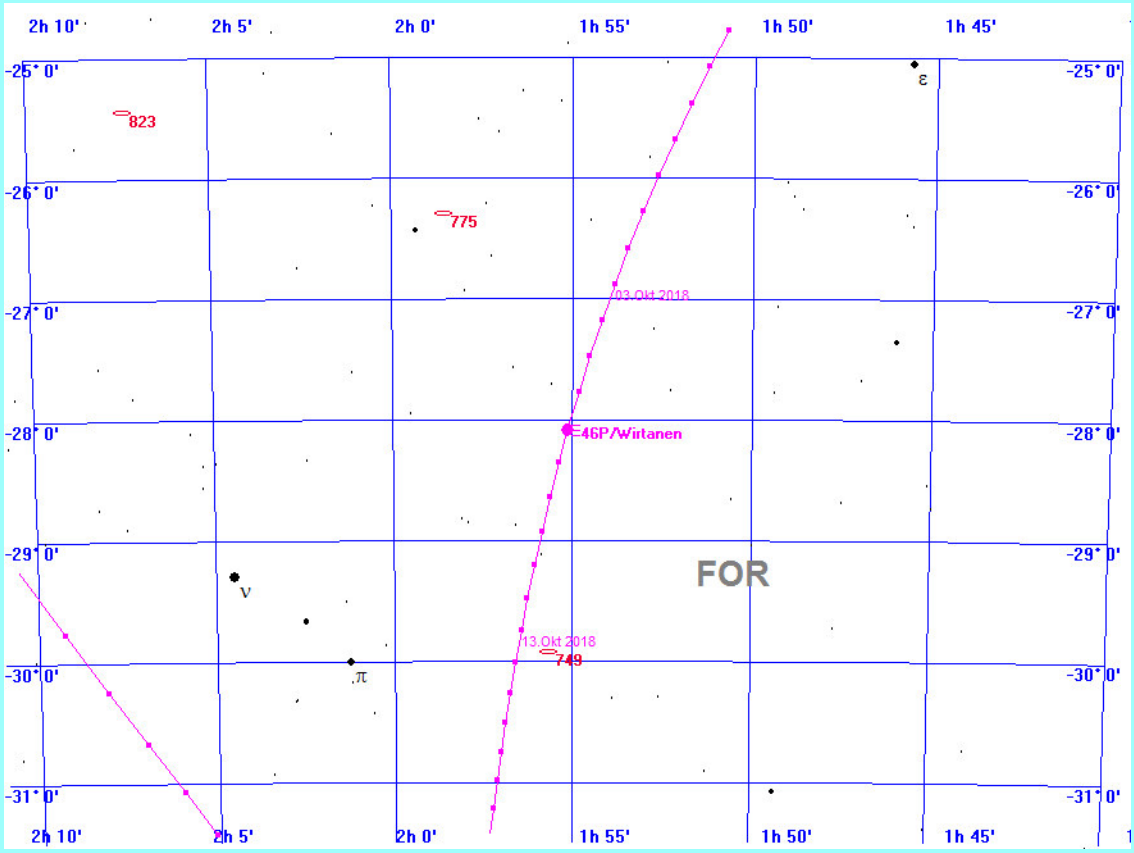


46P/Wirtanen am 15.9.2018

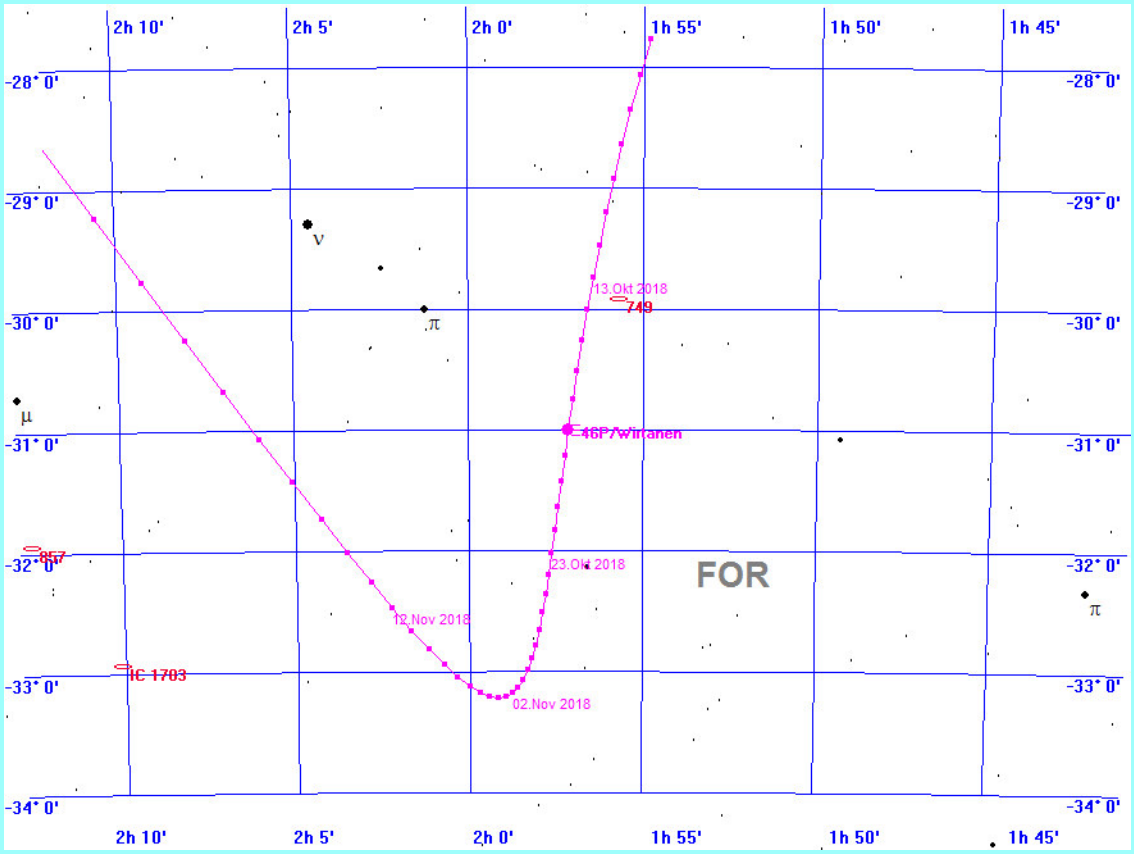


46P/Wirtanen am 26.9.2018

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

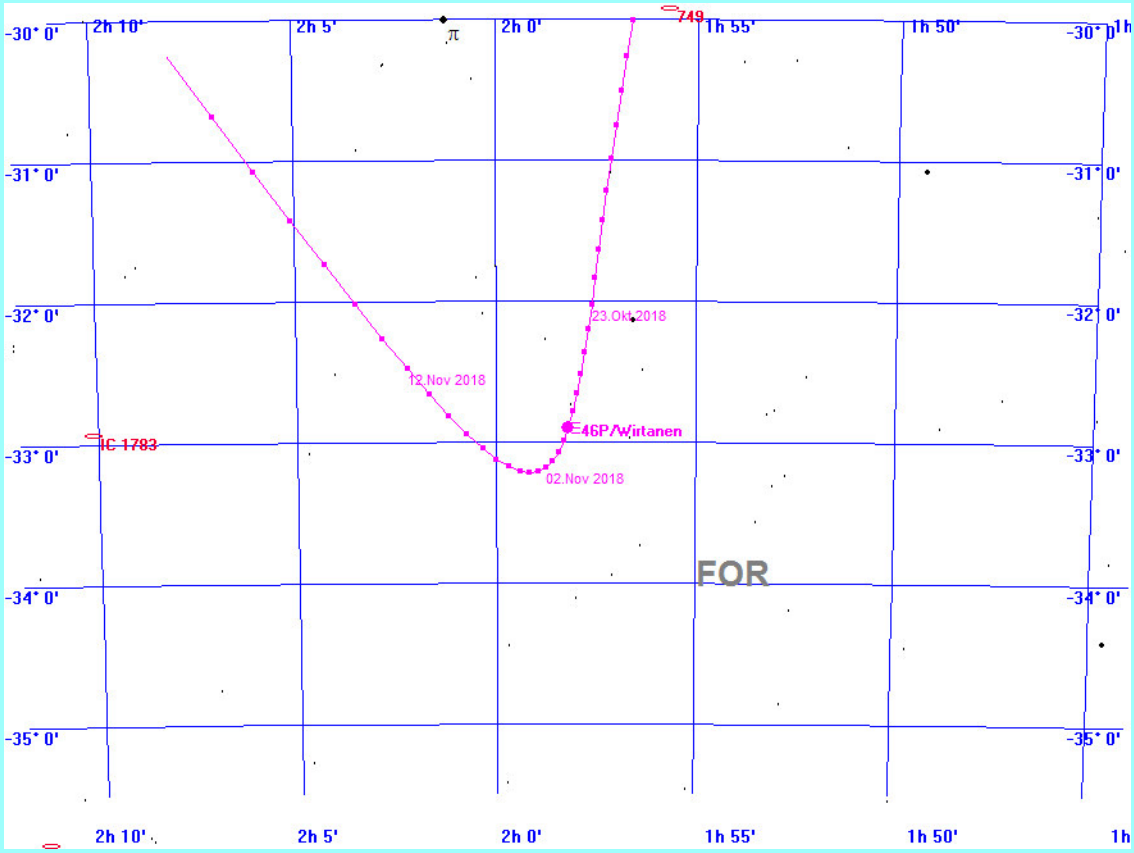


46P/Wirtanen am 7.10.2018

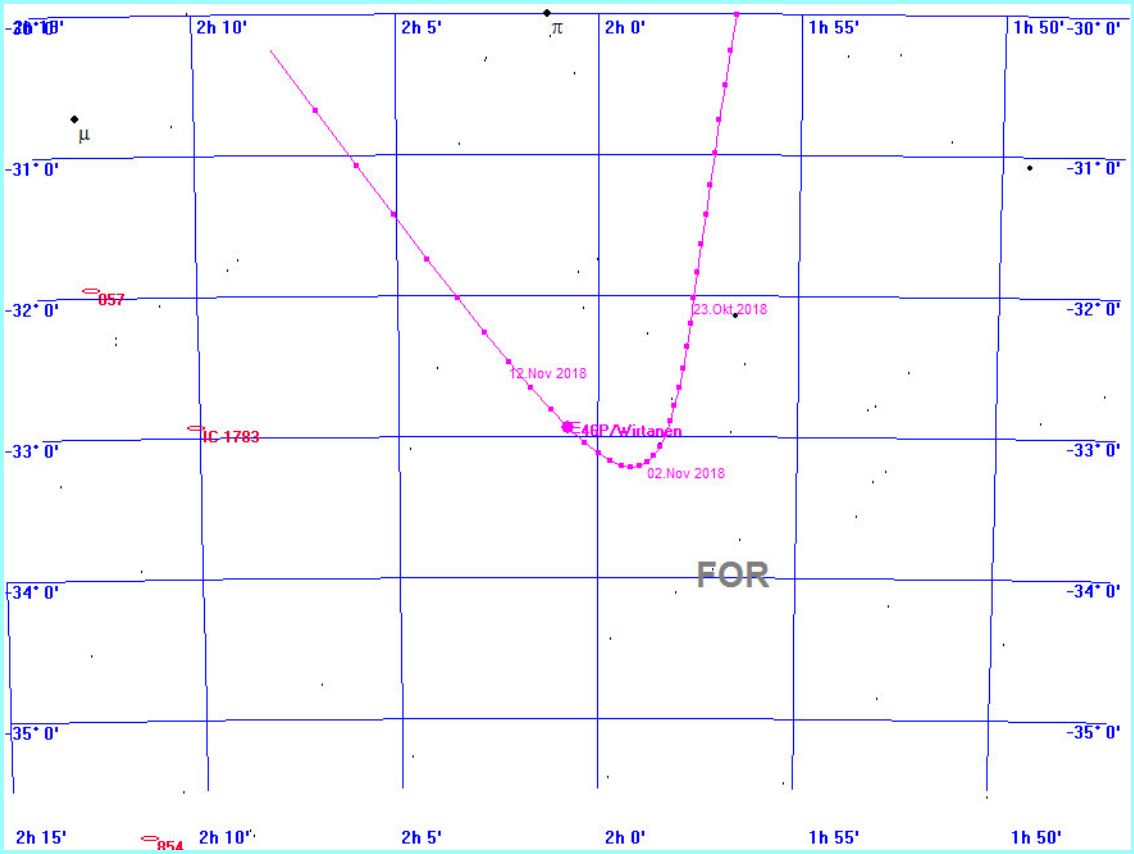


46P/Wirtanen am 18.10.2018

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

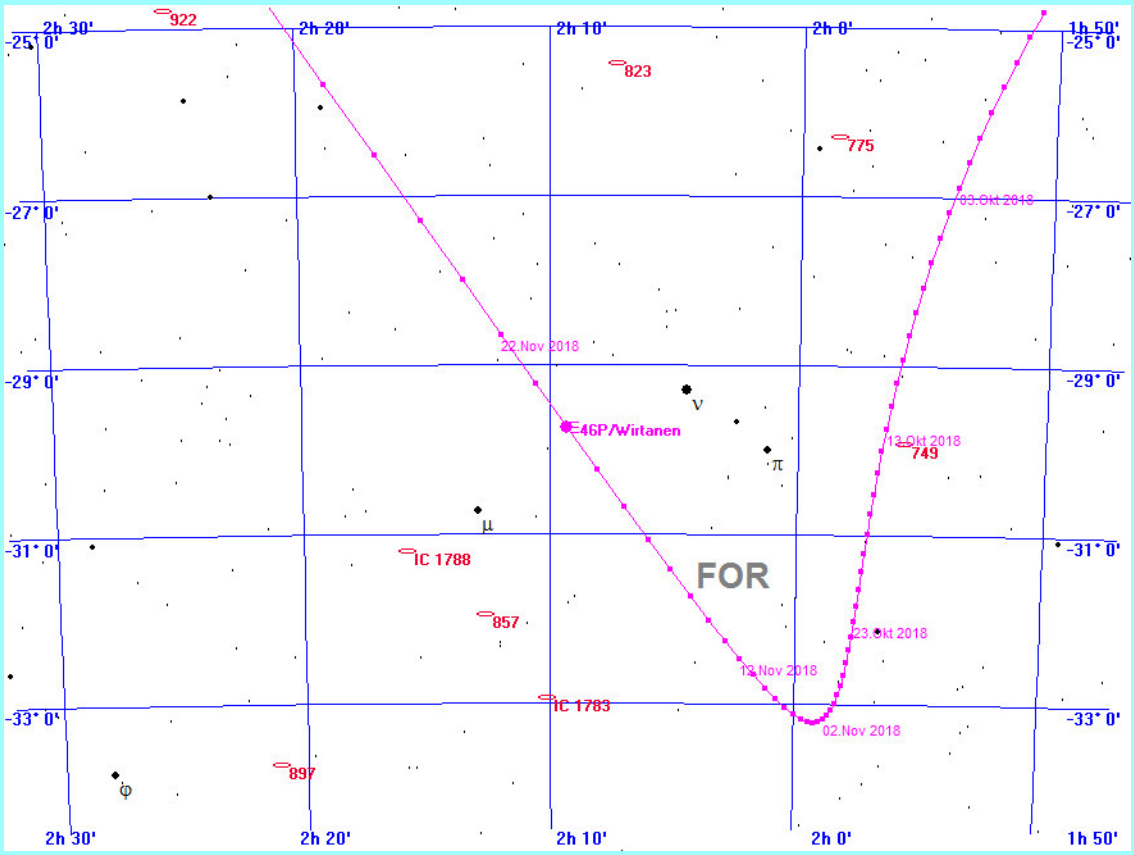


46P/Wirtanen am 29.10.2018

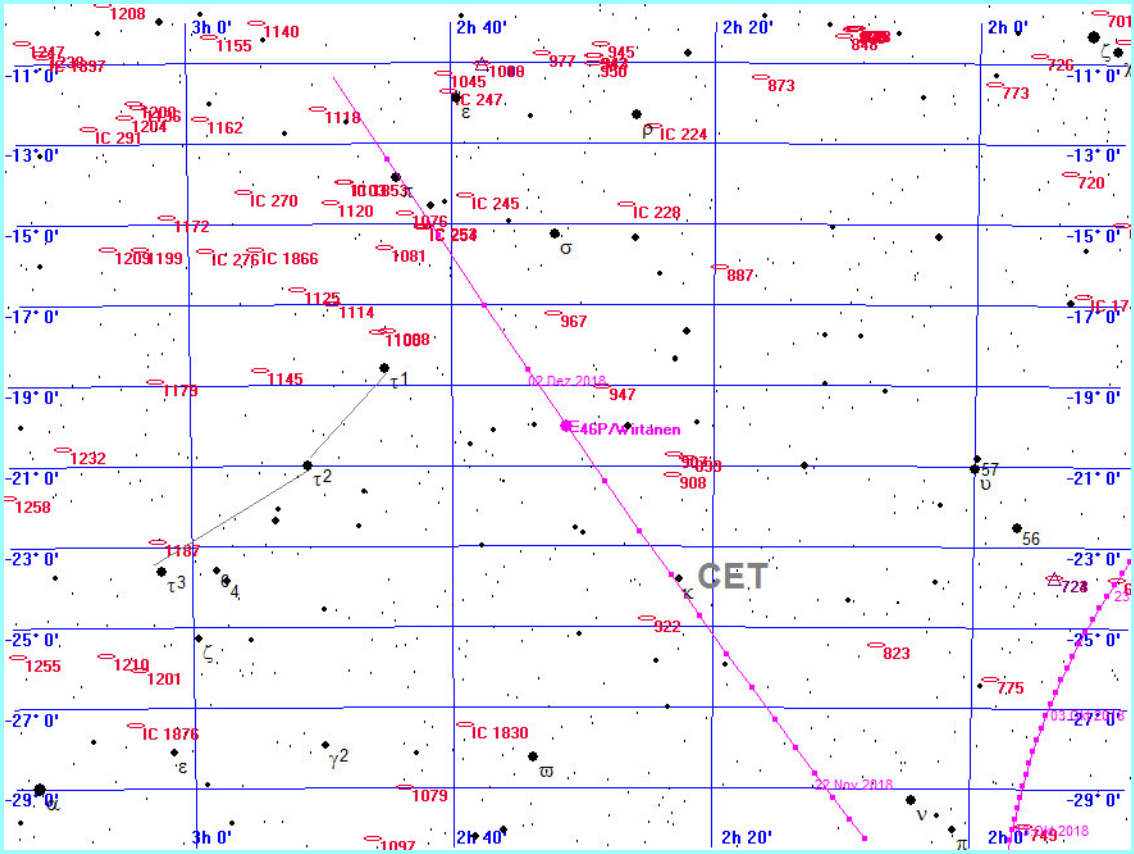


46P/Wirtanen am 9.11.2018

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

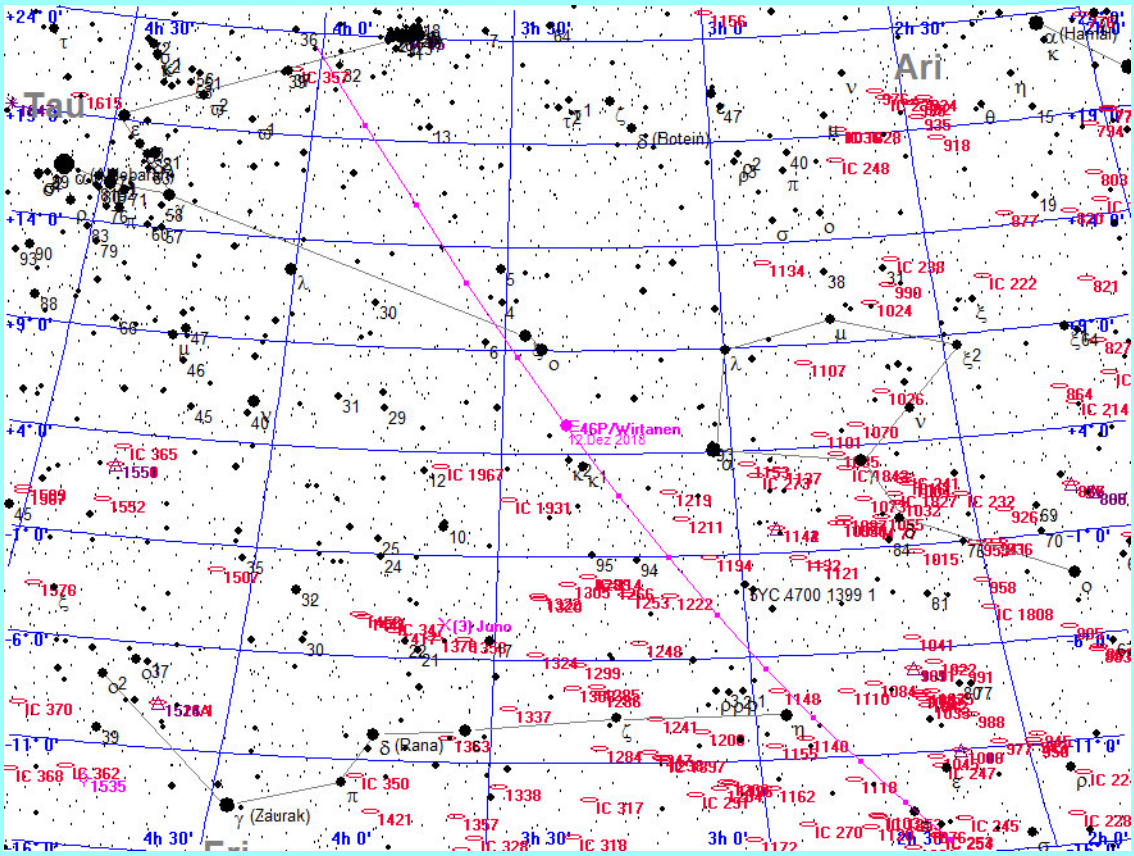


46P/Wirtanen am 20.11.2018

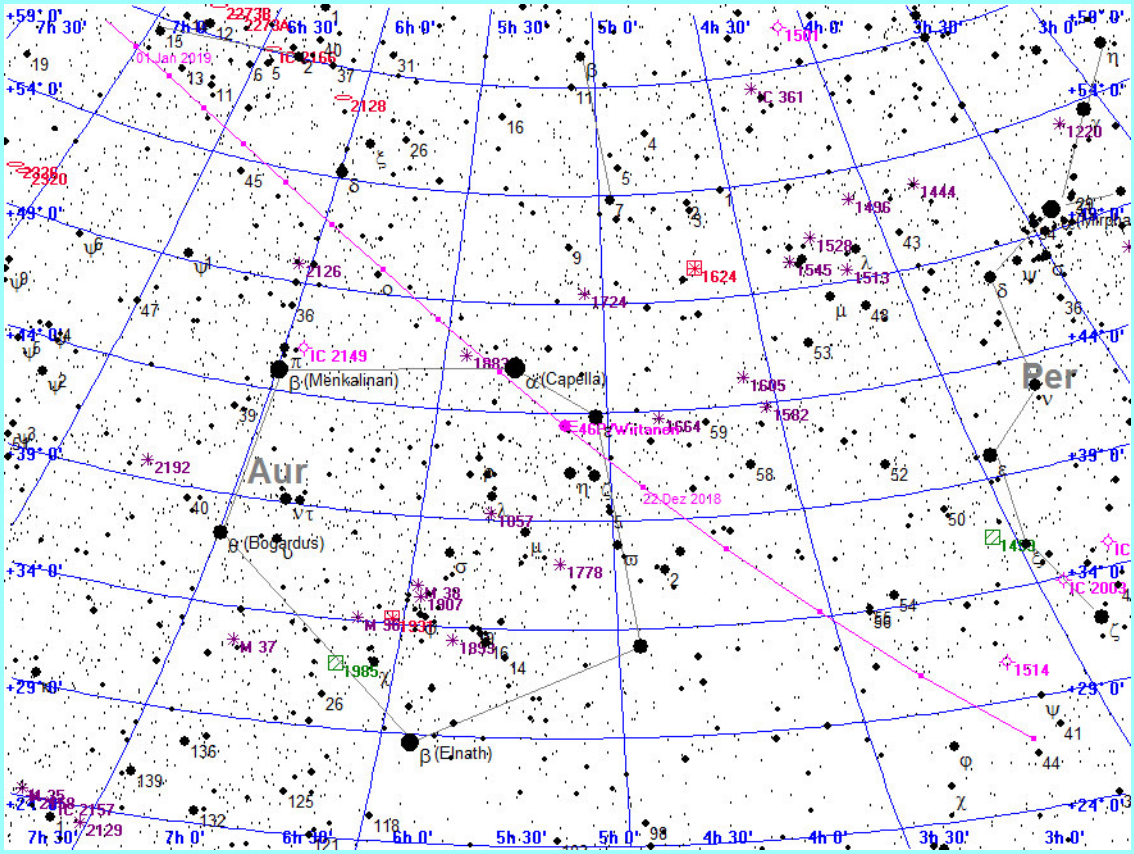


46P/Wirtanen am 1.12.2018

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

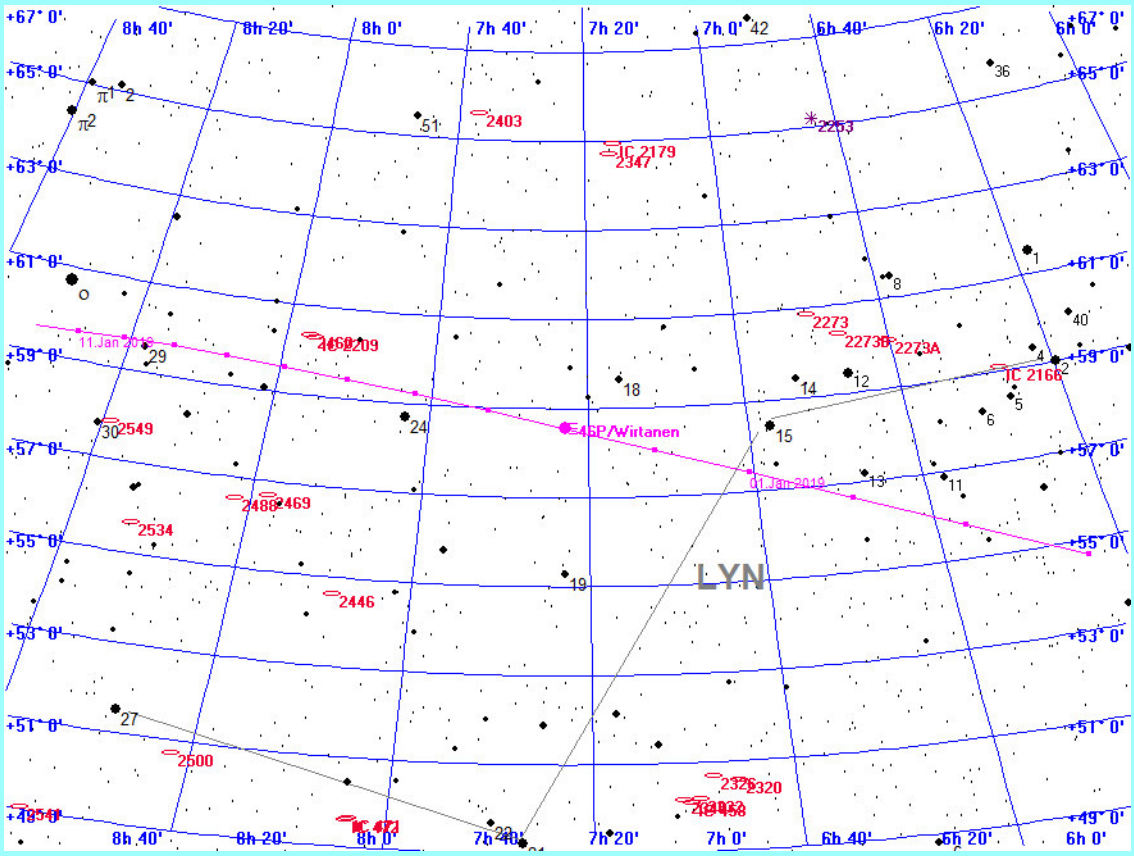


46P/Wirtanen am 12.12.2018

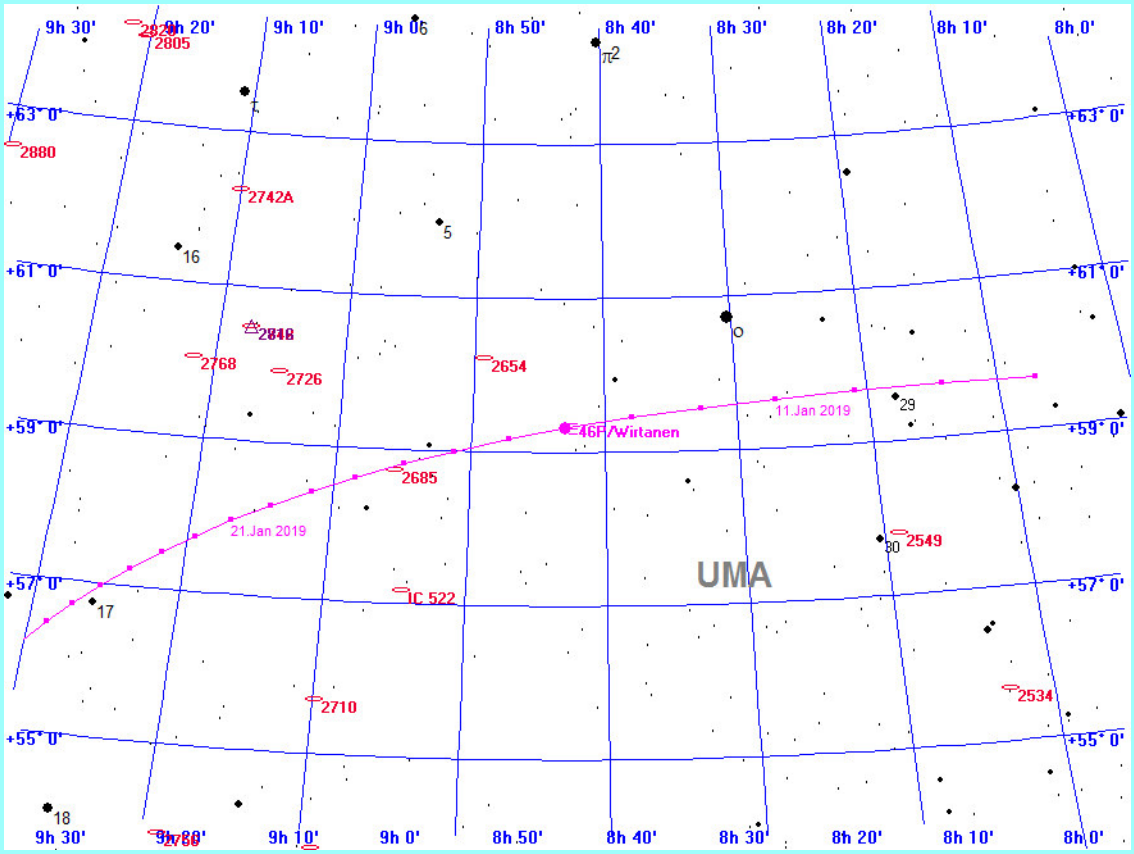


46P/Wirtanen am 23.12.2018

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

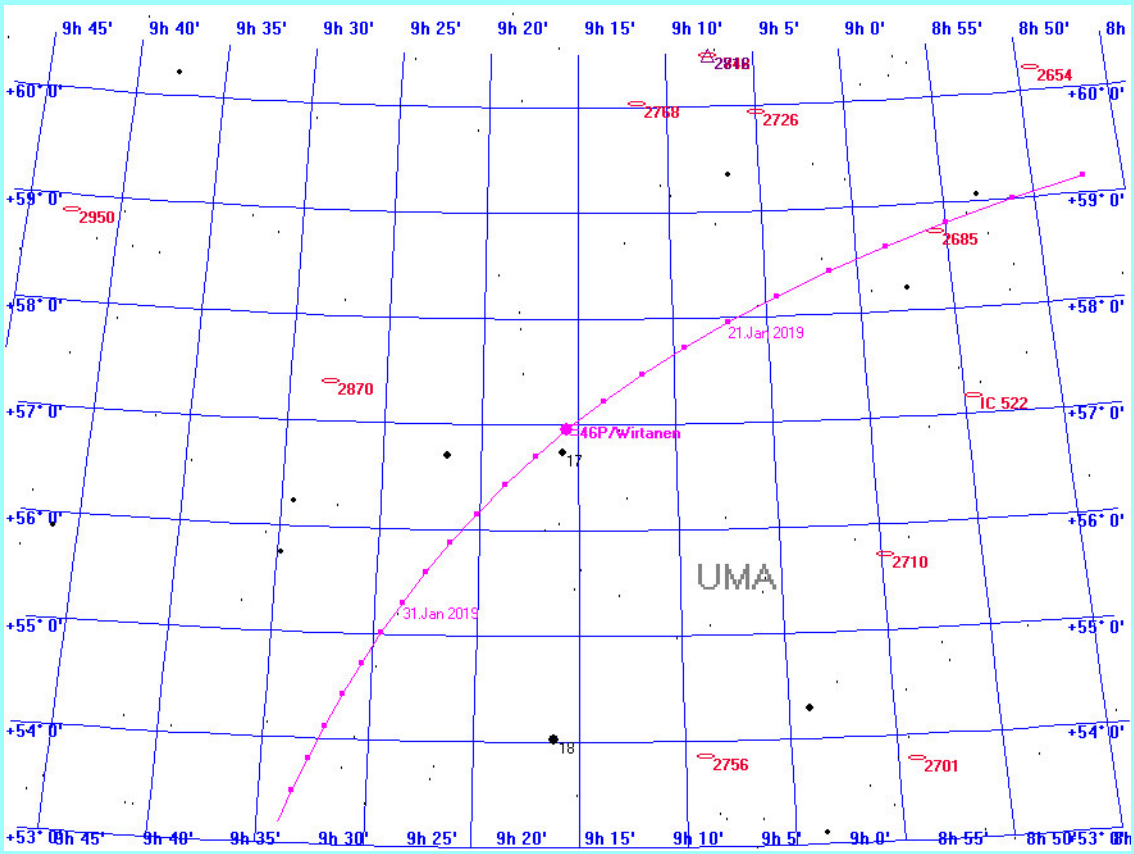


46P/Wirtanen am 3.1.2019

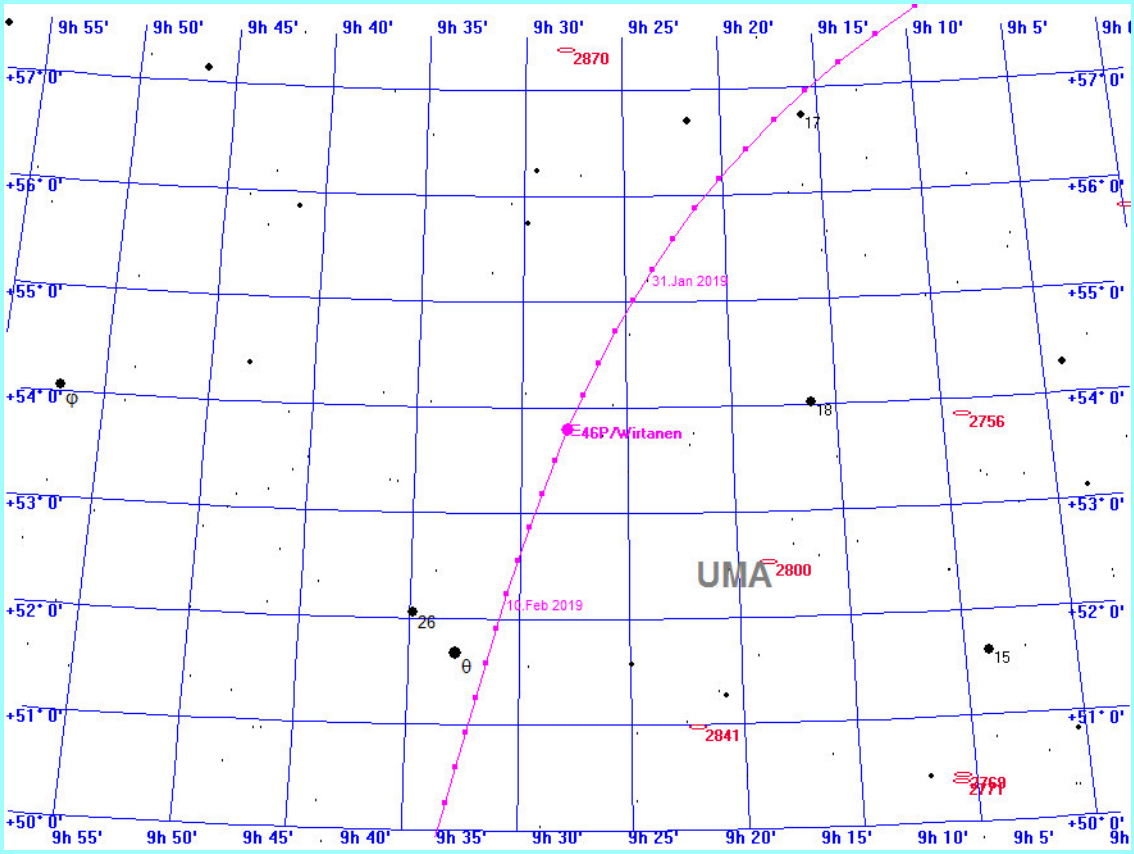


46P/Wirtanen am 14.1.2019

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

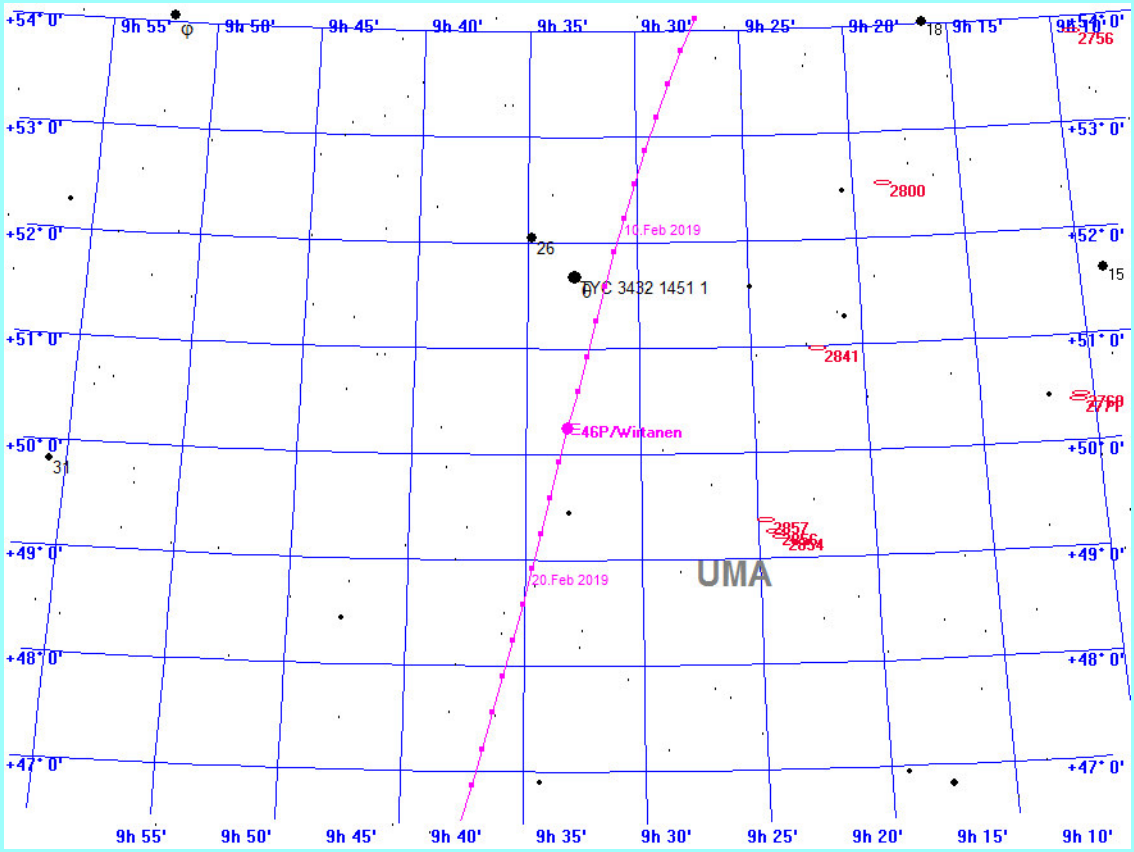


46P/Wirtanen am 25.1.2019

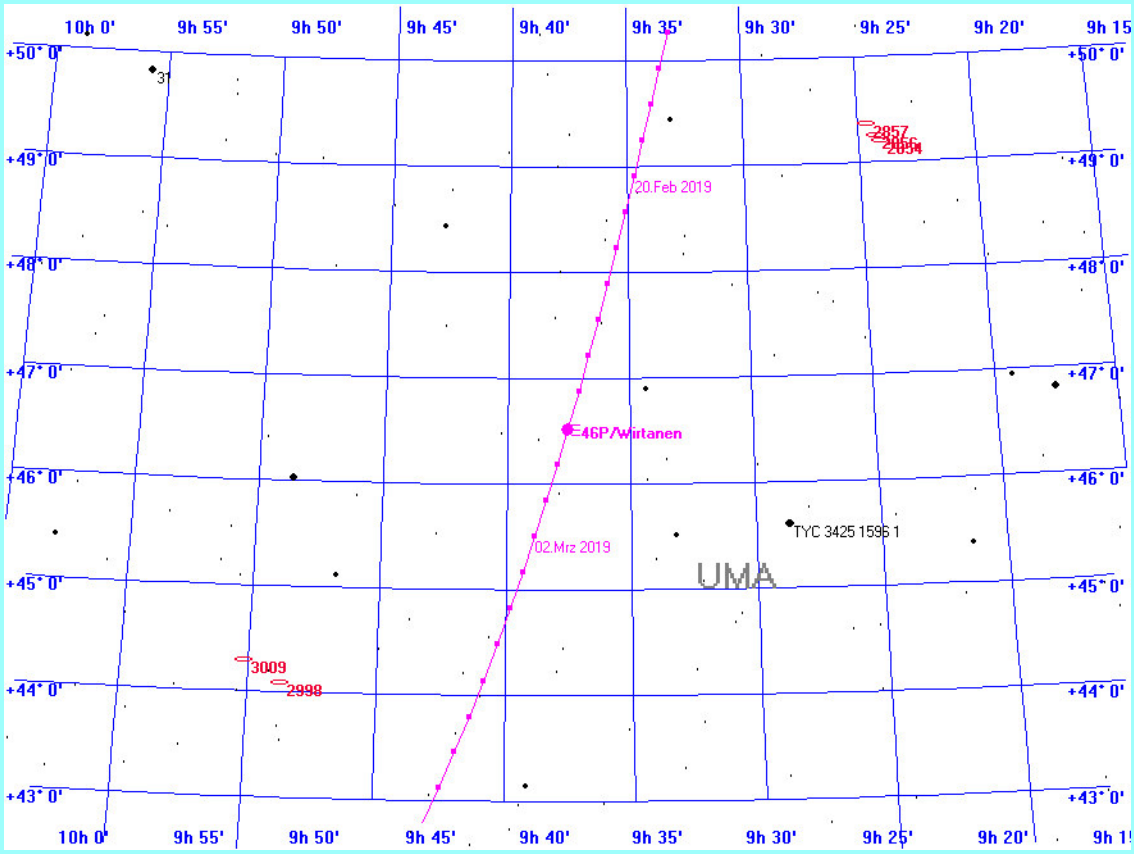


46P/Wirtanen am 5.2.2019

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

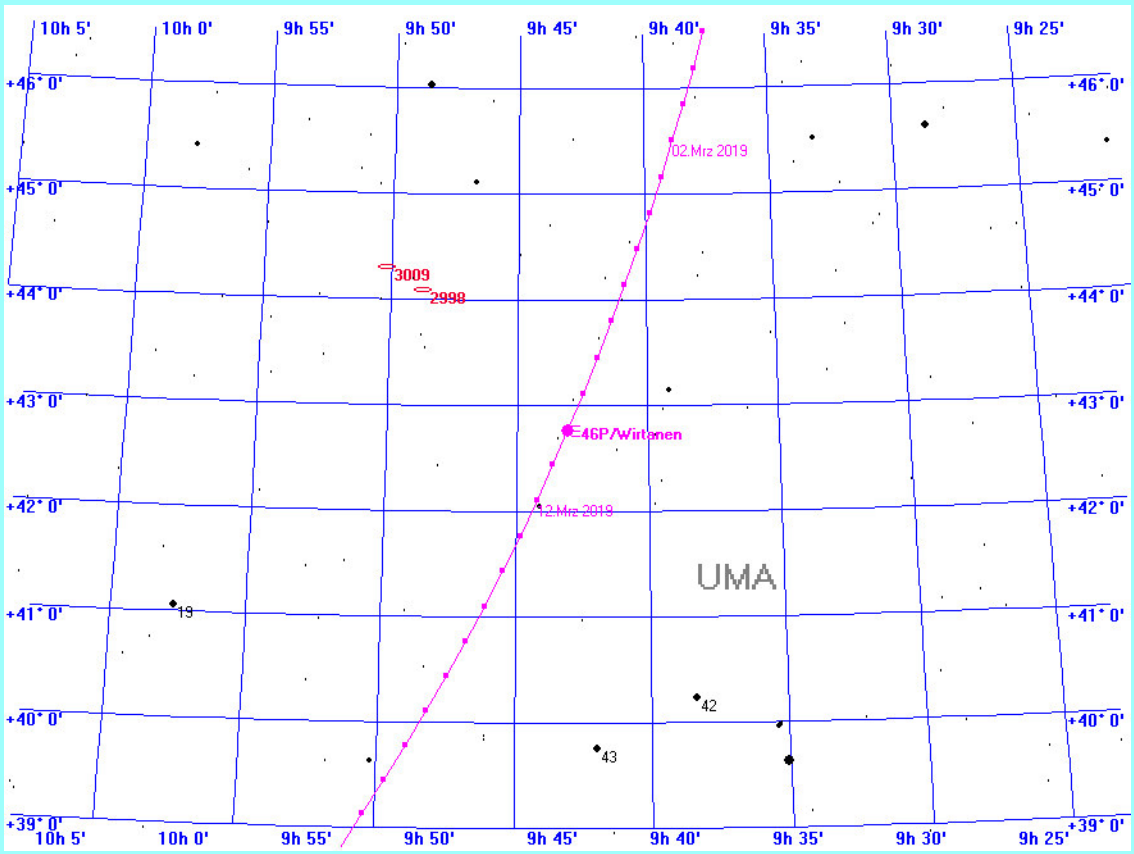


46P/Wirtanen am 16.2.2019

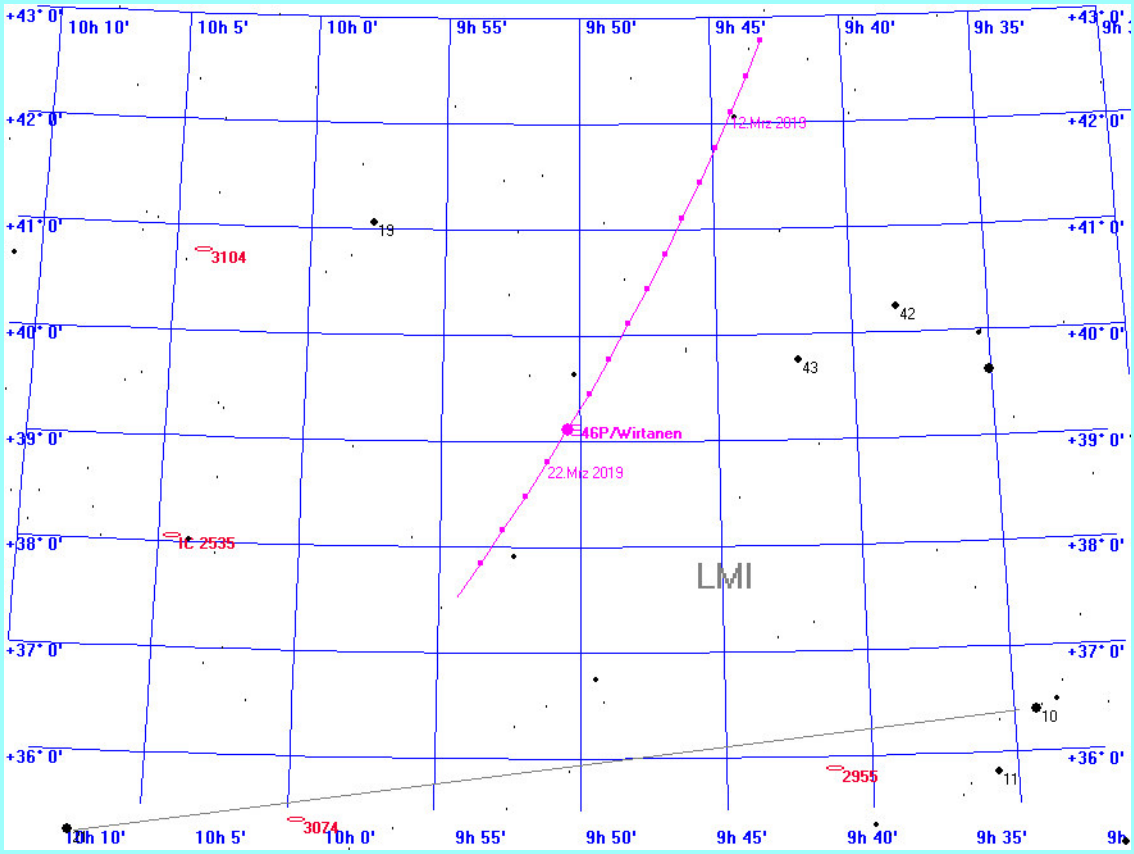


46P/Wirtanen am 27.2.2019

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland



46P/Wirtanen am 10.3.2019



46P/Wirtanen am 21.3.2019

Ephemeride des Kometen 46P/Wirtanen

Datum	Rektaszens.	Deklination	r	Delta	Hell.	Aufg.	Untg.	TOpt.	Höhe	Azi	Stb
Do. 30.Aug 2018	1h29'43.5"	-17°51' 0.4"	1.686 aE	0.807 aE	11.9	23:42	08:50	04:17	+22°	S	CET
Fr. 31.Aug 2018	1h30'43.5"	-18° 3' 7.0"	1.678 aE	0.794 aE	11.9	23:40	08:46	04:14	+22°	S	CET

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

Ephemeride des Kometen 46P/Wirtanen

Datum	Rektaszens.	Deklination	r	Delta	Hell.	Aufg.	Untg.	TOpt.	Höhe	Ri.	Stb
Sa. 01.Sep 2018	1h31'42.8"	-18°15'31.0"	1.669 aE	0.782 aE	11.8	23:39	08:42	04:11	+22°	S	CET
So. 02.Sep 2018	1h32'41.1"	-18°28'12.3"	1.661 aE	0.770 aE	11.7	23:37	08:38	04:08	+21°	S	CET
Mo. 03.Sep 2018	1h33'38.6"	-18°41'10.9"	1.652 aE	0.758 aE	11.7	23:35	08:34	04:05	+21°	S	CET
Di. 04.Sep 2018	1h34'35.1"	-18°54'26.7"	1.644 aE	0.746 aE	11.6	23:34	08:30	04:02	+21°	S	CET
Mi. 05.Sep 2018	1h35'30.7"	-19° 7'59.5"	1.635 aE	0.735 aE	11.5	23:32	08:25	03:59	+21°	S	CET
Do. 06.Sep 2018	1h36'25.3"	-19°21'49.2"	1.627 aE	0.723 aE	11.5	23:30	08:21	03:56	+21°	S	CET
Fr. 07.Sep 2018	1h37'18.8"	-19°35'55.4"	1.618 aE	0.712 aE	11.4	23:28	08:16	03:53	+20°	S	CET
Sa. 08.Sep 2018	1h38'11.4"	-19°50'18.0"	1.610 aE	0.700 aE	11.3	23:27	08:12	03:50	+20°	S	CET
So. 09.Sep 2018	1h39' 2.9"	-20° 4'56.7"	1.601 aE	0.689 aE	11.3	23:25	08:07	03:47	+20°	S	CET
Mo. 10.Sep 2018	1h39'53.3"	-20°19'50.9"	1.593 aE	0.678 aE	11.2	23:24	08:03	03:44	+20°	S	CET
Di. 11.Sep 2018	1h40'42.6"	-20°35' 0.4"	1.584 aE	0.668 aE	11.1	23:22	07:58	03:40	+19°	S	CET
Mi. 12.Sep 2018	1h41'30.9"	-20°50'24.7"	1.576 aE	0.657 aE	11.0	23:20	07:54	03:37	+19°	S	CET
Do. 13.Sep 2018	1h42'18.0"	-21° 6' 3.3"	1.567 aE	0.646 aE	11.0	23:19	07:49	03:34	+19°	S	CET
Fr. 14.Sep 2018	1h43' 4.0"	-21°21'55.8"	1.559 aE	0.636 aE	10.9	23:17	07:44	03:31	+19°	S	CET
Sa. 15.Sep 2018	1h43'48.9"	-21°38' 1.6"	1.550 aE	0.626 aE	10.8	23:16	07:39	03:28	+18°	S	CET
So. 16.Sep 2018	1h44'32.7"	-21°54'20.2"	1.542 aE	0.616 aE	10.8	23:14	07:34	03:25	+18°	S	CET
Mo. 17.Sep 2018	1h45'15.2"	-22°10'51.0"	1.534 aE	0.606 aE	10.7	23:13	07:29	03:21	+18°	S	CET
Di. 18.Sep 2018	1h45'56.6"	-22°27'33.4"	1.525 aE	0.596 aE	10.6	23:11	07:24	03:18	+18°	S	CET
Mi. 19.Sep 2018	1h46'36.9"	-22°44'26.8"	1.517 aE	0.586 aE	10.6	23:10	07:19	03:15	+17°	S	CET
Do. 20.Sep 2018	1h47'15.9"	-23° 1'30.5"	1.509 aE	0.577 aE	10.5	23:08	07:14	03:12	+17°	S	CET
Fr. 21.Sep 2018	1h47'53.7"	-23°18'43.9"	1.500 aE	0.567 aE	10.4	23:07	07:09	03:08	+17°	S	CET
Sa. 22.Sep 2018	1h48'30.4"	-23°36' 6.1"	1.492 aE	0.558 aE	10.3	23:05	07:04	03:05	+16°	S	CET
So. 23.Sep 2018	1h49' 5.7"	-23°53'36.4"	1.484 aE	0.549 aE	10.3	23:04	06:59	03:02	+16°	S	CET
Mo. 24.Sep 2018	1h49'39.9"	-24°11'14.0"	1.476 aE	0.540 aE	10.2	23:03	06:53	02:58	+16°	S	CET
Di. 25.Sep 2018	1h50'12.8"	-24°28'58.0"	1.467 aE	0.531 aE	10.1	23:01	06:48	02:55	+15°	S	CET
Mi. 26.Sep 2018	1h50'44.4"	-24°46'47.6"	1.459 aE	0.522 aE	10.1	23:00	06:42	02:51	+15°	S	CET
Do. 27.Sep 2018	1h51'14.7"	-25° 4'41.7"	1.451 aE	0.514 aE	10.0	22:58	06:37	02:48	+15°	S	FOR
Fr. 28.Sep 2018	1h51'43.8"	-25°22'39.5"	1.443 aE	0.505 aE	9.9	22:57	06:31	02:44	+15°	S	FOR
Sa. 29.Sep 2018	1h52'11.5"	-25°40'39.7"	1.435 aE	0.497 aE	9.8	22:56	06:26	02:41	+14°	S	FOR
So. 30.Sep 2018	1h52'38.0"	-25°58'41.4"	1.427 aE	0.488 aE	9.8	22:54	06:20	02:37	+14°	S	FOR
Mo. 01.Okt 2018	1h53' 3.1"	-26°16'43.3"	1.419 aE	0.480 aE	9.7	22:53	06:15	02:34	+14°	S	FOR
Di. 02.Okt 2018	1h53'26.9"	-26°34'44.2"	1.411 aE	0.472 aE	9.6	22:52	06:09	02:30	+13°	S	FOR
Mi. 03.Okt 2018	1h53'49.4"	-26°52'42.8"	1.403 aE	0.464 aE	9.5	22:50	06:03	02:27	+13°	S	FOR
Do. 04.Okt 2018	1h54'10.6"	-27°10'37.5"	1.395 aE	0.456 aE	9.5	22:49	05:57	02:23	+13°	S	FOR
Fr. 05.Okt 2018	1h54'30.5"	-27°28'26.9"	1.387 aE	0.449 aE	9.4	22:47	05:52	02:20	+12°	S	FOR
Sa. 06.Okt 2018	1h54'49.1"	-27°46' 9.4"	1.379 aE	0.441 aE	9.3	22:46	05:46	02:16	+12°	S	FOR
So. 07.Okt 2018	1h55' 6.4"	-28° 3'43.4"	1.371 aE	0.434 aE	9.2	22:45	05:40	02:12	+12°	S	FOR
Mo. 08.Okt 2018	1h55'22.5"	-28°21' 7.1"	1.364 aE	0.426 aE	9.2	22:43	05:34	02:09	+12°	S	FOR
Di. 09.Okt 2018	1h55'37.4"	-28°38'18.9"	1.356 aE	0.419 aE	9.1	22:42	05:28	02:05	+11°	S	FOR
Mi. 10.Okt 2018	1h55'51.2"	-28°55'16.8"	1.348 aE	0.412 aE	9.0	22:40	05:22	02:01	+11°	S	FOR
Do. 11.Okt 2018	1h56' 3.9"	-29°11'59.3"	1.341 aE	0.405 aE	8.9	22:39	05:16	01:58	+11°	S	FOR
Fr. 12.Okt 2018	1h56'15.6"	-29°28'24.5"	1.333 aE	0.398 aE	8.9	22:37	05:10	01:54	+11°	S	FOR
Sa. 13.Okt 2018	1h56'26.3"	-29°44'30.5"	1.326 aE	0.391 aE	8.8	22:36	05:04	01:50	+10°	S	FOR
So. 14.Okt 2018	1h56'36.1"	-30° 0'15.6"	1.318 aE	0.384 aE	8.7	22:34	04:58	01:46	+10°	S	FOR
Mo. 15.Okt 2018	1h56'45.1"	-30°15'38.0"	1.311 aE	0.378 aE	8.6	22:32	04:52	01:43	+10°	S	FOR
Di. 16.Okt 2018	1h56'53.3"	-30°30'35.8"	1.303 aE	0.371 aE	8.6	22:31	04:46	01:39	+ 9°	S	FOR
Mi. 17.Okt 2018	1h57' 0.9"	-30°45' 7.2"	1.296 aE	0.365 aE	8.5	22:29	04:40	01:35	+ 9°	S	FOR
Do. 18.Okt 2018	1h57' 7.9"	-30°59'10.4"	1.289 aE	0.358 aE	8.4	22:27	04:34	01:31	+ 9°	S	FOR
Fr. 19.Okt 2018	1h57'14.3"	-31°12'43.4"	1.282 aE	0.352 aE	8.3	22:25	04:29	01:27	+ 9°	S	FOR
Sa. 20.Okt 2018	1h57'20.3"	-31°25'44.3"	1.275 aE	0.346 aE	8.3	22:23	04:23	01:24	+ 9°	S	FOR
So. 21.Okt 2018	1h57'26.0"	-31°38'11.2"	1.268 aE	0.340 aE	8.2	22:21	04:17	01:20	+ 8°	S	FOR
Mo. 22.Okt 2018	1h57'31.5"	-31°50' 2.2"	1.261 aE	0.333 aE	8.1	22:19	04:11	01:16	+ 8°	S	FOR
Di. 23.Okt 2018	1h57'36.8"	-32° 1'15.3"	1.254 aE	0.327 aE	8.0	22:17	04:06	01:12	+ 8°	S	FOR
Mi. 24.Okt 2018	1h57'42.0"	-32°11'48.5"	1.247 aE	0.321 aE	8.0	22:15	04:00	01:08	+ 8°	S	FOR
Do. 25.Okt 2018	1h57'47.3"	-32°21'39.7"	1.240 aE	0.315 aE	7.9	22:13	03:55	01:04	+ 8°	S	FOR
Fr. 26.Okt 2018	1h57'52.8"	-32°30'46.8"	1.234 aE	0.310 aE	7.8	22:10	03:50	01:01	+ 7°	S	FOR
Sa. 27.Okt 2018	1h57'58.6"	-32°39' 7.6"	1.227 aE	0.304 aE	7.7	22:08	03:44	00:57	+ 7°	S	FOR
So. 28.Okt 2018	1h58' 4.6"	-32°46'57.8"	1.220 aE	0.298 aE	7.7	21:05	02:39	00:00	+ 7°	S	FOR
Mo. 29.Okt 2018	1h58'11.3"	-32°53'36.8"	1.214 aE	0.292 aE	7.6	21:02	02:34	00:00	+ 7°	S	FOR
Di. 30.Okt 2018	1h58'18.6"	-32°59'22.0"	1.207 aE	0.286 aE	7.5	20:59	02:30	00:00	+ 7°	S	FOR
Mi. 31.Okt 2018	1h58'26.7"	-33° 4'10.9"	1.201 aE	0.281 aE	7.4	20:56	02:25	23:38	+ 7°	S	FOR
Do. 01.Nov 2018	1h58'35.7"	-33° 8' 0.5"	1.195 aE	0.275 aE	7.4	20:53	02:21	23:34	+ 7°	S	FOR
Fr. 02.Nov 2018	1h58'45.9"	-33°10'47.9"	1.189 aE	0.270 aE	7.3	20:49	02:16	23:30	+ 7°	S	FOR
Sa. 03.Nov 2018	1h58'57.3"	-33°12'29.8"	1.183 aE	0.264 aE	7.2	20:46	02:12	23:27	+ 7°	S	FOR
So. 04.Nov 2018	1h59'10.2"	-33°13' 2.9"	1.177 aE	0.259 aE	7.1	20:42	02:09	23:23	+ 7°	S	FOR
Mo. 05.Nov 2018	1h59'24.7"	-33°12'23.8"	1.172 aE	0.253 aE	7.0	20:38	02:05	23:19	+ 7°	S	FOR
Di. 06.Nov 2018	1h59'41.2"	-33°10'28.8"	1.166 aE	0.248 aE	7.0	20:34	02:02	23:16	+ 7°	S	FOR
Mi. 07.Nov 2018	1h59'59.8"	-33° 7'14.0"	1.160 aE	0.242 aE	6.9	20:29	01:59	23:12	+ 7°	S	FOR
Do. 08.Nov 2018	2h 0'20.7"	-33° 2'35.4"	1.155 aE	0.237 aE	6.8	20:25	01:56	23:09	+ 7°	S	FOR
Fr. 09.Nov 2018	2h 0'44.3"	-32°56'28.8"	1.150 aE	0.232 aE	6.7	20:20	01:53	23:05	+ 7°	S	FOR
Sa. 10.Nov 2018	2h 1'10.7"	-32°48'49.6"	1.145 aE	0.226 aE	6.7	20:15	01:51	23:02	+ 7°	S	FOR
So. 11.Nov 2018	2h 1'40.3"	-32°39'33.0"	1.140 aE	0.221 aE	6.6	20:10	01:49	22:58	+ 8°	S	FOR
Mo. 12.Nov 2018	2h 2'13.3"	-32°28'33.8"	1.135 aE	0.216 aE	6.5	20:05	01:48	22:55	+ 8°	S	FOR
Di. 13.Nov 2018	2h 2'49.9"	-32°15'46.4"	1.130 aE	0.210 aE	6.4	19:59	01:47	22:52	+ 8°	S	FOR
Mi. 14.Nov 2018	2h 3'30.5"	-32° 1' 4.5"	1.125 aE	0.205 aE	6.3	19:53	01:46	22:49	+ 8°	S	FOR
Do. 15.Nov 2018	2h 4'15.4"	-31°44'21.4"	1.121 aE	0.200 aE	6.2	19:47	01:45	22:46	+ 9°	S	FOR
Fr. 16.Nov 2018	2h 5' 4.9"	-31°25'29.8"	1.116 aE	0.195 aE	6.2	19:41	01:45	22:43	+ 9°	S	FOR

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

Ephemeride des Kometen 46P/Wirtanen

Datum	Rektaszens.	Deklination	r	Delta	Hell.	Aufg.	Untg.	TOpt.	Höhe	Ri.	Stb
Sa. 17.Nov 2018	2h 5'59.3"	-31° 4'21.4"	1.112 aE	0.190 aE	6.1	19:35	01:45	22:40	+ 9°	S	FOR
So. 18.Nov 2018	2h 6'58.9"	-30°40'47.4"	1.108 aE	0.185 aE	6.0	19:28	01:46	22:37	+10°	S	FOR
Mo. 19.Nov 2018	2h 8' 4.1"	-30°14'37.8"	1.104 aE	0.180 aE	5.9	19:21	01:47	22:34	+10°	S	FOR
Di. 20.Nov 2018	2h 9'15.3"	-29°45'41.5"	1.100 aE	0.174 aE	5.8	19:14	01:48	22:32	+11°	S	FOR
Mi. 21.Nov 2018	2h10'32.9"	-29°13'46.3"	1.096 aE	0.169 aE	5.7	19:07	01:50	22:29	+11°	S	FOR
Do. 22.Nov 2018	2h11'57.2"	-28°38'38.5"	1.093 aE	0.164 aE	5.7	19:00	01:52	22:27	+12°	S	FOR
Fr. 23.Nov 2018	2h13'28.7"	-28° 0' 2.8"	1.089 aE	0.159 aE	5.6	18:52	01:55	22:25	+13°	S	FOR
Sa. 24.Nov 2018	2h15' 7.9"	-27°17'42.2"	1.086 aE	0.154 aE	5.5	18:45	01:58	22:23	+13°	S	FOR
So. 25.Nov 2018	2h16'55.4"	-26°31'17.7"	1.083 aE	0.149 aE	5.4	18:37	02:02	22:21	+14°	S	FOR
Mo. 26.Nov 2018	2h18'51.5"	-25°40'27.9"	1.080 aE	0.145 aE	5.3	18:28	02:06	22:19	+15°	S	FOR
Di. 27.Nov 2018	2h20'56.9"	-24°44'49.1"	1.077 aE	0.140 aE	5.2	18:20	02:10	22:17	+16°	S	CET
Mi. 28.Nov 2018	2h23'12.4"	-23°43'55.0"	1.074 aE	0.135 aE	5.1	18:12	02:15	22:16	+17°	S	CET
Do. 29.Nov 2018	2h25'38.5"	-22°37'16.2"	1.072 aE	0.130 aE	5.0	18:03	02:21	22:15	+19°	S	CET
Fr. 30.Nov 2018	2h28'16.0"	-21°24'20.6"	1.070 aE	0.126 aE	4.9	17:54	02:27	22:13	+20°	S	CET
Sa. 01.Dez 2018	2h31' 5.9"	-20° 4'33.0"	1.067 aE	0.121 aE	4.8	17:45	02:34	22:13	+21°	S	CET
So. 02.Dez 2018	2h34' 9.0"	-18°37'15.2"	1.065 aE	0.117 aE	4.7	17:35	02:42	22:12	+23°	S	ERI
Mo. 03.Dez 2018	2h37'26.4"	-17° 1'46.5"	1.064 aE	0.112 aE	4.7	17:25	02:51	22:12	+25°	S	ERI
Di. 04.Dez 2018	2h40'59.2"	-15°17'24.0"	1.062 aE	0.108 aE	4.6	17:15	03:00	22:12	+26°	S	ERI
Mi. 05.Dez 2018	2h44'48.5"	-13°23'23.8"	1.060 aE	0.104 aE	4.5	17:05	03:10	22:12	+29°	S	ERI
Do. 06.Dez 2018	2h48'55.7"	-11°19' 2.1"	1.059 aE	0.100 aE	4.4	16:54	03:21	22:13	+31°	S	ERI
Fr. 07.Dez 2018	2h53'22.1"	- 9° 3'37.8"	1.058 aE	0.097 aE	4.3	16:43	03:33	22:14	+33°	S	ERI
Sa. 08.Dez 2018	2h58' 9.2"	- 6°36'35.0"	1.057 aE	0.093 aE	4.2	16:32	03:46	22:15	+36°	S	ERI
So. 09.Dez 2018	3h 3'18.4"	- 3°57'27.3"	1.056 aE	0.090 aE	4.1	16:20	04:00	22:16	+39°	S	ERI
Mo. 10.Dez 2018	3h 8'51.4"	- 1° 6' 2.6"	1.056 aE	0.087 aE	4.1	16:08	04:16	22:19	+42°	S	CET
Di. 11.Dez 2018	3h14'49.9"	+ 1°57'31.6"	1.055 aE	0.085 aE	4.0	15:55	04:33	22:21	+45°	S	TAU
Mi. 12.Dez 2018	3h21'15.4"	+ 5°12'41.9"	1.055 aE	0.082 aE	3.9	15:42	04:52	22:24	+48°	S	TAU
Do. 13.Dez 2018	3h28' 9.6"	+ 8°38'23.5"	1.055 aE	0.081 aE	3.9	15:27	05:12	22:27	+52°	S	TAU
Fr. 14.Dez 2018	3h35'34.0"	+12°12'57.2"	1.055 aE	0.079 aE	3.8	15:12	05:35	22:31	+56°	S	TAU
Sa. 15.Dez 2018	3h43'30.2"	+15°54' 8.0"	1.055 aE	0.078 aE	3.8	14:56	06:00	22:36	+59°	S	TAU
So. 16.Dez 2018	3h51'59.3"	+19°39' 9.4"	1.056 aE	0.077 aE	3.8	14:38	06:27	22:40	+63°	S	TAU
Mo. 17.Dez 2018	4h 1' 2.3"	+23°24'50.8"	1.056 aE	0.077 aE	3.8	14:18	06:57	22:46	+67°	S	TAU
Di. 18.Dez 2018	4h10'39.5"	+27° 7'49.9"	1.057 aE	0.078 aE	3.8	13:55	07:32	22:52	+71°	S	TAU
Mi. 19.Dez 2018	4h20'51.0"	+30°44'46.8"	1.058 aE	0.079 aE	3.8	13:28	08:12	22:58	+74°	S	PER
Do. 20.Dez 2018	4h31'36.0"	+34°12'38.0"	1.059 aE	0.080 aE	3.9	12:53	09:02	23:06	+77°	S	AUR
Fr. 21.Dez 2018	4h42'52.8"	+37°28'48.1"	1.060 aE	0.082 aE	3.9	11:47	10:23	23:13	+80°	S	AUR
Sa. 22.Dez 2018	4h54'38.9"	+40°31'16.9"	1.062 aE	0.084 aE	4.0	--:--	--:--	23:21	+83°	S	AUR
So. 23.Dez 2018	5h 6'50.9"	+43°18'42.9"	1.063 aE	0.086 aE	4.1	--:--	--:--	23:30	+86°	S	AUR
Mo. 24.Dez 2018	5h19'24.3"	+45°50'22.0"	1.065 aE	0.089 aE	4.2	--:--	--:--	23:39	+88°	S	AUR
Di. 25.Dez 2018	5h32'13.6"	+48° 6' 3.2"	1.067 aE	0.092 aE	4.2	--:--	--:--	23:48	+90°	NW	AUR
Mi. 26.Dez 2018	5h45'12.9"	+50° 6' 3.3"	1.069 aE	0.096 aE	4.3	--:--	--:--	23:57	+88°	N	AUR
Do. 27.Dez 2018	5h58'15.6"	+51°51' 0.9"	1.072 aE	0.100 aE	4.4	--:--	--:--	00:00	+88°	N	AUR
Fr. 28.Dez 2018	6h11'14.8"	+53°21'49.6"	1.074 aE	0.104 aE	4.5	--:--	--:--	00:06	+87°	N	AUR
Sa. 29.Dez 2018	6h24' 4.0"	+54°39'33.4"	1.077 aE	0.108 aE	4.6	--:--	--:--	00:15	+85°	N	LYN
So. 30.Dez 2018	6h36'36.9"	+55°45'21.6"	1.080 aE	0.112 aE	4.7	--:--	--:--	00:23	+84°	N	LYN
Mo. 31.Dez 2018	6h48'48.0"	+56°40'25.3"	1.083 aE	0.117 aE	4.9	--:--	--:--	00:31	+83°	N	LYN
Di. 01.Jan 2019	7h 0'32.5"	+57°25'54.7"	1.086 aE	0.121 aE	5.0	--:--	--:--	00:39	+83°	N	LYN
Mi. 02.Jan 2019	7h11'46.7"	+58° 2'56.7"	1.089 aE	0.126 aE	5.1	--:--	--:--	00:47	+82°	N	LYN
Do. 03.Jan 2019	7h22'27.8"	+58°32'34.1"	1.092 aE	0.131 aE	5.2	--:--	--:--	00:53	+81°	N	LYN
Fr. 04.Jan 2019	7h32'34.1"	+58°55'44.2"	1.096 aE	0.137 aE	5.3	--:--	--:--	01:00	+81°	N	LYN
Sa. 05.Jan 2019	7h42' 4.7"	+59°13'18.8"	1.100 aE	0.142 aE	5.4	--:--	--:--	01:05	+81°	N	LYN
So. 06.Jan 2019	7h50'59.2"	+59°26' 3.9"	1.103 aE	0.147 aE	5.5	--:--	--:--	01:10	+81°	N	LYN
Mo. 07.Jan 2019	7h59'18.2"	+59°34'39.9"	1.107 aE	0.153 aE	5.6	--:--	--:--	01:15	+80°	N	LYN
Di. 08.Jan 2019	8h 7' 2.6"	+59°39'42.3"	1.111 aE	0.158 aE	5.7	--:--	--:--	01:18	+80°	N	LYN
Mi. 09.Jan 2019	8h14'13.5"	+59°41'41.5"	1.116 aE	0.164 aE	5.8	--:--	--:--	01:22	+80°	N	LYN
Do. 10.Jan 2019	8h20'52.5"	+59°41' 3.7"	1.120 aE	0.169 aE	5.9	--:--	--:--	01:24	+80°	N	UMA
Fr. 11.Jan 2019	8h27' 1.3"	+59°38'11.5"	1.125 aE	0.175 aE	6.0	--:--	--:--	01:26	+80°	N	UMA
Sa. 12.Jan 2019	8h32'41.7"	+59°33'24.0"	1.129 aE	0.181 aE	6.1	--:--	--:--	01:28	+80°	N	UMA
So. 13.Jan 2019	8h37'55.3"	+59°26'57.3"	1.134 aE	0.187 aE	6.2	--:--	--:--	01:29	+81°	N	UMA
Mo. 14.Jan 2019	8h42'44.0"	+59°19' 5.4"	1.139 aE	0.193 aE	6.3	--:--	--:--	01:30	+81°	N	UMA
Di. 15.Jan 2019	8h47' 9.4"	+59° 9'59.9"	1.144 aE	0.199 aE	6.4	--:--	--:--	01:31	+81°	N	UMA
Mi. 16.Jan 2019	8h51'13.4"	+58°59'50.6"	1.149 aE	0.205 aE	6.5	--:--	--:--	01:31	+81°	N	UMA
Do. 17.Jan 2019	8h54'57.4"	+58°48'45.8"	1.155 aE	0.211 aE	6.6	--:--	--:--	01:31	+81°	N	UMA
Fr. 18.Jan 2019	8h58'23.0"	+58°36'52.8"	1.160 aE	0.218 aE	6.7	--:--	--:--	01:30	+81°	N	UMA
Sa. 19.Jan 2019	9h 1'31.4"	+58°24'17.4"	1.165 aE	0.224 aE	6.7	--:--	--:--	01:29	+82°	N	UMA
So. 20.Jan 2019	9h 4'24.2"	+58°11' 4.6"	1.171 aE	0.230 aE	6.8	--:--	--:--	01:28	+82°	N	UMA
Mo. 21.Jan 2019	9h 7' 2.4"	+57°57'18.7"	1.177 aE	0.237 aE	6.9	--:--	--:--	01:27	+82°	N	UMA
Di. 22.Jan 2019	9h 9'27.2"	+57°43' 3.2"	1.183 aE	0.243 aE	7.0	--:--	--:--	01:25	+82°	N	UMA
Mi. 23.Jan 2019	9h11'39.6"	+57°28'21.1"	1.188 aE	0.250 aE	7.1	--:--	--:--	01:24	+83°	N	UMA
Do. 24.Jan 2019	9h13'40.6"	+57°13'14.7"	1.195 aE	0.256 aE	7.2	--:--	--:--	01:22	+83°	N	UMA
Fr. 25.Jan 2019	9h15'31.2"	+56°57'46.2"	1.201 aE	0.263 aE	7.3	--:--	--:--	01:20	+83°	N	UMA
Sa. 26.Jan 2019	9h17'12.1"	+56°41'57.1"	1.207 aE	0.270 aE	7.4	--:--	--:--	01:17	+83°	N	UMA
So. 27.Jan 2019	9h18'44.2"	+56°25'48.8"	1.213 aE	0.277 aE	7.5	--:--	--:--	01:15	+84°	N	UMA
Mo. 28.Jan 2019	9h20' 8.3"	+56° 9'22.5"	1.220 aE	0.284 aE	7.6	--:--	--:--	01:12	+84°	N	UMA
Di. 29.Jan 2019	9h21'25.0"	+55°52'39.1"	1.226 aE	0.291 aE	7.6	--:--	--:--	01:10	+84°	N	UMA
Mi. 30.Jan 2019	9h22'35.0"	+55°35'39.5"	1.233 aE	0.298 aE	7.7	--:--	--:--	01:07	+84°	N	UMA
Do. 31.Jan 2019	9h23'39.0"	+55°18'24.4"	1.239 aE	0.305 aE	7.8	--:--	--:--	01:04	+85°	N	UMA
Fr. 01.Feb 2019	9h24'37.5"	+55° 0'54.6"	1.246 aE	0.312 aE	7.9	--:--	--:--	01:01	+85°	N	UMA

Der Komet 46P/Wirtanen im Jahre 2018
berechnet für den Standort Mitteldeutschland

Ephemeride des Kometen 46P/Wirtanen

Datum	Rektaszens.	Deklination	r	Delta	Hell.	Aufg.	Untg.	TOpt.	Höhe	Ri.	Stb
Sa. 02.Feb 2019	9h25'31.0"	+54°43'10.6"	1.253 aE	0.320 aE	8.0	--:--	--:--	00:58	+85°	N	UMA
So. 03.Feb 2019	9h26'20.1"	+54°25'13.0"	1.260 aE	0.327 aE	8.1	--:--	--:--	00:55	+86°	N	UMA
Mo. 04.Feb 2019	9h27' 5.3"	+54° 7' 2.6"	1.267 aE	0.334 aE	8.2	--:--	--:--	00:52	+86°	N	UMA
Di. 05.Feb 2019	9h27'46.9"	+53°48'39.8"	1.274 aE	0.342 aE	8.2	--:--	--:--	00:48	+86°	N	UMA
Mi. 06.Feb 2019	9h28'25.4"	+53°30' 5.2"	1.281 aE	0.350 aE	8.3	--:--	--:--	00:45	+87°	N	UMA
Do. 07.Feb 2019	9h29' 1.2"	+53°11'19.4"	1.288 aE	0.357 aE	8.4	--:--	--:--	00:42	+87°	N	UMA
Fr. 08.Feb 2019	9h29'34.6"	+52°52'23.1"	1.295 aE	0.365 aE	8.5	--:--	--:--	00:38	+87°	N	UMA
Sa. 09.Feb 2019	9h30' 6.0"	+52°33'16.7"	1.302 aE	0.373 aE	8.6	--:--	--:--	00:35	+87°	N	UMA
So. 10.Feb 2019	9h30'35.5"	+52°14' 0.8"	1.310 aE	0.381 aE	8.7	--:--	--:--	00:32	+88°	N	UMA
Mo. 11.Feb 2019	9h31' 3.6"	+51°54'36.2"	1.317 aE	0.390 aE	8.7	--:--	--:--	00:28	+88°	N	UMA
Di. 12.Feb 2019	9h31'30.4"	+51°35' 3.2"	1.325 aE	0.398 aE	8.8	--:--	--:--	00:25	+88°	N	UMA
Mi. 13.Feb 2019	9h31'56.2"	+51°15'22.7"	1.332 aE	0.406 aE	8.9	--:--	--:--	00:21	+89°	N	UMA
Do. 14.Feb 2019	9h32'21.1"	+50°55'35.1"	1.340 aE	0.415 aE	9.0	--:--	--:--	00:18	+89°	N	UMA
Fr. 15.Feb 2019	9h32'45.4"	+50°35'41.1"	1.347 aE	0.423 aE	9.1	--:--	--:--	00:14	+89°	N	UMA
Sa. 16.Feb 2019	9h33' 9.2"	+50°15'41.4"	1.355 aE	0.432 aE	9.2	--:--	--:--	00:10	+90°	N	UMA
So. 17.Feb 2019	9h33'32.7"	+49°55'36.4"	1.363 aE	0.441 aE	9.2	--:--	--:--	00:07	+90°	S	UMA
Mo. 18.Feb 2019	9h33'55.9"	+49°35'26.9"	1.370 aE	0.450 aE	9.3	--:--	--:--	00:03	+90°	S	UMA
Di. 19.Feb 2019	9h34'19.1"	+49°15'13.2"	1.378 aE	0.459 aE	9.4	--:--	--:--	00:00	+89°	S	UMA
Mi. 20.Feb 2019	9h34'42.2"	+48°54'56.0"	1.386 aE	0.468 aE	9.5	--:--	--:--	00:00	+89°	SW	UMA
Do. 21.Feb 2019	9h35' 5.5"	+48°34'35.7"	1.394 aE	0.477 aE	9.6	--:--	--:--	23:49	+88°	S	UMA
Fr. 22.Feb 2019	9h35'28.9"	+48°14'12.6"	1.402 aE	0.487 aE	9.6	--:--	--:--	23:46	+88°	S	UMA
Sa. 23.Feb 2019	9h35'52.6"	+47°53'47.4"	1.410 aE	0.496 aE	9.7	--:--	--:--	23:42	+88°	S	UMA
So. 24.Feb 2019	9h36'16.6"	+47°33'20.2"	1.418 aE	0.506 aE	9.8	--:--	--:--	23:39	+87°	S	UMA
Mo. 25.Feb 2019	9h36'41.1"	+47°12'51.5"	1.426 aE	0.515 aE	9.9	--:--	--:--	23:35	+87°	S	UMA
Di. 26.Feb 2019	9h37' 6.0"	+46°52'21.6"	1.434 aE	0.525 aE	9.9	--:--	--:--	23:32	+87°	S	UMA
Mi. 27.Feb 2019	9h37'31.5"	+46°31'50.9"	1.442 aE	0.535 aE	10.0	--:--	--:--	23:28	+86°	S	UMA
Do. 28.Feb 2019	9h37'57.6"	+46°11'19.6"	1.450 aE	0.545 aE	10.1	--:--	--:--	23:25	+86°	S	UMA
Fr. 01.Mrz 2019	9h38'24.3"	+45°50'48.2"	1.458 aE	0.556 aE	10.2	--:--	--:--	23:21	+86°	S	UMA
Sa. 02.Mrz 2019	9h38'51.8"	+45°30'16.9"	1.466 aE	0.566 aE	10.3	--:--	--:--	23:18	+85°	S	UMA
So. 03.Mrz 2019	9h39'20.1"	+45° 9'46.1"	1.474 aE	0.576 aE	10.3	--:--	--:--	23:14	+85°	S	UMA
Mo. 04.Mrz 2019	9h39'49.2"	+44°49'16.1"	1.483 aE	0.587 aE	10.4	--:--	--:--	23:11	+84°	S	UMA
Di. 05.Mrz 2019	9h40'19.1"	+44°28'47.3"	1.491 aE	0.598 aE	10.5	--:--	--:--	23:07	+84°	S	UMA
Mi. 06.Mrz 2019	9h40'49.9"	+44° 8'19.9"	1.499 aE	0.609 aE	10.6	--:--	--:--	23:04	+84°	S	UMA
Do. 07.Mrz 2019	9h41'21.6"	+43°47'54.4"	1.507 aE	0.620 aE	10.6	--:--	--:--	23:01	+83°	S	UMA
Fr. 08.Mrz 2019	9h41'54.2"	+43°27'30.9"	1.516 aE	0.631 aE	10.7	--:--	--:--	22:57	+83°	S	UMA
Sa. 09.Mrz 2019	9h42'27.8"	+43° 7' 9.9"	1.524 aE	0.642 aE	10.8	--:--	--:--	22:54	+83°	S	UMA
So. 10.Mrz 2019	9h43' 2.3"	+42°46'51.6"	1.533 aE	0.653 aE	10.9	--:--	--:--	22:50	+82°	S	UMA
Mo. 11.Mrz 2019	9h43'37.8"	+42°26'36.2"	1.541 aE	0.665 aE	10.9	--:--	--:--	22:47	+82°	S	LMI
Di. 12.Mrz 2019	9h44'14.3"	+42° 6'24.1"	1.549 aE	0.677 aE	11.0	--:--	--:--	22:44	+82°	S	LMI
Mi. 13.Mrz 2019	9h44'51.8"	+41°46'15.5"	1.558 aE	0.688 aE	11.1	--:--	--:--	22:40	+81°	S	LMI
Do. 14.Mrz 2019	9h45'30.2"	+41°26'10.7"	1.566 aE	0.700 aE	11.1	--:--	--:--	22:37	+81°	S	LMI
Fr. 15.Mrz 2019	9h46' 9.5"	+41° 6' 9.9"	1.575 aE	0.712 aE	11.2	--:--	--:--	22:34	+81°	S	LMI
Sa. 16.Mrz 2019	9h46'49.9"	+40°46'13.5"	1.583 aE	0.724 aE	11.3	--:--	--:--	22:31	+80°	S	LMI
So. 17.Mrz 2019	9h47'31.1"	+40°26'21.5"	1.591 aE	0.737 aE	11.4	--:--	--:--	22:27	+80°	S	LMI
Mo. 18.Mrz 2019	9h48'13.3"	+40° 6'34.2"	1.600 aE	0.749 aE	11.4	--:--	--:--	22:24	+80°	S	LMI
Di. 19.Mrz 2019	9h48'56.4"	+39°46'51.7"	1.608 aE	0.762 aE	11.5	--:--	--:--	22:21	+79°	S	LMI
Mi. 20.Mrz 2019	9h49'40.3"	+39°27'14.3"	1.617 aE	0.774 aE	11.6	10:38	10:03	22:18	+79°	S	LMI
Do. 21.Mrz 2019	9h50'25.1"	+39° 7'42.0"	1.625 aE	0.787 aE	11.6	10:56	09:38	22:15	+79°	S	LMI
Fr. 22.Mrz 2019	9h51'10.8"	+38°48'15.0"	1.634 aE	0.800 aE	11.7	11:06	09:22	22:11	+79°	S	LMI
Sa. 23.Mrz 2019	9h51'57.3"	+38°28'53.2"	1.642 aE	0.813 aE	11.8	11:13	09:09	22:08	+78°	S	LMI
So. 24.Mrz 2019	9h52'44.5"	+38° 9'36.9"	1.651 aE	0.826 aE	11.9	11:18	08:57	22:05	+78°	S	LMI
Mo. 25.Mrz 2019	9h53'32.6"	+37°50'25.9"	1.659 aE	0.839 aE	11.9	11:23	08:46	22:02	+78°	S	LMI
Di. 26.Mrz 2019	9h54'21.5"	+37°31'20.4"	1.668 aE	0.853 aE	12.0	11:27	08:36	21:59	+77°	S	LMI