

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	TRi.	Stb.
Fr 01.06.2018 00:00	C/2016 M1 PANSTARRS	19h15'55.4"	-24°20'59.4"	2.3535	1.4644	9.5+	143°	23:57	03:47	+15°	07:35	02:27	+13°	S	SGR
Fr 01.06.2018 00:00	P/2010 H2 Vales	15h50'14.3"	-19°35' 2.2"	3.2824	2.2803	13.0-	169°	19:57	00:23	+20°	04:42	00:22	+20°	S	SCO
Fr 01.06.2018 00:00	21P/Giacobini-Zinner	20h29'22.1"	+33°13' 7.8"	1.6824	1.1580	13.2+	101°	19:13	05:01	+73°	14:45	02:27	+57°	O	CYG
Fr 01.06.2018 00:00	37P/Forbes	22h48'38.4"	-10°28'48.5"	1.6336	1.2706	13.6+	91°	02:09	07:21	+29°	12:32	02:27	+ 2°	O	AQR
Fr 01.06.2018 00:00	C/2016 R2 PANSTARRS	6h21'50.6"	+48°35'49.1"	2.6132	3.3892	13.8-	34°	--:--	14:53	+88°	--:--	23:48	+17°	NW	AUR
Fr 01.06.2018 00:00	C/2016 N6 PANSTARRS	7h56'51.2"	+46°10'35.2"	2.7149	3.2964	13.9-	47°	--:--	16:27	+85°	--:--	23:48	+24°	NW	LYN
Fr 01.06.2018 00:00	P/2013 R3-A Catalin.	21h13'58.1"	-16°55'35.5"	2.4605	1.8622	14.3+	114°	01:09	05:46	+22°	10:21	02:27	+10°	SO	CAP
Fr 01.06.2018 00:00	P/2013 R3-B Catalin.	21h13'39.3"	-16°57'12.0"	2.4610	1.8617	14.3+	114°	01:09	05:45	+22°	10:21	02:27	+10°	SO	CAP
Fr 01.06.2018 00:00	C/2017 M4 ATLAS	18h38'41.2"	+46°38'26.2"	3.9101	3.5099	14.6+	106°	--:--	03:10	+86°	--:--	02:27	+82°	SO	LYR
Sa 02.06.2018 00:00	C/2016 M1 PANSTARRS	19h14' 5.4"	-25° 1'54.5"	2.3497	1.4507	9.5+	144°	23:56	03:41	+14°	07:24	02:25	+12°	S	SGR
Sa 02.06.2018 00:00	P/2010 H2 Vales	15h49'28.1"	-19°36'31.5"	3.2837	2.2841	13.0-	168°	19:53	00:18	+20°	04:37	00:17	+20°	S	SCO
Sa 02.06.2018 00:00	21P/Giacobini-Zinner	20h31' 0.4"	+33°45' 6.5"	1.6731	1.1463	13.1+	101°	19:03	04:59	+73°	14:50	02:25	+57°	O	CYG
Sa 02.06.2018 00:00	37P/Forbes	22h50'28.0"	-10°11'19.6"	1.6352	1.2651	13.6+	91°	02:05	07:19	+29°	12:31	02:25	+ 2°	O	AQR
Sa 02.06.2018 00:00	C/2016 R2 PANSTARRS	6h24'18.9"	+48°44'15.5"	2.6142	3.3932	13.8-	34°	--:--	14:52	+88°	--:--	23:51	+17°	NW	AUR
Sa 02.06.2018 00:00	C/2016 N6 PANSTARRS	7h57'23.5"	+45°48'52.6"	2.7131	3.3072	13.9-	47°	--:--	16:23	+85°	--:--	23:51	+23°	NW	LYN
Sa 02.06.2018 00:00	P/2013 R3-A Catalin.	21h14'33.8"	-16°53' 2.1"	2.4581	1.8489	14.2+	115°	01:05	05:42	+22°	10:18	02:25	+10°	SO	CAP
Sa 02.06.2018 00:00	P/2013 R3-B Catalin.	21h14'14.8"	-16°54'39.5"	2.4586	1.8484	14.2+	115°	01:05	05:42	+22°	10:18	02:25	+10°	SO	CAP
Sa 02.06.2018 00:00	C/2017 M4 ATLAS	18h36'44.3"	+46°37'52.6"	3.9050	3.4985	14.6+	106°	--:--	03:04	+86°	--:--	02:25	+82°	SO	LYR
So 03.06.2018 00:00	C/2016 M1 PANSTARRS	19h12'10.5"	-25°43'31.9"	2.3458	1.4374	9.5+	146°	23:55	03:35	+13°	07:13	02:23	+12°	S	SGR
So 03.06.2018 00:00	P/2010 H2 Vales	15h48'42.4"	-19°38' 1.0"	3.2850	2.2882	13.0-	167°	19:48	00:13	+20°	04:33	00:12	+20°	S	LIB
So 03.06.2018 00:00	21P/Giacobini-Zinner	20h32'39.4"	+34°17'16.2"	1.6639	1.1347	13.1+	101°	18:53	04:57	+74°	14:56	02:23	+58°	O	CYG
So 03.06.2018 00:00	37P/Forbes	22h52'16.1"	- 9°53'52.8"	1.6370	1.2596	13.6+	91°	02:01	07:16	+29°	12:30	02:23	+ 3°	O	AQR
So 03.06.2018 00:00	C/2016 R2 PANSTARRS	6h26'48.3"	+48°52'34.9"	2.6152	3.3972	13.8-	34°	--:--	14:50	+88°	--:--	23:53	+17°	NW	AUR
So 03.06.2018 00:00	C/2016 N6 PANSTARRS	7h57'56.4"	+45°27'20.7"	2.7112	3.3179	13.9-	46°	--:--	16:20	+84°	--:--	23:53	+22°	NW	LYN
So 03.06.2018 00:00	P/2013 R3-A Catalin.	21h15' 8.1"	-16°50'33.9"	2.4557	1.8356	14.2+	116°	01:02	05:39	+22°	10:15	02:23	+10°	SO	CAP
So 03.06.2018 00:00	P/2013 R3-B Catalin.	21h14'49.0"	-16°52'12.3"	2.4562	1.8351	14.2+	116°	01:02	05:39	+22°	10:14	02:23	+10°	SO	CAP
So 03.06.2018 00:00	C/2017 M4 ATLAS	18h34'46.1"	+46°36'57.3"	3.9000	3.4873	14.6+	107°	--:--	02:59	+86°	--:--	02:23	+83°	SO	LYR
Mo 04.06.2018 00:00	C/2016 M1 PANSTARRS	19h10'10.4"	-26°25'49.9"	2.3420	1.4246	9.5+	147°	23:55	03:29	+13°	07:02	02:21	+11°	S	SGR
Mo 04.06.2018 00:00	P/2010 H2 Vales	15h47'57.3"	-19°39'30.8"	3.2864	2.2926	13.0-	166°	19:44	00:08	+20°	04:28	00:07	+20°	S	LIB
Mo 04.06.2018 00:00	21P/Giacobini-Zinner	20h34'19.1"	+34°49'36.5"	1.6546	1.1232	13.0+	101°	18:43	04:55	+74°	15:02	02:21	+58°	O	CYG
Mo 04.06.2018 00:00	37P/Forbes	22h54' 2.7"	- 9°36'28.3"	1.6388	1.2541	13.6+	92°	01:58	07:14	+30°	12:30	02:21	+ 3°	O	AQR
Mo 04.06.2018 00:00	C/2016 R2 PANSTARRS	6h29'18.9"	+49° 0'47.1"	2.6163	3.4010	13.8-	34°	--:--	14:49	+88°	--:--	23:56	+16°	NW	AUR
Mo 04.06.2018 00:00	C/2016 N6 PANSTARRS	7h58'29.8"	+45° 5'59.3"	2.7094	3.3285	13.9-	45°	--:--	16:17	+84°	--:--	00:00	+21°	NW	LYN
Mo 04.06.2018 00:00	P/2013 R3-A Catalin.	21h15'41.1"	-16°48'11.3"	2.4533	1.8225	14.2+	117°	00:58	05:36	+22°	10:12	02:21	+10°	SO	CAP
Mo 04.06.2018 00:00	P/2013 R3-B Catalin.	21h15'21.8"	-16°49'50.6"	2.4538	1.8220	14.2+	117°	00:58	05:35	+22°	10:11	02:21	+10°	SO	CAP
Mo 04.06.2018 00:00	C/2017 M4 ATLAS	18h32'46.4"	+46°35'39.5"	3.8950	3.4763	14.6+	107°	--:--	02:53	+86°	--:--	02:21	+83°	SO	LYR

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Di 05.06.2018 00:00	C/2016 M1 PANSTARRS	19h 8' 5.1"	-27° 8'46.7"	2.3383	1.4123	9.4+	149°	23:54	03:23	+12°	06:50	02:18	+11°	S	SGR
Di 05.06.2018 00:00	21P/Giacobini-Zinner	20h35'59.6"	+35°22' 7.1"	1.6453	1.1118	12.9+	101°	18:31	04:52	+75°	15:08	02:18	+59°	O	CYG
Di 05.06.2018 00:00	P/2010 H2 Vales	15h47'12.7"	-19°41' 0.9"	3.2877	2.2973	13.0-	165°	19:39	23:59	+19°	04:23	00:03	+20°	S	LIB
Di 05.06.2018 00:00	37P/Forbes	22h55'47.8"	- 9°19' 6.5"	1.6406	1.2487	13.6+	92°	01:54	07:12	+30°	12:29	02:18	+ 3°	O	AQR
Di 05.06.2018 00:00	C/2016 R2 PANSTARRS	6h31'50.7"	+49° 8'52.1"	2.6174	3.4048	13.8-	33°	--:--	14:48	+88°	--:--	23:58	+16°	NW	AUR
Di 05.06.2018 00:00	C/2016 N6 PANSTARRS	7h59' 3.6"	+44°44'48.3"	2.7076	3.3390	13.9-	44°	--:--	16:13	+84°	--:--	00:00	+20°	NW	LYN
Di 05.06.2018 00:00	P/2013 R3-A Catalin.	21h16'12.8"	-16°45'54.1"	2.4509	1.8094	14.2+	118°	00:55	05:32	+22°	10:09	02:18	+10°	SO	CAP
Di 05.06.2018 00:00	P/2013 R3-B Catalin.	21h15'53.3"	-16°47'34.5"	2.4514	1.8090	14.2+	118°	00:54	05:32	+22°	10:08	02:18	+10°	SO	CAP
Di 05.06.2018 00:00	C/2017 M4 ATLAS	18h30'45.5"	+46°33'59.0"	3.8900	3.4654	14.6+	107°	--:--	02:47	+86°	--:--	02:18	+84°	SO	LYR
Mi 06.06.2018 00:00	C/2016 M1 PANSTARRS	19h 5'54.5"	-27°52'20.2"	2.3346	1.4005	9.4+	150°	23:54	03:17	+11°	06:39	02:16	+10°	S	SGR
Mi 06.06.2018 00:00	21P/Giacobini-Zinner	20h37'41.0"	+35°54'47.7"	1.6361	1.1005	12.9+	101°	18:19	04:50	+75°	15:16	02:16	+59°	O	CYG
Mi 06.06.2018 00:00	P/2010 H2 Vales	15h46'28.7"	-19°42'31.5"	3.2891	2.3022	13.0-	164°	19:35	23:54	+19°	04:18	00:00	+19°	S	SCO
Mi 06.06.2018 00:00	37P/Forbes	22h57'31.4"	- 9° 1'47.4"	1.6425	1.2433	13.6+	93°	01:50	07:10	+30°	12:28	02:16	+ 3°	O	AQR
Mi 06.06.2018 00:00	C/2016 R2 PANSTARRS	6h34'23.6"	+49°16'49.7"	2.6185	3.4085	13.8-	33°	--:--	14:46	+89°	--:--	00:00	+16°	NW	AUR
Mi 06.06.2018 00:00	C/2016 N6 PANSTARRS	7h59'37.9"	+44°23'47.3"	2.7058	3.3495	13.9-	44°	--:--	16:10	+83°	--:--	00:00	+20°	NW	LYN
Mi 06.06.2018 00:00	P/2013 R3-A Catalin.	21h16'43.1"	-16°43'42.7"	2.4485	1.7965	14.2+	118°	00:51	05:29	+22°	10:05	02:16	+10°	SO	CAP
Mi 06.06.2018 00:00	P/2013 R3-B Catalin.	21h16'23.5"	-16°45'24.0"	2.4490	1.7960	14.2+	119°	00:51	05:28	+22°	10:05	02:16	+10°	SO	CAP
Mi 06.06.2018 00:00	C/2017 M4 ATLAS	18h28'43.2"	+46°31'55.2"	3.8850	3.4548	14.6+	108°	--:--	02:41	+86°	--:--	02:16	+84°	SO	LYR
Mi 06.06.2018 00:00	C/2017 S3 PANSTARRS	1h24'12.7"	+57°54'37.6"	1.7033	2.1399	15.0+	51°	--:--	09:37	+83°	--:--	02:16	+33°	NO	CAS
Do 07.06.2018 00:00	C/2016 M1 PANSTARRS	19h 3'38.4"	-28°36'28.0"	2.3310	1.3893	9.4+	151°	23:54	03:11	+10°	06:26	02:14	+10°	S	SGR
Do 07.06.2018 00:00	21P/Giacobini-Zinner	20h39'23.2"	+36°27'37.9"	1.6268	1.0894	12.8+	101°	18:05	04:48	+76°	15:25	02:14	+59°	O	CYG
Do 07.06.2018 00:00	P/2010 H2 Vales	15h45'45.4"	-19°44' 2.6"	3.2904	2.3074	13.0-	163°	19:30	23:50	+19°	04:13	00:01	+19°	S	SCO
Do 07.06.2018 00:00	37P/Forbes	22h59'13.4"	- 8°44'31.4"	1.6445	1.2379	13.6+	93°	01:47	07:08	+31°	12:27	02:14	+ 4°	O	AQR
Do 07.06.2018 00:00	C/2016 R2 PANSTARRS	6h36'57.6"	+49°24'39.9"	2.6197	3.4121	13.8-	33°	--:--	14:45	+89°	--:--	00:01	+16°	NW	AUR
Do 07.06.2018 00:00	C/2016 N6 PANSTARRS	8h 0'12.6"	+44° 2'56.3"	2.7041	3.3597	14.0-	43°	--:--	16:07	+83°	--:--	00:01	+19°	NW	LYN
Do 07.06.2018 00:00	P/2013 R3-A Catalin.	21h17'12.0"	-16°41'37.1"	2.4461	1.7836	14.1+	119°	00:47	05:25	+23°	10:02	02:14	+11°	SO	CAP
Do 07.06.2018 00:00	P/2013 R3-B Catalin.	21h16'52.2"	-16°43'19.4"	2.4466	1.7831	14.1+	119°	00:47	05:25	+22°	10:02	02:14	+11°	SO	CAP
Do 07.06.2018 00:00	C/2017 M4 ATLAS	18h26'39.8"	+46°29'27.5"	3.8800	3.4444	14.6+	108°	--:--	02:35	+86°	--:--	02:14	+85°	SO	LYR
Do 07.06.2018 00:00	C/2017 S3 PANSTARRS	1h27'18.6"	+58° 0'24.4"	1.6858	2.1187	14.9+	52°	--:--	09:36	+83°	--:--	02:14	+33°	NO	CAS
Fr 08.06.2018 00:00	C/2016 M1 PANSTARRS	19h 1'16.7"	-29°21' 7.6"	2.3274	1.3785	9.4+	153°	23:54	03:04	+10°	06:14	02:12	+ 9°	S	SGR
Fr 08.06.2018 00:00	21P/Giacobini-Zinner	20h41' 6.4"	+37° 0'37.4"	1.6176	1.0783	12.7+	101°	17:50	04:46	+76°	15:37	02:12	+60°	O	CYG
Fr 08.06.2018 00:00	P/2010 H2 Vales	15h45' 2.7"	-19°45'34.2"	3.2918	2.3129	13.0-	162°	19:26	23:45	+19°	04:08	00:03	+19°	S	SCO
Fr 08.06.2018 00:00	37P/Forbes	23h 0'53.9"	- 8°27'18.8"	1.6465	1.2325	13.6+	94°	01:43	07:05	+31°	12:27	02:12	+ 4°	O	AQR
Fr 08.06.2018 00:00	C/2016 R2 PANSTARRS	6h39'32.8"	+49°32'22.5"	2.6210	3.4156	13.9-	33°	--:--	14:44	+89°	--:--	00:03	+16°	NW	AUR
Fr 08.06.2018 00:00	C/2016 N6 PANSTARRS	8h 0'47.7"	+43°42'15.1"	2.7025	3.3699	14.0-	42°	--:--	16:03	+83°	--:--	00:03	+18°	NW	LYN
Fr 08.06.2018 00:00	P/2013 R3-A Catalin.	21h17'39.5"	-16°39'37.4"	2.4437	1.7709	14.1+	120°	00:44	05:22	+23°	09:59	02:12	+11°	SO	CAP
Fr 08.06.2018 00:00	P/2013 R3-B Catalin.	21h17'19.6"	-16°41'20.6"	2.4442	1.7704	14.1+	120°	00:44	05:21	+23°	09:58	02:12	+11°	SO	CAP

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Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	TRi.	Stb.
Fr 08.06.2018	00:00 C/2017 M4 ATLAS	18h24'35.3"	+46°26'35.6"	3.8750	3.4341	14.6+	108°	--:--	02:29	+86°	--:--	02:12	+85°	SO	LYR
Fr 08.06.2018	00:00 C/2017 S3 PANSTARRS	1h30'27.3"	+58° 6' 6.9"	1.6682	2.0973	14.8+	52°	--:--	09:35	+83°	--:--	02:12	+33°	NO	CAS
Sa 09.06.2018	00:00 C/2016 M1 PANSTARRS	18h58'49.3"	-30° 6'16.1"	2.3238	1.3684	9.3+	154°	23:55	02:58	+ 9°	06:01	02:10	+ 8°	S	SGR
Sa 09.06.2018	00:00 21P/Giacobini-Zinner	20h42'50.6"	+37°33'45.8"	1.6084	1.0673	12.7+	101°	17:30	04:43	+77°	15:52	02:10	+60°	O	CYG
Sa 09.06.2018	00:00 P/2010 H2 Vales	15h44'20.8"	-19°47' 6.5"	3.2931	2.3186	13.0-	161°	19:21	23:41	+19°	04:04	00:05	+19°	S	SCO
Sa 09.06.2018	00:00 37P/Forbes	23h 2'32.8"	- 8°10' 9.6"	1.6486	1.2271	13.5+	94°	01:39	07:03	+31°	12:26	02:10	+ 4°	O	AQR
Sa 09.06.2018	00:00 C/2016 R2 PANSTARRS	6h42' 9.2"	+49°39'57.4"	2.6223	3.4191	13.9-	33°	--:--	14:42	+89°	--:--	00:05	+16°	NW	LYN
Sa 09.06.2018	00:00 C/2016 N6 PANSTARRS	8h 1'23.2"	+43°21'43.6"	2.7009	3.3800	14.0-	41°	--:--	16:00	+82°	--:--	00:05	+17°	NW	LYN
Sa 09.06.2018	00:00 P/2013 R3-A Catalin.	21h18' 5.6"	-16°37'43.7"	2.4413	1.7582	14.1+	121°	00:40	05:18	+23°	09:55	02:10	+11°	SO	CAP
Sa 09.06.2018	00:00 P/2013 R3-B Catalin.	21h17'45.5"	-16°39'27.9"	2.4418	1.7577	14.1+	121°	00:40	05:18	+23°	09:55	02:10	+11°	SO	CAP
Sa 09.06.2018	00:00 C/2017 M4 ATLAS	18h22'29.7"	+46°23'18.9"	3.8701	3.4241	14.5+	109°	--:--	02:23	+86°	--:--	02:10	+85°	SO	LYR
Sa 09.06.2018	00:00 C/2017 S3 PANSTARRS	1h33'38.9"	+58°11'44.6"	1.6505	2.0758	14.8+	52°	--:--	09:34	+83°	--:--	02:10	+33°	NO	CAS
Sa 09.06.2018	00:00 364P/PANSTARRS	8h57'17.7"	+15°20'43.2"	0.8366	0.4649	14.9+	55°	09:35	16:55	+54°	00:20	00:05	+ 2°	NW	CNC
So 10.06.2018	00:00 C/2016 M1 PANSTARRS	18h56'16.1"	-30°51'50.4"	2.3203	1.3588	9.3+	155°	23:56	02:52	+ 8°	05:47	02:08	+ 8°	S	SGR
So 10.06.2018	00:00 21P/Giacobini-Zinner	20h44'35.8"	+38° 7' 2.7"	1.5991	1.0565	12.6+	101°	16:58	04:41	+77°	16:20	02:08	+60°	O	CYG
So 10.06.2018	00:00 P/2010 H2 Vales	15h43'39.7"	-19°48'39.5"	3.2945	2.3247	13.0-	159°	19:17	23:36	+19°	03:59	00:08	+19°	S	SCO
So 10.06.2018	00:00 37P/Forbes	23h 4'10.1"	- 7°53' 4.3"	1.6507	1.2218	13.5+	95°	01:36	07:01	+31°	12:25	02:08	+ 4°	O	AQR
So 10.06.2018	00:00 C/2016 R2 PANSTARRS	6h44'46.7"	+49°47'24.6"	2.6236	3.4224	13.9-	33°	--:--	14:41	+89°	--:--	00:08	+16°	NW	LYN
So 10.06.2018	00:00 C/2016 N6 PANSTARRS	8h 1'59.0"	+43° 1'21.5"	2.6993	3.3899	14.0-	40°	--:--	15:57	+82°	--:--	00:08	+16°	NW	LYN
So 10.06.2018	00:00 P/2013 R3-A Catalin.	21h18'30.2"	-16°35'56.2"	2.4389	1.7457	14.1+	122°	00:36	05:15	+23°	09:52	02:08	+11°	SO	CAP
So 10.06.2018	00:00 P/2013 R3-B Catalin.	21h18'10.0"	-16°37'41.4"	2.4394	1.7452	14.1+	122°	00:36	05:14	+23°	09:52	02:08	+11°	SO	CAP
So 10.06.2018	00:00 C/2017 M4 ATLAS	18h20'23.2"	+46°19'37.1"	3.8651	3.4143	14.5+	109°	--:--	02:17	+86°	--:--	02:08	+85°	S	LYR
So 10.06.2018	00:00 C/2017 S3 PANSTARRS	1h36'53.5"	+58°17'16.9"	1.6328	2.0541	14.7+	52°	--:--	09:34	+82°	--:--	02:08	+33°	NO	CAS
Mo 11.06.2018	00:00 C/2016 M1 PANSTARRS	18h53'37.0"	-31°37'47.1"	2.3169	1.3497	9.3+	157°	23:57	02:45	+ 7°	05:33	02:07	+ 7°	S	SGR
Mo 11.06.2018	00:00 21P/Giacobini-Zinner	20h46'22.2"	+38°40'27.6"	1.5899	1.0457	12.5+	101°	--:--	04:39	+78°	--:--	02:07	+61°	O	CYG
Mo 11.06.2018	00:00 P/2010 H2 Vales	15h42'59.3"	-19°50'13.4"	3.2958	2.3309	13.0-	158°	19:12	23:31	+19°	03:54	00:10	+19°	S	SCO
Mo 11.06.2018	00:00 37P/Forbes	23h 5'45.8"	- 7°36' 3.0"	1.6529	1.2165	13.5+	95°	01:32	06:58	+32°	12:24	02:07	+ 5°	O	AQR
Mo 11.06.2018	00:00 C/2016 R2 PANSTARRS	6h47'25.3"	+49°54'44.0"	2.6250	3.4257	13.9-	32°	--:--	14:40	+89°	--:--	00:10	+16°	NW	LYN
Mo 11.06.2018	00:00 C/2016 N6 PANSTARRS	8h 2'35.2"	+42°41' 8.7"	2.6977	3.3997	14.0-	40°	--:--	15:53	+82°	--:--	00:10	+15°	NW	LYN
Mo 11.06.2018	00:00 P/2013 R3-A Catalin.	21h18'53.4"	-16°34'14.8"	2.4366	1.7332	14.1+	123°	00:33	05:11	+23°	09:49	02:07	+12°	SO	CAP
Mo 11.06.2018	00:00 P/2013 R3-B Catalin.	21h18'33.1"	-16°36' 1.0"	2.4371	1.7328	14.1+	123°	00:32	05:11	+23°	09:48	02:07	+12°	SO	CAP
Mo 11.06.2018	00:00 C/2017 M4 ATLAS	18h18'15.7"	+46°15'29.7"	3.8602	3.4047	14.5+	109°	--:--	02:11	+85°	--:--	02:07	+85°	S	LYR
Mo 11.06.2018	00:00 C/2017 S3 PANSTARRS	1h40'11.1"	+58°22'43.3"	1.6150	2.0322	14.6+	52°	--:--	09:33	+82°	--:--	02:07	+33°	NO	CAS
Di 12.06.2018	00:00 C/2016 M1 PANSTARRS	18h50'51.9"	-32°24' 2.4"	2.3135	1.3413	9.3+	158°	23:58	02:38	+ 7°	05:19	02:05	+ 6°	S	SGR
Di 12.06.2018	00:00 21P/Giacobini-Zinner	20h48' 9.8"	+39°14' 0.2"	1.5807	1.0351	12.5+	101°	--:--	04:37	+79°	--:--	02:05	+61°	O	CYG
Di 12.06.2018	00:00 P/2010 H2 Vales	15h42'19.8"	-19°51'48.1"	3.2972	2.3375	13.0-	157°	19:08	23:27	+19°	03:49	00:12	+19°	S	SCO

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Di 12.06.2018	00:00 37P/Forbes	23h 7'19.9"	- 7°19' 5.9"	1.6551	1.2113	13.5+	96°	01:28	06:56	+32°	12:23	02:05	+ 5°	O	AQR
Di 12.06.2018	00:00 C/2016 R2 PANSTARRS	6h50' 5.0"	+50° 1'55.3"	2.6264	3.4289	13.9-	32°	--:--	14:38	+89°	--:--	00:12	+16°	NW	LYN
Di 12.06.2018	00:00 C/2016 N6 PANSTARRS	8h 3'11.8"	+42°21' 5.0"	2.6962	3.4094	14.0-	39°	--:--	15:50	+81°	--:--	00:12	+15°	NW	LYN
Di 12.06.2018	00:00 P/2013 R3-A Catalin.	21h19'15.1"	-16°32'39.9"	2.4342	1.7209	14.0+	124°	00:29	05:08	+23°	09:45	02:05	+12°	SO	CAP
Di 12.06.2018	00:00 P/2013 R3-B Catalin.	21h18'54.6"	-16°34'27.0"	2.4347	1.7205	14.0+	124°	00:29	05:07	+23°	09:45	02:05	+12°	SO	CAP
Di 12.06.2018	00:00 C/2017 M4 ATLAS	18h16' 7.5"	+46°10'56.4"	3.8553	3.3954	14.5+	110°	--:--	02:05	+85°	--:--	02:04	+85°	S	LYR
Di 12.06.2018	00:00 C/2017 S3 PANSTARRS	1h43'32.0"	+58°28' 3.1"	1.5970	2.0102	14.5+	52°	--:--	09:32	+82°	--:--	02:05	+33°	NO	CAS
Mi 13.06.2018	00:00 C/2016 M1 PANSTARRS	18h48' 0.7"	-33°10'32.5"	2.3101	1.3335	9.3+	159°	--:--	02:31	+ 6°	05:04	02:04	+ 6°	S	SGR
Mi 13.06.2018	00:00 21P/Giacobini-Zinner	20h49'58.7"	+39°47'39.9"	1.5715	1.0245	12.4+	101°	--:--	04:35	+79°	--:--	02:04	+62°	O	CYG
Mi 13.06.2018	00:00 P/2010 H2 Vales	15h41'41.1"	-19°53'23.8"	3.2986	2.3442	13.0-	156°	19:04	23:22	+19°	03:45	00:14	+19°	S	SCO
Mi 13.06.2018	00:00 37P/Forbes	23h 8'52.3"	- 7° 2'13.3"	1.6574	1.2060	13.5+	96°	01:24	06:54	+32°	12:22	02:04	+ 6°	O	AQR
Mi 13.06.2018	00:00 C/2016 R2 PANSTARRS	6h52'45.8"	+50° 8'58.6"	2.6278	3.4321	13.9-	32°	--:--	14:37	+89°	--:--	00:14	+15°	N	LYN
Mi 13.06.2018	00:00 C/2016 N6 PANSTARRS	8h 3'48.6"	+42° 1'10.3"	2.6948	3.4190	14.0-	38°	--:--	15:47	+81°	--:--	00:14	+14°	NW	LYN
Mi 13.06.2018	00:00 P/2013 R3-A Catalin.	21h19'35.4"	-16°31'11.3"	2.4319	1.7087	14.0+	124°	00:25	05:04	+23°	09:42	02:04	+12°	SO	CAP
Mi 13.06.2018	00:00 P/2013 R3-B Catalin.	21h19'14.7"	-16°32'59.4"	2.4324	1.7083	14.0+	125°	00:25	05:04	+23°	09:41	02:04	+12°	SO	CAP
Mi 13.06.2018	00:00 C/2017 S3 PANSTARRS	1h46'56.3"	+58°33'15.6"	1.5790	1.9880	14.5+	52°	--:--	09:32	+82°	--:--	02:04	+33°	NO	CAS
Mi 13.06.2018	00:00 C/2017 M4 ATLAS	18h13'58.6"	+46° 5'56.7"	3.8504	3.3862	14.5+	110°	--:--	01:59	+85°	--:--	01:58	+85°	S	LYR
Do 14.06.2018	00:00 C/2016 M1 PANSTARRS	18h45' 3.4"	-33°57'13.4"	2.3068	1.3262	9.2+	160°	00:00	02:25	+ 5°	04:48	02:02	+ 5°	S	SGR
Do 14.06.2018	00:00 21P/Giacobini-Zinner	20h51'49.0"	+40°21'26.3"	1.5623	1.0141	12.3+	101°	--:--	04:33	+80°	--:--	02:02	+62°	O	CYG
Do 14.06.2018	00:00 P/2010 H2 Vales	15h41' 3.4"	-19°55' 0.6"	3.2999	2.3513	13.0-	155°	18:59	23:18	+19°	03:40	00:15	+18°	S	SCO
Do 14.06.2018	00:00 37P/Forbes	23h10'23.1"	- 6°45'25.4"	1.6598	1.2008	13.5+	97°	01:20	06:51	+33°	12:21	02:02	+ 6°	O	AQR
Do 14.06.2018	00:00 C/2016 R2 PANSTARRS	6h55'27.7"	+50°15'53.7"	2.6293	3.4351	13.9-	32°	--:--	14:36	+90°	--:--	00:15	+15°	N	LYN
Do 14.06.2018	00:00 C/2016 N6 PANSTARRS	8h 4'25.7"	+41°41'24.3"	2.6933	3.4284	14.0-	37°	--:--	15:43	+81°	--:--	00:15	+13°	NW	LYN
Do 14.06.2018	00:00 P/2013 R3-A Catalin.	21h19'54.1"	-16°29'49.3"	2.4296	1.6966	14.0+	125°	00:21	05:00	+23°	09:38	02:02	+12°	SO	CAP
Do 14.06.2018	00:00 P/2013 R3-B Catalin.	21h19'33.3"	-16°31'38.4"	2.4300	1.6962	14.0+	125°	00:21	05:00	+23°	09:38	02:02	+12°	SO	CAP
Do 14.06.2018	00:00 C/2017 S3 PANSTARRS	1h50'24.2"	+58°38'20.1"	1.5610	1.9657	14.4+	52°	--:--	09:31	+82°	--:--	02:02	+33°	NO	CAS
Do 14.06.2018	00:00 C/2017 M4 ATLAS	18h11'49.1"	+46° 0'30.5"	3.8455	3.3773	14.5+	110°	--:--	01:52	+85°	--:--	01:51	+85°	S	LYR
Fr 15.06.2018	00:00 C/2016 M1 PANSTARRS	18h41'59.9"	-34°44' 0.5"	2.3036	1.3196	9.2+	161°	00:03	02:18	+ 4°	04:31	02:01	+ 4°	S	SGR
Fr 15.06.2018	00:00 21P/Giacobini-Zinner	20h53'40.7"	+40°55'18.9"	1.5532	1.0037	12.2+	101°	--:--	04:31	+80°	--:--	02:01	+63°	O	CYG
Fr 15.06.2018	00:00 P/2010 H2 Vales	15h40'26.6"	-19°56'38.5"	3.3013	2.3586	13.1-	154°	18:55	23:13	+19°	03:35	00:17	+18°	S	SCO
Fr 15.06.2018	00:00 37P/Forbes	23h11'52.2"	- 6°28'42.5"	1.6621	1.1956	13.5+	97°	01:17	06:49	+33°	12:20	02:01	+ 6°	O	AQR
Fr 15.06.2018	00:00 C/2016 R2 PANSTARRS	6h58'10.7"	+50°22'40.6"	2.6309	3.4381	13.9-	32°	--:--	14:35	+90°	--:--	00:17	+15°	N	LYN
Fr 15.06.2018	00:00 C/2016 N6 PANSTARRS	8h 5' 3.1"	+41°21'47.0"	2.6919	3.4376	14.0-	37°	--:--	15:40	+80°	--:--	00:17	+12°	NW	LYN
Fr 15.06.2018	00:00 P/2013 R3-A Catalin.	21h20'11.3"	-16°28'33.8"	2.4272	1.6846	14.0+	126°	00:18	04:57	+23°	09:35	02:01	+13°	SO	CAP
Fr 15.06.2018	00:00 P/2013 R3-B Catalin.	21h19'50.3"	-16°30'23.9"	2.4277	1.6842	14.0+	126°	00:17	04:56	+23°	09:34	02:01	+13°	SO	CAP
Fr 15.06.2018	00:00 C/2017 S3 PANSTARRS	1h53'55.7"	+58°43'15.6"	1.5428	1.9433	14.3+	52°	--:--	09:31	+82°	--:--	02:01	+33°	NO	CAS
Fr 15.06.2018	00:00 C/2017 M4 ATLAS	18h 9'39.0"	+45°54'37.3"	3.8406	3.3686	14.5+	110°	--:--	01:46	+85°	--:--	01:45	+85°	S	LYR

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Sa 16.06.2018 00:00	C/2016 M1 PANSTARRS	18h38'50.1"	-35°30'49.4"	2.3004	1.3137	9.2+	162°	00:07	02:10	+ 4°	04:13	02:00	+ 4°	S	SGR
Sa 16.06.2018 00:00	21P/Giacobini-Zinner	20h55'34.0"	+41°29'17.2"	1.5440	0.9935	12.2+	100°	--:--	04:29	+81°	--:--	02:00	+63°	O	CYG
Sa 16.06.2018 00:00	P/2010 H2 Vales	15h39'50.7"	-19°58'17.7"	3.3027	2.3661	13.1-	153°	18:51	23:09	+19°	03:31	00:18	+18°	S	SCO
Sa 16.06.2018 00:00	37P/Forbes	23h13'19.5"	- 6°12' 4.7"	1.6646	1.1905	13.5+	98°	01:13	06:46	+33°	12:19	02:00	+ 7°	O	AQR
Sa 16.06.2018 00:00	C/2016 R2 PANSTARRS	7h 0'54.7"	+50°29'19.1"	2.6324	3.4410	13.9-	32°	--:--	14:33	+90°	--:--	00:18	+15°	N	LYN
Sa 16.06.2018 00:00	P/2013 R3-A Catalin.	21h20'27.0"	-16°27'25.0"	2.4249	1.6728	14.0+	127°	00:14	04:53	+23°	09:31	02:00	+13°	SO	CAP
Sa 16.06.2018 00:00	P/2013 R3-B Catalin.	21h20' 5.9"	-16°29'16.1"	2.4254	1.6724	14.0+	127°	00:14	04:53	+23°	09:31	02:00	+13°	SO	CAP
Sa 16.06.2018 00:00	C/2016 N6 PANSTARRS	8h 5'40.8"	+41° 2'18.2"	2.6906	3.4467	14.0-	36°	--:--	15:37	+80°	--:--	00:18	+12°	NW	LYN
Sa 16.06.2018 00:00	C/2017 S3 PANSTARRS	1h57'31.0"	+58°48' 1.3"	1.5245	1.9206	14.2+	52°	--:--	09:31	+82°	--:--	02:00	+33°	NO	CAS
Sa 16.06.2018 00:00	C/2017 M4 ATLAS	18h 7'28.6"	+45°48'16.9"	3.8358	3.3602	14.5+	110°	--:--	01:40	+85°	--:--	01:39	+85°	S	LYR
So 17.06.2018 00:00	C/2016 M1 PANSTARRS	18h35'34.2"	-36°17'35.4"	2.2972	1.3083	9.2+	162°	00:11	02:03	+ 3°	03:55	02:00	+ 3°	S	SGR
So 17.06.2018 00:00	21P/Giacobini-Zinner	20h57'29.0"	+42° 3'20.8"	1.5349	0.9833	12.1+	100°	--:--	04:27	+81°	--:--	02:00	+64°	O	CYG
So 17.06.2018 00:00	P/2010 H2 Vales	15h39'15.8"	-19°59'58.2"	3.3041	2.3739	13.1-	152°	18:46	23:04	+19°	03:26	00:20	+17°	S	SCO
So 17.06.2018 00:00	37P/Forbes	23h14'45.2"	- 5°55'32.2"	1.6671	1.1853	13.5+	98°	01:09	06:44	+33°	12:18	02:00	+ 7°	O	AQR
So 17.06.2018 00:00	C/2016 R2 PANSTARRS	7h 3'39.8"	+50°35'49.0"	2.6341	3.4438	13.9-	32°	--:--	14:32	+90°	--:--	00:20	+15°	N	LYN
So 17.06.2018 00:00	P/2013 R3-A Catalin.	21h20'41.2"	-16°26'23.0"	2.4226	1.6611	13.9+	128°	00:10	04:49	+23°	09:27	02:00	+13°	SO	CAP
So 17.06.2018 00:00	P/2013 R3-B Catalin.	21h20'19.9"	-16°28'14.9"	2.4231	1.6607	13.9+	128°	00:10	04:49	+23°	09:27	02:00	+13°	SO	CAP
So 17.06.2018 00:00	C/2016 N6 PANSTARRS	8h 6'18.6"	+40°42'57.7"	2.6893	3.4557	14.0-	35°	--:--	15:33	+80°	--:--	00:20	+11°	NW	LYN
So 17.06.2018 00:00	C/2017 S3 PANSTARRS	2h 1'10.3"	+58°52'36.1"	1.5062	1.8979	14.2+	52°	--:--	09:30	+82°	--:--	02:00	+33°	NO	CAS
So 17.06.2018 00:00	C/2017 M4 ATLAS	18h 5'17.7"	+45°41'29.1"	3.8309	3.3520	14.5+	111°	--:--	01:34	+85°	--:--	01:33	+85°	S	HER
Mo 18.06.2018 00:00	C/2016 M1 PANSTARRS	18h32'11.9"	-37° 4'13.6"	2.2941	1.3036	9.2+	163°	00:17	01:56	+ 2°	03:34	01:55	+ 2°	S	SGR
Mo 18.06.2018 00:00	21P/Giacobini-Zinner	20h59'25.7"	+42°37'29.2"	1.5257	0.9732	12.0+	100°	--:--	04:25	+82°	--:--	01:59	+64°	O	CYG
Mo 18.06.2018 00:00	P/2010 H2 Vales	15h38'42.0"	-20° 1'40.1"	3.3054	2.3819	13.1-	151°	18:42	23:00	+19°	03:21	00:21	+17°	S	SCO
Mo 18.06.2018 00:00	37P/Forbes	23h16' 9.2"	- 5°39' 5.3"	1.6696	1.1802	13.5+	99°	01:05	06:41	+34°	12:16	01:59	+ 8°	O	AQR
Mo 18.06.2018 00:00	C/2016 R2 PANSTARRS	7h 6'26.0"	+50°42'10.4"	2.6357	3.4465	13.9-	32°	--:--	14:31	+90°	--:--	00:21	+15°	N	LYN
Mo 18.06.2018 00:00	P/2013 R3-A Catalin.	21h20'53.8"	-16°25'27.7"	2.4203	1.6495	13.9+	129°	00:06	04:46	+23°	09:24	01:59	+14°	SO	CAP
Mo 18.06.2018 00:00	P/2013 R3-B Catalin.	21h20'32.3"	-16°27'20.6"	2.4208	1.6491	13.9+	129°	00:06	04:45	+23°	09:23	01:59	+14°	SO	CAP
Mo 18.06.2018 00:00	C/2016 N6 PANSTARRS	8h 6'56.7"	+40°23'45.3"	2.6880	3.4645	14.0-	34°	--:--	15:30	+79°	--:--	00:21	+10°	NW	LYN
Mo 18.06.2018 00:00	C/2017 S3 PANSTARRS	2h 4'53.8"	+58°56'59.2"	1.4877	1.8749	14.1+	52°	--:--	09:30	+82°	--:--	01:59	+33°	NO	CAS
Mo 18.06.2018 00:00	C/2017 M4 ATLAS	18h 3' 6.7"	+45°34'13.8"	3.8261	3.3440	14.4+	111°	--:--	01:28	+85°	--:--	01:27	+85°	S	HER
Di 19.06.2018 00:00	C/2016 M1 PANSTARRS	18h28'43.5"	-37°50'39.1"	2.2911	1.2995	9.2+	163°	00:25	01:49	+ 1°	03:12	01:48	+ 1°	S	CRA
Di 19.06.2018 00:00	21P/Giacobini-Zinner	21h 1'24.4"	+43°11'42.0"	1.5166	0.9633	12.0+	100°	--:--	04:23	+82°	--:--	01:59	+65°	O	CYG
Di 19.06.2018 00:00	P/2010 H2 Vales	15h38' 9.2"	-20° 3'23.4"	3.3068	2.3901	13.1-	150°	18:38	22:55	+19°	03:17	00:21	+17°	S	SCO
Di 19.06.2018 00:00	37P/Forbes	23h17'31.4"	- 5°22'44.1"	1.6722	1.1752	13.5+	99°	01:01	06:38	+34°	12:15	01:59	+ 8°	O	AQR
Di 19.06.2018 00:00	C/2016 R2 PANSTARRS	7h 9'13.2"	+50°48'23.1"	2.6374	3.4492	13.9-	32°	--:--	14:30	+90°	--:--	00:21	+15°	N	LYN
Di 19.06.2018 00:00	P/2013 R3-A Catalin.	21h21' 4.9"	-16°24'39.2"	2.4180	1.6381	13.9+	130°	23:59	04:42	+23°	09:20	01:59	+14°	SO	CAP

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Di 19.06.2018	00:00 P/2013 R3-B Catalin.	21h20'43.2"	-16°26'33.1"	2.4185	1.6377	13.9+	130°	23:58	04:41	+23°	09:20	01:59	+14°	SO	CAP
Di 19.06.2018	00:00 C/2016 N6 PANSTARRS	8h 7'35.0"	+40° 4'40.9"	2.6868	3.4732	14.0-	34°	--:--	15:27	+79°	--:--	00:21	+10°	NW	LYN
Di 19.06.2018	00:00 C/2017 S3 PANSTARRS	2h 8'41.7"	+59° 1' 9.2"	1.4692	1.8519	14.0+	52°	--:--	09:30	+82°	--:--	01:59	+33°	NO	CAS
Di 19.06.2018	00:00 C/2017 M4 ATLAS	18h 0'55.5"	+45°26'30.8"	3.8213	3.3363	14.4+	111°	--:--	01:22	+85°	--:--	01:21	+85°	S	HER
Mi 20.06.2018	00:00 C/2016 M1 PANSTARRS	18h25' 8.8"	-38°36'47.0"	2.2881	1.2961	9.2+	163°	00:36	01:41	+ 1°	02:45	01:40	+ 1°	S	CRA
Mi 20.06.2018	00:00 21P/Giacobini-Zinner	21h 3'25.1"	+43°45'58.7"	1.5075	0.9534	11.9+	100°	--:--	04:21	+83°	--:--	01:58	+65°	O	CYG
Mi 20.06.2018	00:00 P/2010 H2 Vales	15h37'37.5"	-20° 5' 8.3"	3.3082	2.3986	13.1-	149°	18:33	22:51	+19°	03:12	00:22	+17°	S	SCO
Mi 20.06.2018	00:00 37P/Forbes	23h18'51.8"	- 5° 6'28.8"	1.6749	1.1701	13.5+	100°	00:57	06:36	+34°	12:14	01:58	+ 9°	O	AQR
Mi 20.06.2018	00:00 P/2013 R3-A Catalin.	21h21'14.4"	-16°23'57.6"	2.4157	1.6268	13.9+	131°	23:55	04:38	+23°	09:16	01:58	+14°	SO	CAP
Mi 20.06.2018	00:00 P/2013 R3-B Catalin.	21h20'52.5"	-16°25'52.4"	2.4162	1.6264	13.9+	131°	23:55	04:38	+23°	09:16	01:58	+14°	SO	CAP
Mi 20.06.2018	00:00 C/2016 R2 PANSTARRS	7h12' 1.3"	+50°54'27.0"	2.6392	3.4518	13.9-	31°	--:--	14:29	+90°	--:--	00:22	+15°	N	LYN
Mi 20.06.2018	00:00 C/2017 S3 PANSTARRS	2h12'34.1"	+59° 5' 4.9"	1.4505	1.8286	13.9+	52°	--:--	09:30	+82°	--:--	01:58	+33°	NO	CAS
Mi 20.06.2018	00:00 C/2016 N6 PANSTARRS	8h 8'13.5"	+39°45'44.3"	2.6856	3.4817	14.0-	33°	--:--	15:24	+79°	--:--	00:22	+ 9°	NW	LYN
Mi 20.06.2018	00:00 C/2017 M4 ATLAS	17h58'44.2"	+45°18'19.9"	3.8165	3.3289	14.4+	111°	--:--	01:16	+84°	--:--	01:15	+84°	S	HER
Do 21.06.2018	00:00 21P/Giacobini-Zinner	21h 5'27.9"	+44°20'18.9"	1.4985	0.9436	11.8+	100°	--:--	04:19	+84°	--:--	01:58	+66°	O	CYG
Do 21.06.2018	00:00 P/2010 H2 Vales	15h37' 6.8"	-20° 6'54.8"	3.3096	2.4074	13.1-	147°	18:29	22:46	+19°	03:07	00:23	+16°	SW	SCO
Do 21.06.2018	00:00 37P/Forbes	23h20'10.5"	- 4°50'19.6"	1.6776	1.1651	13.5+	100°	00:53	06:33	+34°	12:13	01:58	+ 9°	O	AQR
Do 21.06.2018	00:00 C/2017 S3 PANSTARRS	2h16'31.3"	+59° 8'45.0"	1.4318	1.8053	13.8+	52°	--:--	09:30	+82°	--:--	01:58	+33°	NO	CAS
Do 21.06.2018	00:00 P/2013 R3-A Catalin.	21h21'22.3"	-16°23'22.9"	2.4134	1.6156	13.9+	132°	23:51	04:34	+23°	09:13	01:58	+15°	SO	CAP
Do 21.06.2018	00:00 P/2013 R3-B Catalin.	21h21' 0.3"	-16°25'18.6"	2.4139	1.6152	13.9+	132°	23:51	04:34	+23°	09:12	01:58	+15°	SO	CAP
Do 21.06.2018	00:00 C/2016 R2 PANSTARRS	7h14'50.5"	+51° 0'22.0"	2.6410	3.4543	13.9-	31°	--:--	14:28	+90°	--:--	00:23	+15°	N	LYN
Do 21.06.2018	00:00 C/2016 N6 PANSTARRS	8h 8'52.1"	+39°26'55.4"	2.6845	3.4900	14.0-	32°	--:--	15:20	+78°	--:--	00:23	+ 8°	NW	LYN
Do 21.06.2018	00:00 C/2017 M4 ATLAS	17h56'33.0"	+45° 9'41.3"	3.8117	3.3217	14.4+	111°	--:--	01:10	+84°	--:--	01:09	+84°	S	HER
Do 21.06.2018	00:00 65P/Gunn	23h25' 0.6"	-15° 9'48.7"	3.1515	2.7618	15.0+	103°	01:51	06:38	+24°	11:23	01:58	+ 0°	SO	AQR
Fr 22.06.2018	00:00 21P/Giacobini-Zinner	21h 7'33.1"	+44°54'42.2"	1.4894	0.9338	11.8+	100°	--:--	04:17	+84°	--:--	01:59	+67°	O	CYG
Fr 22.06.2018	00:00 P/2010 H2 Vales	15h36'37.3"	-20° 8'42.9"	3.3110	2.4163	13.1-	146°	18:25	22:42	+19°	03:03	00:23	+16°	SW	SCO
Fr 22.06.2018	00:00 37P/Forbes	23h21'27.4"	- 4°34'16.8"	1.6803	1.1601	13.5+	101°	00:49	06:31	+35°	12:11	01:59	+10°	O	AQR
Fr 22.06.2018	00:00 C/2017 S3 PANSTARRS	2h20'33.4"	+59°12' 8.1"	1.4129	1.7817	13.8+	52°	--:--	09:30	+82°	--:--	01:59	+33°	NO	CAS
Fr 22.06.2018	00:00 P/2013 R3-A Catalin.	21h21'28.7"	-16°22'55.1"	2.4112	1.6046	13.8+	133°	23:47	04:30	+23°	09:09	01:59	+15°	SO	CAP
Fr 22.06.2018	00:00 P/2013 R3-B Catalin.	21h21' 6.5"	-16°24'51.8"	2.4116	1.6042	13.8+	133°	23:47	04:30	+23°	09:08	01:59	+15°	SO	CAP
Fr 22.06.2018	00:00 C/2016 R2 PANSTARRS	7h17'40.7"	+51° 6' 7.9"	2.6428	3.4568	13.9-	31°	--:--	14:27	+90°	--:--	00:23	+15°	N	LYN
Fr 22.06.2018	00:00 C/2016 N6 PANSTARRS	8h 9'30.9"	+39° 8'13.9"	2.6834	3.4982	14.0-	31°	--:--	15:17	+78°	--:--	00:23	+ 8°	NW	LYN
Fr 22.06.2018	00:00 C/2017 M4 ATLAS	17h54'21.9"	+45° 0'34.7"	3.8069	3.3147	14.4+	112°	--:--	01:04	+84°	--:--	01:03	+84°	S	HER
Fr 22.06.2018	00:00 65P/Gunn	23h25'31.2"	-15° 9'59.8"	3.1532	2.7505	15.0+	104°	01:48	06:34	+24°	11:19	01:59	+ 1°	SO	AQR
Sa 23.06.2018	00:00 21P/Giacobini-Zinner	21h 9'40.8"	+45°29' 8.0"	1.4804	0.9242	11.7+	99°	--:--	04:15	+85°	--:--	01:59	+67°	O	CYG
Sa 23.06.2018	00:00 P/2010 H2 Vales	15h36' 8.8"	-20°10'32.8"	3.3124	2.4255	13.1-	145°	18:21	22:38	+19°	02:58	00:23	+16°	SW	SCO

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Sa 23.06.2018 00:00	37P/Forbes	23h22'42.6"	- 4°18'20.4"	1.6831	1.1552	13.5+	101°	00:45	06:28	+35°	12:10	01:59	+11°	O	PSC
Sa 23.06.2018 00:00	C/2017 S3 PANSTARRS	2h24'40.8"	+59°15'12.6"	1.3940	1.7581	13.7+	52°	--:--	09:30	+82°	--:--	01:59	+33°	NO	CAS
Sa 23.06.2018 00:00	P/2013 R3-A Catalin.	21h21'33.5"	-16°22'34.3"	2.4089	1.5937	13.8+	134°	23:43	04:27	+23°	09:05	01:59	+16°	SO	CAP
Sa 23.06.2018 00:00	P/2013 R3-B Catalin.	21h21'11.1"	-16°24'31.9"	2.4094	1.5933	13.8+	134°	23:43	04:26	+23°	09:04	01:59	+16°	SO	CAP
Sa 23.06.2018 00:00	C/2016 R2 PANSTARRS	7h20'31.8"	+51°11'44.6"	2.6447	3.4592	13.9-	31°	--:--	14:26	+89°	--:--	00:23	+15°	N	LYN
Sa 23.06.2018 00:00	C/2016 N6 PANSTARRS	8h10' 9.8"	+38°49'39.6"	2.6823	3.5062	14.0-	31°	--:--	15:14	+78°	--:--	00:23	+ 7°	NW	LYN
Sa 23.06.2018 00:00	C/2017 M4 ATLAS	17h52'11.0"	+44°51' 0.2"	3.8022	3.3081	14.4+	112°	--:--	00:58	+84°	--:--	00:57	+84°	S	HER
Sa 23.06.2018 00:00	65P/Gunn	23h26' 0.7"	-15°10'17.9"	3.1550	2.7393	15.0+	105°	01:44	06:31	+24°	11:16	01:59	+ 2°	SO	AQR
So 24.06.2018 00:00	21P/Giacobini-Zinner	21h11'51.0"	+46° 3'36.1"	1.4714	0.9146	11.6+	99°	--:--	04:13	+85°	--:--	02:00	+68°	O	CYG
So 24.06.2018 00:00	P/2010 H2 Vales	15h35'41.6"	-20°12'24.5"	3.3138	2.4348	13.1-	144°	18:17	22:33	+19°	02:54	00:23	+15°	SW	SCO
So 24.06.2018 00:00	37P/Forbes	23h23'55.9"	- 4° 2'30.7"	1.6860	1.1503	13.5+	102°	00:41	06:25	+35°	12:08	02:00	+12°	O	PSC
So 24.06.2018 00:00	C/2017 S3 PANSTARRS	2h28'53.6"	+59°17'56.8"	1.3749	1.7343	13.6+	52°	--:--	09:31	+81°	--:--	02:00	+33°	NO	CAS
So 24.06.2018 00:00	P/2013 R3-A Catalin.	21h21'36.7"	-16°22'20.5"	2.4066	1.5830	13.8+	134°	23:39	04:23	+23°	09:01	02:00	+16°	SO	CAP
So 24.06.2018 00:00	P/2013 R3-B Catalin.	21h21'14.1"	-16°24'19.0"	2.4071	1.5826	13.8+	135°	23:39	04:22	+23°	09:01	02:00	+16°	SO	CAP
So 24.06.2018 00:00	C/2016 R2 PANSTARRS	7h23'23.8"	+51°17'12.1"	2.6466	3.4615	13.9-	31°	--:--	14:24	+89°	--:--	00:23	+15°	N	LYN
So 24.06.2018 00:00	C/2016 N6 PANSTARRS	8h10'48.9"	+38°31'12.6"	2.6813	3.5141	14.0-	30°	03:33	15:10	+78°	02:51	00:23	+ 7°	NW	LYN
So 24.06.2018 00:00	C/2017 M4 ATLAS	17h50' 0.5"	+44°40'57.8"	3.7974	3.3016	14.4+	112°	--:--	00:51	+84°	--:--	00:50	+84°	S	HER
So 24.06.2018 00:00	65P/Gunn	23h26'29.1"	-15°10'43.1"	3.1568	2.7282	15.0+	106°	01:41	06:27	+24°	11:12	02:00	+ 2°	SO	AQR
Mo 25.06.2018 00:00	21P/Giacobini-Zinner	21h14' 4.1"	+46°38' 5.8"	1.4624	0.9052	11.5+	99°	--:--	04:12	+86°	--:--	02:01	+68°	O	CYG
Mo 25.06.2018 00:00	P/2010 H2 Vales	15h35'15.4"	-20°14'17.9"	3.3152	2.4444	13.1-	143°	18:12	22:29	+19°	02:49	00:22	+15°	SW	SCO
Mo 25.06.2018 00:00	C/2017 S3 PANSTARRS	2h33'12.1"	+59°20'18.8"	1.3558	1.7103	13.5+	52°	--:--	09:31	+81°	--:--	02:01	+33°	NO	CAS
Mo 25.06.2018 00:00	37P/Forbes	23h25' 7.3"	- 3°46'47.8"	1.6889	1.1454	13.5+	103°	00:37	06:22	+35°	12:07	02:01	+12°	SO	PSC
Mo 25.06.2018 00:00	P/2013 R3-A Catalin.	21h21'38.3"	-16°22'13.7"	2.4044	1.5724	13.8+	135°	23:35	04:19	+23°	08:57	02:01	+16°	SO	CAP
Mo 25.06.2018 00:00	P/2013 R3-B Catalin.	21h21'15.6"	-16°24'13.1"	2.4049	1.5721	13.8+	135°	23:35	04:18	+23°	08:57	02:01	+16°	SO	CAP
Mo 25.06.2018 00:00	C/2016 R2 PANSTARRS	7h26'16.8"	+51°22'30.3"	2.6485	3.4638	13.9-	31°	--:--	14:23	+89°	--:--	00:22	+15°	N	LYN
Mo 25.06.2018 00:00	C/2016 N6 PANSTARRS	8h11'28.1"	+38°12'52.4"	2.6803	3.5217	14.0-	29°	03:48	15:07	+77°	02:29	00:22	+ 6°	NW	LYN
Mo 25.06.2018 00:00	C/2017 M4 ATLAS	17h47'50.3"	+44°30'27.7"	3.7927	3.2955	14.4+	112°	--:--	00:45	+84°	--:--	00:44	+84°	S	HER
Mo 25.06.2018 00:00	65P/Gunn	23h26'56.5"	-15°11'15.3"	3.1586	2.7171	15.0+	106°	01:38	06:24	+24°	11:09	02:01	+ 3°	SO	AQR
Di 26.06.2018 00:00	21P/Giacobini-Zinner	21h16'20.1"	+47°12'36.8"	1.4535	0.8957	11.5+	99°	--:--	04:10	+87°	--:--	02:02	+69°	O	CYG
Di 26.06.2018 00:00	P/2010 H2 Vales	15h34'50.5"	-20°16'13.3"	3.3166	2.4542	13.2-	142°	18:08	22:25	+19°	02:44	00:21	+15°	SW	SCO
Di 26.06.2018 00:00	C/2017 S3 PANSTARRS	2h37'36.6"	+59°22'16.6"	1.3365	1.6862	13.4+	52°	--:--	09:32	+81°	--:--	02:02	+33°	NO	CAS
Di 26.06.2018 00:00	37P/Forbes	23h26'17.0"	- 3°31'12.0"	1.6918	1.1405	13.5+	103°	00:33	06:20	+36°	12:05	02:02	+13°	SO	PSC
Di 26.06.2018 00:00	P/2013 R3-A Catalin.	21h21'38.4"	-16°22'13.9"	2.4021	1.5620	13.8+	136°	23:31	04:15	+23°	08:53	02:02	+17°	SO	CAP
Di 26.06.2018 00:00	P/2013 R3-B Catalin.	21h21'15.4"	-16°24'14.2"	2.4026	1.5617	13.8+	136°	23:31	04:14	+23°	08:53	02:02	+17°	SO	CAP
Di 26.06.2018 00:00	C/2016 R2 PANSTARRS	7h29'10.8"	+51°27'39.0"	2.6505	3.4660	13.9-	31°	--:--	14:22	+89°	--:--	00:21	+15°	N	LYN
Di 26.06.2018 00:00	C/2016 N6 PANSTARRS	8h12' 7.3"	+37°54'39.1"	2.6794	3.5293	14.0-	28°	03:57	15:04	+77°	02:14	00:21	+ 6°	NW	LYN
Di 26.06.2018 00:00	C/2017 M4 ATLAS	17h45'40.7"	+44°19'29.8"	3.7880	3.2896	14.4+	112°	--:--	00:39	+84°	--:--	00:38	+84°	S	HER

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Di 26.06.2018	00:00 65P/Gunn	23h27'22.8"	-15°11'54.7"	3.1604	2.7061	15.0+	107°	01:34	06:20	+24°	11:05	02:02	+ 3°	SO	AQR
Mi 27.06.2018	00:00 21P/Giacobini-Zinner	21h18'39.2"	+47°47' 8.5"	1.4445	0.8864	11.4+	99°	--:--	04:08	+87°	--:--	02:03	+70°	O	CYG
Mi 27.06.2018	00:00 P/2010 H2 Vales	15h34'26.7"	-20°18'10.6"	3.3180	2.4642	13.2-	141°	18:04	22:20	+19°	02:40	00:21	+14°	SW	SCO
Mi 27.06.2018	00:00 C/2017 S3 PANSTARRS	2h42' 7.2"	+59°23'48.0"	1.3171	1.6620	13.3+	52°	--:--	09:32	+81°	--:--	02:03	+33°	NO	CAS
Mi 27.06.2018	00:00 37P/Forbes	23h27'24.7"	- 3°15'43.4"	1.6948	1.1357	13.5-	104°	00:29	06:17	+36°	12:04	02:03	+14°	SO	PSC
Mi 27.06.2018	00:00 P/2013 R3-A Catalin.	21h21'36.8"	-16°22'21.1"	2.3999	1.5517	13.8+	137°	23:27	04:11	+23°	08:49	02:03	+17°	SO	CAP
Mi 27.06.2018	00:00 P/2013 R3-B Catalin.	21h21'13.7"	-16°24'22.3"	2.4004	1.5514	13.8+	137°	23:27	04:10	+23°	08:49	02:03	+17°	SO	CAP
Mi 27.06.2018	00:00 C/2016 R2 PANSTARRS	7h32' 5.6"	+51°32'38.1"	2.6525	3.4682	13.9-	31°	--:--	14:21	+89°	--:--	00:21	+15°	N	LYN
Mi 27.06.2018	00:00 C/2016 N6 PANSTARRS	8h12'46.7"	+37°36'32.4"	2.6785	3.5366	14.0-	28°	04:04	15:01	+77°	02:01	00:21	+ 5°	NW	LYN
Mi 27.06.2018	00:00 C/2017 M4 ATLAS	17h43'31.6"	+44° 8' 4.4"	3.7833	3.2840	14.4+	112°	--:--	00:33	+83°	--:--	00:32	+83°	S	HER
Mi 27.06.2018	00:00 65P/Gunn	23h27'48.0"	-15°12'41.1"	3.1622	2.6952	15.0+	108°	01:31	06:17	+24°	11:02	02:03	+ 4°	SO	AQR
Do 28.06.2018	00:00 21P/Giacobini-Zinner	21h21' 1.7"	+48°21'40.4"	1.4356	0.8772	11.3+	98°	--:--	04:07	+88°	--:--	02:04	+70°	O	CYG
Do 28.06.2018	00:00 P/2010 H2 Vales	15h34' 4.1"	-20°20' 9.8"	3.3194	2.4745	13.2-	140°	18:00	22:16	+19°	02:35	00:20	+14°	SW	SCO
Do 28.06.2018	00:00 C/2017 S3 PANSTARRS	2h46'44.4"	+59°24'50.5"	1.2976	1.6376	13.2+	52°	--:--	09:33	+81°	--:--	02:04	+33°	NO	CAS
Do 28.06.2018	00:00 37P/Forbes	23h28'30.6"	- 3° 0'22.3"	1.6978	1.1309	13.5-	104°	00:25	06:14	+36°	12:02	02:04	+15°	SO	PSC
Do 28.06.2018	00:00 P/2013 R3-A Catalin.	21h21'33.6"	-16°22'35.4"	2.3977	1.5416	13.7+	138°	23:23	04:07	+23°	08:45	02:04	+18°	SO	CAP
Do 28.06.2018	00:00 P/2013 R3-B Catalin.	21h21'10.3"	-16°24'37.5"	2.3982	1.5413	13.7+	138°	23:23	04:06	+23°	08:45	02:04	+18°	SO	CAP
Do 28.06.2018	00:00 C/2016 R2 PANSTARRS	7h35' 1.3"	+51°37'27.5"	2.6546	3.4702	13.9-	31°	--:--	14:20	+89°	--:--	00:20	+16°	N	LYN
Do 28.06.2018	00:00 C/2016 N6 PANSTARRS	8h13'26.1"	+37°18'32.2"	2.6776	3.5437	14.0-	27°	04:09	14:57	+76°	01:49	00:20	+ 5°	NW	LYN
Do 28.06.2018	00:00 C/2017 M4 ATLAS	17h41'23.2"	+43°56'11.6"	3.7786	3.2786	14.4+	112°	--:--	00:27	+83°	--:--	00:26	+83°	S	HER
Do 28.06.2018	00:00 65P/Gunn	23h28'12.2"	-15°13'34.7"	3.1640	2.6843	14.9+	109°	01:27	06:13	+24°	10:58	02:04	+ 5°	SO	AQR
Fr 29.06.2018	00:00 21P/Giacobini-Zinner	21h23'27.7"	+48°56'11.9"	1.4268	0.8680	11.2+	98°	--:--	04:05	+88°	--:--	02:06	+71°	O	CYG
Fr 29.06.2018	00:00 C/2017 S3 PANSTARRS	2h51'28.3"	+59°25'21.6"	1.2779	1.6131	13.1+	52°	--:--	09:34	+81°	--:--	02:06	+33°	NO	CAS
Fr 29.06.2018	00:00 P/2010 H2 Vales	15h33'42.7"	-20°22'11.1"	3.3209	2.4849	13.2-	139°	17:56	22:12	+19°	02:31	00:19	+14°	SW	LIB
Fr 29.06.2018	00:00 37P/Forbes	23h29'34.6"	- 2°45' 8.9"	1.7009	1.1262	13.5-	105°	00:21	06:11	+37°	12:01	02:06	+16°	SO	PSC
Fr 29.06.2018	00:00 P/2013 R3-A Catalin.	21h21'28.8"	-16°22'56.7"	2.3955	1.5317	13.7+	139°	23:19	04:03	+23°	08:41	02:06	+18°	SO	CAP
Fr 29.06.2018	00:00 P/2013 R3-B Catalin.	21h21' 5.3"	-16°24'59.7"	2.3959	1.5314	13.7+	139°	23:19	04:02	+23°	08:41	02:06	+18°	SO	CAP
Fr 29.06.2018	00:00 C/2016 R2 PANSTARRS	7h37'57.9"	+51°42' 7.2"	2.6567	3.4723	13.9-	31°	--:--	14:19	+89°	--:--	00:19	+16°	N	LYN
Fr 29.06.2018	00:00 C/2016 N6 PANSTARRS	8h14' 5.7"	+37° 0'38.2"	2.6768	3.5507	14.0-	26°	04:13	14:54	+76°	01:39	00:19	+ 4°	NW	LYN
Fr 29.06.2018	00:00 C/2017 M4 ATLAS	17h39'15.6"	+43°43'51.5"	3.7740	3.2736	14.3+	112°	--:--	00:21	+83°	--:--	00:20	+83°	S	HER
Fr 29.06.2018	00:00 65P/Gunn	23h28'35.2"	-15°14'35.3"	3.1658	2.6735	14.9+	110°	01:24	06:10	+24°	10:55	02:06	+ 5°	SO	AQR
Sa 30.06.2018	00:00 21P/Giacobini-Zinner	21h25'57.5"	+49°30'42.4"	1.4179	0.8588	11.2+	98°	--:--	04:04	+89°	--:--	02:08	+72°	O	CYG
Sa 30.06.2018	00:00 C/2017 S3 PANSTARRS	2h56'19.3"	+59°25'18.2"	1.2582	1.5884	13.0+	52°	--:--	09:35	+81°	--:--	02:08	+33°	NO	CAS
Sa 30.06.2018	00:00 P/2010 H2 Vales	15h33'22.5"	-20°24'14.3"	3.3223	2.4955	13.2-	138°	17:52	22:07	+19°	02:26	00:17	+14°	SW	LIB
Sa 30.06.2018	00:00 37P/Forbes	23h30'36.7"	- 2°30' 3.3"	1.7041	1.1215	13.5-	106°	00:17	06:08	+37°	11:59	02:08	+16°	SO	PSC
Sa 30.06.2018	00:00 P/2013 R3-A Catalin.	21h21'22.4"	-16°23'25.1"	2.3933	1.5219	13.7+	140°	23:15	03:59	+23°	08:37	02:08	+19°	SO	CAP

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Sa 30.06.2018 00:00	P/2013 R3-B Catalin.	21h20'58.7"	-16°25'28.8"	2.3937	1.5216	13.7+	140°	23:15	03:58	+23°	08:37	02:08	+19°	SO	CAP
Sa 30.06.2018 00:00	C/2016 R2 PANSTARRS	7h40'55.4"	+51°46'37.1"	2.6589	3.4742	14.0-	31°	--:--	14:18	+89°	--:--	00:17	+16°	N	LYN
Sa 30.06.2018 00:00	C/2016 N6 PANSTARRS	8h14'45.3"	+36°42'50.5"	2.6760	3.5575	14.0-	26°	04:16	14:51	+76°	01:29	00:17	+ 4°	NW	LYN
Sa 30.06.2018 00:00	C/2017 M4 ATLAS	17h37' 8.8"	+43°31' 4.4"	3.7693	3.2688	14.3+	112°	--:--	00:15	+83°	--:--	00:17	+83°	S	HER
Sa 30.06.2018 00:00	65P/Gunn	23h28'57.1"	-15°15'43.1"	3.1676	2.6628	14.9+	111°	01:20	06:06	+24°	10:51	02:08	+ 6°	SO	AQR
So 01.07.2018 00:00	21P/Giacobini-Zinner	21h28'31.3"	+50° 5'11.3"	1.4091	0.8498	11.1+	98°	--:--	04:02	+89°	--:--	02:09	+72°	O	CYG
So 01.07.2018 00:00	C/2017 S3 PANSTARRS	3h 1'17.6"	+59°24'37.3"	1.2383	1.5637	12.9+	52°	--:--	09:36	+81°	--:--	02:09	+33°	NO	CAM
So 01.07.2018 00:00	P/2010 H2 Vales	15h33' 3.6"	-20°26'19.7"	3.3237	2.5063	13.2-	137°	17:48	22:03	+19°	02:22	00:16	+13°	SW	LIB
So 01.07.2018 00:00	37P/Forbes	23h31'36.8"	- 2°15' 5.8"	1.7072	1.1168	13.5-	106°	00:12	06:05	+37°	11:57	02:09	+17°	SO	PSC
So 01.07.2018 00:00	P/2013 R3-A Catalin.	21h21'14.4"	-16°24' 0.4"	2.3911	1.5123	13.7+	141°	23:11	03:55	+23°	08:33	02:09	+19°	SO	CAP
So 01.07.2018 00:00	P/2013 R3-B Catalin.	21h20'50.5"	-16°26' 5.0"	2.3915	1.5121	13.7+	141°	23:11	03:54	+23°	08:32	02:09	+19°	SO	CAP
So 01.07.2018 00:00	C/2016 R2 PANSTARRS	7h43'53.6"	+51°50'57.0"	2.6611	3.4761	14.0-	31°	--:--	14:17	+89°	--:--	00:16	+16°	N	LYN
So 01.07.2018 00:00	C/2016 N6 PANSTARRS	8h15'24.9"	+36°25' 8.8"	2.6753	3.5641	14.0-	25°	04:19	14:47	+75°	01:19	00:16	+ 3°	NW	LYN
So 01.07.2018 00:00	C/2017 M4 ATLAS	17h35' 2.9"	+43°17'50.6"	3.7647	3.2643	14.3+	112°	--:--	00:09	+82°	--:--	00:16	+82°	S	HER
So 01.07.2018 00:00	65P/Gunn	23h29'17.8"	-15°16'58.0"	3.1694	2.6521	14.9+	112°	01:17	06:02	+24°	10:47	02:09	+ 7°	SO	AQR
Mo 02.07.2018 00:00	21P/Giacobini-Zinner	21h31' 9.4"	+50°39'37.9"	1.4004	0.8408	11.0+	97°	--:--	04:01	+90°	--:--	02:11	+73°	O	CYG
Mo 02.07.2018 00:00	C/2017 S3 PANSTARRS	3h 6'23.6"	+59°23'15.1"	1.2183	1.5388	12.8+	52°	--:--	09:37	+81°	--:--	02:11	+33°	NO	CAM
Mo 02.07.2018 00:00	P/2010 H2 Vales	15h32'45.8"	-20°28'27.2"	3.3251	2.5172	13.2-	136°	17:44	21:59	+19°	02:18	00:14	+13°	SW	LIB
Mo 02.07.2018 00:00	37P/Forbes	23h32'35.0"	- 2° 0'16.5"	1.7105	1.1121	13.5-	107°	00:08	06:02	+37°	11:55	02:11	+18°	SO	PSC
Mo 02.07.2018 00:00	P/2013 R3-A Catalin.	21h21' 4.7"	-16°24'42.7"	2.3889	1.5029	13.7+	142°	23:07	03:51	+23°	08:29	02:11	+19°	SO	CAP
Mo 02.07.2018 00:00	P/2013 R3-B Catalin.	21h20'40.7"	-16°26'48.1"	2.3894	1.5026	13.7+	142°	23:07	03:50	+23°	08:28	02:11	+19°	SO	CAP
Mo 02.07.2018 00:00	C/2016 R2 PANSTARRS	7h46'52.7"	+51°55' 6.9"	2.6633	3.4780	14.0-	31°	--:--	14:16	+89°	--:--	00:14	+16°	N	LYN
Mo 02.07.2018 00:00	C/2016 N6 PANSTARRS	8h16' 4.6"	+36° 7'32.9"	2.6746	3.5705	14.0-	24°	04:21	14:44	+75°	01:10	00:14	+ 3°	NW	LYN
Mo 02.07.2018 00:00	C/2017 M4 ATLAS	17h32'58.0"	+43° 4'10.2"	3.7600	3.2600	14.3+	112°	--:--	23:57	+82°	--:--	00:14	+82°	S	HER
Mo 02.07.2018 00:00	65P/Gunn	23h29'37.5"	-15°18'20.1"	3.1713	2.6416	14.9+	112°	01:13	05:59	+24°	10:43	02:11	+ 7°	SO	AQR
Di 03.07.2018 00:00	21P/Giacobini-Zinner	21h33'52.0"	+51°14' 1.5"	1.3916	0.8319	11.0+	97°	--:--	04:00	+89°	--:--	02:14	+74°	O	CYG
Di 03.07.2018 00:00	C/2017 S3 PANSTARRS	3h11'37.6"	+59°21' 8.0"	1.1982	1.5137	12.7+	52°	--:--	09:38	+81°	--:--	02:14	+34°	NO	CAM
Di 03.07.2018 00:00	P/2010 H2 Vales	15h32'29.3"	-20°30'36.8"	3.3266	2.5284	13.2-	135°	17:40	21:55	+19°	02:13	00:12	+13°	SW	LIB
Di 03.07.2018 00:00	37P/Forbes	23h33'31.1"	- 1°45'35.7"	1.7137	1.1075	13.5-	107°	00:04	05:59	+38°	11:53	02:14	+19°	SO	PSC
Di 03.07.2018 00:00	P/2013 R3-A Catalin.	21h20'53.5"	-16°25'31.9"	2.3867	1.4936	13.6+	143°	23:03	03:46	+23°	08:25	02:14	+20°	SO	CAP
Di 03.07.2018 00:00	P/2013 R3-B Catalin.	21h20'29.3"	-16°27'38.0"	2.3872	1.4934	13.6+	143°	23:03	03:46	+23°	08:24	02:14	+20°	SO	CAP
Di 03.07.2018 00:00	C/2016 R2 PANSTARRS	7h49'52.6"	+51°59' 6.8"	2.6656	3.4798	14.0-	31°	--:--	14:16	+89°	--:--	00:12	+16°	N	LYN
Di 03.07.2018 00:00	C/2016 N6 PANSTARRS	8h16'44.3"	+35°50' 2.7"	2.6739	3.5767	14.0-	23°	04:23	14:41	+75°	01:02	00:12	+ 3°	NW	LYN
Di 03.07.2018 00:00	C/2017 M4 ATLAS	17h30'54.1"	+42°50' 3.7"	3.7554	3.2561	14.3+	112°	--:--	23:51	+82°	--:--	00:12	+82°	S	HER
Di 03.07.2018 00:00	65P/Gunn	23h29'55.9"	-15°19'49.2"	3.1731	2.6311	14.9+	113°	01:10	05:55	+24°	10:40	02:14	+ 8°	SO	AQR
Mi 04.07.2018 00:00	21P/Giacobini-Zinner	21h36'39.3"	+51°48'21.2"	1.3829	0.8230	10.9+	97°	--:--	03:59	+89°	--:--	02:16	+74°	O	CYG

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Mi 04.07.2018 00:00	C/2017 S3 PANSTARRS	3h16'59.9"	+59°18'11.6"	1.1779	1.4886	12.6+	52°	--:--	09:40	+82°	--:--	02:16	+34°	NO	CAM
Mi 04.07.2018 00:00	P/2010 H2 Vales	15h32'14.1"	-20°32'48.5"	3.3280	2.5398	13.2-	134°	17:36	21:51	+19°	02:09	00:11	+13°	SW	LIB
Mi 04.07.2018 00:00	37P/Forbes	23h34'25.3"	- 1°31' 3.6"	1.7170	1.1030	13.5-	108°	23:56	05:56	+38°	11:52	02:16	+20°	SO	PSC
Mi 04.07.2018 00:00	P/2013 R3-A Catalin.	21h20'40.6"	-16°26'27.9"	2.3846	1.4846	13.6+	144°	22:59	03:42	+23°	08:20	02:16	+20°	S	CAP
Mi 04.07.2018 00:00	P/2013 R3-B Catalin.	21h20'16.3"	-16°28'34.9"	2.3850	1.4843	13.6+	144°	22:59	03:42	+23°	08:20	02:16	+20°	S	CAP
Mi 04.07.2018 00:00	C/2016 R2 PANSTARRS	7h52'53.3"	+52° 2'56.4"	2.6679	3.4816	14.0-	31°	--:--	14:15	+89°	--:--	00:11	+16°	N	LYN
Mi 04.07.2018 00:00	C/2016 N6 PANSTARRS	8h17'24.1"	+35°32'38.2"	2.6733	3.5828	14.0-	23°	04:25	14:38	+75°	00:54	00:11	+ 2°	NW	LYN
Mi 04.07.2018 00:00	C/2017 M4 ATLAS	17h28'51.4"	+42°35'31.3"	3.7508	3.2524	14.3+	112°	--:--	23:45	+82°	--:--	00:11	+81°	SW	HER
Mi 04.07.2018 00:00	65P/Gunn	23h30'13.3"	-15°21'25.4"	3.1749	2.6207	14.9+	114°	01:06	05:52	+24°	10:36	02:16	+ 9°	SO	AQR
Do 05.07.2018 00:00	21P/Giacobini-Zinner	21h39'31.8"	+52°22'36.4"	1.3743	0.8142	10.8+	97°	--:--	03:58	+88°	--:--	02:18	+75°	O	CYG
Do 05.07.2018 00:00	C/2017 S3 PANSTARRS	3h22'30.8"	+59°14'21.2"	1.1575	1.4633	12.5+	52°	--:--	09:42	+82°	--:--	02:18	+34°	NO	CAM
Do 05.07.2018 00:00	P/2010 H2 Vales	15h32' 0.1"	-20°35' 2.5"	3.3294	2.5513	13.3-	133°	17:32	21:47	+19°	02:04	00:09	+12°	SW	LIB
Do 05.07.2018 00:00	37P/Forbes	23h35'17.4"	- 1°16'40.4"	1.7204	1.0984	13.5-	109°	23:51	05:53	+38°	11:50	02:18	+21°	SO	PSC
Do 05.07.2018 00:00	P/2013 R3-A Catalin.	21h20'26.2"	-16°27'30.8"	2.3824	1.4757	13.6+	145°	22:55	03:38	+23°	08:16	02:18	+21°	S	CAP
Do 05.07.2018 00:00	P/2013 R3-B Catalin.	21h20' 1.6"	-16°29'38.5"	2.3828	1.4755	13.6+	145°	22:55	03:38	+23°	08:15	02:18	+21°	S	CAP
Do 05.07.2018 00:00	C/2016 R2 PANSTARRS	7h55'54.8"	+52° 6'35.9"	2.6702	3.4833	14.0-	32°	--:--	14:14	+89°	--:--	00:09	+16°	N	LYN
Do 05.07.2018 00:00	C/2016 N6 PANSTARRS	8h18' 3.8"	+35°15'19.0"	2.6727	3.5886	14.0-	22°	04:26	14:34	+74°	00:46	00:09	+ 2°	NW	LYN
Do 05.07.2018 00:00	C/2017 M4 ATLAS	17h26'49.9"	+42°20'33.4"	3.7463	3.2490	14.3+	112°	--:--	23:39	+81°	--:--	00:09	+81°	SW	HER
Do 05.07.2018 00:00	65P/Gunn	23h30'29.4"	-15°23' 8.7"	3.1767	2.6104	14.9+	115°	01:03	05:48	+24°	10:32	02:18	+10°	SO	AQR
Fr 06.07.2018 00:00	21P/Giacobini-Zinner	21h42'29.7"	+52°56'46.0"	1.3657	0.8054	10.7+	96°	--:--	03:57	+88°	--:--	02:20	+75°	O	CYG
Fr 06.07.2018 00:00	C/2017 S3 PANSTARRS	3h28'10.7"	+59° 9'31.6"	1.1370	1.4380	12.3+	52°	--:--	09:43	+82°	--:--	02:20	+34°	NO	CAM
Fr 06.07.2018 00:00	P/2010 H2 Vales	15h31'47.3"	-20°37'18.7"	3.3309	2.5630	13.3-	132°	17:28	21:42	+19°	02:00	00:07	+12°	SW	LIB
Fr 06.07.2018 00:00	37P/Forbes	23h36' 7.4"	- 1° 2'26.3"	1.7238	1.0940	13.5-	109°	23:47	05:50	+38°	11:48	02:20	+22°	SO	PSC
Fr 06.07.2018 00:00	P/2013 R3-A Catalin.	21h20'10.1"	-16°28'40.4"	2.3802	1.4670	13.6+	146°	22:51	03:34	+23°	08:12	02:20	+21°	S	CAP
Fr 06.07.2018 00:00	P/2013 R3-B Catalin.	21h19'45.4"	-16°30'48.8"	2.3807	1.4668	13.6+	146°	22:51	03:34	+23°	08:11	02:20	+21°	S	CAP
Fr 06.07.2018 00:00	C/2016 R2 PANSTARRS	7h58'57.0"	+52°10' 5.0"	2.6726	3.4849	14.0-	32°	--:--	14:13	+89°	--:--	00:07	+16°	N	LYN
Fr 06.07.2018 00:00	C/2016 N6 PANSTARRS	8h18'43.6"	+34°58' 5.1"	2.6722	3.5943	14.0-	21°	04:27	14:31	+74°	00:38	00:07	+ 2°	NW	LYN
Fr 06.07.2018 00:00	C/2017 M4 ATLAS	17h24'49.7"	+42° 5'10.4"	3.7417	3.2459	14.3+	112°	--:--	23:33	+81°	--:--	00:07	+80°	SW	HER
Fr 06.07.2018 00:00	65P/Gunn	23h30'44.4"	-15°24'59.1"	3.1786	2.6002	14.9+	116°	00:59	05:44	+24°	10:28	02:20	+10°	SO	AQR
Sa 07.07.2018 00:00	21P/Giacobini-Zinner	21h45'33.4"	+53°30'49.1"	1.3571	0.7967	10.7+	96°	--:--	03:56	+87°	--:--	02:23	+76°	O	CYG
Sa 07.07.2018 00:00	C/2017 S3 PANSTARRS	3h33'59.9"	+59° 3'37.1"	1.1163	1.4125	12.2+	52°	--:--	09:45	+82°	--:--	02:23	+34°	NO	CAM
Sa 07.07.2018 00:00	P/2010 H2 Vales	15h31'35.8"	-20°39'37.1"	3.3323	2.5749	13.3-	131°	17:24	21:38	+19°	01:56	00:05	+12°	SW	LIB
Sa 07.07.2018 00:00	37P/Forbes	23h36'55.4"	- 0°48'21.6"	1.7272	1.0895	13.5-	110°	23:43	05:47	+38°	11:46	02:23	+23°	SO	PSC
Sa 07.07.2018 00:00	P/2013 R3-A Catalin.	21h19'52.5"	-16°29'56.6"	2.3781	1.4584	13.6+	147°	22:47	03:30	+23°	08:07	02:23	+21°	S	CAP
Sa 07.07.2018 00:00	P/2013 R3-B Catalin.	21h19'27.6"	-16°32' 5.7"	2.3786	1.4583	13.6+	147°	22:47	03:29	+23°	08:07	02:23	+21°	S	CAP
Sa 07.07.2018 00:00	C/2016 R2 PANSTARRS	8h 1'59.9"	+52°13'23.8"	2.6750	3.4865	14.0-	32°	--:--	14:12	+89°	--:--	00:05	+16°	N	LYN
Sa 07.07.2018 00:00	C/2016 N6 PANSTARRS	8h19'23.4"	+34°40'56.4"	2.6717	3.5997	14.0-	21°	04:28	14:28	+74°	00:30	00:05	+ 1°	NW	LYN

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	TRi.	Stb.
Sa 07.07.2018	00:00 C/2017 M4 ATLAS	17h22'50.8"	+41°49'22.7"	3.7372	3.2431	14.3+	111°	--:--	23:27	+81°	--:--	00:05	+79°	SW	HER
Sa 07.07.2018	00:00 65P/Gunn	23h30'58.2"	-15°26'56.5"	3.1804	2.5901	14.9+	117°	00:56	05:41	+24°	10:24	02:23	+11°	SO	AQR
So 08.07.2018	00:00 21P/Giacobini-Zinner	21h48'43.2"	+54° 4'44.5"	1.3485	0.7881	10.6+	96°	--:--	03:55	+87°	--:--	02:25	+76°	O	CYG
So 08.07.2018	00:00 C/2017 S3 PANSTARRS	3h39'58.7"	+58°56'31.3"	1.0954	1.3870	12.1+	51°	--:--	09:47	+82°	--:--	02:25	+33°	NO	CAM
So 08.07.2018	00:00 P/2010 H2 Vales	15h31'25.5"	-20°41'57.8"	3.3337	2.5869	13.3-	130°	17:21	21:34	+18°	01:51	00:02	+12°	SW	LIB
So 08.07.2018	00:00 37P/Forbes	23h37'41.3"	- 0°34'26.5"	1.7307	1.0851	13.5-	111°	23:38	05:44	+39°	11:44	02:25	+24°	SO	PSC
So 08.07.2018	00:00 P/2013 R3-A Catalin.	21h19'33.2"	-16°31'19.4"	2.3760	1.4501	13.6+	148°	22:43	03:25	+23°	08:03	02:25	+21°	S	CAP
So 08.07.2018	00:00 P/2013 R3-B Catalin.	21h19' 8.2"	-16°33'29.2"	2.3764	1.4500	13.6+	148°	22:43	03:25	+23°	08:02	02:25	+21°	S	CAP
So 08.07.2018	00:00 C/2016 R2 PANSTARRS	8h 5' 3.5"	+52°16'32.2"	2.6775	3.4881	14.0-	32°	--:--	14:11	+88°	--:--	00:02	+17°	N	LYN
So 08.07.2018	00:00 C/2016 N6 PANSTARRS	8h20' 3.2"	+34°23'52.7"	2.6713	3.6050	14.1-	20°	04:29	14:25	+73°	00:23	00:02	+ 1°	NW	LYN
So 08.07.2018	00:00 C/2017 M4 ATLAS	17h20'53.4"	+41°33'10.7"	3.7326	3.2406	14.3+	111°	--:--	23:22	+80°	--:--	00:02	+79°	SW	HER
So 08.07.2018	00:00 65P/Gunn	23h31'10.9"	-15°29' 0.9"	3.1823	2.5801	14.9+	118°	00:52	05:37	+24°	10:20	02:25	+12°	SO	AQR
So 08.07.2018	00:00 48P/Johnson	22h34'27.4"	-17°14' 6.6"	2.0239	1.2040	15.0+	131°	00:06	04:40	+22°	09:14	02:25	+16°	SO	AQR
Mo 09.07.2018	00:00 21P/Giacobini-Zinner	21h51'59.4"	+54°38'31.2"	1.3401	0.7795	10.5+	96°	--:--	03:54	+86°	--:--	02:28	+77°	NO	CEP
Mo 09.07.2018	00:00 C/2017 S3 PANSTARRS	3h46' 7.3"	+58°48' 7.2"	1.0744	1.3614	12.0+	51°	--:--	09:50	+82°	--:--	02:28	+33°	NO	CAM
Mo 09.07.2018	00:00 P/2010 H2 Vales	15h31'16.5"	-20°44'20.9"	3.3352	2.5991	13.3-	129°	17:17	21:30	+18°	01:47	00:00	+11°	SW	LIB
Mo 09.07.2018	00:00 37P/Forbes	23h38'25.0"	- 0°20'41.2"	1.7343	1.0808	13.5-	112°	23:34	05:40	+39°	11:42	02:28	+25°	SO	PSC
Mo 09.07.2018	00:00 P/2013 R3-A Catalin.	21h19'12.5"	-16°32'48.6"	2.3739	1.4420	13.5+	149°	22:39	03:21	+23°	07:59	02:28	+22°	S	CAP
Mo 09.07.2018	00:00 P/2013 R3-B Catalin.	21h18'47.2"	-16°34'59.0"	2.3743	1.4418	13.5+	149°	22:38	03:21	+23°	07:58	02:28	+22°	S	CAP
Mo 09.07.2018	00:00 C/2016 R2 PANSTARRS	8h 8' 7.8"	+52°19'30.1"	2.6800	3.4896	14.0-	32°	--:--	14:10	+88°	--:--	23:58	+17°	N	LYN
Mo 09.07.2018	00:00 C/2016 N6 PANSTARRS	8h20'43.0"	+34° 6'53.9"	2.6709	3.6100	14.1-	19°	04:30	14:21	+73°	00:16	00:00	+ 1°	NW	LYN
Mo 09.07.2018	00:00 C/2017 M4 ATLAS	17h18'57.4"	+41°16'35.0"	3.7281	3.2384	14.3+	111°	--:--	23:16	+80°	--:--	00:00	+78°	SW	HER
Mo 09.07.2018	00:00 65P/Gunn	23h31'22.3"	-15°31'12.2"	3.1841	2.5702	14.9+	119°	00:49	05:33	+24°	10:16	02:28	+12°	SO	AQR
Mo 09.07.2018	00:00 46P/Wirtanen	0h25'28.6"	-13°13'26.7"	2.1261	1.6165	15.0+	105°	01:30	06:27	+26°	11:23	02:28	+ 8°	SO	CET
Mo 09.07.2018	00:00 48P/Johnson	22h35' 9.3"	-17°21'57.7"	2.0229	1.1960	15.0+	132°	00:03	04:37	+22°	09:10	02:28	+16°	SO	AQR
Di 10.07.2018	00:00 21P/Giacobini-Zinner	21h55'22.7"	+55°12' 7.9"	1.3316	0.7709	10.4+	95°	--:--	03:54	+86°	--:--	02:30	+77°	NO	CEP
Di 10.07.2018	00:00 C/2017 S3 PANSTARRS	3h52'26.2"	+58°38'17.2"	1.0533	1.3356	11.9+	51°	--:--	09:52	+82°	--:--	02:30	+33°	NO	CAM
Di 10.07.2018	00:00 P/2010 H2 Vales	15h31' 8.8"	-20°46'46.2"	3.3366	2.6114	13.3-	128°	17:13	21:26	+18°	01:43	00:00	+11°	SW	LIB
Di 10.07.2018	00:00 P/2013 R3-A Catalin.	21h18'50.1"	-16°34'24.2"	2.3717	1.4341	13.5+	150°	22:34	03:17	+23°	07:54	02:30	+22°	S	CAP
Di 10.07.2018	00:00 P/2013 R3-B Catalin.	21h18'24.7"	-16°36'35.2"	2.3722	1.4339	13.5+	150°	22:34	03:16	+23°	07:53	02:30	+22°	S	CAP
Di 10.07.2018	00:00 37P/Forbes	23h39' 6.6"	- 0° 7' 6.0"	1.7378	1.0765	13.5-	112°	23:30	05:37	+39°	11:39	02:30	+26°	SO	PSC
Di 10.07.2018	00:00 C/2016 R2 PANSTARRS	8h11'12.7"	+52°22'17.5"	2.6826	3.4910	14.0-	32°	--:--	14:09	+88°	--:--	23:56	+17°	N	LYN
Di 10.07.2018	00:00 C/2016 N6 PANSTARRS	8h21'22.7"	+33°49'59.8"	2.6705	3.6149	14.1-	19°	04:30	14:18	+73°	00:09	00:00	+ 0°	NW	LYN
Di 10.07.2018	00:00 C/2017 M4 ATLAS	17h17' 2.9"	+40°59'35.9"	3.7236	3.2364	14.3+	111°	--:--	23:10	+80°	--:--	00:00	+77°	SW	HER
Di 10.07.2018	00:00 65P/Gunn	23h31'32.5"	-15°33'30.4"	3.1860	2.5604	14.9+	119°	00:45	05:29	+24°	10:12	02:30	+13°	SO	AQR
Di 10.07.2018	00:00 46P/Wirtanen	0h26'51.1"	-13°13'29.4"	2.1179	1.5984	14.9+	106°	01:28	06:25	+26°	11:21	02:30	+ 8°	SO	CET
Di 10.07.2018	00:00 48P/Johnson	22h35'49.6"	-17°30' 3.0"	2.0218	1.1881	15.0+	133°	23:58	04:34	+22°	09:06	02:30	+17°	SO	AQR

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	TRi.	Stb.
Mi 11.07.2018 00:00	21P/Giacobini-Zinner	21h58'53.3"	+55°45'33.0"	1.3232	0.7624	10.4+	95°	--:--	03:53	+85°	--:--	02:33	+77°	NO	CEP
Mi 11.07.2018 00:00	C/2017 S3 PANSTARRS	3h58'55.7"	+58°26'52.5"	1.0320	1.3099	11.7+	51°	--:--	09:55	+82°	--:--	02:33	+33°	NO	CAM
Mi 11.07.2018 00:00	P/2010 H2 Vales	15h31' 2.3"	-20°49'13.9"	3.3381	2.6240	13.3-	127°	17:09	21:22	+18°	01:38	23:53	+11°	SW	LIB
Mi 11.07.2018 00:00	P/2013 R3-A Catalin.	21h18'26.3"	-16°36' 5.9"	2.3696	1.4263	13.5+	151°	22:30	03:13	+23°	07:50	02:33	+22°	S	CAP
Mi 11.07.2018 00:00	P/2013 R3-B Catalin.	21h18' 0.7"	-16°38'17.5"	2.3701	1.4262	13.5+	152°	22:30	03:12	+23°	07:49	02:33	+22°	S	CAP
Mi 11.07.2018 00:00	37P/Forbes	23h39'46.1"	+ 0° 6'19.0"	1.7414	1.0722	13.5-	113°	23:25	05:34	+39°	11:37	02:33	+27°	SO	PSC
Mi 11.07.2018 00:00	C/2016 R2 PANSTARRS	8h14'18.3"	+52°24'54.4"	2.6851	3.4924	14.0-	32°	--:--	14:09	+88°	--:--	23:53	+17°	N	LYN
Mi 11.07.2018 00:00	C/2017 M4 ATLAS	17h15'10.0"	+40°42'14.1"	3.7191	3.2348	14.3+	111°	--:--	23:04	+80°	--:--	00:00	+77°	SW	HER
Mi 11.07.2018 00:00	46P/Wirtanen	0h28'13.4"	-13°13'41.5"	2.1096	1.5803	14.9+	107°	01:25	06:22	+26°	11:18	02:33	+ 9°	SO	CET
Mi 11.07.2018 00:00	65P/Gunn	23h31'41.4"	-15°35'55.5"	3.1878	2.5507	14.9+	120°	00:42	05:25	+24°	10:08	02:33	+14°	SO	AQR
Mi 11.07.2018 00:00	48P/Johnson	22h36'28.3"	-17°38'22.3"	2.0208	1.1803	14.9+	134°	23:56	04:30	+22°	09:02	02:33	+17°	SO	AQR
Do 12.07.2018 00:00	21P/Giacobini-Zinner	22h 2'31.7"	+56°18'45.2"	1.3149	0.7540	10.3+	95°	--:--	03:53	+84°	--:--	02:36	+77°	NO	CEP
Do 12.07.2018 00:00	C/2017 S3 PANSTARRS	4h 5'35.8"	+58°13'43.9"	1.0105	1.2841	11.6+	50°	--:--	09:58	+83°	--:--	02:36	+33°	NO	CAM
Do 12.07.2018 00:00	P/2010 H2 Vales	15h30'57.2"	-20°51'44.0"	3.3395	2.6366	13.3-	126°	17:05	21:18	+18°	01:34	23:51	+11°	SW	LIB
Do 12.07.2018 00:00	P/2013 R3-A Catalin.	21h18' 0.9"	-16°37'53.7"	2.3675	1.4188	13.5+	152°	22:26	03:08	+23°	07:45	02:36	+22°	S	CAP
Do 12.07.2018 00:00	P/2013 R3-B Catalin.	21h17'35.2"	-16°40' 5.9"	2.3680	1.4187	13.5+	153°	22:26	03:08	+23°	07:44	02:36	+22°	S	CAP
Do 12.07.2018 00:00	37P/Forbes	23h40'23.3"	+ 0°19'33.5"	1.7451	1.0681	13.5-	114°	23:21	05:31	+40°	11:35	02:36	+28°	SO	PSC
Do 12.07.2018 00:00	C/2016 R2 PANSTARRS	8h17'24.4"	+52°27'20.6"	2.6878	3.4938	14.0-	32°	--:--	14:08	+88°	--:--	23:51	+17°	N	UMA
Do 12.07.2018 00:00	C/2017 M4 ATLAS	17h13'18.7"	+40°24'30.1"	3.7147	3.2334	14.2+	111°	--:--	22:58	+79°	--:--	23:51	+76°	SW	HER
Do 12.07.2018 00:00	46P/Wirtanen	0h29'35.5"	-13°14' 3.0"	2.1013	1.5624	14.8+	107°	01:23	06:20	+26°	11:16	02:36	+10°	SO	CET
Do 12.07.2018 00:00	65P/Gunn	23h31'49.2"	-15°38'27.3"	3.1897	2.5412	14.9+	121°	00:38	05:22	+24°	10:04	02:36	+14°	SO	AQR
Do 12.07.2018 00:00	48P/Johnson	22h37' 5.4"	-17°46'55.5"	2.0198	1.1727	14.9+	134°	23:53	04:27	+21°	08:57	02:36	+17°	SO	AQR
Fr 13.07.2018 00:00	21P/Giacobini-Zinner	22h 6'18.5"	+56°51'42.9"	1.3066	0.7455	10.2+	94°	--:--	03:53	+84°	--:--	02:38	+78°	NO	CEP
Fr 13.07.2018 00:00	C/2017 S3 PANSTARRS	4h12'27.0"	+57°58'40.6"	0.9888	1.2582	11.4+	50°	--:--	10:01	+83°	--:--	02:38	+33°	NO	CAM
Fr 13.07.2018 00:00	P/2010 H2 Vales	15h30'53.2"	-20°54'16.4"	3.3410	2.6494	13.4-	125°	17:02	21:14	+18°	01:30	23:48	+11°	SW	LIB
Fr 13.07.2018 00:00	P/2013 R3-A Catalin.	21h17'34.1"	-16°39'47.3"	2.3655	1.4115	13.5+	154°	22:22	03:04	+23°	07:41	02:38	+22°	S	CAP
Fr 13.07.2018 00:00	P/2013 R3-B Catalin.	21h17' 8.2"	-16°41'60.0"	2.3659	1.4114	13.5+	154°	22:22	03:03	+22°	07:40	02:38	+22°	S	CAP
Fr 13.07.2018 00:00	37P/Forbes	23h40'58.3"	+ 0°32'37.2"	1.7488	1.0639	13.5-	114°	23:17	05:27	+40°	11:33	02:38	+28°	SO	PSC
Fr 13.07.2018 00:00	C/2016 R2 PANSTARRS	8h20'31.2"	+52°29'36.3"	2.6904	3.4951	14.0-	32°	--:--	14:07	+88°	--:--	23:48	+17°	N	UMA
Fr 13.07.2018 00:00	C/2017 M4 ATLAS	17h11'29.1"	+40° 6'24.4"	3.7102	3.2323	14.2+	110°	--:--	22:53	+79°	--:--	23:48	+75°	SW	HER
Fr 13.07.2018 00:00	46P/Wirtanen	0h30'57.4"	-13°14'34.2"	2.0931	1.5445	14.8+	108°	01:20	06:17	+26°	11:13	02:38	+10°	SO	CET
Fr 13.07.2018 00:00	65P/Gunn	23h31'55.7"	-15°41' 5.9"	3.1916	2.5317	14.9+	122°	00:35	05:18	+24°	10:00	02:38	+15°	SO	AQR
Fr 13.07.2018 00:00	48P/Johnson	22h37'40.9"	-17°55'42.6"	2.0189	1.1653	14.9+	135°	23:51	04:24	+21°	08:53	02:38	+17°	SO	AQR
Sa 14.07.2018 00:00	21P/Giacobini-Zinner	22h10'14.2"	+57°24'24.1"	1.2984	0.7372	10.1+	94°	--:--	03:53	+83°	--:--	02:41	+78°	NO	CEP
Sa 14.07.2018 00:00	C/2017 S3 PANSTARRS	4h19'29.5"	+57°41'31.3"	0.9670	1.2323	11.3+	50°	--:--	10:04	+83°	--:--	02:41	+33°	NO	CAM
Sa 14.07.2018 00:00	P/2010 H2 Vales	15h30'50.6"	-20°56'51.3"	3.3425	2.6624	13.4-	124°	16:58	21:10	+18°	01:26	23:46	+10°	SW	LIB

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Sa 14.07.2018 00:00	P/2013 R3-A Catalin.	21h17' 5.8"	-16°41'46.6"	2.3634	1.4044	13.5+	155°	22:18	02:59	+22°	07:36	02:41	+22°	S	CAP
Sa 14.07.2018 00:00	P/2013 R3-B Catalin.	21h16'39.7"	-16°43'59.8"	2.3638	1.4043	13.5+	155°	22:17	02:59	+22°	07:35	02:41	+22°	S	CAP
Sa 14.07.2018 00:00	37P/Forbes	23h41'31.1"	+ 0°45'29.9"	1.7525	1.0598	13.6-	115°	23:12	05:24	+40°	11:30	02:41	+29°	SO	PSC
Sa 14.07.2018 00:00	C/2016 R2 PANSTARRS	8h23'38.4"	+52°31'41.3"	2.6931	3.4964	14.0-	32°	--:--	14:06	+88°	--:--	23:46	+17°	N	UMA
Sa 14.07.2018 00:00	C/2017 M4 ATLAS	17h 9'41.3"	+39°47'57.7"	3.7058	3.2315	14.2+	110°	--:--	22:47	+79°	--:--	23:46	+75°	SW	HER
Sa 14.07.2018 00:00	46P/Wirtanen	0h32'19.2"	-13°15'15.2"	2.0848	1.5267	14.7+	108°	01:18	06:15	+26°	11:10	02:41	+11°	SO	CET
Sa 14.07.2018 00:00	65P/Gunn	23h32' 1.0"	-15°43'51.0"	3.1934	2.5224	14.9+	123°	00:31	05:14	+23°	09:56	02:41	+16°	SO	AQR
Sa 14.07.2018 00:00	48P/Johnson	22h38'14.8"	-18° 4'43.2"	2.0179	1.1580	14.9+	136°	23:48	04:20	+21°	08:49	02:41	+18°	SO	AQR
So 15.07.2018 00:00	21P/Giacobini-Zinner	22h14'19.4"	+57°56'47.1"	1.2902	0.7289	10.1+	94°	--:--	03:53	+83°	--:--	02:44	+78°	NO	CEP
So 15.07.2018 00:00	C/2017 S3 PANSTARRS	4h26'43.3"	+57°22' 3.0"	0.9450	1.2065	11.2+	49°	--:--	10:07	+84°	--:--	02:44	+32°	NO	CAM
So 15.07.2018 00:00	P/2010 H2 Vales	15h30'49.2"	-20°59'28.5"	3.3439	2.6755	13.4-	123°	16:54	21:06	+18°	01:21	23:43	+10°	SW	LIB
So 15.07.2018 00:00	66P/du Toit	1h20' 8.8"	-19°19'27.8"	1.4921	0.9232	13.4-	100°	02:36	06:58	+20°	11:20	02:44	+ 1°	SO	CET
So 15.07.2018 00:00	P/2013 R3-A Catalin.	21h16'36.1"	-16°43'51.3"	2.3613	1.3975	13.5+	156°	22:13	02:55	+22°	07:31	02:44	+22°	S	CAP
So 15.07.2018 00:00	P/2013 R3-B Catalin.	21h16' 9.8"	-16°46' 5.0"	2.3618	1.3974	13.5+	156°	22:13	02:55	+22°	07:31	02:44	+22°	S	CAP
So 15.07.2018 00:00	37P/Forbes	23h42' 1.7"	+ 0°58'11.5"	1.7563	1.0558	13.6-	116°	23:08	05:20	+40°	11:28	02:44	+30°	SO	PSC
So 15.07.2018 00:00	C/2016 R2 PANSTARRS	8h26'46.2"	+52°33'35.7"	2.6959	3.4976	14.0-	32°	--:--	14:05	+88°	--:--	23:43	+18°	N	UMA
So 15.07.2018 00:00	C/2017 M4 ATLAS	17h 7'55.2"	+39°29'10.5"	3.7014	3.2310	14.2+	110°	--:--	22:41	+78°	--:--	23:43	+74°	SW	HER
So 15.07.2018 00:00	46P/Wirtanen	0h33'40.7"	-13°16' 6.2"	2.0764	1.5089	14.7+	109°	01:15	06:12	+26°	11:08	02:44	+12°	SO	CET
So 15.07.2018 00:00	65P/Gunn	23h32' 5.1"	-15°46'42.6"	3.1953	2.5133	14.9+	124°	00:27	05:10	+23°	09:52	02:44	+16°	SO	AQR
So 15.07.2018 00:00	48P/Johnson	22h38'47.0"	-18°13'57.2"	2.0170	1.1508	14.9+	137°	23:46	04:17	+21°	08:45	02:44	+18°	SO	AQR
Mo 16.07.2018 00:00	21P/Giacobini-Zinner	22h18'34.7"	+58°28'49.7"	1.2821	0.7206	10.0+	94°	--:--	03:53	+82°	--:--	02:46	+78°	NO	CEP
Mo 16.07.2018 00:00	C/2017 S3 PANSTARRS	4h34' 8.7"	+57° 0' 1.6"	0.9228	1.1806	11.0+	49°	--:--	10:11	+84°	--:--	02:46	+32°	NO	CAM
Mo 16.07.2018 00:00	P/2010 H2 Vales	15h30'49.1"	-21° 2' 8.2"	3.3454	2.6887	13.4-	122°	16:51	21:02	+18°	01:17	23:41	+10°	SW	LIB
Mo 16.07.2018 00:00	66P/du Toit	1h20'56.6"	-19° 8'28.6"	1.4986	0.9230	13.4-	101°	02:31	06:55	+20°	11:18	02:46	+ 1°	SO	CET
Mo 16.07.2018 00:00	P/2013 R3-A Catalin.	21h16' 5.0"	-16°46' 1.4"	2.3593	1.3908	13.4+	157°	22:09	02:51	+22°	07:27	02:46	+22°	S	CAP
Mo 16.07.2018 00:00	P/2013 R3-B Catalin.	21h15'38.6"	-16°48'15.5"	2.3597	1.3908	13.4+	157°	22:09	02:50	+22°	07:26	02:46	+22°	S	CAP
Mo 16.07.2018 00:00	37P/Forbes	23h42'30.0"	+ 1°10'41.8"	1.7601	1.0519	13.6-	117°	23:03	05:17	+40°	11:25	02:46	+31°	SO	PSC
Mo 16.07.2018 00:00	C/2016 R2 PANSTARRS	8h29'54.5"	+52°35'19.3"	2.6986	3.4988	14.0-	33°	--:--	14:04	+88°	--:--	23:41	+18°	N	UMA
Mo 16.07.2018 00:00	C/2017 M4 ATLAS	17h 6'10.9"	+39°10' 3.6"	3.6970	3.2308	14.2+	110°	--:--	22:36	+78°	--:--	23:41	+73°	SW	HER
Mo 16.07.2018 00:00	46P/Wirtanen	0h35' 2.0"	-13°17' 7.3"	2.0681	1.4913	14.6+	110°	01:13	06:09	+26°	11:05	02:46	+12°	SO	CET
Mo 16.07.2018 00:00	65P/Gunn	23h32' 7.9"	-15°49'40.6"	3.1972	2.5042	14.9+	125°	00:24	05:06	+23°	09:48	02:46	+17°	SO	AQR
Mo 16.07.2018 00:00	48P/Johnson	22h39'17.5"	-18°23'24.3"	2.0162	1.1438	14.9+	138°	23:43	04:14	+21°	08:40	02:46	+18°	S	AQR
Di 17.07.2018 00:00	21P/Giacobini-Zinner	22h23' 0.7"	+59° 0'29.7"	1.2741	0.7123	9.9+	93°	--:--	03:54	+82°	--:--	02:49	+78°	NO	CEP
Di 17.07.2018 00:00	C/2017 S3 PANSTARRS	4h41'45.7"	+56°35'11.6"	0.9004	1.1548	10.9+	48°	--:--	10:15	+84°	--:--	02:49	+32°	NO	CAM
Di 17.07.2018 00:00	P/2010 H2 Vales	15h30'50.2"	-21° 4'50.3"	3.3469	2.7020	13.4-	121°	16:47	20:58	+18°	01:13	23:38	+10°	SW	LIB
Di 17.07.2018 00:00	66P/du Toit	1h21'41.4"	-18°57'42.5"	1.5051	0.9228	13.4-	102°	02:27	06:52	+20°	11:16	02:49	+ 2°	SO	CET
Di 17.07.2018 00:00	P/2013 R3-A Catalin.	21h15'32.5"	-16°48'16.4"	2.3572	1.3844	13.4+	158°	22:05	02:46	+22°	07:22	02:45	+22°	S	CAP

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Di 17.07.2018 00:00	P/2013 R3-B Catalin.	21h15' 6.0"	-16°50'30.9"	2.3577	1.3843	13.4+	158°	22:05	02:46	+22°	07:21	02:45	+22°	S	CAP
Di 17.07.2018 00:00	37P/Forbes	23h42'56.1"	+ 1°23' 0.4"	1.7639	1.0480	13.6-	117°	22:59	05:13	+41°	11:23	02:49	+32°	SO	PSC
Di 17.07.2018 00:00	C/2016 R2 PANSTARRS	8h33' 3.2"	+52°36'52.2"	2.7014	3.5000	14.0-	33°	--:--	14:04	+88°	--:--	23:38	+18°	N	UMA
Di 17.07.2018 00:00	C/2017 M4 ATLAS	17h 4'28.4"	+38°50'37.6"	3.6926	3.2309	14.2+	109°	--:--	22:30	+78°	--:--	23:38	+73°	SW	HER
Di 17.07.2018 00:00	46P/Wirtanen	0h36'23.0"	-13°18'18.8"	2.0598	1.4737	14.5+	110°	01:10	06:07	+26°	11:02	02:49	+13°	SO	CET
Di 17.07.2018 00:00	48P/Johnson	22h39'46.4"	-18°33' 4.4"	2.0153	1.1370	14.8+	139°	23:41	04:10	+21°	08:36	02:49	+18°	S	AQR
Di 17.07.2018 00:00	65P/Gunn	23h32' 9.5"	-15°52'44.8"	3.1991	2.4953	14.8+	126°	00:20	05:02	+23°	09:44	02:49	+17°	SO	AQR
Mi 18.07.2018 00:00	21P/Giacobini-Zinner	22h27'38.1"	+59°31'44.5"	1.2661	0.7041	9.8+	93°	--:--	03:55	+81°	--:--	02:52	+78°	NO	CEP
Mi 18.07.2018 00:00	C/2017 S3 PANSTARRS	4h49'34.4"	+56° 7'15.8"	0.8778	1.1291	10.7+	48°	--:--	10:18	+85°	--:--	02:52	+31°	NO	CAM
Mi 18.07.2018 00:00	P/2013 R3-A Catalin.	21h14'58.8"	-16°50'36.3"	2.3552	1.3781	13.4+	159°	22:01	02:42	+22°	07:17	02:41	+22°	S	CAP
Mi 18.07.2018 00:00	P/2013 R3-B Catalin.	21h14'32.2"	-16°52'51.2"	2.3556	1.3781	13.4+	159°	22:00	02:41	+22°	07:17	02:40	+22°	S	CAP
Mi 18.07.2018 00:00	P/2010 H2 Vales	15h30'52.6"	-21° 7'34.8"	3.3483	2.7155	13.4-	121°	16:43	20:55	+18°	01:09	23:36	+10°	SW	LIB
Mi 18.07.2018 00:00	66P/du Toit	1h22'23.2"	-18°47' 9.4"	1.5117	0.9225	13.4-	102°	02:23	06:49	+20°	11:14	02:52	+ 3°	SO	CET
Mi 18.07.2018 00:00	37P/Forbes	23h43'19.9"	+ 1°35' 7.3"	1.7678	1.0442	13.6-	118°	22:54	05:10	+41°	11:20	02:52	+33°	SO	PSC
Mi 18.07.2018 00:00	C/2016 R2 PANSTARRS	8h36'12.4"	+52°38'14.4"	2.7043	3.5011	14.0-	33°	--:--	14:03	+88°	--:--	23:36	+18°	N	UMA
Mi 18.07.2018 00:00	C/2017 M4 ATLAS	17h 2'47.8"	+38°30'53.1"	3.6882	3.2313	14.2+	109°	10:57	22:25	+77°	09:58	23:36	+72°	SW	HER
Mi 18.07.2018 00:00	46P/Wirtanen	0h37'43.9"	-13°19'40.7"	2.0515	1.4563	14.5+	111°	01:08	06:04	+26°	11:00	02:52	+14°	SO	CET
Mi 18.07.2018 00:00	48P/Johnson	22h40'13.6"	-18°42'57.0"	2.0145	1.1303	14.8+	140°	23:38	04:07	+20°	08:31	02:52	+19°	S	AQR
Mi 18.07.2018 00:00	65P/Gunn	23h32' 9.9"	-15°55'55.2"	3.2010	2.4866	14.8+	127°	00:16	04:58	+23°	09:39	02:52	+18°	SO	AQR
Do 19.07.2018 00:00	21P/Giacobini-Zinner	22h32'27.6"	+60° 2'31.5"	1.2582	0.6960	9.8+	93°	--:--	03:56	+81°	--:--	02:55	+77°	NO	CEP
Do 19.07.2018 00:00	C/2017 S3 PANSTARRS	4h57'34.7"	+55°35'55.2"	0.8551	1.1035	10.5+	47°	--:--	10:23	+85°	--:--	02:55	+31°	NO	AUR
Do 19.07.2018 00:00	P/2013 R3-A Catalin.	21h14'23.8"	-16°53' 0.7"	2.3532	1.3721	13.4+	160°	21:56	02:37	+22°	07:12	02:36	+22°	S	CAP
Do 19.07.2018 00:00	P/2013 R3-B Catalin.	21h13'57.0"	-16°55'15.9"	2.3536	1.3722	13.4+	160°	21:56	02:37	+22°	07:12	02:36	+22°	S	CAP
Do 19.07.2018 00:00	P/2010 H2 Vales	15h30'56.3"	-21°10'21.7"	3.3498	2.7291	13.4-	120°	16:40	20:51	+18°	01:05	23:33	+ 9°	SW	LIB
Do 19.07.2018 00:00	66P/du Toit	1h23' 2.1"	-18°36'48.9"	1.5184	0.9223	13.5-	103°	02:18	06:45	+21°	11:11	02:55	+ 4°	SO	CET
Do 19.07.2018 00:00	37P/Forbes	23h43'41.5"	+ 1°47' 2.3"	1.7717	1.0404	13.6-	119°	22:49	05:06	+41°	11:18	02:55	+34°	SO	PSC
Do 19.07.2018 00:00	C/2016 R2 PANSTARRS	8h39'21.9"	+52°39'25.8"	2.7072	3.5022	14.0-	33°	--:--	14:02	+88°	--:--	23:33	+18°	N	UMA
Do 19.07.2018 00:00	C/2017 M4 ATLAS	17h 1' 9.2"	+38°10'50.8"	3.6839	3.2319	14.2+	109°	11:07	22:19	+77°	09:36	23:33	+71°	SW	HER
Do 19.07.2018 00:00	46P/Wirtanen	0h39' 4.5"	-13°21'13.2"	2.0431	1.4389	14.4+	111°	01:05	06:02	+26°	10:57	02:55	+14°	SO	CET
Do 19.07.2018 00:00	48P/Johnson	22h40'39.1"	-18°53' 1.9"	2.0138	1.1238	14.8+	140°	23:36	04:03	+20°	08:27	02:55	+19°	S	AQR
Do 19.07.2018 00:00	65P/Gunn	23h32' 9.0"	-15°59'11.6"	3.2029	2.4780	14.8+	128°	00:13	04:54	+23°	09:35	02:55	+18°	SO	AQR
Fr 20.07.2018 00:00	21P/Giacobini-Zinner	22h37'30.0"	+60°32'47.7"	1.2504	0.6878	9.7+	92°	--:--	03:57	+80°	--:--	02:57	+77°	NO	CEP
Fr 20.07.2018 00:00	C/2017 S3 PANSTARRS	5h 5'46.6"	+55° 0'49.1"	0.8321	1.0781	10.4+	47°	--:--	10:27	+86°	--:--	02:57	+30°	NO	AUR
Fr 20.07.2018 00:00	P/2013 R3-A Catalin.	21h13'47.6"	-16°55'29.5"	2.3512	1.3663	13.4+	161°	21:52	02:32	+22°	07:08	02:31	+22°	S	CAP
Fr 20.07.2018 00:00	P/2013 R3-B Catalin.	21h13'20.7"	-16°57'45.0"	2.3516	1.3664	13.4+	161°	21:52	02:32	+22°	07:07	02:31	+22°	S	CAP
Fr 20.07.2018 00:00	P/2010 H2 Vales	15h31' 1.2"	-21°13'10.9"	3.3513	2.7428	13.4-	119°	16:36	20:47	+18°	01:00	23:31	+ 9°	SW	LIB
Fr 20.07.2018 00:00	66P/du Toit	1h23'37.9"	-18°26'41.0"	1.5252	0.9220	13.5-	104°	02:14	06:42	+21°	11:09	02:57	+ 5°	SO	CET

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Fr 20.07.2018	00:00 37P/Forbes	23h44' 0.7"	+ 1°58'45.1"	1.7757	1.0367	13.6-	120°	22:45	05:03	+41°	11:15	02:57	+35°	SO	PSC
Fr 20.07.2018	00:00 C/2016 R2 PANSTARRS	8h42'31.9"	+52°40'26.4"	2.7101	3.5032	14.1-	33°	--:--	14:01	+88°	--:--	23:31	+18°	N	UMA
Fr 20.07.2018	00:00 C/2017 M4 ATLAS	16h59'32.4"	+37°50'31.5"	3.6795	3.2328	14.2+	108°	11:14	22:14	+77°	09:19	23:31	+71°	SW	HER
Fr 20.07.2018	00:00 46P/Wirtanen	0h40'24.9"	-13°22'56.6"	2.0347	1.4216	14.4+	112°	01:03	05:59	+26°	10:54	02:57	+15°	SO	CET
Fr 20.07.2018	00:00 48P/Johnson	22h41' 3.0"	-19° 3'18.7"	2.0130	1.1174	14.8+	141°	23:33	03:59	+20°	08:22	02:57	+19°	S	AQR
Fr 20.07.2018	00:00 65P/Gunn	23h32' 6.9"	-16° 2'33.9"	3.2048	2.4695	14.8+	129°	00:09	04:50	+23°	09:31	02:57	+19°	SO	AQR
Fr 20.07.2018	00:00 38P/Stephan-Oterma	3h 7'32.8"	+ 1° 7'35.4"	2.1149	2.1782	14.9+	73°	02:17	08:26	+40°	14:35	02:57	+ 6°	O	CET
Sa 21.07.2018	00:00 21P/Giacobini-Zinner	22h42'46.0"	+61° 2'29.7"	1.2426	0.6798	9.6+	92°	--:--	03:58	+80°	--:--	03:00	+77°	NO	CEP
Sa 21.07.2018	00:00 C/2017 S3 PANSTARRS	5h14' 9.7"	+54°21'34.9"	0.8089	1.0528	10.2+	46°	--:--	10:32	+87°	--:--	03:00	+29°	NO	AUR
Sa 21.07.2018	00:00 P/2013 R3-A Catalin.	21h13'10.3"	-16°58' 2.4"	2.3492	1.3608	13.4+	162°	21:48	02:28	+22°	07:03	02:27	+22°	S	CAP
Sa 21.07.2018	00:00 P/2013 R3-B Catalin.	21h12'43.2"	-17° 0'18.1"	2.3496	1.3609	13.4+	162°	21:47	02:27	+22°	07:02	02:26	+22°	S	CAP
Sa 21.07.2018	00:00 P/2010 H2 Vales	15h31' 7.3"	-21°16' 2.6"	3.3528	2.7567	13.5-	118°	16:33	20:43	+18°	00:56	23:28	+ 9°	SW	LIB
Sa 21.07.2018	00:00 66P/du Toit	1h24'10.8"	-18°16'45.5"	1.5320	0.9217	13.5-	104°	02:10	06:39	+21°	11:07	03:00	+ 6°	SO	CET
Sa 21.07.2018	00:00 37P/Forbes	23h44'17.7"	+ 2°10'15.6"	1.7797	1.0331	13.6-	121°	22:40	04:59	+41°	11:12	03:00	+35°	SO	PSC
Sa 21.07.2018	00:00 C/2016 R2 PANSTARRS	8h45'42.1"	+52°41'16.1"	2.7131	3.5042	14.1-	33°	--:--	14:01	+88°	--:--	23:28	+18°	NW	UMA
Sa 21.07.2018	00:00 C/2017 M4 ATLAS	16h57'57.6"	+37°29'55.8"	3.6752	3.2340	14.2+	108°	11:18	22:08	+76°	09:03	23:28	+70°	SW	HER
Sa 21.07.2018	00:00 46P/Wirtanen	0h41'45.1"	-13°24'51.0"	2.0264	1.4044	14.3+	113°	01:00	05:56	+26°	10:51	03:00	+15°	SO	CET
Sa 21.07.2018	00:00 48P/Johnson	22h41'25.1"	-19°13'47.1"	2.0123	1.1113	14.8+	142°	23:31	03:56	+20°	08:18	03:00	+19°	S	AQR
Sa 21.07.2018	00:00 65P/Gunn	23h32' 3.6"	-16° 6' 1.9"	3.2066	2.4612	14.8+	130°	00:06	04:46	+23°	09:26	03:00	+19°	SO	AQR
Sa 21.07.2018	00:00 38P/Stephan-Oterma	3h 9'37.4"	+ 1°16'22.1"	2.1073	2.1622	14.9+	73°	02:14	08:24	+41°	14:34	03:00	+ 7°	O	CET
So 22.07.2018	00:00 21P/Giacobini-Zinner	22h48'16.4"	+61°31'34.0"	1.2349	0.6717	9.5+	92°	--:--	04:00	+79°	--:--	03:03	+77°	NO	CEP
So 22.07.2018	00:00 C/2017 S3 PANSTARRS	5h22'44.0"	+53°37'47.8"	0.7855	1.0278	10.0+	45°	--:--	10:36	+88°	--:--	03:03	+29°	NO	AUR
So 22.07.2018	00:00 P/2013 R3-A Catalin.	21h12'31.8"	-17° 0'39.0"	2.3472	1.3555	13.4+	163°	21:43	02:23	+22°	06:58	02:22	+22°	S	CAP
So 22.07.2018	00:00 P/2013 R3-B Catalin.	21h12' 4.6"	-17° 2'55.0"	2.3476	1.3556	13.4+	164°	21:43	02:23	+22°	06:57	02:22	+22°	S	CAP
So 22.07.2018	00:00 P/2010 H2 Vales	15h31'14.6"	-21°18'56.6"	3.3543	2.7706	13.5-	117°	16:29	20:39	+18°	00:52	23:25	+ 9°	SW	LIB
So 22.07.2018	00:00 66P/du Toit	1h24'40.7"	-18° 7' 2.2"	1.5388	0.9213	13.5-	105°	02:05	06:35	+21°	11:04	03:03	+ 7°	SO	CET
So 22.07.2018	00:00 37P/Forbes	23h44'32.4"	+ 2°21'33.6"	1.7837	1.0296	13.6-	121°	22:36	04:55	+42°	11:09	03:03	+36°	SO	PSC
So 22.07.2018	00:00 C/2016 R2 PANSTARRS	8h48'52.7"	+52°41'55.1"	2.7161	3.5052	14.1-	33°	--:--	14:00	+88°	--:--	23:25	+18°	NW	UMA
So 22.07.2018	00:00 C/2017 M4 ATLAS	16h56'24.7"	+37° 9' 4.4"	3.6709	3.2355	14.2+	107°	11:22	22:03	+76°	08:49	23:25	+70°	SW	HER
So 22.07.2018	00:00 46P/Wirtanen	0h43' 5.0"	-13°26'56.5"	2.0180	1.3873	14.3+	113°	00:58	05:54	+26°	10:49	03:03	+16°	SO	CET
So 22.07.2018	00:00 48P/Johnson	22h41'45.6"	-19°24'26.7"	2.0116	1.1053	14.8+	143°	23:28	03:52	+20°	08:13	03:03	+19°	S	AQR
So 22.07.2018	00:00 38P/Stephan-Oterma	3h11'42.4"	+ 1°25' 7.8"	2.0997	2.1463	14.8+	74°	02:12	08:22	+41°	14:33	03:03	+ 8°	O	TAU
So 22.07.2018	00:00 65P/Gunn	23h31'59.0"	-16° 9'35.5"	3.2086	2.4531	14.8+	131°	23:58	04:42	+23°	09:22	03:03	+20°	SO	AQR
Mo 23.07.2018	00:00 21P/Giacobini-Zinner	22h54' 2.0"	+61°59'56.4"	1.2273	0.6637	9.5+	91°	--:--	04:02	+79°	--:--	03:06	+76°	NO	CEP
Mo 23.07.2018	00:00 C/2017 S3 PANSTARRS	5h31'28.9"	+52°49' 0.9"	0.7618	1.0031	9.8+	44°	--:--	10:41	+88°	--:--	03:06	+28°	NO	AUR
Mo 23.07.2018	00:00 P/2013 R3-A Catalin.	21h11'52.2"	-17° 3'19.2"	2.3452	1.3504	13.4+	165°	21:39	02:19	+22°	06:53	02:18	+22°	S	CAP
Mo 23.07.2018	00:00 P/2013 R3-B Catalin.	21h11'24.9"	-17° 5'35.4"	2.3456	1.3505	13.4+	165°	21:39	02:18	+22°	06:53	02:17	+22°	S	CAP

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Mo 23.07.2018 00:00	P/2010 H2 Vales	15h31'23.2"	-21°21'53.0"	3.3558	2.7846	13.5-	116°	16:26	20:35	+18°	00:48	23:23	+ 9°	SW	LIB
Mo 23.07.2018 00:00	66P/du Toit	1h25' 7.6"	-17°57'30.9"	1.5458	0.9210	13.5-	106°	02:01	06:32	+21°	11:01	03:06	+ 8°	SO	CET
Mo 23.07.2018 00:00	37P/Forbes	23h44'44.8"	+ 2°32'38.8"	1.7878	1.0262	13.6-	122°	22:31	04:52	+42°	11:07	03:06	+37°	SO	PSC
Mo 23.07.2018 00:00	C/2016 R2 PANSTARRS	8h52' 3.6"	+52°42'23.2"	2.7191	3.5062	14.1-	34°	--:--	13:59	+88°	--:--	23:23	+19°	NW	UMA
Mo 23.07.2018 00:00	C/2017 M4 ATLAS	16h54'53.8"	+36°47'58.1"	3.6666	3.2373	14.2+	107°	11:24	21:57	+76°	08:36	23:23	+69°	SW	HER
Mo 23.07.2018 00:00	46P/Wirtanen	0h44'24.7"	-13°29'13.5"	2.0096	1.3703	14.2+	114°	00:56	05:51	+26°	10:46	03:06	+16°	SO	CET
Mo 23.07.2018 00:00	48P/Johnson	22h42' 4.4"	-19°35'17.1"	2.0110	1.0994	14.8+	144°	23:25	03:49	+20°	08:08	03:06	+19°	S	AQR
Mo 23.07.2018 00:00	38P/Stephan-Oterma	3h13'47.9"	+ 1°33'52.5"	2.0921	2.1304	14.8+	74°	02:09	08:21	+41°	14:31	03:06	+ 8°	O	TAU
Mo 23.07.2018 00:00	65P/Gunn	23h31'53.2"	-16°13'14.5"	3.2105	2.4451	14.8+	132°	23:54	04:38	+23°	09:18	03:06	+20°	SO	AQR
Di 24.07.2018 00:00	21P/Giacobini-Zinner	23h 0' 3.5"	+62°27'32.6"	1.2198	0.6557	9.4+	91°	--:--	04:04	+78°	--:--	03:08	+76°	NO	CEP
Di 24.07.2018 00:00	C/2017 S3 PANSTARRS	5h40'24.1"	+51°54'45.2"	0.7380	0.9788	9.6+	43°	--:--	10:46	+89°	--:--	03:08	+27°	NO	AUR
Di 24.07.2018 00:00	P/2013 R3-A Catalin.	21h11'11.6"	-17° 6' 2.7"	2.3432	1.3455	13.3+	166°	21:35	02:14	+22°	06:48	02:13	+22°	S	CAP
Di 24.07.2018 00:00	P/2013 R3-B Catalin.	21h10'44.2"	-17° 8'19.0"	2.3436	1.3457	13.3+	166°	21:34	02:14	+22°	06:48	02:13	+22°	S	CAP
Di 24.07.2018 00:00	P/2010 H2 Vales	15h31'33.0"	-21°24'51.6"	3.3572	2.7988	13.5-	115°	16:22	20:32	+18°	00:44	23:20	+ 9°	SW	LIB
Di 24.07.2018 00:00	66P/du Toit	1h25'31.5"	-17°48'11.5"	1.5528	0.9207	13.5-	107°	01:57	06:28	+21°	10:59	03:08	+ 9°	SO	CET
Di 24.07.2018 00:00	37P/Forbes	23h44'54.9"	+ 2°43'31.1"	1.7919	1.0228	13.6-	123°	22:26	04:48	+42°	11:04	03:08	+38°	SO	PSC
Di 24.07.2018 00:00	C/2016 R2 PANSTARRS	8h55'14.8"	+52°42'40.5"	2.7222	3.5071	14.1-	34°	--:--	13:58	+88°	--:--	23:20	+19°	NW	UMA
Di 24.07.2018 00:00	46P/Wirtanen	0h45'44.1"	-13°31'41.9"	2.0012	1.3534	14.2+	115°	00:53	05:49	+26°	10:43	03:08	+17°	SO	CET
Di 24.07.2018 00:00	C/2017 M4 ATLAS	16h53'24.9"	+36°26'37.4"	3.6623	3.2393	14.2+	107°	11:26	21:52	+75°	08:23	23:20	+68°	SW	HER
Di 24.07.2018 00:00	38P/Stephan-Oterma	3h15'53.7"	+ 1°42'36.3"	2.0846	2.1145	14.7+	74°	02:06	08:19	+41°	14:30	03:08	+ 9°	O	TAU
Di 24.07.2018 00:00	48P/Johnson	22h42'21.5"	-19°46'17.8"	2.0104	1.0938	14.7+	145°	23:23	03:45	+19°	08:04	03:08	+19°	S	AQR
Di 24.07.2018 00:00	65P/Gunn	23h31'46.2"	-16°16'58.7"	3.2124	2.4373	14.8+	133°	23:51	04:34	+23°	09:13	03:08	+20°	S	AQR
Mi 25.07.2018 00:00	21P/Giacobini-Zinner	23h 6'21.9"	+62°54'17.7"	1.2123	0.6478	9.3+	91°	--:--	04:06	+78°	--:--	03:11	+76°	NO	CEP
Mi 25.07.2018 00:00	C/2017 S3 PANSTARRS	5h49'28.9"	+50°54'29.5"	0.7138	0.9550	9.4+	42°	--:--	10:51	+90°	--:--	03:11	+26°	NO	AUR
Mi 25.07.2018 00:00	P/2013 R3-A Catalin.	21h10'30.0"	-17° 8'49.3"	2.3413	1.3409	13.3+	167°	21:30	02:10	+22°	06:43	02:09	+22°	S	CAP
Mi 25.07.2018 00:00	P/2013 R3-B Catalin.	21h10' 2.5"	-17°11' 5.6"	2.3417	1.3411	13.3+	167°	21:30	02:09	+22°	06:43	02:08	+22°	S	CAP
Mi 25.07.2018 00:00	P/2010 H2 Vales	15h31'44.0"	-21°27'52.5"	3.3587	2.8130	13.5-	114°	16:19	20:28	+18°	00:40	23:17	+ 9°	SW	LIB
Mi 25.07.2018 00:00	66P/du Toit	1h25'52.5"	-17°39' 3.7"	1.5598	0.9203	13.6-	107°	01:52	06:25	+22°	10:56	03:11	+10°	SO	CET
Mi 25.07.2018 00:00	37P/Forbes	23h45' 2.7"	+ 2°54'10.3"	1.7961	1.0196	13.6-	124°	22:22	04:44	+42°	11:01	03:11	+38°	SO	PSC
Mi 25.07.2018 00:00	C/2016 R2 PANSTARRS	8h58'26.1"	+52°42'46.9"	2.7253	3.5080	14.1-	34°	--:--	13:58	+88°	--:--	23:17	+19°	NW	UMA
Mi 25.07.2018 00:00	46P/Wirtanen	0h47' 3.3"	-13°34'22.1"	1.9928	1.3365	14.1+	115°	00:51	05:46	+26°	10:40	03:11	+17°	SO	CET
Mi 25.07.2018 00:00	C/2017 M4 ATLAS	16h51'57.9"	+36° 5' 3.2"	3.6581	3.2416	14.2+	106°	11:27	21:46	+75°	08:11	23:17	+68°	SW	HER
Mi 25.07.2018 00:00	38P/Stephan-Oterma	3h18' 0.0"	+ 1°51'19.2"	2.0771	2.0988	14.6+	75°	02:04	08:17	+41°	14:29	03:11	+10°	O	TAU
Mi 25.07.2018 00:00	48P/Johnson	22h42'36.9"	-19°57'28.5"	2.0098	1.0883	14.7+	146°	23:20	03:41	+19°	07:59	03:11	+19°	S	AQR
Mi 25.07.2018 00:00	65P/Gunn	23h31'37.9"	-16°20'48.1"	3.2143	2.4297	14.8+	133°	23:47	04:30	+23°	09:09	03:11	+21°	S	AQR
Do 26.07.2018 00:00	21P/Giacobini-Zinner	23h12'57.9"	+63°20' 6.2"	1.2050	0.6399	9.2+	90°	--:--	04:09	+77°	--:--	03:14	+76°	NO	CEP
Do 26.07.2018 00:00	C/2017 S3 PANSTARRS	5h58'42.9"	+49°47'40.9"	0.6895	0.9317	9.2+	41°	--:--	10:57	+88°	--:--	03:14	+25°	NO	AUR

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Do 26.07.2018 00:00	P/2013 R3-A Catalin.	21h 9'47.6"	-17°11'38.5"	2.3393	1.3365	13.3+	168°	21:26	02:05	+22°	06:39	02:04	+22°	S	CAP
Do 26.07.2018 00:00	P/2013 R3-B Catalin.	21h 9'19.9"	-17°13'54.9"	2.3397	1.3367	13.3+	168°	21:26	02:04	+22°	06:38	02:03	+22°	S	CAP
Do 26.07.2018 00:00	P/2010 H2 Vales	15h31'56.1"	-21°30'55.7"	3.3602	2.8274	13.5-	113°	16:16	20:24	+18°	00:36	23:14	+ 8°	SW	LIB
Do 26.07.2018 00:00	66P/du Toit	1h26'10.5"	-17°30' 7.4"	1.5669	0.9200	13.6-	108°	01:48	06:21	+22°	10:53	03:14	+10°	SO	CET
Do 26.07.2018 00:00	37P/Forbes	23h45' 8.2"	+ 3° 4'36.1"	1.8002	1.0164	13.6-	125°	22:17	04:40	+42°	10:58	03:14	+39°	SO	PSC
Do 26.07.2018 00:00	46P/Wirtanen	0h48'22.2"	-13°37'14.3"	1.9844	1.3198	14.1+	116°	00:48	05:43	+26°	10:37	03:14	+18°	SO	CET
Do 26.07.2018 00:00	C/2016 R2 PANSTARRS	9h 1'37.7"	+52°42'42.5"	2.7284	3.5089	14.1-	34°	--:--	13:57	+88°	--:--	23:14	+19°	NW	UMA
Do 26.07.2018 00:00	C/2017 M4 ATLAS	16h50'33.0"	+35°43'16.0"	3.6539	3.2442	14.2+	106°	11:28	21:41	+75°	08:00	23:14	+67°	SW	HER
Do 26.07.2018 00:00	38P/Stephan-Oterma	3h20' 6.7"	+ 2° 0' 1.2"	2.0696	2.0830	14.6+	75°	02:01	08:15	+41°	14:28	03:14	+11°	O	TAU
Do 26.07.2018 00:00	48P/Johnson	22h42'50.6"	-20° 8'48.6"	2.0092	1.0830	14.7+	146°	23:18	03:38	+19°	07:54	03:14	+19°	S	AQR
Do 26.07.2018 00:00	65P/Gunn	23h31'28.5"	-16°24'42.4"	3.2162	2.4222	14.8+	134°	23:43	04:26	+23°	09:04	03:14	+21°	S	AQR
Fr 27.07.2018 00:00	C/2017 S3 PANSTARRS	6h 8' 5.2"	+48°33'44.7"	0.6649	0.9091	9.0+	40°	--:--	11:02	+87°	--:--	03:17	+23°	NO	AUR
Fr 27.07.2018 00:00	21P/Giacobini-Zinner	23h19'52.1"	+63°44'52.3"	1.1977	0.6321	9.2+	90°	--:--	04:12	+77°	--:--	03:17	+75°	NO	CEP
Fr 27.07.2018 00:00	P/2013 R3-A Catalin.	21h 9' 4.2"	-17°14'30.2"	2.3374	1.3324	13.3+	169°	21:21	02:00	+22°	06:34	01:59	+22°	S	CAP
Fr 27.07.2018 00:00	P/2013 R3-B Catalin.	21h 8'36.4"	-17°16'46.7"	2.3378	1.3326	13.3+	169°	21:21	02:00	+22°	06:33	01:59	+22°	S	CAP
Fr 27.07.2018 00:00	P/2010 H2 Vales	15h32' 9.5"	-21°34' 1.0"	3.3617	2.8418	13.5-	112°	16:12	20:21	+18°	00:32	23:12	+ 8°	SW	LIB
Fr 27.07.2018 00:00	66P/du Toit	1h26'25.4"	-17°21'22.4"	1.5741	0.9197	13.6-	109°	01:43	06:17	+22°	10:50	03:17	+11°	SO	CET
Fr 27.07.2018 00:00	37P/Forbes	23h45'11.4"	+ 3°14'48.4"	1.8044	1.0133	13.6-	126°	22:12	04:36	+42°	10:55	03:17	+40°	SO	PSC
Fr 27.07.2018 00:00	46P/Wirtanen	0h49'40.8"	-13°40'18.7"	1.9759	1.3032	14.0+	116°	00:46	05:41	+26°	10:34	03:17	+18°	SO	CET
Fr 27.07.2018 00:00	C/2016 R2 PANSTARRS	9h 4'49.5"	+52°42'27.4"	2.7316	3.5097	14.1-	34°	--:--	13:56	+88°	--:--	23:12	+19°	NW	UMA
Fr 27.07.2018 00:00	C/2017 M4 ATLAS	16h49'10.0"	+35°21'16.6"	3.6496	3.2471	14.2+	105°	11:29	21:36	+74°	07:48	23:12	+66°	SW	HER
Fr 27.07.2018 00:00	38P/Stephan-Oterma	3h22'13.8"	+ 2° 8'42.3"	2.0621	2.0674	14.5+	75°	01:59	08:13	+41°	14:27	03:17	+12°	O	TAU
Fr 27.07.2018 00:00	48P/Johnson	22h43' 2.6"	-20°20'17.6"	2.0087	1.0779	14.7+	147°	23:15	03:34	+19°	07:49	03:17	+19°	S	AQR
Fr 27.07.2018 00:00	65P/Gunn	23h31'17.8"	-16°28'41.5"	3.2181	2.4149	14.8+	135°	23:40	04:22	+23°	09:00	03:17	+21°	S	AQR
Sa 28.07.2018 00:00	C/2017 S3 PANSTARRS	6h17'35.1"	+47°12' 5.3"	0.6400	0.8872	8.8+	39°	--:--	11:08	+86°	--:--	03:19	+22°	NO	AUR
Sa 28.07.2018 00:00	21P/Giacobini-Zinner	23h27' 5.5"	+64° 8'29.3"	1.1905	0.6242	9.1+	90°	--:--	04:15	+77°	--:--	03:19	+75°	NO	CEP
Sa 28.07.2018 00:00	P/2013 R3-A Catalin.	21h 8'20.0"	-17°17'24.1"	2.3354	1.3285	13.3+	170°	21:17	01:56	+22°	06:29	01:55	+22°	S	CAP
Sa 28.07.2018 00:00	P/2013 R3-B Catalin.	21h 7'52.2"	-17°19'40.5"	2.3358	1.3287	13.3+	170°	21:17	01:55	+22°	06:28	01:54	+22°	S	CAP
Sa 28.07.2018 00:00	P/2010 H2 Vales	15h32'24.0"	-21°37' 8.6"	3.3632	2.8563	13.5-	111°	16:09	20:17	+18°	00:28	23:09	+ 8°	SW	LIB
Sa 28.07.2018 00:00	66P/du Toit	1h26'37.4"	-17°12'48.5"	1.5813	0.9193	13.6-	110°	01:39	06:13	+22°	10:47	03:19	+12°	SO	CET
Sa 28.07.2018 00:00	37P/Forbes	23h45'12.4"	+ 3°24'46.9"	1.8087	1.0103	13.6-	126°	22:07	04:32	+43°	10:52	03:19	+40°	SO	PSC
Sa 28.07.2018 00:00	46P/Wirtanen	0h50'59.2"	-13°43'35.4"	1.9675	1.2867	14.0+	117°	00:44	05:38	+25°	10:31	03:19	+19°	SO	CET
Sa 28.07.2018 00:00	C/2016 R2 PANSTARRS	9h 8' 1.4"	+52°42' 1.4"	2.7348	3.5106	14.1-	34°	--:--	13:55	+88°	--:--	23:09	+19°	NW	UMA
Sa 28.07.2018 00:00	C/2017 M4 ATLAS	16h47'49.1"	+34°59' 5.7"	3.6454	3.2502	14.2+	105°	11:29	21:31	+74°	07:37	23:09	+66°	SW	HER
Sa 28.07.2018 00:00	38P/Stephan-Oterma	3h24'21.4"	+ 2°17'22.6"	2.0547	2.0518	14.4+	76°	01:56	08:12	+42°	14:26	03:19	+13°	O	TAU
Sa 28.07.2018 00:00	48P/Johnson	22h43'12.9"	-20°31'55.0"	2.0082	1.0729	14.7+	148°	23:13	03:30	+19°	07:44	03:19	+19°	S	AQR
Sa 28.07.2018 00:00	65P/Gunn	23h31' 6.0"	-16°32'45.2"	3.2200	2.4078	14.8+	136°	23:36	04:18	+23°	08:55	03:19	+21°	S	AQR

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
So 29.07.2018 00:00	C/2017 S3 PANSTARRS	6h27'11.7"	+45°42' 6.8"	0.6149	0.8663	8.6+	37°	--:--	11:13	+84°	--:--	03:22	+20°	NO	AUR
So 29.07.2018 00:00	21P/Giacobini-Zinner	23h34'38.4"	+64°30'50.2"	1.1835	0.6165	9.0+	90°	--:--	04:19	+76°	--:--	03:22	+74°	NO	CAS
So 29.07.2018 00:00	P/2013 R3-A Catalin.	21h 7'35.1"	-17°20'19.8"	2.3335	1.3248	13.3+	171°	21:13	01:51	+22°	06:24	01:50	+22°	S	CAP
So 29.07.2018 00:00	P/2013 R3-B Catalin.	21h 7' 7.1"	-17°22'36.1"	2.3339	1.3250	13.3+	171°	21:12	01:50	+22°	06:23	01:49	+22°	S	CAP
So 29.07.2018 00:00	P/2010 H2 Vales	15h32'39.6"	-21°40'18.3"	3.3647	2.8709	13.6-	111°	16:06	20:13	+17°	00:24	23:06	+ 8°	SW	LIB
So 29.07.2018 00:00	37P/Forbes	23h45'11.0"	+ 3°34'31.4"	1.8130	1.0074	13.6-	127°	22:03	04:28	+43°	10:48	03:22	+41°	S	PSC
So 29.07.2018 00:00	66P/du Toit	1h26'46.4"	-17° 4'25.3"	1.5886	0.9190	13.6-	110°	01:34	06:10	+22°	10:44	03:22	+13°	SO	CET
So 29.07.2018 00:00	46P/Wirtanen	0h52'17.2"	-13°47' 4.7"	1.9591	1.2703	13.9+	118°	00:41	05:35	+25°	10:28	03:22	+19°	SO	CET
So 29.07.2018 00:00	C/2016 R2 PANSTARRS	9h11'13.4"	+52°41'24.7"	2.7380	3.5114	14.1-	35°	--:--	13:55	+88°	--:--	23:06	+19°	NW	UMA
So 29.07.2018 00:00	C/2017 M4 ATLAS	16h46'30.1"	+34°36'43.8"	3.6413	3.2535	14.2+	104°	11:30	21:25	+73°	07:27	23:06	+65°	SW	HER
So 29.07.2018 00:00	38P/Stephan-Oterma	3h26'29.4"	+ 2°26' 2.0"	2.0473	2.0362	14.4+	76°	01:54	08:10	+42°	14:25	03:22	+13°	O	TAU
So 29.07.2018 00:00	48P/Johnson	22h43'21.6"	-20°43'40.2"	2.0077	1.0682	14.7+	149°	23:10	03:26	+18°	07:39	03:22	+18°	S	AQR
So 29.07.2018 00:00	65P/Gunn	23h30'52.9"	-16°36'53.2"	3.2220	2.4009	14.8+	137°	23:32	04:14	+23°	08:51	03:22	+22°	S	AQR
Mo 30.07.2018 00:00	C/2017 S3 PANSTARRS	6h36'54.1"	+44° 3'14.4"	0.5896	0.8465	8.3+	35°	--:--	11:19	+82°	--:--	03:25	+19°	NO	AUR
Mo 30.07.2018 00:00	21P/Giacobini-Zinner	23h42'31.6"	+64°51'47.4"	1.1765	0.6087	8.9+	89°	--:--	04:23	+76°	--:--	03:25	+74°	NO	CAS
Mo 30.07.2018 00:00	P/2013 R3-A Catalin.	21h 6'49.5"	-17°23'17.1"	2.3316	1.3214	13.3+	172°	21:08	01:46	+22°	06:19	01:45	+22°	S	CAP
Mo 30.07.2018 00:00	P/2013 R3-B Catalin.	21h 6'21.5"	-17°25'33.3"	2.3320	1.3216	13.3+	173°	21:08	01:46	+22°	06:18	01:45	+22°	S	CAP
Mo 30.07.2018 00:00	P/2010 H2 Vales	15h32'56.5"	-21°43'30.1"	3.3662	2.8856	13.6-	110°	16:02	20:10	+17°	00:20	23:04	+ 8°	SW	LIB
Mo 30.07.2018 00:00	37P/Forbes	23h45' 7.3"	+ 3°44' 1.8"	1.8173	1.0046	13.6-	128°	21:58	04:24	+43°	10:45	03:25	+41°	S	PSC
Mo 30.07.2018 00:00	66P/du Toit	1h26'52.4"	-16°56'12.9"	1.5959	0.9187	13.6-	111°	01:29	06:06	+22°	10:41	03:25	+14°	SO	CET
Mo 30.07.2018 00:00	46P/Wirtanen	0h53'35.0"	-13°50'46.9"	1.9506	1.2539	13.8+	118°	00:39	05:33	+25°	10:25	03:25	+20°	SO	CET
Mo 30.07.2018 00:00	C/2016 R2 PANSTARRS	9h14'25.5"	+52°40'37.3"	2.7413	3.5121	14.1-	35°	--:--	13:54	+88°	--:--	23:04	+19°	NW	UMA
Mo 30.07.2018 00:00	C/2017 M4 ATLAS	16h45'13.2"	+34°14'11.8"	3.6371	3.2572	14.2+	104°	11:30	21:20	+73°	07:16	23:04	+64°	SW	HER
Mo 30.07.2018 00:00	38P/Stephan-Oterma	3h28'37.8"	+ 2°34'40.6"	2.0400	2.0207	14.3+	77°	01:51	08:08	+42°	14:24	03:25	+14°	O	TAU
Mo 30.07.2018 00:00	48P/Johnson	22h43'28.6"	-20°55'32.7"	2.0073	1.0636	14.7+	150°	23:08	03:23	+18°	07:34	03:22	+18°	S	AQR
Mo 30.07.2018 00:00	65P/Gunn	23h30'38.6"	-16°41' 5.4"	3.2239	2.3941	14.8+	138°	23:28	04:10	+23°	08:46	03:25	+22°	S	AQR
Di 31.07.2018 00:00	C/2017 S3 PANSTARRS	6h46'41.5"	+42°14'56.1"	0.5640	0.8281	8.1+	34°	--:--	11:25	+81°	--:--	03:27	+17°	NO	AUR
Di 31.07.2018 00:00	21P/Giacobini-Zinner	23h50'45.4"	+65°11'12.4"	1.1696	0.6011	8.9+	89°	--:--	04:27	+76°	--:--	03:27	+74°	NO	CAS
Di 31.07.2018 00:00	P/2013 R3-A Catalin.	21h 6' 3.3"	-17°26'15.6"	2.3297	1.3182	13.3+	174°	21:04	01:42	+22°	06:14	01:41	+22°	S	CAP
Di 31.07.2018 00:00	P/2013 R3-B Catalin.	21h 5'35.1"	-17°28'31.7"	2.3301	1.3185	13.3+	174°	21:04	01:41	+22°	06:13	01:40	+22°	S	CAP
Di 31.07.2018 00:00	P/2010 H2 Vales	15h33'14.4"	-21°46'44.0"	3.3677	2.9004	13.6-	109°	15:59	20:06	+17°	00:16	23:01	+ 8°	SW	LIB
Di 31.07.2018 00:00	37P/Forbes	23h45' 1.3"	+ 3°53'17.7"	1.8216	1.0019	13.6-	129°	21:53	04:20	+43°	10:42	03:27	+42°	S	PSC
Di 31.07.2018 00:00	66P/du Toit	1h26'55.3"	-16°48'10.8"	1.6033	0.9184	13.7-	112°	01:25	06:02	+22°	10:38	03:27	+14°	SO	CET
Di 31.07.2018 00:00	46P/Wirtanen	0h54'52.4"	-13°54'42.0"	1.9421	1.2377	13.8+	119°	00:37	05:30	+25°	10:22	03:27	+20°	SO	CET
Di 31.07.2018 00:00	C/2016 R2 PANSTARRS	9h17'37.7"	+52°39'39.2"	2.7446	3.5129	14.1-	35°	--:--	13:53	+88°	--:--	23:01	+20°	NW	UMA
Di 31.07.2018 00:00	C/2017 M4 ATLAS	16h43'58.2"	+33°51'30.2"	3.6330	3.2611	14.2+	103°	11:30	21:15	+73°	07:06	23:01	+64°	SW	HER
Di 31.07.2018 00:00	38P/Stephan-Oterma	3h30'46.6"	+ 2°43'18.4"	2.0327	2.0053	14.3+	77°	01:49	08:06	+42°	14:23	03:27	+15°	O	TAU
Di 31.07.2018 00:00	48P/Johnson	22h43'33.9"	-21° 7'31.8"	2.0069	1.0592	14.7+	151°	23:05	03:19	+18°	07:29	03:18	+18°	S	AQR

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Di 31.07.2018	00:00 65P/Gunn	23h30'23.2"	-16°45'21.7"	3.2258	2.3876	14.8+	139°	23:24	04:05	+22°	08:42	03:27	+22°	S	AQR
Mi 01.08.2018	00:00 C/2017 S3 PANSTARRS	6h56'32.9"	+40°16'44.8"	0.5382	0.8111	7.9+	32°	--:--	11:31	+78°	22:57	03:30	+15°	NO	AUR
Mi 01.08.2018	00:00 21P/Giacobini-Zinner	23h59'20.1"	+65°28'56.6"	1.1628	0.5934	8.8+	89°	--:--	04:32	+75°	--:--	03:30	+73°	NO	CEP
Mi 01.08.2018	00:00 P/2013 R3-A Catalin.	21h 5'16.5"	-17°29'15.1"	2.3278	1.3153	13.3+	175°	20:59	01:37	+22°	06:09	01:36	+22°	S	CAP
Mi 01.08.2018	00:00 P/2013 R3-B Catalin.	21h 4'48.3"	-17°31'31.0"	2.3282	1.3156	13.3+	175°	20:59	01:36	+22°	06:08	01:35	+22°	S	CAP
Mi 01.08.2018	00:00 P/2010 H2 Vales	15h33'33.5"	-21°49'59.9"	3.3693	2.9152	13.6-	108°	15:56	20:02	+17°	00:12	22:58	+ 8°	SW	LIB
Mi 01.08.2018	00:00 37P/Forbes	23h44'53.1"	+ 4° 2'19.1"	1.8260	0.9993	13.6-	130°	21:48	04:16	+43°	10:38	03:30	+42°	S	PSC
Mi 01.08.2018	00:00 66P/du Toit	1h26'55.3"	-16°40'18.8"	1.6107	0.9181	13.7-	113°	01:20	05:58	+23°	10:35	03:30	+15°	SO	CET
Mi 01.08.2018	00:00 46P/Wirtanen	0h56' 9.5"	-13°58'50.4"	1.9337	1.2216	13.7+	119°	00:35	05:27	+25°	10:19	03:30	+20°	SO	CET
Mi 01.08.2018	00:00 C/2016 R2 PANSTARRS	9h20'50.0"	+52°38'30.5"	2.7480	3.5136	14.1-	35°	--:--	13:52	+88°	--:--	22:58	+20°	NW	UMA
Mi 01.08.2018	00:00 C/2017 M4 ATLAS	16h42'45.3"	+33°28'39.7"	3.6288	3.2652	14.2+	103°	11:29	21:10	+72°	06:56	22:58	+63°	SW	HER
Mi 01.08.2018	00:00 38P/Stephan-Oterma	3h32'55.8"	+ 2°51'55.5"	2.0254	1.9899	14.2+	77°	01:46	08:04	+42°	14:22	03:30	+16°	O	TAU
Mi 01.08.2018	00:00 48P/Johnson	22h43'37.5"	-21°19'36.8"	2.0065	1.0550	14.7+	152°	23:02	03:15	+18°	07:24	03:14	+18°	S	AQR
Mi 01.08.2018	00:00 65P/Gunn	23h30' 6.6"	-16°49'41.6"	3.2278	2.3812	14.8+	140°	23:21	04:01	+22°	08:37	03:30	+22°	S	AQR
Do 02.08.2018	00:00 C/2017 S3 PANSTARRS	7h 6'27.3"	+38° 8'21.7"	0.5121	0.7959	7.6+	30°	00:16	11:37	+76°	22:03	03:33	+13°	NO	AUR
Do 02.08.2018	00:00 21P/Giacobini-Zinner	0h 8'15.6"	+65°44'50.2"	1.1561	0.5858	8.7+	88°	--:--	04:37	+75°	--:--	03:33	+73°	NO	CEP
Do 02.08.2018	00:00 P/2013 R3-A Catalin.	21h 4'29.2"	-17°32'15.2"	2.3260	1.3126	13.3+	176°	20:55	01:32	+22°	06:04	01:31	+22°	S	CAP
Do 02.08.2018	00:00 P/2013 R3-B Catalin.	21h 4' 0.9"	-17°34'30.9"	2.3264	1.3129	13.3+	176°	20:55	01:32	+22°	06:03	01:31	+22°	S	CAP
Do 02.08.2018	00:00 P/2010 H2 Vales	15h33'53.8"	-21°53'17.9"	3.3708	2.9301	13.6-	107°	15:53	19:59	+17°	00:08	22:55	+ 7°	SW	LIB
Do 02.08.2018	00:00 37P/Forbes	23h44'42.6"	+ 4°11' 5.7"	1.8304	0.9968	13.6-	131°	21:43	04:12	+43°	10:35	03:33	+43°	S	PSC
Do 02.08.2018	00:00 46P/Wirtanen	0h57'26.3"	-14° 3'12.3"	1.9252	1.2056	13.7+	120°	00:32	05:25	+25°	10:16	03:33	+21°	SO	CET
Do 02.08.2018	00:00 66P/du Toit	1h26'52.2"	-16°32'36.8"	1.6182	0.9178	13.7-	114°	01:15	05:54	+23°	10:32	03:33	+16°	SO	CET
Do 02.08.2018	00:00 C/2016 R2 PANSTARRS	9h24' 2.2"	+52°37'11.2"	2.7514	3.5144	14.1-	35°	--:--	13:52	+88°	--:--	22:55	+20°	NW	UMA
Do 02.08.2018	00:00 38P/Stephan-Oterma	3h35' 5.5"	+ 3° 0'31.7"	2.0181	1.9746	14.1+	78°	01:44	08:03	+42°	14:21	03:33	+17°	O	TAU
Do 02.08.2018	00:00 C/2017 M4 ATLAS	16h41'34.3"	+33° 5'40.9"	3.6247	3.2696	14.2+	102°	11:29	21:05	+72°	06:46	22:55	+63°	SW	HER
Do 02.08.2018	00:00 48P/Johnson	22h43'39.5"	-21°31'47.1"	2.0062	1.0510	14.6+	152°	23:00	03:11	+18°	07:18	03:10	+18°	S	AQR
Do 02.08.2018	00:00 65P/Gunn	23h29'48.8"	-16°54' 5.2"	3.2297	2.3751	14.8+	141°	23:17	03:57	+22°	08:32	03:33	+22°	S	AQR
Fr 03.08.2018	00:00 C/2017 S3 PANSTARRS	7h16'24.1"	+35°49'39.5"	0.4858	0.7828	7.3+	28°	01:23	11:43	+74°	21:32	03:35	+10°	NO	LYN
Fr 03.08.2018	00:00 21P/Giacobini-Zinner	0h17'31.8"	+65°58'43.5"	1.1496	0.5783	8.6+	88°	--:--	04:42	+75°	--:--	03:35	+73°	NO	CAS
Fr 03.08.2018	00:00 P/2013 R3-A Catalin.	21h 3'41.4"	-17°35'15.7"	2.3241	1.3101	13.2+	177°	20:51	01:27	+22°	05:59	01:26	+22°	S	CAP
Fr 03.08.2018	00:00 P/2013 R3-B Catalin.	21h 3'13.1"	-17°37'31.2"	2.3245	1.3105	13.3+	177°	20:50	01:27	+22°	05:58	01:26	+22°	S	CAP
Fr 03.08.2018	00:00 46P/Wirtanen	0h58'42.7"	-14° 7'47.9"	1.9167	1.1897	13.6+	121°	00:30	05:22	+25°	10:13	03:35	+21°	SO	CET
Fr 03.08.2018	00:00 P/2010 H2 Vales	15h34'15.1"	-21°56'37.8"	3.3723	2.9451	13.6-	106°	15:49	19:55	+17°	00:04	22:53	+ 7°	SW	SCO
Fr 03.08.2018	00:00 37P/Forbes	23h44'29.8"	+ 4°19'37.2"	1.8348	0.9945	13.7-	132°	21:38	04:08	+44°	10:32	03:35	+43°	S	PSC
Fr 03.08.2018	00:00 66P/du Toit	1h26'46.2"	-16°25' 4.4"	1.6257	0.9176	13.7-	114°	01:11	05:50	+23°	10:28	03:35	+17°	SO	CET
Fr 03.08.2018	00:00 38P/Stephan-Oterma	3h37'15.6"	+ 3° 9' 7.3"	2.0109	1.9594	14.1+	78°	01:41	08:01	+42°	14:19	03:35	+17°	O	TAU
Fr 03.08.2018	00:00 C/2016 R2 PANSTARRS	9h27'14.5"	+52°35'41.4"	2.7548	3.5151	14.1-	36°	--:--	13:51	+88°	--:--	22:53	+20°	NW	UMA

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	TRI.	Stb.
Fr 03.08.2018	00:00 C/2017 M4 ATLAS	16h40'25.3"	+32°42'34.5"	3.6206	3.2742	14.2+	102°	11:28	21:00	+72°	06:37	22:53	+62°	SW	HER
Fr 03.08.2018	00:00 48P/Johnson	22h43'39.9"	-21°44' 2.1"	2.0059	1.0472	14.6+	153°	22:57	03:07	+17°	07:13	03:06	+17°	S	AQR
Fr 03.08.2018	00:00 65P/Gunn	23h29'29.8"	-16°58'32.1"	3.2317	2.3691	14.8+	142°	23:13	03:53	+22°	08:28	03:35	+22°	S	AQR
Sa 04.08.2018	00:00 C/2017 S3 PANSTARRS	7h26'22.3"	+33°20'47.2"	0.4593	0.7720	7.1+	25°	02:06	11:48	+71°	21:08	03:38	+ 8°	NO	GEM
Sa 04.08.2018	00:00 21P/Giacobini-Zinner	0h27' 8.3"	+66°10'25.8"	1.1431	0.5708	8.6+	88°	--:--	04:48	+75°	--:--	03:38	+72°	NO	CAS
Sa 04.08.2018	00:00 P/2013 R3-A Catalin.	21h 2'53.3"	-17°38'16.2"	2.3223	1.3079	13.2+	178°	20:46	01:23	+22°	05:54	01:22	+22°	S	CAP
Sa 04.08.2018	00:00 P/2013 R3-B Catalin.	21h 2'24.9"	-17°40'31.4"	2.3226	1.3083	13.2+	178°	20:46	01:22	+22°	05:53	01:21	+22°	S	CAP
Sa 04.08.2018	00:00 46P/Wirtanen	0h59'58.7"	-14°12'37.5"	1.9082	1.1740	13.6+	121°	00:28	05:19	+25°	10:10	03:38	+21°	SO	CET
Sa 04.08.2018	00:00 P/2010 H2 Vales	15h34'37.6"	-21°59'59.7"	3.3738	2.9601	13.6-	105°	15:46	19:52	+17°	23:56	22:50	+ 7°	SW	SCO
Sa 04.08.2018	00:00 37P/Forbes	23h44'14.8"	+ 4°27'53.5"	1.8393	0.9922	13.7-	133°	21:34	04:04	+44°	10:28	03:38	+43°	S	PSC
Sa 04.08.2018	00:00 66P/du Toit	1h26'37.1"	-16°17'41.4"	1.6333	0.9174	13.7-	115°	01:06	05:46	+23°	10:25	03:38	+17°	SO	CET
Sa 04.08.2018	00:00 38P/Stephan-Oterma	3h39'26.1"	+ 3°17'42.1"	2.0037	1.9442	14.0+	78°	01:39	07:59	+43°	14:18	03:38	+18°	O	TAU
Sa 04.08.2018	00:00 C/2016 R2 PANSTARRS	9h30'26.7"	+52°34' 1.2"	2.7583	3.5157	14.1-	36°	--:--	13:50	+88°	--:--	22:50	+20°	NW	UMA
Sa 04.08.2018	00:00 C/2017 M4 ATLAS	16h39'18.3"	+32°19'21.1"	3.6166	3.2791	14.2+	101°	11:28	20:55	+71°	06:27	22:50	+61°	SW	HER
Sa 04.08.2018	00:00 48P/Johnson	22h43'38.7"	-21°56'20.9"	2.0056	1.0436	14.6+	154°	22:54	03:03	+17°	07:08	03:02	+17°	S	AQR
Sa 04.08.2018	00:00 65P/Gunn	23h29' 9.8"	-17° 3' 2.0"	3.2336	2.3634	14.8+	143°	23:09	03:48	+22°	08:23	03:38	+22°	S	AQR
So 05.08.2018	00:00 C/2017 S3 PANSTARRS	7h36'21.5"	+30°42'15.1"	0.4328	0.7640	6.8+	23°	02:42	11:54	+69°	20:48	03:40	+ 5°	NO	GEM
So 05.08.2018	00:00 21P/Giacobini-Zinner	0h37' 4.2"	+66°19'46.4"	1.1368	0.5634	8.5+	87°	--:--	04:54	+74°	--:--	03:40	+72°	NO	CAS
So 05.08.2018	00:00 P/2013 R3-A Catalin.	21h 2' 4.9"	-17°41'16.5"	2.3204	1.3060	13.2+	179°	20:42	01:18	+22°	05:49	01:17	+22°	S	CAP
So 05.08.2018	00:00 P/2013 R3-B Catalin.	21h 1'36.5"	-17°43'31.3"	2.3208	1.3064	13.2+	179°	20:41	01:17	+21°	05:48	01:16	+21°	S	CAP
So 05.08.2018	00:00 46P/Wirtanen	1h 1'14.4"	-14°17'41.2"	1.8997	1.1583	13.5+	122°	00:26	05:17	+25°	10:07	03:40	+22°	SO	CET
So 05.08.2018	00:00 P/2010 H2 Vales	15h35' 1.1"	-22° 3'23.5"	3.3753	2.9752	13.7-	105°	15:43	19:48	+17°	23:52	22:47	+ 7°	SW	SCO
So 05.08.2018	00:00 37P/Forbes	23h43'57.5"	+ 4°35'54.3"	1.8438	0.9901	13.7-	134°	21:29	03:59	+44°	10:24	03:40	+44°	S	PSC
So 05.08.2018	00:00 66P/du Toit	1h26'25.0"	-16°10'27.4"	1.6409	0.9172	13.7-	116°	01:01	05:42	+23°	10:21	03:40	+18°	SO	CET
So 05.08.2018	00:00 38P/Stephan-Oterma	3h41'37.1"	+ 3°26'16.2"	1.9965	1.9291	13.9+	79°	01:36	07:57	+43°	14:17	03:40	+19°	O	TAU
So 05.08.2018	00:00 C/2016 R2 PANSTARRS	9h33'38.9"	+52°32'10.7"	2.7618	3.5164	14.1-	36°	--:--	13:49	+88°	--:--	22:47	+20°	NW	UMA
So 05.08.2018	00:00 C/2017 M4 ATLAS	16h38'13.2"	+31°56' 1.4"	3.6125	3.2842	14.2+	101°	11:27	20:50	+71°	06:18	22:47	+61°	SW	HER
So 05.08.2018	00:00 48P/Johnson	22h43'35.9"	-22° 8'42.8"	2.0054	1.0402	14.6+	155°	22:52	02:59	+17°	07:03	02:58	+17°	S	AQR
So 05.08.2018	00:00 65P/Gunn	23h28'48.5"	-17° 7'34.8"	3.2356	2.3579	14.8+	144°	23:05	03:44	+22°	08:18	03:40	+22°	S	AQR
Mo 06.08.2018	00:00 C/2017 S3 PANSTARRS	7h46'21.2"	+27°55' 0.2"	0.4061	0.7592	6.5+	21°	03:14	12:00	+66°	20:31	03:43	+ 3°	NO	GEM
Mo 06.08.2018	00:00 21P/Giacobini-Zinner	0h47'18.5"	+66°26'34.1"	1.1306	0.5560	8.4+	87°	--:--	05:01	+74°	--:--	03:43	+72°	NO	CAS
Mo 06.08.2018	00:00 P/2013 R3-A Catalin.	21h 1'16.3"	-17°44'16.1"	2.3186	1.3043	13.2+	179°	20:37	01:13	+21°	05:44	01:12	+21°	S	CAP
Mo 06.08.2018	00:00 P/2013 R3-B Catalin.	21h 0'47.8"	-17°46'30.6"	2.3190	1.3047	13.2+	179°	20:37	01:13	+21°	05:43	01:12	+21°	S	CAP
Mo 06.08.2018	00:00 46P/Wirtanen	1h 2'29.6"	-14°22'59.3"	1.8912	1.1427	13.4+	122°	00:23	05:14	+25°	10:04	03:43	+22°	SO	CET
Mo 06.08.2018	00:00 P/2010 H2 Vales	15h35'25.7"	-22° 6'49.1"	3.3768	2.9904	13.7-	104°	15:40	19:45	+17°	23:48	22:44	+ 7°	SW	SCO
Mo 06.08.2018	00:00 37P/Forbes	23h43'38.0"	+ 4°43'39.5"	1.8483	0.9881	13.7-	135°	21:24	03:55	+44°	10:21	03:43	+44°	S	PSC
Mo 06.08.2018	00:00 66P/du Toit	1h26' 9.9"	-16° 3'22.3"	1.6486	0.9170	13.8-	117°	00:56	05:37	+23°	10:18	03:43	+19°	SO	CET

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	TRI.	Stb.
Mo 06.08.2018 00:00	38P/Stephan-Oterma	3h43'48.4"	+ 3°34'49.6"	1.9894	1.9140	13.9+	79°	01:34	07:56	+43°	14:16	03:43	+20°	O	TAU
Mo 06.08.2018 00:00	C/2016 R2 PANSTARRS	9h36'50.9"	+52°30' 9.8"	2.7653	3.5171	14.1-	36°	--:--	13:49	+88°	--:--	22:44	+20°	NW	UMA
Mo 06.08.2018 00:00	C/2017 M4 ATLAS	16h37'10.0"	+31°32'35.8"	3.6085	3.2896	14.2+	100°	11:26	20:45	+70°	06:09	22:44	+60°	SW	HER
Mo 06.08.2018 00:00	48P/Johnson	22h43'31.5"	-22°21' 7.1"	2.0052	1.0370	14.6+	156°	22:49	02:55	+17°	06:57	02:54	+17°	S	AQR
Mo 06.08.2018 00:00	65P/Gunn	23h28'26.2"	-17°12'10.2"	3.2375	2.3525	14.8+	145°	23:01	03:40	+22°	08:14	03:39	+22°	S	AQR
Mo 06.08.2018 00:00	59P/Kearns-Kwee	5h39'48.6"	+30°15'47.4"	2.3807	2.9379	15.0+	48°	00:42	09:51	+69°	18:59	03:43	+22°	O	AUR
Di 07.08.2018 00:00	21P/Giacobini-Zinner	0h57'49.8"	+66°30'37.8"	1.1245	0.5487	8.3+	87°	--:--	05:07	+74°	--:--	03:46	+71°	NO	CAS
Di 07.08.2018 00:00	P/2013 R3-A Catalin.	21h 0'27.5"	-17°47'14.9"	2.3168	1.3028	13.2+	178°	20:33	01:08	+21°	05:39	01:07	+21°	S	CAP
Di 07.08.2018 00:00	P/2013 R3-B Catalin.	20h59'59.0"	-17°49'28.9"	2.3171	1.3033	13.2+	178°	20:32	01:08	+21°	05:38	01:07	+21°	S	CAP
Di 07.08.2018 00:00	46P/Wirtanen	1h 3'44.4"	-14°28'32.0"	1.8827	1.1273	13.4+	123°	00:21	05:11	+25°	10:00	03:46	+22°	S	CET
Di 07.08.2018 00:00	P/2010 H2 Vales	15h35'51.5"	-22°10'16.6"	3.3784	3.0056	13.7-	103°	15:37	19:41	+17°	23:45	22:41	+ 7°	SW	SCO
Di 07.08.2018 00:00	37P/Forbes	23h43'16.4"	+ 4°51' 8.9"	1.8529	0.9862	13.7-	136°	21:19	03:51	+44°	10:17	03:46	+44°	S	PSC
Di 07.08.2018 00:00	66P/du Toit	1h25'51.8"	-15°56'25.6"	1.6563	0.9170	13.8-	118°	00:51	05:33	+23°	10:14	03:46	+19°	SO	CET
Di 07.08.2018 00:00	38P/Stephan-Oterma	3h46' 0.2"	+ 3°43'22.3"	1.9823	1.8990	13.8+	79°	01:31	07:54	+43°	14:15	03:46	+20°	O	TAU
Di 07.08.2018 00:00	C/2016 R2 PANSTARRS	9h40' 2.9"	+52°27'58.8"	2.7689	3.5177	14.2-	36°	--:--	13:48	+88°	--:--	22:41	+20°	NW	UMA
Di 07.08.2018 00:00	C/2017 M4 ATLAS	16h36' 8.8"	+31° 9' 5.1"	3.6044	3.2952	14.2+	100°	11:25	20:40	+70°	06:00	22:41	+60°	SW	HER
Di 07.08.2018 00:00	48P/Johnson	22h43'25.6"	-22°33'32.9"	2.0050	1.0340	14.6+	156°	22:46	02:51	+17°	06:52	02:50	+17°	S	AQR
Di 07.08.2018 00:00	65P/Gunn	23h28' 2.8"	-17°16'48.0"	3.2395	2.3474	14.8+	146°	22:57	03:36	+22°	08:09	03:35	+22°	S	AQR
Di 07.08.2018 00:00	59P/Kearns-Kwee	5h42' 0.6"	+30°16'49.1"	2.3796	2.9287	15.0+	48°	00:40	09:50	+69°	18:58	03:46	+23°	O	AUR
Mi 08.08.2018 00:00	21P/Giacobini-Zinner	1h 8'36.2"	+66°31'46.2"	1.1185	0.5415	8.3+	86°	--:--	05:14	+74°	--:--	03:48	+71°	NO	CAS
Mi 08.08.2018 00:00	P/2013 R3-A Catalin.	20h59'38.7"	-17°50'12.4"	2.3150	1.3016	13.2+	177°	20:28	01:04	+21°	05:34	01:03	+21°	S	CAP
Mi 08.08.2018 00:00	P/2013 R3-B Catalin.	20h59'10.2"	-17°52'26.0"	2.3153	1.3021	13.2+	177°	20:28	01:03	+21°	05:33	01:02	+21°	S	CAP
Mi 08.08.2018 00:00	46P/Wirtanen	1h 4'58.8"	-14°34'19.5"	1.8742	1.1120	13.3+	124°	00:19	05:09	+25°	09:57	03:48	+22°	S	CET
Mi 08.08.2018 00:00	P/2010 H2 Vales	15h36'18.2"	-22°13'45.9"	3.3799	3.0209	13.7-	102°	15:34	19:38	+17°	23:41	22:39	+ 7°	SW	SCO
Mi 08.08.2018 00:00	37P/Forbes	23h42'52.6"	+ 4°58'22.2"	1.8574	0.9845	13.7-	137°	21:14	03:47	+44°	10:13	03:46	+44°	S	PSC
Mi 08.08.2018 00:00	38P/Stephan-Oterma	3h48'12.4"	+ 3°51'54.5"	1.9753	1.8841	13.7+	80°	01:29	07:52	+43°	14:14	03:48	+21°	O	TAU
Mi 08.08.2018 00:00	66P/du Toit	1h25'30.7"	-15°49'37.1"	1.6641	0.9169	13.8-	119°	00:46	05:29	+23°	10:11	03:48	+20°	SO	CET
Mi 08.08.2018 00:00	C/2017 M4 ATLAS	16h35' 9.6"	+30°45'29.8"	3.6004	3.3010	14.2+	99°	11:25	20:35	+70°	05:51	22:39	+59°	SW	HER
Mi 08.08.2018 00:00	C/2016 R2 PANSTARRS	9h43'14.7"	+52°25'37.7"	2.7725	3.5183	14.2-	37°	--:--	13:47	+88°	--:--	22:39	+20°	NW	UMA
Mi 08.08.2018 00:00	48P/Johnson	22h43'18.2"	-22°45'59.4"	2.0048	1.0312	14.6+	157°	22:44	02:47	+16°	06:46	02:46	+16°	S	AQR
Mi 08.08.2018 00:00	65P/Gunn	23h27'38.3"	-17°21'27.7"	3.2415	2.3426	14.8+	147°	22:54	03:31	+22°	08:04	03:30	+22°	S	AQR
Mi 08.08.2018 00:00	59P/Kearns-Kwee	5h44'12.3"	+30°17'44.1"	2.3786	2.9194	15.0+	49°	00:39	09:48	+70°	18:56	03:48	+23°	O	AUR
Do 09.08.2018 00:00	21P/Giacobini-Zinner	1h19'35.6"	+66°29'48.5"	1.1127	0.5343	8.2+	86°	--:--	05:22	+74°	--:--	03:51	+71°	NO	CAS
Do 09.08.2018 00:00	P/2013 R3-A Catalin.	20h58'49.9"	-17°53' 8.4"	2.3132	1.3007	13.2+	176°	20:24	00:59	+21°	05:29	00:58	+21°	S	CAP
Do 09.08.2018 00:00	P/2013 R3-B Catalin.	20h58'21.3"	-17°55'21.5"	2.3135	1.3011	13.2+	176°	20:24	00:58	+21°	05:28	00:57	+21°	S	CAP
Do 09.08.2018 00:00	46P/Wirtanen	1h 6'12.7"	-14°40'22.0"	1.8657	1.0968	13.3+	124°	00:17	05:06	+25°	09:54	03:51	+23°	S	CET
Do 09.08.2018 00:00	38P/Stephan-Oterma	3h50'25.0"	+ 4° 0'26.0"	1.9683	1.8693	13.7+	80°	01:27	07:50	+43°	14:13	03:51	+22°	O	TAU

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Do 09.08.2018 00:00	37P/Forbes	23h42'26.7"	+ 5° 5'19.4"	1.8621	0.9829	13.7-	138°	21:09	03:42	+44°	10:10	03:41	+44°	S	PSC
Do 09.08.2018 00:00	P/2010 H2 Vales	15h36'46.1"	-22°17'16.9"	3.3814	3.0362	13.7-	101°	15:31	19:34	+17°	23:37	22:36	+ 6°	SW	SCO
Do 09.08.2018 00:00	66P/du Toit	1h25' 6.6"	-15°42'56.3"	1.6719	0.9169	13.8-	120°	00:41	05:25	+24°	10:07	03:51	+20°	SO	CET
Do 09.08.2018 00:00	C/2017 M4 ATLAS	16h34'12.2"	+30°21'50.5"	3.5965	3.3070	14.2+	98°	11:24	20:30	+69°	05:42	22:36	+59°	SW	HER
Do 09.08.2018 00:00	C/2016 R2 PANSTARRS	9h46'26.4"	+52°23' 6.6"	2.7761	3.5189	14.2-	37°	--:--	13:46	+88°	--:--	22:36	+21°	NW	UMA
Do 09.08.2018 00:00	48P/Johnson	22h43' 9.3"	-22°58'25.7"	2.0047	1.0286	14.6+	158°	22:41	02:43	+16°	06:41	02:42	+16°	S	AQR
Do 09.08.2018 00:00	65P/Gunn	23h27'12.7"	-17°26' 9.3"	3.2434	2.3379	14.8+	148°	22:50	03:27	+22°	07:59	03:26	+22°	S	AQR
Do 09.08.2018 00:00	59P/Kearns-Kwee	5h46'23.8"	+30°18'32.4"	2.3776	2.9100	15.0+	49°	00:37	09:46	+70°	18:55	03:51	+24°	O	AUR
Fr 10.08.2018 00:00	21P/Giacobini-Zinner	1h30'45.7"	+66°24'34.3"	1.1070	0.5272	8.1+	86°	--:--	05:29	+74°	--:--	03:53	+70°	NO	CAS
Fr 10.08.2018 00:00	46P/Wirtanen	1h 7'26.1"	-14°46'39.7"	1.8571	1.0817	13.2+	125°	00:15	05:03	+24°	09:51	03:53	+23°	S	CET
Fr 10.08.2018 00:00	P/2013 R3-A Catalin.	20h58' 1.1"	-17°56' 2.6"	2.3114	1.3000	13.2+	175°	20:19	00:54	+21°	05:24	00:53	+21°	S	CAP
Fr 10.08.2018 00:00	P/2013 R3-B Catalin.	20h57'32.6"	-17°58'15.2"	2.3118	1.3005	13.2+	175°	20:19	00:54	+21°	05:23	00:53	+21°	S	CAP
Fr 10.08.2018 00:00	38P/Stephan-Oterma	3h52'38.0"	+ 4° 8'57.0"	1.9613	1.8545	13.6+	81°	01:24	07:49	+43°	14:12	03:53	+23°	SO	TAU
Fr 10.08.2018 00:00	37P/Forbes	23h41'58.7"	+ 5°12' 0.3"	1.8667	0.9814	13.7-	139°	21:04	03:38	+44°	10:06	03:37	+44°	S	PSC
Fr 10.08.2018 00:00	P/2010 H2 Vales	15h37'15.0"	-22°20'49.7"	3.3830	3.0516	13.7-	100°	15:28	19:31	+17°	23:33	22:33	+ 6°	SW	SCO
Fr 10.08.2018 00:00	66P/du Toit	1h24'39.5"	-15°36'22.9"	1.6797	0.9170	13.8-	121°	00:36	05:20	+24°	10:03	03:53	+21°	S	CET
Fr 10.08.2018 00:00	C/2017 M4 ATLAS	16h33'16.7"	+29°58' 7.8"	3.5925	3.3133	14.2+	98°	11:22	20:25	+69°	05:33	22:33	+58°	SW	HER
Fr 10.08.2018 00:00	C/2016 R2 PANSTARRS	9h49'37.8"	+52°20'25.6"	2.7797	3.5195	14.2-	37°	--:--	13:46	+88°	--:--	22:33	+21°	NW	UMA
Fr 10.08.2018 00:00	48P/Johnson	22h42'59.0"	-23°10'51.0"	2.0046	1.0262	14.6+	159°	22:38	02:39	+16°	06:36	02:38	+16°	S	AQR
Fr 10.08.2018 00:00	65P/Gunn	23h26'46.1"	-17°30'52.4"	3.2454	2.3335	14.8+	149°	22:46	03:22	+22°	07:54	03:21	+22°	S	AQR
Fr 10.08.2018 00:00	59P/Kearns-Kwee	5h48'35.1"	+30°19'13.8"	2.3767	2.9007	15.0+	50°	00:35	09:44	+70°	18:53	03:53	+24°	O	AUR
Fr 10.08.2018 00:00	137P/Shoemaker-Levy	21h41'36.5"	- 4°32'30.2"	2.2455	1.2453	15.0+	167°	19:52	01:38	+35°	07:18	01:37	+35°	S	AQR
Sa 11.08.2018 00:00	21P/Giacobini-Zinner	1h42' 3.6"	+66°15'53.6"	1.1014	0.5203	8.1+	85°	--:--	05:36	+75°	--:--	03:56	+70°	NO	CAS
Sa 11.08.2018 00:00	46P/Wirtanen	1h 8'39.1"	-14°53'12.7"	1.8486	1.0667	13.1+	125°	00:13	05:00	+24°	09:47	03:56	+23°	S	CET
Sa 11.08.2018 00:00	P/2013 R3-A Catalin.	20h57'12.5"	-17°58'54.6"	2.3096	1.2995	13.2+	174°	20:15	00:49	+21°	05:19	00:48	+21°	S	CAP
Sa 11.08.2018 00:00	P/2013 R3-B Catalin.	20h56'44.0"	-18° 1' 6.7"	2.3100	1.3000	13.2+	173°	20:15	00:49	+21°	05:18	00:48	+21°	S	CAP
Sa 11.08.2018 00:00	38P/Stephan-Oterma	3h54'51.4"	+ 4°17'27.5"	1.9544	1.8397	13.6+	81°	01:22	07:47	+44°	14:11	03:56	+23°	SO	TAU
Sa 11.08.2018 00:00	37P/Forbes	23h41'28.7"	+ 5°18'24.7"	1.8714	0.9801	13.7-	140°	20:59	03:33	+45°	10:02	03:32	+45°	S	PSC
Sa 11.08.2018 00:00	P/2010 H2 Vales	15h37'45.0"	-22°24'24.2"	3.3845	3.0670	13.7-	99°	15:25	19:27	+17°	23:29	22:30	+ 6°	SW	SCO
Sa 11.08.2018 00:00	66P/du Toit	1h24' 9.5"	-15°29'56.5"	1.6876	0.9171	13.9-	122°	00:31	05:16	+24°	09:59	03:56	+21°	S	CET
Sa 11.08.2018 00:00	C/2017 M4 ATLAS	16h32'23.1"	+29°34'22.3"	3.5885	3.3198	14.2+	97°	11:21	20:21	+68°	05:25	22:30	+57°	SW	HER
Sa 11.08.2018 00:00	C/2016 R2 PANSTARRS	9h52'49.0"	+52°17'34.9"	2.7834	3.5201	14.2-	37°	--:--	13:45	+89°	--:--	22:30	+21°	NW	UMA
Sa 11.08.2018 00:00	48P/Johnson	22h42'47.3"	-23°23'14.3"	2.0046	1.0241	14.6+	159°	22:35	02:35	+16°	06:30	02:34	+16°	S	AQR
Sa 11.08.2018 00:00	65P/Gunn	23h26'18.4"	-17°35'36.6"	3.2474	2.3293	14.8+	150°	22:42	03:18	+22°	07:49	03:17	+22°	S	AQR
Sa 11.08.2018 00:00	59P/Kearns-Kwee	5h50'46.2"	+30°19'48.6"	2.3758	2.8912	14.9+	50°	00:33	09:43	+70°	18:51	03:56	+25°	O	AUR
Sa 11.08.2018 00:00	137P/Shoemaker-Levy	21h41' 1.2"	- 4°33'59.3"	2.2410	1.2394	15.0+	168°	19:48	01:33	+35°	07:13	01:32	+35°	S	AQR
So 12.08.2018 00:00	21P/Giacobini-Zinner	1h53'26.6"	+66° 3'37.5"	1.0960	0.5133	8.0+	85°	--:--	05:44	+75°	--:--	03:58	+70°	NO	CAS

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
So 12.08.2018 00:00	46P/Wirtanen	1h 9'51.6"	-15° 0' 1.2"	1.8401	1.0519	13.1+	126°	00:10	04:58	+24°	09:44	03:58	+23°	S	CET
So 12.08.2018 00:00	P/2013 R3-A Catalin.	20h56'24.2"	-18° 1'44.2"	2.3079	1.2993	13.2+	172°	20:10	00:45	+21°	05:14	00:44	+21°	S	CAP
So 12.08.2018 00:00	P/2013 R3-B Catalin.	20h55'55.7"	-18° 3'55.7"	2.3082	1.2998	13.2+	172°	20:10	00:44	+21°	05:13	00:43	+21°	S	CAP
So 12.08.2018 00:00	38P/Stephan-Oterma	3h57' 5.2"	+ 4°25'57.5"	1.9475	1.8251	13.5+	81°	01:19	07:45	+44°	14:10	03:58	+24°	SO	TAU
So 12.08.2018 00:00	37P/Forbes	23h40'56.6"	+ 5°24'32.6"	1.8761	0.9789	13.7-	141°	20:54	03:29	+45°	09:58	03:28	+45°	S	PSC
So 12.08.2018 00:00	P/2010 H2 Vales	15h38'15.9"	-22°28' 0.4"	3.3860	3.0824	13.7-	99°	15:22	19:24	+17°	23:25	22:28	+ 6°	SW	SCO
So 12.08.2018 00:00	66P/du Toit	1h23'36.5"	-15°23'36.7"	1.6955	0.9173	13.9-	123°	00:26	05:11	+24°	09:55	03:58	+22°	S	CET
So 12.08.2018 00:00	C/2017 M4 ATLAS	16h31'31.4"	+29°10'34.4"	3.5846	3.3264	14.2+	96°	11:20	20:16	+68°	05:17	22:28	+57°	SW	HER
So 12.08.2018 00:00	C/2016 R2 PANSTARRS	9h55'60.0"	+52°14'34.5"	2.7872	3.5207	14.2-	38°	--:--	13:44	+89°	--:--	22:28	+21°	NW	UMA
So 12.08.2018 00:00	48P/Johnson	22h42'34.3"	-23°35'34.8"	2.0045	1.0221	14.6+	160°	22:33	02:30	+16°	06:24	02:29	+16°	S	AQR
So 12.08.2018 00:00	65P/Gunn	23h25'49.8"	-17°40'21.7"	3.2494	2.3253	14.8+	151°	22:38	03:14	+22°	07:45	03:13	+22°	S	AQR
So 12.08.2018 00:00	59P/Kearns-Kwee	5h52'57.0"	+30°20'16.6"	2.3749	2.8818	14.9+	51°	00:31	09:41	+70°	18:49	03:58	+26°	O	AUR
So 12.08.2018 00:00	137P/Shoemaker-Levy	21h40'25.3"	- 4°35'37.4"	2.2366	1.2337	15.0+	169°	19:44	01:29	+35°	07:08	01:28	+35°	S	AQR
Mo 13.08.2018 00:00	21P/Giacobini-Zinner	2h 4'51.5"	+65°47'38.1"	1.0907	0.5065	7.9+	85°	--:--	05:51	+75°	--:--	04:00	+70°	NO	CAS
Mo 13.08.2018 00:00	46P/Wirtanen	1h11' 3.5"	-15° 7' 5.4"	1.8315	1.0371	13.0+	127°	00:08	04:55	+24°	09:41	04:00	+23°	S	CET
Mo 13.08.2018 00:00	P/2013 R3-A Catalin.	20h55'36.2"	-18° 4'31.1"	2.3061	1.2994	13.2+	171°	20:06	00:40	+21°	05:09	00:39	+21°	S	CAP
Mo 13.08.2018 00:00	P/2013 R3-B Catalin.	20h55' 7.7"	-18° 6'41.9"	2.3065	1.2999	13.2+	171°	20:06	00:40	+21°	05:08	00:39	+21°	S	CAP
Mo 13.08.2018 00:00	38P/Stephan-Oterma	3h59'19.3"	+ 4°34'27.1"	1.9406	1.8105	13.4+	82°	01:17	07:43	+44°	14:09	04:00	+25°	SO	TAU
Mo 13.08.2018 00:00	37P/Forbes	23h40'22.7"	+ 5°30'23.9"	1.8808	0.9779	13.7-	142°	20:49	03:24	+45°	09:54	03:23	+45°	S	PSC
Mo 13.08.2018 00:00	P/2010 H2 Vales	15h38'47.9"	-22°31'38.1"	3.3876	3.0979	13.8-	98°	15:19	19:21	+17°	23:22	22:25	+ 6°	SW	SCO
Mo 13.08.2018 00:00	66P/du Toit	1h23' 0.7"	-15°17'22.9"	1.7034	0.9176	13.9-	124°	00:21	05:07	+24°	09:51	04:00	+22°	S	CET
Mo 13.08.2018 00:00	C/2017 M4 ATLAS	16h30'41.5"	+28°46'44.9"	3.5807	3.3333	14.2+	96°	11:19	20:11	+68°	05:08	22:25	+56°	SW	HER
Mo 13.08.2018 00:00	C/2016 R2 PANSTARRS	9h59'10.7"	+52°11'24.7"	2.7909	3.5213	14.2-	38°	--:--	13:43	+89°	--:--	22:25	+21°	NW	UMA
Mo 13.08.2018 00:00	48P/Johnson	22h42'20.0"	-23°47'51.4"	2.0046	1.0204	14.6+	161°	22:30	02:26	+15°	06:19	02:25	+15°	S	AQR
Mo 13.08.2018 00:00	65P/Gunn	23h25'20.2"	-17°45' 7.3"	3.2513	2.3216	14.8+	152°	22:34	03:09	+21°	07:40	03:08	+21°	S	AQR
Mo 13.08.2018 00:00	59P/Kearns-Kwee	5h55' 7.5"	+30°20'37.9"	2.3740	2.8723	14.9+	51°	00:29	09:39	+70°	18:48	04:00	+26°	O	AUR
Mo 13.08.2018 00:00	137P/Shoemaker-Levy	21h39'48.9"	- 4°37'24.4"	2.2322	1.2283	14.9+	169°	19:39	01:24	+35°	07:04	01:23	+35°	S	AQR
Di 14.08.2018 00:00	21P/Giacobini-Zinner	2h16'15.4"	+65°27'48.5"	1.0856	0.4998	7.9+	84°	--:--	05:59	+75°	--:--	04:03	+69°	NO	CAS
Di 14.08.2018 00:00	46P/Wirtanen	1h12'14.9"	-15°14'25.3"	1.8230	1.0225	13.0+	127°	00:06	04:52	+24°	09:37	04:03	+23°	S	CET
Di 14.08.2018 00:00	P/2013 R3-A Catalin.	20h54'48.6"	-18° 7'14.9"	2.3044	1.2997	13.2+	170°	20:02	00:35	+21°	05:04	00:34	+21°	S	CAP
Di 14.08.2018 00:00	P/2013 R3-B Catalin.	20h54'20.1"	-18° 9'25.1"	2.3047	1.3002	13.2+	170°	20:01	00:35	+21°	05:03	00:34	+21°	S	CAP
Di 14.08.2018 00:00	38P/Stephan-Oterma	4h 1'33.9"	+ 4°42'56.3"	1.9338	1.7960	13.4+	82°	01:15	07:42	+44°	14:08	04:03	+25°	SO	TAU
Di 14.08.2018 00:00	37P/Forbes	23h39'46.8"	+ 5°35'58.6"	1.8855	0.9771	13.8-	143°	20:44	03:20	+45°	09:50	03:19	+45°	S	PSC
Di 14.08.2018 00:00	P/2010 H2 Vales	15h39'21.0"	-22°35'17.4"	3.3891	3.1135	13.8-	97°	15:16	19:17	+17°	23:18	22:22	+ 6°	SW	SCO
Di 14.08.2018 00:00	66P/du Toit	1h22'21.9"	-15°11'14.9"	1.7114	0.9180	13.9-	125°	00:16	05:02	+24°	09:47	04:03	+23°	S	CET
Di 14.08.2018 00:00	C/2017 M4 ATLAS	16h29'53.5"	+28°22'54.2"	3.5768	3.3404	14.2+	95°	11:18	20:06	+67°	05:00	22:22	+56°	SW	HER
Di 14.08.2018 00:00	C/2016 R2 PANSTARRS	10h 2'21.1"	+52° 8' 5.4"	2.7947	3.5218	14.2-	38°	--:--	13:43	+89°	--:--	22:22	+21°	NW	UMA
Di 14.08.2018 00:00	48P/Johnson	22h42' 4.5"	-24° 0' 3.3"	2.0046	1.0188	14.6+	161°	22:27	02:22	+15°	06:13	02:21	+15°	S	AQR

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Di 14.08.2018	00:00 65P/Gunn	23h24'49.7"	-17°49'53.2"	3.2533	2.3181	14.8-	153°	22:30	03:05	+21°	07:35	03:04	+21°	S	AQR
Di 14.08.2018	00:00 59P/Kearns-Kwee	5h57'17.8"	+30°20'52.6"	2.3731	2.8627	14.9+	52°	00:27	09:37	+70°	18:46	04:03	+27°	O	AUR
Di 14.08.2018	00:00 137P/Shoemaker-Levy	21h39'12.1"	- 4°39'20.0"	2.2278	1.2232	14.9+	170°	19:35	01:20	+35°	06:59	01:19	+35°	S	AQR
Di 14.08.2018	00:00 64P/Swift-Gehrels	0h 4'58.5"	+13°44'13.1"	1.6941	0.8330	15.0+	133°	20:27	03:45	+53°	10:58	03:44	+53°	S	PSC
Mi 15.08.2018	00:00 21P/Giacobini-Zinner	2h27'35.1"	+65° 4' 3.1"	1.0806	0.4932	7.8+	84°	--:--	06:06	+76°	--:--	04:05	+69°	NO	CAS
Mi 15.08.2018	00:00 46P/Wirtanen	1h13'25.8"	-15°22' 1.1"	1.8144	1.0081	12.9+	128°	00:04	04:49	+24°	09:34	04:05	+23°	S	CET
Mi 15.08.2018	00:00 P/2013 R3-A Catalin.	20h54' 1.5"	-18° 9'55.4"	2.3027	1.3002	13.2+	169°	19:57	00:31	+21°	04:59	00:30	+21°	S	CAP
Mi 15.08.2018	00:00 P/2013 R3-B Catalin.	20h53'33.0"	-18°12' 5.0"	2.3030	1.3008	13.2+	169°	19:57	00:30	+21°	04:58	00:29	+21°	S	CAP
Mi 15.08.2018	00:00 38P/Stephan-Oterma	4h 3'48.9"	+ 4°51'25.4"	1.9270	1.7816	13.3+	82°	01:12	07:40	+44°	14:07	04:05	+26°	SO	TAU
Mi 15.08.2018	00:00 37P/Forbes	23h39' 9.2"	+ 5°41'16.6"	1.8903	0.9764	13.8-	144°	20:39	03:15	+45°	09:46	03:14	+45°	S	PSC
Mi 15.08.2018	00:00 P/2010 H2 Vales	15h39'55.0"	-22°38'58.3"	3.3907	3.1290	13.8-	96°	15:13	19:14	+17°	23:14	22:19	+ 6°	SW	SCO
Mi 15.08.2018	00:00 66P/du Toit	1h21'40.4"	-15° 5'12.0"	1.7194	0.9184	13.9-	126°	00:11	04:58	+24°	09:43	04:05	+23°	S	CET
Mi 15.08.2018	00:00 C/2016 N6 PANSTARRS	8h43'44.3"	+24°16'43.7"	2.6850	3.6439	14.1+	16°	04:00	12:19	+63°	20:35	04:05	+ 0°	NO	CNC
Mi 15.08.2018	00:00 C/2017 M4 ATLAS	16h29' 7.2"	+27°59' 2.8"	3.5729	3.3477	14.2-	95°	11:16	20:02	+67°	04:52	22:19	+55°	SW	HER
Mi 15.08.2018	00:00 C/2016 R2 PANSTARRS	10h 5'31.1"	+52° 4'36.8"	2.7986	3.5224	14.2-	38°	--:--	13:42	+89°	--:--	22:19	+21°	NW	UMA
Mi 15.08.2018	00:00 48P/Johnson	22h41'47.9"	-24°12' 9.7"	2.0047	1.0175	14.6+	162°	22:24	02:18	+15°	06:08	02:17	+15°	S	AQR
Mi 15.08.2018	00:00 65P/Gunn	23h24'18.2"	-17°54'39.0"	3.2553	2.3149	14.8-	154°	22:26	03:00	+21°	07:30	02:59	+21°	S	AQR
Mi 15.08.2018	00:00 64P/Swift-Gehrels	0h 5'48.4"	+14° 5'31.7"	1.6877	0.8222	14.9+	133°	20:22	03:42	+53°	10:57	03:41	+53°	S	PSC
Mi 15.08.2018	00:00 137P/Shoemaker-Levy	21h38'34.8"	- 4°41'24.1"	2.2234	1.2182	14.9+	170°	19:30	01:15	+35°	06:54	01:14	+35°	S	AQR
Mi 15.08.2018	00:00 59P/Kearns-Kwee	5h59'27.7"	+30°21' 0.7"	2.3723	2.8531	14.9+	52°	00:26	09:35	+70°	18:44	04:05	+28°	O	AUR
Do 16.08.2018	00:00 21P/Giacobini-Zinner	2h38'47.8"	+64°36'17.5"	1.0758	0.4868	7.7+	84°	--:--	06:14	+76°	--:--	04:08	+69°	NO	CAS
Do 16.08.2018	00:00 46P/Wirtanen	1h14'36.2"	-15°29'52.9"	1.8059	0.9937	12.8+	128°	00:02	04:47	+24°	09:30	04:08	+23°	S	CET
Do 16.08.2018	00:00 P/2013 R3-A Catalin.	20h53'15.0"	-18°12'32.4"	2.3010	1.3010	13.2+	168°	19:53	00:26	+21°	04:54	00:25	+21°	S	CAP
Do 16.08.2018	00:00 P/2013 R3-B Catalin.	20h52'46.5"	-18°14'41.3"	2.3013	1.3016	13.2+	168°	19:52	00:25	+21°	04:53	00:24	+21°	S	CAP
Do 16.08.2018	00:00 38P/Stephan-Oterma	4h 6' 4.3"	+ 4°59'54.2"	1.9203	1.7673	13.2+	83°	01:10	07:38	+44°	14:06	04:08	+27°	SO	TAU
Do 16.08.2018	00:00 37P/Forbes	23h38'29.7"	+ 5°46'17.8"	1.8951	0.9759	13.8-	145°	20:34	03:11	+45°	09:41	03:10	+45°	S	PSC
Do 16.08.2018	00:00 P/2010 H2 Vales	15h40'30.0"	-22°42'40.6"	3.3922	3.1446	13.8-	95°	15:10	19:11	+16°	23:10	22:17	+ 6°	SW	SCO
Do 16.08.2018	00:00 66P/du Toit	1h20'56.1"	-14°59'14.0"	1.7275	0.9190	14.0-	127°	00:06	04:53	+24°	09:39	04:08	+24°	S	CET
Do 16.08.2018	00:00 C/2016 N6 PANSTARRS	8h44'17.3"	+24° 1'19.7"	2.6861	3.6406	14.1+	17°	03:59	12:15	+63°	20:30	04:08	+ 1°	NO	CNC
Do 16.08.2018	00:00 C/2017 M4 ATLAS	16h28'22.7"	+27°35'11.2"	3.5691	3.3552	14.2-	94°	11:15	19:57	+66°	04:44	22:17	+54°	SW	HER
Do 16.08.2018	00:00 C/2016 R2 PANSTARRS	10h 8'40.8"	+52° 0'59.1"	2.8024	3.5229	14.2-	39°	--:--	13:41	+89°	--:--	22:17	+21°	NW	UMA
Do 16.08.2018	00:00 48P/Johnson	22h41'30.1"	-24°24' 9.4"	2.0048	1.0164	14.6+	162°	22:21	02:14	+15°	06:02	02:13	+15°	S	AQR
Do 16.08.2018	00:00 65P/Gunn	23h23'45.9"	-17°59'24.5"	3.2573	2.3119	14.8-	155°	22:22	02:56	+21°	07:25	02:55	+21°	S	AQR
Do 16.08.2018	00:00 64P/Swift-Gehrels	0h 6'37.5"	+14°26'58.6"	1.6814	0.8117	14.8+	134°	20:17	03:39	+54°	10:56	03:38	+54°	S	PSC
Do 16.08.2018	00:00 137P/Shoemaker-Levy	21h37'57.3"	- 4°43'36.5"	2.2191	1.2135	14.9+	171°	19:26	01:10	+34°	06:49	01:09	+34°	S	AQR
Do 16.08.2018	00:00 59P/Kearns-Kwee	6h 1'37.4"	+30°21' 2.2"	2.3715	2.8435	14.9+	53°	00:24	09:34	+70°	18:42	04:08	+28°	O	AUR
Fr 17.08.2018	00:00 21P/Giacobini-Zinner	2h49'50.8"	+64° 4'29.0"	1.0711	0.4804	7.7+	84°	--:--	06:21	+77°	--:--	04:10	+69°	NO	CAS

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Fr 17.08.2018 00:00	46P/Wirtanen	1h15'46.0"	-15°38' 0.9"	1.7973	0.9795	12.8+	129°	23:58	04:44	+24°	09:27	04:10	+23°	S	CET
Fr 17.08.2018 00:00	38P/Stephan-Oterma	4h 8'20.0"	+ 5° 8'22.9"	1.9136	1.7530	13.2+	83°	01:07	07:37	+44°	14:05	04:10	+28°	SO	TAU
Fr 17.08.2018 00:00	P/2013 R3-A Catalin.	20h52'29.1"	-18°15' 5.5"	2.2993	1.3020	13.2+	167°	19:48	00:21	+21°	04:49	00:20	+21°	S	CAP
Fr 17.08.2018 00:00	P/2013 R3-B Catalin.	20h52' 0.7"	-18°17'13.7"	2.2996	1.3026	13.2+	167°	19:48	00:21	+21°	04:48	00:20	+21°	S	CAP
Fr 17.08.2018 00:00	37P/Forbes	23h37'48.6"	+ 5°51' 2.5"	1.8999	0.9755	13.8-	146°	20:29	03:06	+45°	09:37	03:05	+45°	S	PSC
Fr 17.08.2018 00:00	P/2010 H2 Vales	15h41' 6.0"	-22°46'24.3"	3.3938	3.1602	13.8-	95°	15:07	19:07	+16°	23:07	22:14	+ 6°	SW	SCO
Fr 17.08.2018 00:00	66P/du Toit	1h20' 9.0"	-14°53'20.4"	1.7356	0.9196	14.0-	128°	23:55	04:48	+24°	09:35	04:10	+24°	S	CET
Fr 17.08.2018 00:00	C/2016 N6 PANSTARRS	8h44'49.9"	+23°45'56.0"	2.6873	3.6370	14.1+	17°	03:57	12:12	+63°	20:24	04:10	+ 1°	NO	CNC
Fr 17.08.2018 00:00	C/2017 M4 ATLAS	16h27'40.0"	+27°11'20.0"	3.5653	3.3628	14.2-	93°	11:14	19:52	+66°	04:36	22:14	+54°	SW	HER
Fr 17.08.2018 00:00	C/2016 R2 PANSTARRS	10h11'50.1"	+51°57'12.3"	2.8063	3.5235	14.2-	39°	--:--	13:40	+89°	--:--	22:14	+21°	NW	UMA
Fr 17.08.2018 00:00	48P/Johnson	22h41'11.4"	-24°36' 1.8"	2.0049	1.0156	14.6+	163°	22:18	02:09	+15°	05:57	02:08	+15°	S	AQR
Fr 17.08.2018 00:00	64P/Swift-Gehrels	0h 7'25.8"	+14°48'33.6"	1.6751	0.8013	14.7+	135°	20:12	03:36	+54°	10:55	03:35	+54°	S	PSC
Fr 17.08.2018 00:00	65P/Gunn	23h23'12.8"	-18° 4' 9.2"	3.2593	2.3092	14.8-	156°	22:18	02:51	+21°	07:20	02:50	+21°	S	AQR
Fr 17.08.2018 00:00	137P/Shoemaker-Levy	21h37'19.5"	- 4°45'56.7"	2.2148	1.2090	14.9+	171°	19:22	01:06	+34°	06:45	01:05	+34°	S	AQR
Fr 17.08.2018 00:00	59P/Kearns-Kwee	6h 3'46.8"	+30°20'57.2"	2.3707	2.8339	14.9+	53°	00:22	09:32	+70°	18:41	04:10	+29°	O	AUR
Sa 18.08.2018 00:00	21P/Giacobini-Zinner	3h 0'41.5"	+63°28'35.7"	1.0666	0.4742	7.6+	83°	--:--	06:28	+77°	--:--	04:12	+68°	NO	CAM
Sa 18.08.2018 00:00	46P/Wirtanen	1h16'55.2"	-15°46'25.1"	1.7888	0.9654	12.7+	129°	23:56	04:41	+23°	09:23	04:12	+23°	S	CET
Sa 18.08.2018 00:00	38P/Stephan-Oterma	4h10'36.2"	+ 5°16'51.5"	1.9070	1.7388	13.1+	83°	01:05	07:35	+45°	14:04	04:12	+28°	SO	TAU
Sa 18.08.2018 00:00	P/2013 R3-A Catalin.	20h51'43.9"	-18°17'34.6"	2.2976	1.3032	13.2+	166°	19:44	00:17	+21°	04:44	00:16	+21°	S	CAP
Sa 18.08.2018 00:00	P/2013 R3-B Catalin.	20h51'15.6"	-18°19'42.1"	2.2979	1.3039	13.2+	165°	19:43	00:16	+21°	04:43	00:15	+21°	S	CAP
Sa 18.08.2018 00:00	37P/Forbes	23h37' 5.9"	+ 5°55'30.4"	1.9048	0.9753	13.8-	147°	20:24	03:01	+45°	09:33	03:00	+45°	S	PSC
Sa 18.08.2018 00:00	P/2010 H2 Vales	15h41'42.9"	-22°50' 9.4"	3.3953	3.1758	13.8-	94°	15:04	19:04	+16°	23:03	22:11	+ 5°	SW	SCO
Sa 18.08.2018 00:00	66P/du Toit	1h19'19.2"	-14°47'30.7"	1.7437	0.9204	14.0-	129°	23:50	04:43	+24°	09:31	04:12	+24°	S	CET
Sa 18.08.2018 00:00	C/2016 N6 PANSTARRS	8h45'22.2"	+23°30'32.6"	2.6886	3.6331	14.1+	18°	03:56	12:08	+63°	20:19	04:12	+ 1°	NO	CNC
Sa 18.08.2018 00:00	C/2017 M4 ATLAS	16h26'59.0"	+26°47'29.6"	3.5614	3.3707	14.2-	93°	11:12	19:48	+66°	04:28	22:11	+53°	SW	HER
Sa 18.08.2018 00:00	C/2016 R2 PANSTARRS	10h14'59.0"	+51°53'16.6"	2.8102	3.5240	14.2-	39°	--:--	13:39	+89°	--:--	22:11	+22°	NW	UMA
Sa 18.08.2018 00:00	48P/Johnson	22h40'51.6"	-24°47'45.8"	2.0051	1.0149	14.6+	163°	22:16	02:05	+14°	05:51	02:04	+14°	S	AQR
Sa 18.08.2018 00:00	64P/Swift-Gehrels	0h 8'13.2"	+15°10'16.6"	1.6689	0.7910	14.7+	135°	20:06	03:33	+54°	10:54	03:32	+54°	S	PSC
Sa 18.08.2018 00:00	65P/Gunn	23h22'38.8"	-18° 8'52.8"	3.2613	2.3067	14.8-	157°	22:14	02:47	+21°	07:15	02:46	+21°	S	AQR
Sa 18.08.2018 00:00	364P/PANSTARRS	2h43'48.2"	-34°55' 2.7"	1.1620	0.3162	14.8-	111°	03:53	06:06	+ 4°	08:18	04:12	+ 1°	SO	FOR
Sa 18.08.2018 00:00	137P/Shoemaker-Levy	21h36'41.6"	- 4°48'24.7"	2.2105	1.2048	14.8+	171°	19:17	01:01	+34°	06:40	01:00	+34°	S	AQR
Sa 18.08.2018 00:00	59P/Kearns-Kwee	6h 5'55.8"	+30°20'45.6"	2.3699	2.8242	14.9+	54°	00:20	09:30	+70°	18:39	04:12	+29°	O	AUR
So 19.08.2018 00:00	21P/Giacobini-Zinner	3h11'17.9"	+62°48'37.3"	1.0623	0.4682	7.5+	83°	--:--	06:34	+78°	--:--	04:15	+68°	NO	CAM
So 19.08.2018 00:00	46P/Wirtanen	1h18' 3.8"	-15°55' 5.7"	1.7802	0.9514	12.6+	130°	23:54	04:38	+23°	09:19	04:15	+23°	S	CET
So 19.08.2018 00:00	38P/Stephan-Oterma	4h12'52.7"	+ 5°25'20.2"	1.9004	1.7247	13.0+	84°	01:03	07:33	+45°	14:03	04:15	+29°	SO	TAU
So 19.08.2018 00:00	P/2013 R3-A Catalin.	20h50'59.5"	-18°19'59.5"	2.2959	1.3047	13.2+	164°	19:39	00:12	+21°	04:39	00:11	+21°	S	CAP
So 19.08.2018 00:00	P/2013 R3-B Catalin.	20h50'31.2"	-18°22' 6.2"	2.2963	1.3054	13.2+	164°	19:39	00:11	+21°	04:38	00:10	+21°	S	CAP
So 19.08.2018 00:00	37P/Forbes	23h36'21.6"	+ 5°59'41.7"	1.9096	0.9753	13.8-	148°	20:19	02:57	+45°	09:29	02:56	+45°	S	PSC

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
So 19.08.2018	00:00 P/2010 H2 Vales	15h42'20.9"	-22°53'55.8"	3.3969	3.1914	13.8-	93°	15:01	19:01	+16°	22:59	22:08	+ 5°	SW	SCO
So 19.08.2018	00:00 66P/du Toit	1h18'26.8"	-14°41'44.5"	1.7518	0.9212	14.0-	130°	23:44	04:39	+25°	09:26	04:15	+24°	S	CET
So 19.08.2018	00:00 C/2016 N6 PANSTARRS	8h45'54.1"	+23°15' 9.3"	2.6898	3.6291	14.1+	19°	03:54	12:05	+62°	20:14	04:15	+ 2°	NO	CNC
So 19.08.2018	00:00 C/2017 M4 ATLAS	16h26'19.7"	+26°23'40.4"	3.5577	3.3787	14.2-	92°	11:11	19:43	+65°	04:21	22:08	+53°	SW	HER
So 19.08.2018	00:00 C/2016 R2 PANSTARRS	10h18' 7.5"	+51°49'12.1"	2.8142	3.5245	14.2-	39°	--:--	13:39	+89°	--:--	22:08	+22°	NW	UMA
So 19.08.2018	00:00 48P/Johnson	22h40'31.0"	-24°59'20.7"	2.0053	1.0145	14.6-	163°	22:13	02:01	+14°	05:45	02:00	+14°	S	AQR
So 19.08.2018	00:00 64P/Swift-Gehrels	0h 8'59.8"	+15°32' 7.6"	1.6627	0.7809	14.6+	136°	20:01	03:30	+55°	10:53	03:29	+55°	S	PSC
So 19.08.2018	00:00 65P/Gunn	23h22' 4.1"	-18°13'35.2"	3.2633	2.3045	14.8-	158°	22:10	02:42	+21°	07:10	02:41	+21°	S	AQR
So 19.08.2018	00:00 137P/Shoemaker-Levy	21h36' 3.5"	- 4°51' 0.1"	2.2062	1.2008	14.8+	171°	19:13	00:57	+34°	06:35	00:56	+34°	S	AQR
So 19.08.2018	00:00 59P/Kearns-Kwee	6h 8' 4.5"	+30°20'27.6"	2.3692	2.8145	14.9+	54°	00:19	09:28	+70°	18:37	04:15	+30°	O	AUR
So 19.08.2018	00:00 364P/PANSTARRS	2h38' 8.2"	-34°48'46.7"	1.1723	0.3207	14.9-	112°	03:42	05:57	+ 4°	08:10	04:15	+ 2°	S	FOR
Mo 20.08.2018	00:00 21P/Giacobini-Zinner	3h21'38.0"	+62° 4'34.5"	1.0581	0.4623	7.5+	83°	--:--	06:41	+79°	--:--	04:17	+68°	NO	CAM
Mo 20.08.2018	00:00 46P/Wirtanen	1h19'11.8"	-16° 4' 2.7"	1.7717	0.9376	12.6+	131°	23:52	04:36	+23°	09:16	04:17	+23°	S	CET
Mo 20.08.2018	00:00 38P/Stephan-Oterma	4h15' 9.6"	+ 5°33'49.0"	1.8938	1.7106	13.0+	84°	01:00	07:32	+45°	14:02	04:17	+30°	SO	TAU
Mo 20.08.2018	00:00 P/2013 R3-A Catalin.	20h50'16.0"	-18°22'19.8"	2.2942	1.3064	13.2-	163°	19:35	00:07	+21°	04:34	00:06	+21°	S	CAP
Mo 20.08.2018	00:00 P/2013 R3-B Catalin.	20h49'47.8"	-18°24'25.8"	2.2946	1.3071	13.2-	163°	19:35	00:07	+21°	04:33	00:06	+21°	S	CAP
Mo 20.08.2018	00:00 37P/Forbes	23h35'35.8"	+ 6° 3'36.5"	1.9145	0.9755	13.8-	149°	20:14	02:52	+45°	09:24	02:51	+45°	S	PSC
Mo 20.08.2018	00:00 P/2010 H2 Vales	15h42'59.7"	-22°57'43.5"	3.3984	3.2071	13.8-	92°	14:58	18:57	+16°	22:56	22:06	+ 5°	SW	SCO
Mo 20.08.2018	00:00 66P/du Toit	1h17'31.8"	-14°36' 1.4"	1.7600	0.9222	14.0-	131°	23:39	04:34	+25°	09:22	04:17	+25°	S	CET
Mo 20.08.2018	00:00 C/2016 N6 PANSTARRS	8h46'25.7"	+22°59'46.0"	2.6912	3.6248	14.1+	19°	03:52	12:02	+62°	20:09	04:17	+ 3°	NO	CNC
Mo 20.08.2018	00:00 C/2017 M4 ATLAS	16h25'42.1"	+25°59'52.9"	3.5539	3.3868	14.2-	91°	11:09	19:39	+65°	04:13	22:06	+52°	SW	HER
Mo 20.08.2018	00:00 C/2016 R2 PANSTARRS	10h21'15.6"	+51°44'58.9"	2.8182	3.5251	14.2-	39°	--:--	13:38	+89°	--:--	22:06	+22°	NW	UMA
Mo 20.08.2018	00:00 64P/Swift-Gehrels	0h 9'45.4"	+15°54' 6.2"	1.6566	0.7709	14.5+	136°	19:56	03:27	+55°	10:52	03:26	+55°	S	PSC
Mo 20.08.2018	00:00 48P/Johnson	22h40' 9.5"	-25°10'45.5"	2.0055	1.0142	14.6-	164°	22:10	01:57	+14°	05:40	01:56	+14°	S	AQR
Mo 20.08.2018	00:00 65P/Gunn	23h21'28.6"	-18°18'15.9"	3.2653	2.3026	14.8-	159°	22:06	02:38	+21°	07:05	02:37	+21°	S	AQR
Mo 20.08.2018	00:00 137P/Shoemaker-Levy	21h35'25.4"	- 4°53'42.7"	2.2019	1.1970	14.8+	171°	19:09	00:52	+34°	06:30	00:51	+34°	S	AQR
Mo 20.08.2018	00:00 59P/Kearns-Kwee	6h10'12.9"	+30°20' 3.2"	2.3685	2.8047	14.9+	55°	00:17	09:26	+70°	18:35	04:17	+31°	O	AUR
Mo 20.08.2018	00:00 364P/PANSTARRS	2h32'33.6"	-34°41'43.5"	1.1826	0.3252	14.9-	114°	03:31	05:47	+ 5°	08:03	04:17	+ 2°	S	FOR
Di 21.08.2018	00:00 21P/Giacobini-Zinner	3h31'40.5"	+61°16'29.2"	1.0541	0.4565	7.4+	82°	--:--	06:47	+80°	--:--	04:19	+68°	NO	CAM
Di 21.08.2018	00:00 46P/Wirtanen	1h20'19.3"	-16°13'16.4"	1.7631	0.9239	12.5+	131°	23:50	04:33	+23°	09:12	04:19	+23°	S	CET
Di 21.08.2018	00:00 38P/Stephan-Oterma	4h17'26.9"	+ 5°42'18.1"	1.8873	1.6967	12.9+	84°	00:58	07:30	+45°	14:01	04:19	+30°	SO	TAU
Di 21.08.2018	00:00 P/2013 R3-A Catalin.	20h49'33.4"	-18°24'35.5"	2.2926	1.3084	13.2-	162°	19:30	23:58	+21°	04:29	00:02	+21°	S	CAP
Di 21.08.2018	00:00 P/2013 R3-B Catalin.	20h49' 5.2"	-18°26'40.7"	2.2929	1.3091	13.2-	162°	19:30	23:57	+21°	04:29	00:01	+21°	S	CAP
Di 21.08.2018	00:00 37P/Forbes	23h34'48.6"	+ 6° 7'14.9"	1.9194	0.9758	13.8-	150°	20:09	02:47	+45°	09:20	02:46	+45°	S	PSC
Di 21.08.2018	00:00 P/2010 H2 Vales	15h43'39.5"	-23° 1'32.3"	3.4000	3.2227	13.9-	91°	14:55	18:54	+16°	22:52	22:03	+ 5°	SW	SCO
Di 21.08.2018	00:00 66P/du Toit	1h16'34.3"	-14°30'20.9"	1.7682	0.9233	14.1-	132°	23:34	04:29	+25°	09:18	04:19	+25°	S	CET
Di 21.08.2018	00:00 C/2016 N6 PANSTARRS	8h46'56.9"	+22°44'22.6"	2.6925	3.6203	14.1+	20°	03:51	11:58	+62°	20:04	04:19	+ 3°	NO	CNC
Di 21.08.2018	00:00 C/2017 M4 ATLAS	16h25' 6.1"	+25°36' 7.5"	3.5501	3.3952	14.2-	90°	11:08	19:34	+64°	04:06	22:03	+52°	SW	HER

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Di 21.08.2018	00:00 C/2016 R2 PANSTARRS	10h24'23.1"	+51°40'37.2"	2.8222	3.5256	14.2-	40°	--:--	13:37	+89°	--:--	22:03	+22°	NW	UMA
Di 21.08.2018	00:00 64P/Swift-Gehrels	0h10'30.2"	+16°16'12.4"	1.6505	0.7611	14.4+	137°	19:51	03:23	+56°	10:51	03:22	+56°	S	PSC
Di 21.08.2018	00:00 48P/Johnson	22h39'47.3"	-25°21'59.6"	2.0057	1.0142	14.6-	164°	22:07	01:52	+14°	05:34	01:51	+14°	S	AQR
Di 21.08.2018	00:00 65P/Gunn	23h20'52.4"	-18°22'54.6"	3.2673	2.3009	14.8-	159°	22:01	02:33	+21°	07:00	02:32	+21°	S	AQR
Di 21.08.2018	00:00 137P/Shoemaker-Levy	21h34'47.4"	- 4°56'32.2"	2.1977	1.1935	14.8+	170°	19:04	00:48	+34°	06:26	00:47	+34°	S	AQR
Di 21.08.2018	00:00 59P/Kearns-Kwee	6h12'20.9"	+30°19'32.4"	2.3678	2.7949	14.8+	55°	00:15	09:25	+70°	18:33	04:19	+31°	O	AUR
Di 21.08.2018	00:00 364P/PANSTARRS	2h27' 4.4"	-34°33'55.0"	1.1930	0.3299	15.0-	116°	03:20	05:38	+ 5°	07:55	04:19	+ 3°	S	FOR
Mi 22.08.2018	00:00 21P/Giacobini-Zinner	3h41'24.2"	+60°24'24.2"	1.0502	0.4510	7.4+	82°	--:--	06:52	+81°	--:--	04:21	+67°	NO	CAM
Mi 22.08.2018	00:00 46P/Wirtanen	1h21'26.1"	-16°22'46.8"	1.7545	0.9104	12.5+	132°	23:48	04:30	+23°	09:08	04:21	+23°	S	CET
Mi 22.08.2018	00:00 38P/Stephan-Oterma	4h19'44.7"	+ 5°50'47.3"	1.8809	1.6828	12.9+	85°	00:56	07:28	+45°	14:01	04:21	+31°	SO	TAU
Mi 22.08.2018	00:00 P/2013 R3-A Catalin.	20h48'51.7"	-18°26'46.3"	2.2910	1.3106	13.2-	161°	19:26	23:53	+21°	04:24	00:00	+21°	S	CAP
Mi 22.08.2018	00:00 P/2013 R3-B Catalin.	20h48'23.6"	-18°28'50.7"	2.2913	1.3113	13.2-	161°	19:26	23:53	+21°	04:24	00:00	+21°	S	CAP
Mi 22.08.2018	00:00 37P/Forbes	23h34' 0.1"	+ 6°10'36.8"	1.9244	0.9764	13.9-	151°	20:04	02:43	+45°	09:15	02:42	+45°	S	PSC
Mi 22.08.2018	00:00 P/2010 H2 Vales	15h44'20.2"	-23° 5'22.3"	3.4015	3.2384	13.9-	91°	14:52	18:51	+16°	22:48	22:00	+ 5°	SW	SCO
Mi 22.08.2018	00:00 66P/du Toit	1h15'34.4"	-14°24'42.8"	1.7765	0.9245	14.1-	133°	23:28	04:24	+25°	09:13	04:21	+25°	S	CET
Mi 22.08.2018	00:00 C/2016 N6 PANSTARRS	8h47'27.7"	+22°28'59.0"	2.6939	3.6155	14.1+	21°	03:49	11:55	+62°	19:59	04:21	+ 4°	NO	CNC
Mi 22.08.2018	00:00 C/2017 M4 ATLAS	16h24'31.8"	+25°12'24.5"	3.5464	3.4037	14.2-	90°	11:06	19:30	+64°	03:58	22:00	+51°	SW	HER
Mi 22.08.2018	00:00 C/2016 R2 PANSTARRS	10h27'30.2"	+51°36' 7.2"	2.8262	3.5261	14.2-	40°	--:--	13:36	+89°	--:--	22:00	+22°	NW	UMA
Mi 22.08.2018	00:00 64P/Swift-Gehrels	0h11'14.1"	+16°38'26.0"	1.6445	0.7515	14.4+	137°	19:45	03:20	+56°	10:50	03:19	+56°	S	PSC
Mi 22.08.2018	00:00 48P/Johnson	22h39'24.3"	-25°33' 2.0"	2.0060	1.0144	14.6-	164°	22:04	01:48	+14°	05:28	01:47	+14°	S	AQR
Mi 22.08.2018	00:00 65P/Gunn	23h20'15.5"	-18°27'31.1"	3.2693	2.2994	14.8-	160°	21:57	02:29	+21°	06:55	02:28	+21°	S	AQR
Mi 22.08.2018	00:00 137P/Shoemaker-Levy	21h34' 9.4"	- 4°59'28.3"	2.1935	1.1902	14.8+	170°	19:00	00:43	+34°	06:21	00:42	+34°	S	AQR
Mi 22.08.2018	00:00 59P/Kearns-Kwee	6h14'28.5"	+30°18'55.3"	2.3671	2.7851	14.8+	56°	00:13	09:23	+70°	18:31	04:21	+32°	O	AUR
Do 23.08.2018	00:00 21P/Giacobini-Zinner	3h50'48.3"	+59°28'23.5"	1.0465	0.4456	7.3+	82°	--:--	06:58	+82°	--:--	04:24	+67°	NO	CAM
Do 23.08.2018	00:00 46P/Wirtanen	1h22'32.2"	-16°32'34.0"	1.7460	0.8969	12.4+	132°	23:47	04:27	+23°	09:05	04:24	+23°	S	CET
Do 23.08.2018	00:00 38P/Stephan-Oterma	4h22' 2.7"	+ 5°59'17.0"	1.8745	1.6690	12.8+	85°	00:53	07:27	+45°	14:00	04:24	+31°	SO	TAU
Do 23.08.2018	00:00 P/2013 R3-A Catalin.	20h48'11.1"	-18°28'52.1"	2.2893	1.3130	13.2-	160°	19:22	23:49	+21°	04:20	00:00	+21°	S	CAP
Do 23.08.2018	00:00 P/2013 R3-B Catalin.	20h47'43.1"	-18°30'55.7"	2.2897	1.3137	13.2-	160°	19:21	23:48	+21°	04:19	00:00	+21°	S	CAP
Do 23.08.2018	00:00 37P/Forbes	23h33'10.3"	+ 6°13'42.5"	1.9293	0.9771	13.9-	152°	19:59	02:38	+45°	09:11	02:37	+45°	S	PSC
Do 23.08.2018	00:00 P/2010 H2 Vales	15h45' 1.8"	-23° 9'13.3"	3.4031	3.2541	13.9-	90°	14:50	18:48	+16°	22:45	21:57	+ 5°	SW	SCO
Do 23.08.2018	00:00 C/2016 N6 PANSTARRS	8h47'58.1"	+22°13'35.1"	2.6954	3.6106	14.1+	22°	03:47	11:51	+61°	19:53	04:24	+ 4°	NO	CNC
Do 23.08.2018	00:00 66P/du Toit	1h14'32.0"	-14°19' 6.5"	1.7847	0.9259	14.1-	134°	23:23	04:19	+25°	09:09	04:18	+25°	S	CET
Do 23.08.2018	00:00 C/2017 M4 ATLAS	16h23'59.1"	+24°48'44.5"	3.5427	3.4123	14.2-	89°	11:05	19:25	+64°	03:51	21:57	+51°	SW	HER
Do 23.08.2018	00:00 C/2016 R2 PANSTARRS	10h30'36.8"	+51°31'28.9"	2.8303	3.5267	14.3-	40°	--:--	13:35	+89°	--:--	21:57	+22°	NW	UMA
Do 23.08.2018	00:00 64P/Swift-Gehrels	0h11'57.1"	+17° 0'46.7"	1.6385	0.7420	14.3+	138°	19:40	03:17	+56°	10:49	03:16	+56°	S	PSC
Do 23.08.2018	00:00 48P/Johnson	22h39' 0.8"	-25°43'51.9"	2.0064	1.0149	14.6-	164°	22:01	01:44	+13°	05:23	01:43	+13°	S	AQR
Do 23.08.2018	00:00 137P/Shoemaker-Levy	21h33'31.6"	- 5° 2'30.6"	2.1893	1.1871	14.8+	170°	18:56	00:39	+34°	06:16	00:38	+34°	S	AQR
Do 23.08.2018	00:00 65P/Gunn	23h19'37.9"	-18°32' 5.0"	3.2713	2.2982	14.8-	161°	21:53	02:24	+21°	06:50	02:23	+21°	S	AQR

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Do 23.08.2018 00:00	59P/Kearns-Kwee	6h16'35.7"	+30°18'11.9"	2.3665	2.7753	14.8+	56°	00:12	09:21	+69°	18:29	04:24	+33°	O	AUR
Fr 24.08.2018 00:00	21P/Giacobini-Zinner	3h59'52.3"	+58°28'31.4"	1.0430	0.4404	7.3+	82°	--:--	07:03	+83°	--:--	04:26	+67°	NO	CAM
Fr 24.08.2018 00:00	46P/Wirtanen	1h23'37.7"	-16°42'38.1"	1.7374	0.8836	12.3+	133°	23:45	04:24	+22°	09:01	04:23	+22°	S	CET
Fr 24.08.2018 00:00	38P/Stephan-Oterma	4h24'21.2"	+ 6° 7'47.1"	1.8681	1.6553	12.7+	85°	00:51	07:25	+45°	13:59	04:26	+32°	SO	TAU
Fr 24.08.2018 00:00	P/2013 R3-A Catalin.	20h47'31.6"	-18°30'52.7"	2.2877	1.3156	13.2-	159°	19:17	23:44	+21°	04:15	23:43	+21°	S	CAP
Fr 24.08.2018 00:00	P/2013 R3-B Catalin.	20h47' 3.7"	-18°32'55.4"	2.2881	1.3164	13.2-	159°	19:17	23:44	+21°	04:14	23:43	+21°	S	CAP
Fr 24.08.2018 00:00	37P/Forbes	23h32'19.4"	+ 6°16'32.1"	1.9343	0.9780	13.9-	153°	19:54	02:33	+45°	09:06	02:32	+45°	S	PSC
Fr 24.08.2018 00:00	P/2010 H2 Vales	15h45'44.2"	-23°13' 5.4"	3.4047	3.2697	13.9-	89°	14:47	18:44	+16°	22:41	21:55	+ 5°	SW	SCO
Fr 24.08.2018 00:00	C/2016 N6 PANSTARRS	8h48'28.1"	+21°58'10.8"	2.6968	3.6054	14.1+	22°	03:46	11:48	+61°	19:48	04:26	+ 5°	NO	CNC
Fr 24.08.2018 00:00	66P/du Toit	1h13'27.3"	-14°13'31.7"	1.7930	0.9274	14.1-	135°	23:17	04:14	+25°	09:04	04:13	+25°	S	CET
Fr 24.08.2018 00:00	C/2017 M4 ATLAS	16h23'28.0"	+24°25' 7.6"	3.5390	3.4211	14.2-	88°	11:03	19:21	+63°	03:43	21:55	+50°	SW	HER
Fr 24.08.2018 00:00	64P/Swift-Gehrels	0h12'39.2"	+17°23'14.2"	1.6325	0.7326	14.2+	138°	19:34	03:14	+57°	10:48	03:13	+57°	S	PSC
Fr 24.08.2018 00:00	C/2016 R2 PANSTARRS	10h33'42.8"	+51°26'42.5"	2.8344	3.5272	14.3-	40°	--:--	13:34	+89°	--:--	21:55	+22°	NW	UMA
Fr 24.08.2018 00:00	48P/Johnson	22h38'36.7"	-25°54'28.7"	2.0067	1.0155	14.6-	164°	21:58	01:39	+13°	05:17	01:38	+13°	S	AQR
Fr 24.08.2018 00:00	137P/Shoemaker-Levy	21h32'54.1"	- 5° 5'38.9"	2.1851	1.1843	14.8+	169°	18:52	00:34	+34°	06:11	00:33	+34°	S	AQR
Fr 24.08.2018 00:00	65P/Gunn	23h18'59.8"	-18°36'36.0"	3.2734	2.2973	14.8-	162°	21:49	02:20	+21°	06:45	02:19	+21°	S	AQR
Fr 24.08.2018 00:00	59P/Kearns-Kwee	6h18'42.6"	+30°17'22.3"	2.3659	2.7654	14.8+	57°	00:10	09:19	+69°	18:27	04:26	+33°	O	AUR
Sa 25.08.2018 00:00	21P/Giacobini-Zinner	4h 8'35.9"	+57°24'53.6"	1.0397	0.4354	7.2+	81°	--:--	07:07	+84°	--:--	04:28	+66°	NO	CAM
Sa 25.08.2018 00:00	46P/Wirtanen	1h24'42.5"	-16°52'59.2"	1.7288	0.8705	12.3+	133°	23:43	04:21	+22°	08:57	04:20	+22°	S	CET
Sa 25.08.2018 00:00	38P/Stephan-Oterma	4h26'40.1"	+ 6°16'17.7"	1.8618	1.6417	12.7+	86°	00:49	07:24	+46°	13:58	04:28	+33°	SO	TAU
Sa 25.08.2018 00:00	P/2013 R3-A Catalin.	20h46'53.3"	-18°32'47.9"	2.2861	1.3185	13.2-	158°	19:13	23:40	+21°	04:10	23:39	+21°	S	CAP
Sa 25.08.2018 00:00	P/2013 R3-B Catalin.	20h46'25.5"	-18°34'49.8"	2.2865	1.3193	13.2-	158°	19:13	23:39	+21°	04:09	23:38	+21°	S	CAP
Sa 25.08.2018 00:00	P/2010 H2 Vales	15h46'27.6"	-23°16'58.4"	3.4062	3.2854	13.9-	88°	14:44	18:41	+16°	22:37	21:52	+ 5°	SW	SCO
Sa 25.08.2018 00:00	37P/Forbes	23h31'27.3"	+ 6°19' 5.7"	1.9393	0.9791	13.9-	154°	19:49	02:28	+46°	09:02	02:27	+46°	S	PSC
Sa 25.08.2018 00:00	C/2016 N6 PANSTARRS	8h48'57.7"	+21°42'46.0"	2.6984	3.6000	14.1+	23°	03:44	11:44	+61°	19:43	04:28	+ 5°	NO	CNC
Sa 25.08.2018 00:00	64P/Swift-Gehrels	0h13'20.3"	+17°45'48.3"	1.6266	0.7234	14.1+	139°	19:29	03:10	+57°	10:47	03:09	+57°	S	PSC
Sa 25.08.2018 00:00	66P/du Toit	1h12'20.3"	-14° 7'58.0"	1.8014	0.9290	14.1-	136°	23:12	04:09	+25°	09:00	04:08	+25°	S	CET
Sa 25.08.2018 00:00	C/2017 M4 ATLAS	16h22'58.5"	+24° 1'34.3"	3.5353	3.4301	14.2-	88°	11:01	19:17	+63°	03:36	21:52	+49°	SW	HER
Sa 25.08.2018 00:00	C/2016 R2 PANSTARRS	10h36'48.3"	+51°21'48.1"	2.8386	3.5277	14.3-	41°	--:--	13:34	+89°	--:--	21:52	+22°	NW	UMA
Sa 25.08.2018 00:00	48P/Johnson	22h38'12.1"	-26° 4'51.6"	2.0071	1.0164	14.6-	164°	21:54	01:35	+13°	05:11	01:34	+13°	S	PSA
Sa 25.08.2018 00:00	137P/Shoemaker-Levy	21h32'16.9"	- 5° 8'52.8"	2.1810	1.1817	14.7+	168°	18:47	00:29	+34°	06:06	00:28	+34°	S	AQR
Sa 25.08.2018 00:00	65P/Gunn	23h18'21.1"	-18°41' 3.8"	3.2754	2.2967	14.8-	163°	21:45	02:15	+21°	06:40	02:14	+21°	S	AQR
Sa 25.08.2018 00:00	59P/Kearns-Kwee	6h20'49.0"	+30°16'26.6"	2.3653	2.7555	14.8+	57°	00:08	09:17	+69°	18:25	04:28	+34°	O	AUR
So 26.08.2018 00:00	21P/Giacobini-Zinner	4h16'59.1"	+56°17'36.0"	1.0366	0.4306	7.2+	81°	--:--	07:12	+85°	--:--	04:30	+66°	NO	CAM
So 26.08.2018 00:00	46P/Wirtanen	1h25'46.7"	-17° 3'37.5"	1.7203	0.8574	12.2+	134°	23:41	04:18	+22°	08:53	04:17	+22°	S	CET
So 26.08.2018 00:00	38P/Stephan-Oterma	4h28'59.3"	+ 6°24'49.0"	1.8555	1.6281	12.6+	86°	00:46	07:22	+46°	13:57	04:30	+33°	SO	TAU
So 26.08.2018 00:00	P/2013 R3-A Catalin.	20h46'16.1"	-18°34'37.5"	2.2846	1.3216	13.2-	157°	19:09	23:35	+21°	04:05	23:34	+21°	S	CAP

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
So 26.08.2018 00:00	P/2013 R3-B Catalin.	20h45'48.4"	-18°36'38.6"	2.2849	1.3224	13.2-	156°	19:08	23:35	+21°	04:05	23:34	+21°	S	CAP
So 26.08.2018 00:00	P/2010 H2 Vales	15h47'11.8"	-23°20'52.3"	3.4078	3.3011	13.9-	87°	14:41	18:38	+16°	22:34	21:49	+ 5°	SW	SCO
So 26.08.2018 00:00	37P/Forbes	23h30'34.2"	+ 6°21'23.5"	1.9444	0.9804	13.9-	155°	19:44	02:23	+46°	08:57	02:22	+46°	S	PSC
So 26.08.2018 00:00	64P/Swift-Gehrels	0h14' 0.5"	+18° 8'28.7"	1.6208	0.7144	14.1+	139°	19:23	03:07	+57°	10:46	03:06	+57°	S	PSC
So 26.08.2018 00:00	C/2016 N6 PANSTARRS	8h49'26.9"	+21°27'20.6"	2.6999	3.5944	14.1+	24°	03:42	11:41	+61°	19:38	04:30	+ 6°	NO	CNC
So 26.08.2018 00:00	C/2017 M4 ATLAS	16h22'30.5"	+23°38' 4.9"	3.5316	3.4391	14.2-	87°	11:00	19:12	+63°	03:29	21:49	+49°	SW	HER
So 26.08.2018 00:00	66P/du Toit	1h11'11.2"	-14° 2'25.0"	1.8097	0.9308	14.2-	138°	23:06	04:04	+25°	08:55	04:03	+25°	S	CET
So 26.08.2018 00:00	C/2016 R2 PANSTARRS	10h39'53.2"	+51°16'45.9"	2.8427	3.5282	14.3-	41°	--:--	13:33	+90°	--:--	21:49	+22°	NW	UMA
So 26.08.2018 00:00	48P/Johnson	22h37'47.0"	-26°14'59.8"	2.0075	1.0174	14.6-	164°	21:51	01:31	+13°	05:06	01:30	+13°	S	PSA
So 26.08.2018 00:00	137P/Shoemaker-Levy	21h31'40.0"	- 5°12'12.1"	2.1769	1.1793	14.7+	167°	18:43	00:25	+34°	06:01	00:24	+34°	S	AQR
So 26.08.2018 00:00	65P/Gunn	23h17'41.9"	-18°45'28.2"	3.2774	2.2963	14.8-	163°	21:41	02:11	+20°	06:35	02:10	+20°	S	AQR
So 26.08.2018 00:00	59P/Kearns-Kwee	6h22'55.1"	+30°15'24.8"	2.3647	2.7455	14.8+	58°	00:07	09:16	+69°	18:23	04:30	+34°	O	AUR
Mo 27.08.2018 00:00	21P/Giacobini-Zinner	4h25' 2.2"	+55° 6'45.4"	1.0336	0.4261	7.1+	81°	--:--	07:16	+86°	--:--	04:32	+66°	NO	CAM
Mo 27.08.2018 00:00	46P/Wirtanen	1h26'50.1"	-17°14'32.9"	1.7117	0.8445	12.1+	134°	23:39	04:16	+22°	08:49	04:15	+22°	S	CET
Mo 27.08.2018 00:00	38P/Stephan-Oterma	4h31'18.9"	+ 6°33'20.9"	1.8493	1.6147	12.6+	86°	00:44	07:20	+46°	13:56	04:32	+34°	SO	TAU
Mo 27.08.2018 00:00	P/2013 R3-A Catalin.	20h45'40.3"	-18°36'21.6"	2.2830	1.3249	13.2-	155°	19:04	23:31	+21°	04:01	23:30	+21°	S	CAP
Mo 27.08.2018 00:00	P/2013 R3-B Catalin.	20h45'12.7"	-18°38'21.8"	2.2833	1.3257	13.2-	155°	19:04	23:30	+21°	04:00	23:29	+21°	S	CAP
Mo 27.08.2018 00:00	P/2010 H2 Vales	15h47'56.9"	-23°24'47.1"	3.4094	3.3168	13.9-	87°	14:39	18:35	+16°	22:30	21:47	+ 4°	SW	SCO
Mo 27.08.2018 00:00	37P/Forbes	23h29'40.3"	+ 6°23'25.6"	1.9494	0.9819	13.9-	156°	19:39	02:19	+46°	08:52	02:18	+46°	S	PSC
Mo 27.08.2018 00:00	64P/Swift-Gehrels	0h14'39.8"	+18°31'15.0"	1.6150	0.7055	14.0+	140°	19:18	03:04	+58°	10:45	03:03	+58°	S	PSC
Mo 27.08.2018 00:00	C/2016 N6 PANSTARRS	8h49'55.7"	+21°11'54.5"	2.7015	3.5886	14.1+	24°	03:40	11:38	+60°	19:33	04:32	+ 6°	NO	CNC
Mo 27.08.2018 00:00	C/2017 M4 ATLAS	16h22' 4.0"	+23°14'39.7"	3.5280	3.4484	14.2-	86°	10:58	19:08	+62°	03:22	21:47	+48°	SW	HER
Mo 27.08.2018 00:00	66P/du Toit	1h 9'59.9"	-13°56'52.3"	1.8181	0.9327	14.2-	139°	23:00	03:59	+25°	08:50	03:58	+25°	S	CET
Mo 27.08.2018 00:00	C/2016 R2 PANSTARRS	10h42'57.6"	+51°11'36.2"	2.8470	3.5288	14.3-	41°	--:--	13:32	+90°	--:--	21:47	+22°	NW	UMA
Mo 27.08.2018 00:00	48P/Johnson	22h37'21.7"	-26°24'52.7"	2.0080	1.0187	14.6-	163°	21:48	01:26	+13°	05:00	01:25	+13°	S	PSA
Mo 27.08.2018 00:00	137P/Shoemaker-Levy	21h31' 3.6"	- 5°15'36.3"	2.1728	1.1772	14.7+	167°	18:39	00:20	+34°	05:57	00:19	+34°	S	AQR
Mo 27.08.2018 00:00	59P/Kearns-Kwee	6h25' 0.7"	+30°14'17.0"	2.3642	2.7355	14.8+	58°	00:05	09:14	+69°	18:21	04:32	+35°	O	AUR
Mo 27.08.2018 00:00	65P/Gunn	23h17' 2.2"	-18°49'48.9"	3.2794	2.2962	14.8-	164°	21:37	02:06	+20°	06:30	02:05	+20°	S	AQR
Di 28.08.2018 00:00	21P/Giacobini-Zinner	4h32'45.5"	+53°52'29.3"	1.0309	0.4218	7.1+	81°	--:--	07:19	+87°	--:--	04:34	+65°	O	CAM
Di 28.08.2018 00:00	46P/Wirtanen	1h27'52.7"	-17°25'45.5"	1.7032	0.8318	12.1+	135°	23:37	04:13	+22°	08:45	04:12	+22°	S	CET
Di 28.08.2018 00:00	38P/Stephan-Oterma	4h33'38.9"	+ 6°41'53.7"	1.8431	1.6013	12.5+	87°	00:42	07:19	+46°	13:55	04:34	+34°	SO	ORI
Di 28.08.2018 00:00	P/2013 R3-A Catalin.	20h45' 5.7"	-18°37'59.8"	2.2814	1.3284	13.2-	154°	19:00	23:26	+21°	03:56	23:25	+21°	S	CAP
Di 28.08.2018 00:00	P/2013 R3-B Catalin.	20h44'38.2"	-18°39'59.2"	2.2817	1.3292	13.2-	154°	19:00	23:26	+21°	03:55	23:25	+21°	S	CAP
Di 28.08.2018 00:00	64P/Swift-Gehrels	0h15'18.2"	+18°54' 6.8"	1.6092	0.6967	13.9+	140°	19:12	03:01	+58°	10:44	03:00	+58°	S	PSC
Di 28.08.2018 00:00	P/2010 H2 Vales	15h48'42.9"	-23°28'42.7"	3.4110	3.3324	13.9-	86°	14:36	18:32	+16°	22:26	21:44	+ 4°	SW	SCO
Di 28.08.2018 00:00	37P/Forbes	23h28'45.4"	+ 6°25'12.4"	1.9545	0.9836	14.0-	157°	19:34	02:14	+46°	08:48	02:13	+46°	S	PSC
Di 28.08.2018 00:00	C/2016 N6 PANSTARRS	8h50'24.0"	+20°56'27.5"	2.7032	3.5825	14.1+	25°	03:39	11:34	+60°	19:28	04:34	+ 7°	NO	CNC
Di 28.08.2018 00:00	C/2017 M4 ATLAS	16h21'39.0"	+22°51'19.0"	3.5244	3.4577	14.2-	85°	10:57	19:03	+62°	03:15	21:44	+48°	SW	HER

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

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Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entf.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	Tri.	Stb.
Di 28.08.2018 00:00	66P/du Toit	1h 8'46.7"	-13°51'19.5"	1.8265	0.9348	14.2-	140°	22:55	03:53	+25°	08:46	03:52	+25°	S	CET
Di 28.08.2018 00:00	C/2016 R2 PANSTARRS	10h46' 1.4"	+51° 6'18.9"	2.8512	3.5293	14.3-	41°	--:--	13:31	+90°	--:--	21:44	+22°	NW	UMA
Di 28.08.2018 00:00	48P/Johnson	22h36'56.0"	-26°34'29.6"	2.0084	1.0202	14.6-	163°	21:45	01:22	+13°	04:55	01:21	+13°	S	PSA
Di 28.08.2018 00:00	137P/Shoemaker-Levy	21h30'27.7"	- 5°19' 5.2"	2.1688	1.1753	14.7+	166°	18:35	00:16	+34°	05:52	00:15	+34°	S	AQR
Di 28.08.2018 00:00	59P/Kearns-Kwee	6h27' 5.8"	+30°13' 3.2"	2.3637	2.7255	14.8+	59°	00:03	09:12	+69°	18:19	04:34	+36°	O	GEM
Di 28.08.2018 00:00	65P/Gunn	23h16'22.0"	-18°54' 5.5"	3.2815	2.2964	14.8-	165°	21:32	02:01	+20°	06:25	02:00	+20°	S	AQR
Mi 29.08.2018 00:00	21P/Giacobini-Zinner	4h40' 9.4"	+52°34'55.8"	1.0283	0.4178	7.0+	81°	--:--	07:23	+89°	--:--	04:37	+65°	O	CAM
Mi 29.08.2018 00:00	46P/Wirtanen	1h28'54.6"	-17°37'15.4"	1.6946	0.8192	12.0+	136°	23:36	04:10	+22°	08:41	04:09	+22°	S	CET
Mi 29.08.2018 00:00	38P/Stephan-Oterma	4h35'59.3"	+ 6°50'27.4"	1.8370	1.5880	12.4+	87°	00:39	07:17	+46°	13:54	04:37	+35°	SO	ORI
Mi 29.08.2018 00:00	P/2013 R3-A Catalin.	20h44'32.5"	-18°39'32.2"	2.2799	1.3321	13.2-	153°	18:56	23:22	+21°	03:51	23:21	+21°	S	CAP
Mi 29.08.2018 00:00	P/2013 R3-B Catalin.	20h44' 5.2"	-18°41'30.7"	2.2802	1.3330	13.2-	153°	18:55	23:21	+20°	03:51	23:20	+20°	S	CAP
Mi 29.08.2018 00:00	64P/Swift-Gehrels	0h15'55.5"	+19°17' 3.8"	1.6035	0.6881	13.8+	141°	19:06	02:57	+59°	10:43	02:56	+59°	S	PSC
Mi 29.08.2018 00:00	P/2010 H2 Vales	15h49'29.7"	-23°32'39.0"	3.4125	3.3481	14.0-	85°	14:33	18:29	+16°	22:23	21:41	+ 4°	SW	SCO
Mi 29.08.2018 00:00	37P/Forbes	23h27'49.8"	+ 6°26'44.0"	1.9596	0.9856	14.0-	158°	19:29	02:09	+46°	08:43	02:08	+46°	S	PSC
Mi 29.08.2018 00:00	C/2016 N6 PANSTARRS	8h50'51.9"	+20°40'59.7"	2.7049	3.5763	14.1+	26°	03:37	11:31	+60°	19:23	04:37	+ 8°	NO	CNC
Mi 29.08.2018 00:00	C/2017 M4 ATLAS	16h21'15.4"	+22°28' 3.1"	3.5208	3.4672	14.2-	85°	10:55	18:59	+61°	03:08	21:41	+47°	SW	HER
Mi 29.08.2018 00:00	66P/du Toit	1h 7'31.4"	-13°45'46.4"	1.8349	0.9371	14.2-	141°	22:49	03:48	+25°	08:41	03:47	+25°	S	CET
Mi 29.08.2018 00:00	C/2016 R2 PANSTARRS	10h49' 4.6"	+51° 0'54.4"	2.8554	3.5299	14.3-	42°	--:--	13:30	+90°	--:--	21:41	+23°	NW	UMA
Mi 29.08.2018 00:00	48P/Johnson	22h36'30.2"	-26°43'49.9"	2.0089	1.0219	14.6-	163°	21:42	01:18	+12°	04:49	01:17	+12°	S	PSA
Mi 29.08.2018 00:00	137P/Shoemaker-Levy	21h29'52.4"	- 5°22'38.4"	2.1647	1.1736	14.7+	165°	18:30	00:11	+34°	05:47	00:10	+34°	S	AQR
Mi 29.08.2018 00:00	59P/Kearns-Kwee	6h29'10.6"	+30°11'43.6"	2.3632	2.7155	14.8+	59°	00:02	09:10	+69°	18:17	04:37	+36°	O	GEM
Mi 29.08.2018 00:00	65P/Gunn	23h15'41.4"	-18°58'17.7"	3.2835	2.2968	14.8-	165°	21:28	01:57	+20°	06:20	01:56	+20°	S	AQR
Do 30.08.2018 00:00	21P/Giacobini-Zinner	4h47'14.7"	+51°14'13.7"	1.0259	0.4140	7.0+	80°	--:--	07:26	+90°	--:--	04:39	+64°	O	AUR
Do 30.08.2018 00:00	46P/Wirtanen	1h29'55.7"	-17°49' 2.6"	1.6861	0.8067	11.9+	136°	23:34	04:07	+21°	08:37	04:06	+21°	S	CET
Do 30.08.2018 00:00	38P/Stephan-Oterma	4h38'20.0"	+ 6°59' 2.1"	1.8310	1.5748	12.4+	87°	00:37	07:16	+46°	13:53	04:39	+36°	SO	ORI
Do 30.08.2018 00:00	P/2013 R3-A Catalin.	20h44' 0.7"	-18°40'58.6"	2.2783	1.3361	13.2-	152°	18:51	23:17	+20°	03:47	23:16	+20°	S	CAP
Do 30.08.2018 00:00	P/2013 R3-B Catalin.	20h43'33.5"	-18°42'56.2"	2.2787	1.3369	13.2-	152°	18:51	23:17	+20°	03:46	23:16	+20°	S	CAP
Do 30.08.2018 00:00	64P/Swift-Gehrels	0h16'31.9"	+19°40' 5.4"	1.5979	0.6797	13.8+	141°	19:01	02:54	+59°	10:42	02:53	+59°	S	PSC
Do 30.08.2018 00:00	P/2010 H2 Vales	15h50'17.3"	-23°36'36.0"	3.4141	3.3637	14.0-	84°	14:30	18:25	+16°	22:19	21:38	+ 4°	SW	SCO
Do 30.08.2018 00:00	37P/Forbes	23h26'53.6"	+ 6°28' 0.7"	1.9647	0.9877	14.0-	159°	19:24	02:04	+46°	08:38	02:03	+46°	S	PSC
Do 30.08.2018 00:00	C/2016 N6 PANSTARRS	8h51'19.3"	+20°25'30.7"	2.7066	3.5698	14.1+	27°	03:35	11:27	+60°	19:18	04:39	+ 8°	O	CNC
Do 30.08.2018 00:00	C/2017 M4 ATLAS	16h20'53.3"	+22° 4'52.2"	3.5172	3.4768	14.2-	84°	10:53	18:55	+61°	03:01	21:38	+47°	SW	HER
Do 30.08.2018 00:00	66P/du Toit	1h 6'14.4"	-13°40'12.6"	1.8433	0.9395	14.3-	142°	22:43	03:43	+26°	08:36	03:42	+26°	S	CET
Do 30.08.2018 00:00	C/2016 R2 PANSTARRS	10h52' 7.1"	+50°55'22.7"	2.8597	3.5304	14.3-	42°	--:--	13:29	+90°	--:--	21:38	+23°	NW	UMA
Do 30.08.2018 00:00	48P/Johnson	22h36' 4.3"	-26°52'53.0"	2.0095	1.0239	14.6-	162°	21:39	01:13	+12°	04:44	01:12	+12°	S	PSA
Do 30.08.2018 00:00	137P/Shoemaker-Levy	21h29'17.7"	- 5°26'15.5"	2.1607	1.1721	14.7+	164°	18:26	00:07	+34°	05:42	00:06	+34°	S	AQR
Do 30.08.2018 00:00	59P/Kearns-Kwee	6h31'14.8"	+30°10'18.1"	2.3627	2.7054	14.8+	60°	23:58	09:08	+69°	18:15	04:39	+37°	O	GEM
Do 30.08.2018 00:00	65P/Gunn	23h15' 0.4"	-19° 2'25.4"	3.2855	2.2975	14.8-	166°	21:24	01:52	+20°	06:15	01:51	+20°	S	AQR

Kometenephemeride für den Zeitraum 1. 6.2018 - 31. 8.2018 bis zu einer Helligkeit von 15.0 mag., aufsteigend sortiert nach Helligkeit

Alle Zeiten gelten für den Standort oberlungwitz (50.8° N, 12.8° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -15°

Datum	Komet	RA (2000.0)	Dek(2000.0)	r	Entfg.	Hell	Elong	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH	TRi.	Stb.
Fr 31.08.2018 00:00	21P/Giacobini-Zinner	4h54' 1.9"	+49°50'32.2"	1.0237	0.4104	7.0+	80°	--:--	07:28	+89°	--:--	04:41	+64°	O	AUR
Fr 31.08.2018 00:00	46P/Wirtanen	1h30'56.0"	-18° 1' 7.1"	1.6775	0.7943	11.9+	137°	23:32	04:04	+21°	08:33	04:03	+21°	S	CET
Fr 31.08.2018 00:00	38P/Stephan-Oterma	4h40'41.0"	+ 7° 7'37.8"	1.8250	1.5617	12.3+	88°	00:35	07:14	+46°	13:52	04:41	+36°	SO	ORI
Fr 31.08.2018 00:00	P/2013 R3-A Catalin.	20h43'30.4"	-18°42'18.8"	2.2768	1.3402	13.2-	151°	18:47	23:13	+20°	03:42	23:12	+20°	S	CAP
Fr 31.08.2018 00:00	P/2013 R3-B Catalin.	20h43' 3.3"	-18°44'15.7"	2.2771	1.3411	13.2-	151°	18:47	23:12	+20°	03:42	23:11	+20°	S	CAP
Fr 31.08.2018 00:00	64P/Swift-Gehrels	0h17' 7.4"	+20° 3'11.3"	1.5923	0.6714	13.7+	142°	18:55	02:51	+59°	10:41	02:50	+59°	S	PSC
Fr 31.08.2018 00:00	P/2010 H2 Vales	15h51' 5.7"	-23°40'33.6"	3.4157	3.3794	14.0-	84°	14:28	18:22	+15°	22:16	21:36	+ 4°	SW	SCO
Fr 31.08.2018 00:00	37P/Forbes	23h25'56.7"	+ 6°29' 2.6"	1.9698	0.9900	14.0-	160°	19:19	01:59	+46°	08:33	01:58	+46°	S	PSC
Fr 31.08.2018 00:00	C/2016 N6 PANSTARRS	8h51'46.3"	+20°10' 0.7"	2.7083	3.5631	14.1+	28°	03:33	11:24	+59°	19:12	04:41	+ 9°	O	CNC
Fr 31.08.2018 00:00	C/2017 M4 ATLAS	16h20'32.7"	+21°41'46.7"	3.5137	3.4864	14.2-	83°	10:51	18:51	+61°	02:54	21:36	+46°	SW	HER
Fr 31.08.2018 00:00	66P/du Toit	1h 4'55.5"	-13°34'37.7"	1.8518	0.9421	14.3-	143°	22:37	03:38	+26°	08:32	03:37	+26°	S	CET
Fr 31.08.2018 00:00	C/2016 R2 PANSTARRS	10h55' 9.0"	+50°49'44.1"	2.8641	3.5310	14.3-	42°	--:--	13:28	+90°	--:--	21:36	+23°	NW	UMA
Fr 31.08.2018 00:00	48P/Johnson	22h35'38.3"	-27° 1'38.3"	2.0101	1.0260	14.6-	162°	21:35	01:09	+12°	04:38	01:08	+12°	S	PSA
Fr 31.08.2018 00:00	137P/Shoemaker-Levy	21h28'43.8"	- 5°29'56.3"	2.1567	1.1709	14.7+	163°	18:22	23:58	+34°	05:37	00:01	+34°	S	AQR
Fr 31.08.2018 00:00	59P/Kearns-Kwee	6h33'18.6"	+30° 8'46.9"	2.3623	2.6953	14.8+	60°	23:57	09:06	+69°	18:13	04:41	+38°	O	GEM
Fr 31.08.2018 00:00	65P/Gunn	23h14'19.1"	-19° 6'28.1"	3.2876	2.2985	14.8-	166°	21:20	01:48	+20°	06:10	01:47	+20°	S	AQR

Legende:

- Eine Zeile in dieser Farbe signalisiert eine optimale Beobachtbarkeit in über 10° Höhe
- Eine Zeile in dieser Farbe signalisiert eine optimale Beobachtbarkeit in unter 10° Höhe
- Eine Zeile in dieser Farbe signalisiert eine Unbeobachtbarkeit des Kometen

Datum	= Berechnungsdatum und -Uhrzeit
Komet	= Name des Kometen
RA (2000.0)	= Rektaszension zum Berechnungszeitpunkt (Äquinoktium 2000.0)
Dek.(2000.0)	= Deklination zum Berechnungszeitpunkt (Äquinoktium 2000.0)
r	= Abstand Sonne - Komet zum Berechnungszeitpunkt
Entfg.	= Abstand Erde - Komet zum Berechnungszeitpunkt
Hell.	= Helligkeit des Kometen zum Berechnungszeitpunkt
Elong.	= Elongation des Kometen zum Berechnungszeitpunkt
Aufg.	= Kometenaufgang
Kulm.	= Kulmination des Kometen
KHöh	= Höhe des Kometen zum Kulminationszeitpunkt
Untg.	= Kometenuntergang
TOpt.	= Optimaler Beobachtungszeitpunkt
TOptH.	= Höhe des Kometen zum optimalen Beobachtungszeitpunkt
TRi.	= Azimut des Kometen zum optimalen Beobachtungszeitpunkt
Stb.	= Sternbild zur berechneten Position