

# Grange Observatory

## LUNAR OCCULTATIONS FOR YEAR 2017

### TABLES LEGEND

Date/Day/Time	the time scale herein used is the Central Europe Time (CET)
A	estimated calculation error in time of event (seconds)
P	phenomenon
D	star disappearance
R	star reappearance
G	graze occultation
SAO	(when present) Smithsonian Astronomical Observatory catalogue star number
Mag	star magnitude in SAO catalogue
Al	star height above horizon (degrees)
Az	azimuth (degrees)
Sn	Sun height above horizon (negative = below horizon, degrees)
K	Moon's illumination (phase in percent)
Name	(when present) classic star designation

# Occultations 2017 for Grange Observatory WGS 84 coordinates

Day	Date	Time	A	Mag	P	K	Al	Az	Sn	SAO	Name
	d m y	h m s	s			%	°	°	°		
Sun	01-01-2017	18:04:18	1	6.9	D	11%+	20	224	-11	164430	NSV 25615
Sun	01-01-2017	18:37:01	2	6.6	D	11%+	15	230	-16	164444	
Mon	02-01-2017	18:21:25	1	7.8	D	19%+	26	218	-14	165025	
Wed	04-01-2017	20:15:42		6.4	C	38%+	31	230	-33	128595	4 (Ceti)/Piscium
Wed	04-01-2017	20:20:34	3	6.2	D	38%+	31	228	-34	128602	5 (Ceti)/Piscium
Wed	04-01-2017	20:30:56	1	7.1	D	38%+	30	230	-36	128607	
Thu	05-01-2017	18:10:21	1	7.0	D	49%+	47	174	-11	109556	
Thu	05-01-2017	21:09:49	1	7.6	D	50%+	35	231	-42	109613	
Tue	10-01-2017	00:02:32	1	5.5	D	91%+	54	229	-66	94227	
Thu	12-01-2017	22:20:34	2	5.6	D	100%+	46	116	-53	97472	3 Cancri
Thu	12-01-2017	22:54:43	2	5.6	R	100%+	51	126	-58	97472	3 Cancri
Fri	13-01-2017	05:47:35	1	6.0	R	99%+	27	267	-24	97653	
Sat	21-01-2017	04:15:04	2	5.8	R	38%+	19	131	-40	158887	13 Librae
Sat	21-01-2017	07:07:21	1	7.1	R	37%+	32	174	-10	158929	FY Librae
Sun	22-01-2017	05:39:28	1	6.3	R	29%+	21	141	-25	159461	
Wed	25-01-2017	07:11:33		7.0	F	7%+	11	133	-9		
Thu	26-01-2017	07:00:40	1	5.6	R	3%+	3	122	-10	162229	NGC 6595
Sun	29-01-2017	18:38:47	1	7.3	D	3%+	6	247	-11	164883	V4024 Sagittarii
Thu	02-02-2017	20:14:56	1	4.4	D	34%+	35	237	-27	110065	nu Piscium
Thu	02-02-2017	21:29:50	1	7.6	D	35%+	24	253	-40	110088	
Sat	04-02-2017	00:45:26	1	4.3	D	47%+	3	282	-61	110723	mu Ceti
Sat	04-02-2017	19:27:06	3	4.1	D	57%+	57	191	-19	93469	5 Tauri
Sat	04-02-2017	20:00:24	3	4.1	R	57%+	56	205	-24	93469	5 Tauri
Sun	05-02-2017	00:10:42	2	6.7	D	58%+	20	270	-60	93532	
Sun	05-02-2017	17:40:00	2	4.5	D	67%+	49	125	+0	93932	71 Tauri, V777 Tauri
Sun	05-02-2017	18:50:42	1	3.8	D	68%+	58	149	-12	93955	theta 1 Tauri
Sun	05-02-2017	18:53:19	1	3.4	D	68%+	58	150	-12	93957	theta 2 Tauri
Sun	05-02-2017	19:17:52	1	6.7	D	68%+	60	161	-17	93961	
Sun	05-02-2017	20:06:52	1	4.8	D	68%+	61	184	-25	93975	NSV 01627
Sun	05-02-2017	20:10:27	1	6.5	D	68%+	61	186	-26	93981	
Sun	05-02-2017	21:51:53	1	6.6	D	69%+	53	228	-43	94004	
Sun	05-02-2017	23:18:46	2	6.9	D	69%+	40	251	-55	94027	Aldebaran, alpha Tau
Mon	05-02-2017	23:57:12	2	0.9	R	69%+	34	259	-59	94027	Aldebaran, alpha Tau
Mon	06-02-2017	18:30:37	2	5.4	D	78%+	50	121	-8	94554	115 Tauri
Wed	08-02-2017	04:02:23	1	6.4	D	89%+	13	282	-39	96111	
Thu	09-02-2017	00:09:22	1	5.0	D	95%+	58	215	-59	97120	74 Geminorum
Sun	12-02-2017	04:59:54	1	5.6	R	99%+	33	246	-28	118380	49 Leonis, TX Leonis
Wed	15-02-2017	01:18:04	1	6.7	R	83%+	31	134	-57	139072	
Wed	15-02-2017	02:55:33	2	6.2	R	83%+	40	162	-47	139096	46 Virginis
Wed	15-02-2017	05:23:45	1	6.7	R	82%+	37	208	-23	139131	48 Virginis
Tue	21-02-2017	06:17:28		5.5	P	28%+	20	148	-12		M23, open cluster
Wed	22-02-2017	05:30:48	1	6.3	R	20%+	9	129	-20	161803	V4405 Sagittarii
Thu	02-03-2017	18:31:32	2	6.8	D	20%+	42	231	-3	110464	
Thu	02-03-2017	20:14:54	2	7.6	D	21%+	27	255	-21		
Thu	02-03-2017	20:45:05	1	7.6	D	21%+	21	260	-26	110502	
Fri	03-03-2017	21:29:17	2	7.3	D	31%+	26	262	-33	93398	
Fri	03-03-2017	22:57:09	1	6.0	D	32%+	11	277	-45	93416	
Sat	04-03-2017	19:50:53	1	6.3	D	42%+	52	228	-16	93836	48 Tauri, V1099 Tauri
Sat	04-03-2017	21:58:44	1	3.7	D	43%+	32	259	-37	93868	Hyadum I, gamma Tauri
Sun	05-03-2017	00:42:50	1	6.6	D	44%+	5	288	-51	93925	70 Tauri, NSV 15985
Sun	05-03-2017	00:51:36	1	4.5	D	44%+	4	289	-51	93932	71 Tauri, V777 Tauri
Mon	06-03-2017	00:42:52	1	5.0	D	55%+	15	279	-51	94526	111 Tauri
Mon	06-03-2017	20:27:05	1	6.6	D	65%+	62	199	-22	95456	
Wed	08-03-2017	20:17:21	1	6.0	D	84%+	57	143	-20	97653	
Thu	09-03-2017	01:39:59	1	6.7	D	86%+	34	259	-47	97773	
Tue	14-03-2017	22:10:14	1	5.9	R	94%+	15	113	-36	139308	65 Virginis
Tue	14-03-2017	23:05:08	1	5.8	R	94%+	23	124	-42	139324	66 Virginis
Wed	15-03-2017	04:34:28	2	4.7	R	94%+	32	216	-23	139390	74 Virginis
Sat	18-03-2017	06:00:50	2	6.5	R	73%+	26	200	-7	159598	NSV 07351
Sun	19-03-2017	02:46:19	1	4.9	R	65%+	17	140	-37	160046	24 (Scorpii)/Ophiuchi
Sat	01-04-2017	18:59:54	1	5.5	D	27%+	51	235	+0	94227	
Sun	02-04-2017	21:58:41	1	7.7	D	39%+	32	264	-29	95174	
Tue	04-04-2017	21:36:44	3	5.6	D	62%+	53	231	-25	97472	3 Cancri
Tue	04-04-2017	22:57:02	1	7.4	D	62%+	41	251	-34	97512	
Thu	06-04-2017	21:19:41	1	6.9	D	81%+	57	179	-22	98806	21 Leonis
Fri	14-04-2017	02:05:58	1	3.9	R	93%+	30	171	-31	159370	Gamma Librae
Wed	19-04-2017	05:26:34	4	5.9	R	52%+	24	162	-3	163060	57 Sagittarii
Sat	22-04-2017	04:30:46	5	7.0	R	23%+	8	115	-11	165079	54 Aquarii
Fri	28-04-2017	19:21:12	1	0.9	D	7%+	26	268	+2	94027	Aldebaran, alpha Tau
Fri	28-04-2017	20:18:04	1	0.9	R	8%+	16	278	-8	94027	Aldebaran, alpha Tau
Sun	30-04-2017	20:51:57	1	7.5	D	25%+	32	265	-12	96047	
Sun	30-04-2017	22:28:07	1	7.3	D	26%+	16	281	-24	96110	
Sun	30-04-2017	22:48:44	4	6.4	D	26%+	12	284	-26	96111	
Mon	01-05-2017	20:05:19	1	7.8	D	35%+	48	241	-5	97168	
Wed	03-05-2017	21:38:38	1	6.7	D	58%+	47	232	-18	98687	
Thu	04-05-2017	19:45:11	2	6.0	D	68%+	54	170	-1	99136	45 Leonis, CX Leonis
Fri	05-05-2017	00:36:31	1	5.6	D	69%+	23	258	-29	118380	49 Leonis, TX Leonis
Mon	08-05-2017	01:14:35	1	6.2	D	92%+	29	229	-27	139096	46 Virginis
Sat	13-05-2017	04:12:46	2	6.3	R	96%+	20	211	-9	160231	29 Ophiuchi
Mon	15-05-2017	02:08:50	1	6.7	R	85%+	22	157	-22	187108	
Sun	28-05-2017	21:07:00	1	6.8	D	13%+	17	279	-9	96837	
Sun	28-05-2017	22:12:10	1	6.9	D	13%+	6	290	-16	96888	
Sat	03-06-2017	00:13:18	3	6.8	D	64%+	17	255	-22	119150	
Sat	03-06-2017	19:59:34	1	2.8	D	73%+	43	172	+2	138917	Gamma Virginis
Sat	03-06-2017	20:00:07	1	3.5	D	73%+	43	172	+1		
Sat	03-06-2017	21:23:45	1	2.8	R	73%+	41	200	-10	138917	Gamma Virginis
Sat	03-06-2017	21:27:27	2	5.9	D	73%+	41	201	-11	138933	
Thu	15-06-2017	04:39:47	2	5.1	R	74%+	31	177	-1	164713	Mu Capricorni
Fri	16-06-2017	04:18:01	1	7.0	R	64%+	32	157	-4	165248	65 Aquarii
Sat	17-06-2017	02:48:30	1	6.4	R	54%+	20	122	-15	146748	
Mon	19-06-2017	02:08:25	1	6.6	R	33%+	4	91	-18	109727	35 Ceti
Mon	19-06-2017	04:06:51	1	7.6	R	32%+	24	112	-6	109775	
Thu	22-06-2017	03:58:23	2	6.0	R	6%+	4	72	-7	93775	NSV 01466
Thu	22-06-2017	16:27:19	1	0.9	D	4%+	18	276	+38	94027	Aldebaran, alpha Tau
Thu	22-06-2017	17:21:11	1	0.9	R	4%+	9	285	+29	94027	Aldebaran, alpha Tau
Fri	14-07-2017	01:47:03	1	4.9	R	78%+	27	136	-21	146612	chi Aquarii
Tue	25-07-2017	20:50:12	1	6.0	D	8%+	6	278	-7	99136	45 Leonis, CX Leonis
Fri	28-07-2017	20:16:11	1	6.7	D	32%+	26	235	-3	139072	
Sat	29-07-2017	20:43:08	2	7.0	D	42%+	25	229	-7	139548	
Sat	29-07-2017	21:13:46	2	6.6	D	42%+	21	236	-11	139559	88 Virginis
Wed	02-08-2017	22:24:09	3	6.3	D	79%+	22	205	-20	160231	29 Ophiuchi
Sun	06-08-2017	22:19:59	1	5.1	D	99%+	23	155	-21	163592	pi Capricorni
Mon	14-08-2017	00:47:50	1	4.3	R	62%+	20	98	-30	110543	xi 2 Ceti
Mon	14-08-2017	04:08:12	1	7.4	R	60%+	49	146	-14	110616	
Tue	15-08-2017	01:00:29	1	6.0	C	50%+	16	89	-31	93416	
Tue	15-08-2017	01:49:12	1	7.4	R	50%+	24	96	-29	93422	
Tue	15-08-2017	02:54:02	1	6.3	R	49%+	35	109	-23	93439	
Tue	15-08-2017	04:51:51	1	4.1	R	49%+	52	140	-7	93469	5 Tauri
Wed	16-08-2017	00:23:32		3.7	C	39%+	3	72	-31	93868	Hyadum I, gamma Tauri
Wed	16-08-2017	03:05:09	2	7.5	R	38%+	29	97	-22	93928	V0992 Tauri
Wed	16-08-2017	03:11:06	1	6.6	R	38%+	31	98	-21	93925	70 Tauri, NSV 15985
Wed	16-08-2017	03:23:44	1	4.5	R	38%+	33	101	-20	93932	71 Tauri, V777 Tauri
Wed	16-08-2017	03:38:15	1	3.4	D	38%+	35	103	-18	93957	theta 2 Tauri
Wed	16-08-2017	04:42:20	1	3.4	R	37%+	46	118	-9	93957	theta 2 Tauri

Day	Date d m y	Time h m s	A s	Mag	P	K %	Al °	Az °	Sn °	SAO	Name
Wed	16-08-2017	04:44:39	1	3.8	R	37%	46	119	-9	93955	theta 1 Tauri
Wed	16-08-2017	04:56:55	1	6.7	R	37%	48	122	-7	93961	
Wed	16-08-2017	07:43:24	1	0.9	D	36%	61	187	+22	94027	Aldebaran, alpha Tau
Wed	16-08-2017	08:58:36	1	0.9	R	36%	56	221	+35	94027	Aldebaran, alpha Tau
Thu	17-08-2017	04:03:43	1	5.4	R	27%	31	96	-15	94554	115 Tauri
Fri	18-08-2017	03:07:35	1	6.8	R	17%	12	76	-22	95677	OU Geminorum
Fri	18-08-2017	03:50:36	1	7.9	R	17%	20	83	-17	95707	
Tue	29-08-2017	19:38:45	2	6.7	D	54%+	25	195	-5	160044	
Tue	29-08-2017	19:57:33	3	4.9	D	54%+	25	200	-8	160046	24 (Scorpii)/Ophiuchi
Mon	04-09-2017	23:35:41	6	5.1	D	98%+	31	182	-37	164713	Kuh, mu Capricorni
Thu	07-09-2017	21:43:40	1	6.1	R	97%	18	113	-27	128743	
Fri	08-09-2017	05:13:22	1	5.9	R	96%	27	238	-9	128843	14 Ceti
Sat	09-09-2017	04:00:56	2	6.6	R	91%	45	207	-21	109895	
Sun	10-09-2017	03:11:48	2	6.8	R	83%	53	171	-28	110464	
Mon	11-09-2017	01:02:43	3	6.0	R	75%	36	112	-40	93320	
Tue	12-09-2017	01:12:28	2	6.0	R	64%	31	100	-40	93775	NSV 01466
Tue	12-09-2017	05:34:27	2	6.3	R	62%	60	186	-6	93836	48 Tauri, V1099 Tau
Tue	12-09-2017	07:54:48	2	3.7	R	62%	47	239	+18	93868	Hyadum I, gamma Tau
Thu	14-09-2017	04:29:51	1	7.4	R	40%	47	114	-18	95390	
Thu	14-09-2017	04:37:55	1	6.6	R	40%	48	117	-16	95397	
Thu	14-09-2017	04:56:27	1	5.2	C	40%	51	125	-13	95432	71 Orionis
Fri	15-09-2017	02:45:29	1	7.7	R	29%	20	83	-33	96575	
Fri	15-09-2017	05:02:49	1	7.7	R	29%	43	109	-12	96676	
Sat	16-09-2017	03:32:40	1	5.1	G	19%	17	84	-27	97645	Tegmen, zeta 1 Cancri
Sat	16-09-2017	03:32:41	1	6.2	G	19%	17	84	-27	97680	
Sat	16-09-2017	03:32:56	1	6.2	C	19%	17	84	-27	97646	Companion of Tegmen
Sat	16-09-2017	05:20:36	2	7.7	R	19%	36	101	-10	97680	
Sun	17-09-2017	04:57:17	1	6.5	R	11%	21	89	-14	98427	81 Cancri
Sun	24-09-2017	20:10:00	1	3.9	D	20%+	7	241	-19	159370	Gamma Lib
Fri	29-09-2017	20:34:02	9	4.9	D	66%+	24	193	-25	162964	56 Sagittarii
Sat	30-09-2017	00:01:39	1	5.9	D	67%+	4	238	-47	163060	57 Sagittarii
Tue	03-10-2017	23:20:45	1	4.9	D	96%+	37	187	-47	146612	chi Aquarii
Tue	10-10-2017	00:50:55	1	7.1	R	77%	41	108	-51	94158	
Wed	11-10-2017	00:51:17	1	7.0	R	67%	32	95	-51	94927	
Wed	11-10-2017	00:51:43	1	6.8	R	67%	32	95	-51	94920	
Wed	11-10-2017	04:56:25	1	7.1	R	65%	63	172	-19	95070	
Wed	11-10-2017	06:23:26	1	7.2	R	65%	60	215	-4	95127	
Thu	12-10-2017	04:10:05	1	7.3	R	54%	54	127	-28	96335	
Fri	13-10-2017	02:27:16	1	7.3	R	43%	28	92	-43	97357	
Fri	13-10-2017	05:03:56	3	7.1	R	42%	53	127	-18	97468	
Sat	14-10-2017	01:50:18	1	7.4	R	33%	11	78	-48	98169	52 Cancri
Sun	15-10-2017	03:31:12	2	6.4	R	22%	17	88	-35	98809	23 Leonis, NSV 18283
Wed	25-10-2017	19:51:30	2	7.5	D	30%+	13	223	-26	187040	
Sat	28-10-2017	20:11:13	1	6.7	D	58%+	27	196	-30	164177	
Wed	01-11-2017	23:20:04	1	6.6	D	93%+	43	199	-57	128868	15 Ceti
Fri	03-11-2017	05:13:02	1	4.4	C	98%+	6	274	-21	110065	nu Piscium
Sat	04-11-2017	22:50:54	1	6.0	R	99%	48	130	-56	93416	
Sun	05-11-2017	20:35:29	1	3.7	R	96%	19	86	-36	93868	Hyadum I, gamma Tau
Mon	06-11-2017	00:52:07	1	5.0	R	95%	58	148	-60	93950	75 Tauri
Mon	06-11-2017	23:56:46	1	6.7	R	89%	44	111	-61	94586	
Tue	07-11-2017	01:28:26	1	4.3	R	89%	57	137	-57	94628	119 Tauri, CE Tauri
Tue	07-11-2017	02:05:33	1	5.7	R	89%	61	152	-53	94649	120 Tauri, V960 Tauri
Tue	07-11-2017	06:56:30	1	6.7	R	87%	37	260	-4	94793	127 Tauri
Wed	08-11-2017	01:07:24	1	7.1	R	80%	47	112	-59	95852	22 Geminorum
Thu	09-11-2017	01:26:57	1	6.8	R	70%	40	104	-58	97087	
Thu	09-11-2017	06:14:27	1	4.9	R	68%	60	214	-12	97221	81 Geminorum
Sat	11-11-2017	07:02:10	1	7.1	R	46%	58	184	-4	98730	
Tue	14-11-2017	06:30:08	2	7.6	R	17%	33	128	-10	119313	
Fri	24-11-2017	17:59:51	3	6.2	D	31%+	26	194	-11	163910	
Sat	25-11-2017	19:56:17	2	7.2	D	41%+	24	213	-32	164579	
Sat	25-11-2017	21:21:35	1	6.0	D	41%+	14	231	-46	164612	45 Capricorni
Tue	28-11-2017	20:14:28	1	6.7	D	71%+	42	181	-35	128628	
Tue	28-11-2017	22:51:51	2	6.6	D	72%+	31	227	-60	128661	NSV 15057
Wed	29-11-2017	20:55:21	1	6.1	D	80%+	46	178	-42	109643	26 Ceti
Wed	29-11-2017	23:41:37	1	6.4	D	81%+	35	230	-65	109694	29 Ceti
Thu	30-11-2017	01:21:14	1	6.0	D	82%+	20	252	-63	109715	33 Ceti, NSV 00422
Fri	08-12-2017	03:27:54	2	6.6	R	72%	56	145	-46	98517	
Fri	08-12-2017	22:58:34	1	1.4	R	65%	3	76	-62	98967	Regulus, alpha Leonis
Sat	09-12-2017	02:21:46	1	7.2	R	63%	37	114	-57	99025	
Mon	11-12-2017	02:02:40	1	6.7	R	42%	12	97	-60	119139	NSV 19065
Thu	14-12-2017	06:15:52	1	6.6	R	14%	20	129	-18	139953	
Wed	20-12-2017	18:50:07	2	4.9	D	5%	1	240	-20	162964	56 Sagittarii
Sat	23-12-2017	19:58:02	1	5.3	D	25%+	17	231	-31	164974	42 Aquarii
Thu	28-12-2017	20:36:09	2	4.3	D	75%+	53	182	-38	110543	xi 2 Ceti
Thu	28-12-2017	21:49:44	1	6.9	D	76%+	50	211	-50	110566	
Fri	29-12-2017	20:11:55	1	6.0	D	84%+	54	149	-33	93416	
Sat	30-12-2017	18:03:23	1	3.7	D	92%+	30	98	-11	93868	Hyadum I, gamma Tau
Sat	30-12-2017	22:29:44	1	5.0	D	93%+	61	183	-56	93950	75 Tauri
Sun	31-12-2017	02:42:51	5	0.9	D	93%+	30	263	-56	94027	Aldebaran, alpha Tau
Sun	31-12-2017	02:56:02	4	0.9	R	93%+	28	265	-54	94027	Aldebaran, alpha Tau
Sun	31-12-2017	22:35:27	1	4.3	D	98%+	62	156	-57	94628	119 Tauri, CE Tauri