Siding Spring Observatory

January 2020

DATE	EVENING SUN set	–12°	–18°	MOON set	rise	MORNING SUN –18°	–12°	rise	HOURS twi–twi	TWILIGHTS sidereal time		MOON phase	SUN (apparent)		MOON (apparent)	
01–02 We	19:16	20:13	20:50	23:25		03:25	04:01	04:58	06:35	03:28	10:04	0·35	18 46·2	–23 01	23 42·8	–07 25
02–03 Th	19:16	20:13	20:50	23:54		03:26	04:02	04:59	06:36	03:32	10:09	0·44	18 50·6	–22 56	00 26·6	–02 52
03–04 Fr	19:17	20:13	20:50	00:23	—	03:27	04:03	05:00	06:36	03:36	10:14	0·54	18 55·0	–22 50	01 10·2	+01 48
04–05 Sa	19:17	20:13	20:50	00:53		03:28	04:04	05:00	06:37	03:40	10:19	0·63	18 59·4	–22 44	01 54·5	+06 27
05–06 Su	19:17	20:13	20:50	01:24		03:28	04:05	05:01	06:38	03:44	10:24	0·72	19 03·8	–22 38	02 40·3	+10 55
06–07 Mo	19:17	20:13	20:50	01:59		03:29	04:06	05:02	06:39	03:48	10:29	0·81	19 08·2	–22 31	03 28·6	+15 03
07–08 Tu	19:17	20:13	20:49	02:39		03:30	04:06	05:03	06:41	03:52	10:34	0·88	19 12·6	–22 23	04 20·0	+18 36
08–09 We	19:17	20:13	20:49	03:24		03:31	04:07	05:04	06:42	03:55	10:39	0·94	19 16·9	–22 16	05 15·0	+21 19
09–10 Th	19:17	20:13	20:49			03:33	04:08	05:05	06:43	03:59	10:44	0·98	19 21·3	–22 07	06 13·2	+22 54
10–11 Fr	19:17	20:13	20:49			03:34	04:09	05:05	06:44	04:03	10:49	1·00	19 25·7	–21 59	07 13·7	+23 09
11–12 Sa	19:17	20:13	20:49			03:35	04:10	05:06	06:46	04:07	10:54	0·99	19 30·0	–21 50	08 15·0	+21 54
12–13 Su	19:17	20:13	20:48			03:36	04:11	05:07	06:47	04:10	10:59	0·96	19 34·3	–21 40	09 15·6	+19 14
13–14 Mo	19:17	20:13	20:48		21:18	03:37	04:12	05:08	06:48	04:14	11:04	0·90	19 38·7	–21 30	10 14·2	+15 21
14–15 Tu	19:17	20:12	20:48		21:59	03:38	04:13	05:09	06:50	04:17	11:09	0·82	19 43·0	–21 20	11 10·5	+10 32
15–16 We	19:16	20:12	20:47		22:37	03:39	04:14	05:10	06:52	04:21	11:14	0·72	19 47·3	–21 09	12 04·6	+05 10
16–17 Th	19:16	20:12	20:47		23:13	03:40	04:15	05:11	06:53	04:24	11:19	0·61	19 51·6	–20 58	12 57·2	–00 26
17–18 Fr	19:16	20:11	20:46	—	23:49	03:41	04:16	05:12	06:55	04:28	11:24	0·50	19 55·8	–20 46	13 49·2	–05 56
18–19 Sa	19:16	20:11	20:46		00:25	03:43	04:17	05:12	06:56	04:31	11:29	0·38	20 00·1	–20 34	14 41·5	–11 04
19–20 Su	19:16	20:10	20:45		01:04	03:44	04:18	05:13	06:58	04:35	11:34	0·28	20 04·4	–20 22	15 34·7	–15 33
20–21 Mo	19:15	20:10	20:45		01:46	03:45	04:20	05:14	07:00	04:38	11:40	0·19	20 08·6	–20 09	16 29·2	–19 09
21–22 Tu	19:15	20:10	20:44		02:32	03:46	04:21	05:15	07:02	04:41	11:45	0·11	20 12·9	–19 56	17 24·9	–21 42
22–23 We	19:15	20:09	20:43		03:22	03:47	04:22	05:16	07:04	04:45	11:50	0·05	20 17·1	–19 43	18 21·3	–23 02
23–24 Th	19:14	20:08	20:43			03:49	04:23	05:17	07:06	04:48	11:55	0·02	20 21·3	–19 29	19 17·3	–23 07
24–25 Fr	19:14	20:08	20:42			03:50	04:24	05:18	07:07	04:51	12:00	0·00	20 25·5	–19 15	20 12·1	–21 59
25–26 Sa	19:13	20:07	20:41			03:51	04:25	05:19	07:09	04:54	12:05	0·00	20 29·7	–19 00	21 04·7	–19 48
26–27 Su	19:13	20:07	20:40			03:52	04:26	05:20	07:11	04:57	12:11	0·03	20 33·8	–18 45	21 54·8	–16 45
27–28 Mo	19:12	20:06	20:40	20:53		03:54	04:27	05:21	07:13	05:01	12:16	0·07	20 38·0	–18 30	22 42·5	–13 01
28–29 Tu	19:12	20:05	20:39	21:25		03:55	04:28	05:22	07:16	05:04	12:21	0·12	20 42·1	–18 14	23 28·1	–08 48
29–30 We	19:11	20:05	20:38	21:55		03:56	04:29	05:23	07:18	05:07	12:26	0·19	20 46·3	–17 58	00 12·2	–04 18
30–31 Th	19:11	20:04	20:37	22:23		03:57	04:30	05:24	07:20	05:10	12:31	0·27	20 50·4	–17 42	00 55·7	+00 20
31–01 Fr	19:10	20:03	20:36	22:52		03:58	04:31	05:25	07:22	05:13	12:36	0·36	20 54·5	–17 25	01 39·3	+04 59

Siding Spring Observatory

February 2020

DATE	EVENING SUN			MOON		MORNING SUN			HOURS	TWILIGHTS		MOON	SUN		MOON	
	set	–12°	–18°	set	rise	–18°	–12°	rise	twi–twi	sidereal time		phase	(apparent)		(apparent)	
01–02 Sa	19:09	20:02	20:35	23:22	—	04:00	04:33	05:26	07:24	05:16	12:42	0·45	20 58·6	–17 09	02 23·9	+09 29
02–03 Su	19:09	20:02	20:34	23:55		04:01	04:34	05:26	07:26	05:19	12:47	0·55	21 02·6	–16 51	03 10·4	+13 41
03–04 Mo	19:08	20:01	20:33	00:31		04:02	04:35	05:27	07:28	05:22	12:52	0·65	21 06·7	–16 34	03 59·5	+17 24
04–05 Tu	19:07	20:00	20:32	01:13		04:03	04:36	05:28	07:30	05:25	12:57	0·74	21 10·7	–16 16	04 52·0	+20 24
05–06 We	19:07	19:59	20:31	02:01		04:04	04:37	05:29	07:33	05:28	13:02	0·83	21 14·8	–15 58	05 47·9	+22 27
06–07 Th	19:06	19:58	20:30	02:56		04:06	04:38	05:30	07:35	05:31	13:07	0·90	21 18·8	–15 40	06 47·0	+23 16
07–08 Fr	19:05	19:57	20:29	03:59		04:07	04:39	05:31	07:37	05:34	13:12	0·96	21 22·8	–15 21	07 48·1	+22 39
08–09 Sa	19:04	19:56	20:28			04:08	04:40	05:32	07:39	05:36	13:18	0·99	21 26·8	–15 03	08 49·8	+20 32
09–10 Su	19:03	19:55	20:27			04:09	04:41	05:33	07:42	05:39	13:23	1·00	21 30·8	–14 43	09 50·5	+17 02
10–11 Mo	19:03	19:54	20:26			04:10	04:42	05:34	07:44	05:42	13:28	0·98	21 34·7	–14 24	10 49·3	+12 23
11–12 Tu	19:02	19:53	20:25		20:33	04:11	04:43	05:35	07:46	05:45	13:33	0·93	21 38·7	–14 04	11 46·0	+06 58
12–13 We	19:01	19:52	20:24		21:11	04:13	04:44	05:35	07:48	05:48	13:38	0·85	21 42·6	–13 45	12 40·9	+01 11
13–14 Th	19:00	19:51	20:23		21:48	04:14	04:45	05:36	07:51	05:51	13:43	0·76	21 46·5	–13 25	13 34·8	–04 35
14–15 Fr	18:59	19:50	20:21		22:25	04:15	04:46	05:37	07:53	05:53	13:48	0·65	21 50·5	–13 04	14 28·3	–09 59
15–16 Sa	18:58	19:49	20:20	—	23:03	04:16	04:47	05:38	07:55	05:56	13:53	0·54	21 54·4	–12 44	15 22·1	–14 44
16–17 Su	18:57	19:48	20:19		23:45	04:17	04:48	05:39	07:58	05:59	13:58	0·43	21 58·2	–12 23	16 16·7	–18 35
17–18 Mo	18:56	19:47	20:18		00:30	04:18	04:49	05:40	08:00	06:01	14:03	0·32	22 02·1	–12 02	17 12·2	–21 21
18–19 Tu	18:55	19:46	20:17		01:18	04:19	04:50	05:41	08:02	06:04	14:08	0·23	22 06·0	–11 41	18 08·0	–22 57
19–20 We	18:54	19:45	20:15		02:11	04:20	04:51	05:41	08:05	06:07	14:13	0·15	22 09·9	–11 20	19 03·6	–23 18
20–21 Th	18:53	19:43	20:14		03:06	04:21	04:52	05:42	08:07	06:10	14:18	0·09	22 13·7	–10 59	19 58·0	–22 27
21–22 Fr	18:52	19:42	20:13		04:03	04:22	04:53	05:43	08:09	06:12	14:23	0·04	22 17·5	–10 37	20 50·6	–20 31
22–23 Sa	18:51	19:41	20:12			04:23	04:54	05:44	08:11	06:15	14:28	0·01	22 21·4	–10 15	21 40·9	–17 40
23–24 Su	18:50	19:40	20:10			04:24	04:55	05:45	08:14	06:18	14:33	0·00	22 25·2	–09 53	22 28·9	–14 06
24–25 Mo	18:49	19:39	20:09			04:25	04:56	05:45	08:16	06:20	14:38	0·01	22 29·0	–09 31	23 14·9	–09 59
25–26 Tu	18:48	19:38	20:08			04:26	04:56	05:46	08:18	06:23	14:43	0·03	22 32·8	–09 09	23 59·4	–05 31
26–27 We	18:47	19:36	20:06	20:25		04:27	04:57	05:47	08:21	06:26	14:48	0·08	22 36·6	–08 47	00 42·9	–00 52
27–28 Th	18:46	19:35	20:05	20:53		04:28	04:58	05:48	08:23	06:28	14:53	0·13	22 40·3	–08 24	01 26·3	+03 49
28–29 Fr	18:45	19:34	20:04	21:23		04:29	04:59	05:49	08:25	06:31	14:58	0·20	22 44·1	–08 02	02 10·3	+08 22
29–01 Sa	18:43	19:33	20:02	21:54		04:30	05:00	05:49	08:27	06:33	15:03	0·29	22 47·8	–07 39	02 55·6	+12 39

Siding Spring Observatory

March 2020

DATE	EVENING SUN			MOON		MORNING SUN			HOURS	TWILIGHTS		MOON	SUN		MOON	
	set	–12°	–18°	set	rise	–18°	–12°	rise	twi–twi	sidereal time		phase	(apparent)		(apparent)	
01–02 Su	18:42	19:32	20:01	22:28	—	04:31	05:01	05:50	08:30	06:36	15:08	0·38	22 51·6	–07 16	03 43·1	+16 29
02–03 Mo	18:41	19:30	20:00	23:06		04:32	05:02	05:51	08:32	06:39	15:12	0·48	22 55·3	–06 53	04 33·3	+19 41
03–04 Tu	18:40	19:29	19:58	23:50		04:33	05:03	05:52	08:34	06:41	15:17	0·58	22 59·1	–06 30	05 26·6	+22 01
04–05 We	18:39	19:28	19:57	00:40		04:34	05:03	05:52	08:36	06:44	15:22	0·68	23 02·8	–06 07	06 23·0	+23 17
05–06 Th	18:38	19:26	19:56	01:38		04:35	05:04	05:53	08:39	06:46	15:27	0·77	23 06·5	–05 44	07 21·9	+23 15
06–07 Fr	18:36	19:25	19:54	02:41		04:36	05:05	05:54	08:41	06:49	15:32	0·86	23 10·2	–05 20	08 22·2	+21 47
07–08 Sa	18:35	19:24	19:53	03:50		04:37	05:06	05:55	08:43	06:52	15:37	0·93	23 13·9	–04 57	09 22·7	+18 53
08–09 Su	18:34	19:23	19:52			04:37	05:07	05:55	08:45	06:54	15:41	0·98	23 17·6	–04 34	10 22·4	+14 40
09–10 Mo	18:33	19:21	19:50			04:38	05:07	05:56	08:47	06:57	15:46	1·00	23 21·3	–04 10	11 20·6	+09 26
10–11 Tu	18:32	19:20	19:49			04:39	05:08	05:57	08:50	06:59	15:51	0·99	23 25·0	–03 47	12 17·3	+03 35
11–12 We	18:30	19:19	19:48			04:40	05:09	05:57	08:52	07:02	15:56	0·95	23 28·7	–03 23	13 13·2	–02 28
12–13 Th	18:29	19:18	19:46		20:20	04:41	05:10	05:58	08:54	07:05	16:00	0·88	23 32·3	–02 59	14 08·7	–08 17
13–14 Fr	18:28	19:16	19:45		20:59	04:42	05:10	05:59	08:56	07:07	16:05	0·79	23 36·0	–02 36	15 04·4	–13 30
14–15 Sa	18:27	19:15	19:44		21:41	04:42	05:11	05:59	08:58	07:10	16:10	0·69	23 39·7	–02 12	16 00·6	–17 48
15–16 Su	18:25	19:14	19:42	—	22:26	04:43	05:12	06:00	09:00	07:12	16:15	0·59	23 43·3	–01 48	16 57·4	–20 59
16–17 Mo	18:24	19:12	19:41		23:14	04:44	05:12	06:01	09:02	07:15	16:19	0·48	23 47·0	–01 25	17 54·4	–22 55
17–18 Tu	18:23	19:11	19:40		00:06	04:45	05:13	06:01	09:05	07:18	16:24	0·38	23 50·6	–01 01	18 50·7	–23 33
18–19 We	18:22	19:10	19:38		01:01	04:45	05:14	06:02	09:07	07:20	16:29	0·28	23 54·3	–00 37	19 45·7	–22 56
19–20 Th	18:20	19:08	19:37		01:58	04:46	05:15	06:03	09:09	07:23	16:33	0·20	23 57·9	–00 13	20 38·6	–21 13
20–21 Fr	18:19	19:07	19:36		02:54	04:47	05:15	06:03	09:11	07:25	16:38	0·13	00 01·6	+00 10	21 29·1	–18 33
21–22 Sa	18:18	19:06	19:34		03:49	04:48	05:16	06:04	09:13	07:28	16:43	0·07	00 05·2	+00 34	22 17·3	–15 06
22–23 Su	18:17	19:05	19:33		04:44	04:48	05:17	06:05	09:15	07:31	16:47	0·03	00 08·9	+00 58	23 03·4	–11 05
23–24 Mo	18:15	19:03	19:32			04:49	05:17	06:05	09:17	07:33	16:52	0·01	00 12·5	+01 21	23 48·0	–06 40
24–25 Tu	18:14	19:02	19:30			04:50	05:18	06:06	09:19	07:36	16:57	0·00	00 16·2	+01 45	00 31·6	–02 00
25–26 We	18:13	19:01	19:29			04:50	05:19	06:07	09:21	07:39	17:01	0·01	00 19·8	+02 08	01 15·0	+02 44
26–27 Th	18:12	19:00	19:28			04:51	05:19	06:07	09:23	07:41	17:06	0·04	00 23·4	+02 32	01 58·8	+07 23
27–28 Fr	18:10	18:58	19:27	19:55		04:52	05:20	06:08	09:25	07:44	17:11	0·09	00 27·1	+02 55	02 43·7	+11 47
28–29 Sa	18:09	18:57	19:25	20:28		04:52	05:21	06:09	09:27	07:47	17:15	0·15	00 30·7	+03 19	03 30·4	+15 46
29–30 Su	18:08	18:56	19:24	21:04		04:53	05:21	06:09	09:29	07:49	17:20	0·23	00 34·4	+03 42	04 19·4	+19 09
30–31 Mo	18:07	18:55	19:23	21:45	—	04:54	05:22	06:10	09:31	07:52	17:25	0·32	00 38·0	+04 06	05 11·0	+21 44
31–01 Tu	18:05	18:53	19:21	22:32	—	04:54	05:23	06:11	09:32	07:55	17:29	0·41	00 41·7	+04 29	06 05·4	+23 18

Siding Spring Observatory

April 2020

DATE	EVENING SUN			MOON		MORNING SUN			HOURS	TWILIGHTS		MOON	SUN		MOON	
	set	–12°	–18°	set	rise	–18°	–12°	rise	twi–twi	sidereal time		phase	(apparent)		(apparent)	
01–02 We	18:04	18:52	19:20	23:25		04:55	05:23	06:11	09:34	07:57	17:34	0·52	00 45·3	+04 52	07 02·0	+23 41
02–03 Th	18:03	18:51	19:19	00:24		04:56	05:24	06:12	09:36	08:00	17:38	0·62	00 49·0	+05 15	08 00·1	+22 44
03–04 Fr	18:02	18:50	19:18	01:28		04:56	05:24	06:13	09:38	08:03	17:43	0·73	00 52·6	+05 38	08 58·8	+20 25
04–05 Sa	18:00	18:48	19:17	02:36		04:57	05:25	06:13	09:40	08:05	17:47	0·82	00 56·3	+06 01	09 57·1	+16 46
05–06 Su	17:59	18:47	19:15	03:45		04:58	05:26	06:14	09:42	08:08	17:52	0·90	00 59·9	+06 24	10 54·5	+12 00
06–07 Mo	17:58	18:46	19:14	04:55		04:58	05:26	06:14	09:44	08:11	17:57	0·96	01 03·6	+06 46	11 51·1	+06 24
07–08 Tu	17:57	18:45	19:13			04:59	05:27	06:15	09:45	08:14	18:01	1·00	01 07·2	+07 09	12 47·2	+00 20
08–09 We	17:56	18:44	19:12			04:59	05:28	06:16	09:47	08:16	18:06	1·00	01 10·9	+07 31	13 43·3	–05 47
09–10 Th	17:54	18:43	19:11			05:00	05:28	06:16	09:49	08:19	18:10	0·97	01 14·6	+07 53	14 40·0	–11 29
10–11 Fr	17:53	18:41	19:10		19:32	05:01	05:29	06:17	09:51	08:22	18:15	0·91	01 18·2	+08 15	15 37·7	–16 24
11–12 Sa	17:52	18:40	19:08		20:16	05:01	05:29	06:18	09:52	08:25	18:19	0·83	01 21·9	+08 37	16 36·4	–20 12
12–13 Su	17:51	18:39	19:07		21:05	05:02	05:30	06:18	09:54	08:28	18:24	0·74	01 25·6	+08 59	17 35·4	–22 40
13–14 Mo	17:50	18:38	19:06	—	21:58	05:02	05:31	06:19	09:56	08:31	18:28	0·64	01 29·3	+09 21	18 33·9	–23 45
14–15 Tu	17:49	18:37	19:05		22:54	05:03	05:31	06:20	09:57	08:33	18:33	0·54	01 33·0	+09 43	19 30·8	–23 29
15–16 We	17:48	18:36	19:04		23:51	05:04	05:32	06:20	09:59	08:36	18:37	0·44	01 36·7	+10 04	20 25·3	–22 00
16–17 Th	17:46	18:35	19:03		00:48	05:04	05:32	06:21	10:01	08:39	18:42	0·34	01 40·4	+10 25	21 17·0	–19 30
17–18 Fr	17:45	18:34	19:02		01:44	05:05	05:33	06:22	10:02	08:42	18:47	0·25	01 44·1	+10 46	22 05·9	–16 12
18–19 Sa	17:44	18:33	19:01		02:39	05:05	05:34	06:22	10:04	08:45	18:51	0·17	01 47·8	+11 07	22 52·4	–12 16
19–20 Su	17:43	18:32	19:00		03:33	05:06	05:34	06:23	10:06	08:48	18:56	0·11	01 51·6	+11 28	23 37·2	–07 54
20–21 Mo	17:42	18:31	18:59		04:25	05:07	05:35	06:23	10:07	08:51	19:00	0·06	01 55·3	+11 48	00 20·8	–03 15
21–22 Tu	17:41	18:30	18:58			05:07	05:35	06:24	10:09	08:54	19:05	0·02	01 59·0	+12 09	01 04·1	+01 31
22–23 We	17:40	18:29	18:57			05:08	05:36	06:25	10:10	08:57	19:09	0·00	02 02·8	+12 29	01 47·7	+06 15
23–24 Th	17:39	18:28	18:56			05:08	05:37	06:25	10:12	09:00	19:14	0·00	02 06·6	+12 49	02 32·4	+10 48
24–25 Fr	17:38	18:27	18:55			05:09	05:37	06:26	10:13	09:03	19:18	0·02	02 10·3	+13 08	03 18·8	+14 58
25–26 Sa	17:37	18:26	18:54	19:04		05:09	05:38	06:27	10:15	09:06	19:23	0·06	02 14·1	+13 28	04 07·4	+18 34
26–27 Su	17:36	18:25	18:53	19:44		05:10	05:38	06:27	10:16	09:09	19:27	0·11	02 17·9	+13 47	04 58·6	+21 24
27–28 Mo	17:35	18:24	18:52	20:29		05:11	05:39	06:28	10:18	09:12	19:32	0·18	02 21·7	+14 06	05 52·2	+23 15
28–29 Tu	17:34	18:23	18:52	21:19		05:11	05:40	06:29	10:19	09:15	19:36	0·27	02 25·5	+14 25	06 47·8	+23 56
29–30 We	17:33	18:22	18:51	22:16	—	05:12	05:40	06:29	10:20	09:18	19:41	0·36	02 29·3	+14 43	07 44·7	+23 21
30–01 Th	17:32	18:21	18:50	23:17		05:12	05:41	06:30	10:22	09:21	19:45	0·47	02 33·1	+15 02	08 41·9	+21 27

Siding Spring Observatory

May 2020

DATE	EVENING SUN			MOON		MORNING SUN			HOURS	TWILIGHTS		MOON	SUN		MOON	
	set	–12°	–18°	set	rise	–18°	–12°	rise	twi–twi	sidereal time		phase	(apparent)		(apparent)	
01–02 Fr	17:31	18:21	18:49	00:21		05:13	05:41	06:31	10:23	09:24	19:50	0·58	02 36·9	+15 20	09 38·6	+18 17
02–03 Sa	17:30	18:20	18:48	01:27		05:13	05:42	06:31	10:25	09:27	19:54	0·69	02 40·8	+15 38	10 34·4	+14 00
03–04 Su	17:30	18:19	18:48	02:34		05:14	05:42	06:32	10:26	09:31	19:59	0·79	02 44·6	+15 55	11 29·3	+08 48
04–05 Mo	17:29	18:18	18:47	03:42		05:14	05:43	06:33	10:27	09:34	20:03	0·88	02 48·4	+16 13	12 23·8	+03 00
05–06 Tu	17:28	18:18	18:46	04:51		05:15	05:44	06:33	10:28	09:37	20:08	0·95	02 52·3	+16 30	13 18·6	–03 04
06–07 We	17:27	18:17	18:45			05:16	05:44	06:34	10:30	09:40	20:12	0·99	02 56·2	+16 46	14 14·3	–08 59
07–08 Th	17:26	18:16	18:45			05:16	05:45	06:35	10:31	09:44	20:17	1·00	03 00·1	+17 03	15 11·5	–14 21
08–09 Fr	17:25	18:15	18:44			05:17	05:45	06:35	10:32	09:47	20:21	0·98	03 03·9	+17 19	16 10·4	–18 47
09–10 Sa	17:25	18:15	18:43		18:52	05:17	05:46	06:36	10:33	09:50	20:26	0·94	03 07·8	+17 35	17 10·6	–21 57
10–11 Su	17:24	18:14	18:43		19:44	05:18	05:47	06:37	10:35	09:53	20:30	0·87	03 11·7	+17 50	18 11·1	–23 40
11–12 Mo	17:23	18:13	18:42		20:40	05:18	05:47	06:37	10:36	09:57	20:35	0·79	03 15·7	+18 06	19 10·4	–23 56
12–13 Tu	17:23	18:13	18:42	—	21:39	05:19	05:48	06:38	10:37	10:00	20:39	0·70	03 19·6	+18 21	20 07·4	–22 50
13–14 We	17:22	18:12	18:41		22:38	05:19	05:48	06:39	10:38	10:04	20:44	0·60	03 23·5	+18 35	21 01·4	–20 35
14–15 Th	17:21	18:12	18:41		23:36	05:20	05:49	06:39	10:39	10:07	20:48	0·50	03 27·5	+18 50	21 52·0	–17 26
15–16 Fr	17:21	18:11	18:40		00:32	05:20	05:49	06:40	10:40	10:10	20:53	0·40	03 31·4	+19 04	22 39·8	–13 36
16–17 Sa	17:20	18:11	18:39		01:26	05:21	05:50	06:41	10:41	10:14	20:57	0·31	03 35·4	+19 18	23 25·2	–09 18
17–18 Su	17:19	18:10	18:39		02:19	05:22	05:50	06:41	10:42	10:17	21:02	0·23	03 39·4	+19 31	00 09·1	–04 40
18–19 Mo	17:19	18:10	18:39		03:12	05:22	05:51	06:42	10:43	10:21	21:06	0·15	03 43·4	+19 44	00 52·4	+00 06
19–20 Tu	17:18	18:09	18:38		04:05	05:23	05:52	06:42	10:44	10:24	21:11	0·09	03 47·4	+19 57	01 35·8	+04 54
20–21 We	17:18	18:09	18:38		04:59	05:23	05:52	06:43	10:45	10:28	21:15	0·04	03 51·4	+20 09	02 20·1	+09 33
21–22 Th	17:17	18:08	18:37			05:24	05:53	06:44	10:46	10:31	21:19	0·01	03 55·4	+20 21	03 06·2	+13 53
22–23 Fr	17:17	18:08	18:37			05:24	05:53	06:44	10:47	10:35	21:24	0·00	03 59·4	+20 33	03 54·5	+17 43
23–24 Sa	17:16	18:08	18:37			05:25	05:54	06:45	10:47	10:39	21:28	0·01	04 03·4	+20 44	04 45·5	+20 50
24–25 Su	17:16	18:07	18:36			05:25	05:54	06:46	10:48	10:42	21:33	0·03	04 07·5	+20 55	05 39·1	+22 59
25–26 Mo	17:16	18:07	18:36	19:15		05:26	05:55	06:46	10:49	10:46	21:37	0·08	04 11·5	+21 06	06 34·8	+24 00
26–27 Tu	17:15	18:07	18:36	20:10		05:26	05:55	06:47	10:50	10:50	21:42	0·15	04 15·6	+21 16	07 31·8	+23 44
27–28 We	17:15	18:06	18:36	21:10		05:27	05:56	06:47	10:51	10:53	21:46	0·23	04 19·6	+21 26	08 29·0	+22 09
28–29 Th	17:15	18:06	18:35	22:13	—	05:27	05:56	06:48	10:51	10:57	21:51	0·33	04 23·7	+21 36	09 25·4	+19 17
29–30 Fr	17:14	18:06	18:35	23:17		05:28	05:57	06:48	10:52	11:01	21:55	0·44	04 27·8	+21 45	10 20·4	+15 19
30–31 Sa	17:14	18:06	18:35	00:22		05:28	05:57	06:49	10:53	11:04	21:59	0·55	04 31·9	+21 53	11 14·2	+10 28
31–01 Su	17:14	18:05	18:35	01:28		05:28	05:58	06:50	10:53	11:08	22:04	0·66	04 35·9	+22 02	12 07·1	+04 57

Siding Spring Observatory

June 2020

DATE	EVENING SUN			MOON		MORNING SUN			HOURS	TWILIGHTS		MOON	SUN		MOON	
	set	–12°	–18°	set	rise	–18°	–12°	rise	twi–twi	sidereal time		phase	(apparent)		(apparent)	
01–02 Mo	17:14	18:05	18:35	02:34		05:29	05:58	06:50	10:54	11:12	22:08	0·77	04 40·0	+22 10	12 59·9	–00 53
02–03 Tu	17:13	18:05	18:34	03:41		05:29	05:59	06:51	10:54	11:16	22:13	0·86	04 44·1	+22 18	13 53·4	–06 45
03–04 We	17:13	18:05	18:34	04:49		05:30	05:59	06:51	10:55	11:20	22:17	0·93	04 48·3	+22 25	14 48·5	–12 16
04–05 Th	17:13	18:05	18:34			05:30	06:00	06:52	10:55	11:24	22:21	0·98	04 52·4	+22 32	15 45·7	–17 04
05–06 Fr	17:13	18:05	18:34			05:31	06:00	06:52	10:56	11:27	22:26	1·00	04 56·5	+22 38	16 44·9	–20 48
06–07 Sa	17:13	18:05	18:34			05:31	06:01	06:53	10:56	11:31	22:30	0·99	05 00·6	+22 44	17 45·6	–23 11
07–08 Su	17:13	18:05	18:34			05:31	06:01	06:53	10:57	11:35	22:34	0·96	05 04·7	+22 50	18 46·2	–24 04
08–09 Mo	17:13	18:05	18:34		19:23	05:32	06:01	06:53	10:57	11:39	22:39	0·91	05 08·9	+22 55	19 45·3	–23 30
09–10 Tu	17:13	18:05	18:34		20:23	05:32	06:02	06:54	10:58	11:43	22:43	0·83	05 13·0	+23 00	20 41·7	–21 38
10–11 We	17:13	18:05	18:34		21:23	05:33	06:02	06:54	10:58	11:47	22:47	0·75	05 17·2	+23 04	21 34·6	–18 44
11–12 Th	17:13	18:05	18:34	—	22:21	05:33	06:02	06:55	10:58	11:51	22:52	0·66	05 21·3	+23 08	22 24·2	–15 02
12–13 Fr	17:13	18:05	18:34		23:17	05:33	06:03	06:55	10:58	11:55	22:56	0·57	05 25·4	+23 12	23 11·0	–10 48
13–14 Sa	17:13	18:05	18:34		00:11	05:34	06:03	06:55	10:59	11:59	23:00	0·47	05 29·6	+23 15	23 55·7	–06 13
14–15 Su	17:13	18:05	18:34		01:04	05:34	06:03	06:56	10:59	12:03	23:04	0·38	05 33·8	+23 18	00 39·2	–01 27
15–16 Mo	17:13	18:05	18:35		01:57	05:34	06:04	06:56	10:59	12:07	23:09	0·29	05 37·9	+23 20	01 22·4	+03 22
16–17 Tu	17:13	18:05	18:35		02:51	05:34	06:04	06:56	10:59	12:11	23:13	0·20	05 42·1	+23 22	02 06·3	+08 05
17–18 We	17:13	18:05	18:35		03:46	05:35	06:04	06:57	10:59	12:15	23:17	0·13	05 46·2	+23 24	02 51·7	+12 33
18–19 Th	17:13	18:05	18:35		04:42	05:35	06:05	06:57	10:59	12:20	23:21	0·07	05 50·4	+23 25	03 39·3	+16 35
19–20 Fr	17:13	18:06	18:35			05:35	06:05	06:57	10:59	12:24	23:25	0·03	05 54·6	+23 26	04 29·7	+19 57
20–21 Sa	17:14	18:06	18:35			05:35	06:05	06:57	10:59	12:28	23:30	0·01	05 58·7	+23 26	05 23·0	+22 27
21–22 Su	17:14	18:06	18:36			05:36	06:05	06:58	10:59	12:32	23:34	0·00	06 02·9	+23 26	06 19·0	+23 51
22–23 Mo	17:14	18:06	18:36			05:36	06:06	06:58	10:59	12:36	23:38	0·02	06 07·0	+23 26	07 16·7	+23 57
23–24 Tu	17:14	18:07	18:36	19:03		05:36	06:06	06:58	10:59	12:40	23:42	0·06	06 11·2	+23 25	08 14·8	+22 41
24–25 We	17:15	18:07	18:36	20:06		05:36	06:06	06:58	10:59	12:45	23:46	0·12	06 15·4	+23 23	09 12·3	+20 06
25–26 Th	17:15	18:07	18:37	21:11		05:36	06:06	06:58	10:59	12:49	23:50	0·20	06 19·5	+23 22	10 08·2	+16 20
26–27 Fr	17:15	18:07	18:37	22:16		05:36	06:06	06:58	10:59	12:53	23:54	0·30	06 23·7	+23 20	11 02·3	+11 39
27–28 Sa	17:15	18:08	18:37	23:20	—	05:37	06:06	06:58	10:59	12:57	23:58	0·41	06 27·8	+23 17	11 54·9	+06 18
28–29 Su	17:16	18:08	18:38	00:25	—	05:37	06:06	06:58	10:59	13:01	00:02	0·53	06 32·0	+23 14	12 46·8	+00 35
29–30 Mo	17:16	18:08	18:38	01:30		05:37	06:06	06:59	10:58	13:06	00:06	0·64	06 36·1	+23 11	13 38·9	–05 10
30–01 Tu	17:17	18:09	18:38	02:36		05:37	06:06	06:59	10:58	13:10	00:10	0·75	06 40·2	+23 07	14 32·0	–10 41

Siding Spring Observatory

July 2020

DATE		EVENING SUN			MOON		MORNING SUN			HOURS	TWILIGHTS		MOON	SUN		MOON	
		set	–12°	–18°	set	rise	–18°	–12°	rise	twi–twi	sidereal time		phase	(apparent)		(apparent)	
01–02	We	17:17	18:09	18:39	03:43		05:37	06:06	06:59	10:58	13:14	00:14	0·84	06 44·4	+23 03	15 26·9	–15 36
02–03	Th	17:17	18:09	18:39	04:50		05:37	06:06	06:58	10:57	13:19	00:18	0·92	06 48·5	+22 58	16 24·1	–19 38
03–04	Fr	17:18	18:10	18:39			05:37	06:06	06:58	10:57	13:23	00:22	0·97	06 52·6	+22 53	17 23·1	–22 28
04–05	Sa	17:18	18:10	18:40			05:37	06:06	06:58	10:57	13:27	00:26	1·00	06 56·8	+22 48	18 23·2	–23 54
05–06	Su	17:19	18:11	18:40			05:37	06:06	06:58	10:56	13:32	00:30	1·00	07 00·9	+22 42	19 22·8	–23 53
06–07	Mo	17:19	18:11	18:40			05:37	06:06	06:58	10:56	13:36	00:34	0·98	07 05·0	+22 36	20 20·4	–22 29
07–08	Tu	17:20	18:11	18:41		19:08	05:37	06:06	06:58	10:55	13:40	00:38	0·94	07 09·1	+22 29	21 15·1	–19 55
08–09	We	17:20	18:12	18:41		20:08	05:37	06:06	06:58	10:55	13:45	00:42	0·88	07 13·2	+22 22	22 06·5	–16 26
09–10	Th	17:20	18:12	18:42		21:05	05:36	06:06	06:58	10:54	13:49	00:45	0·80	07 17·3	+22 15	22 54·8	–12 19
10–11	Fr	17:21	18:13	18:42		22:01	05:36	06:06	06:57	10:54	13:53	00:49	0·72	07 21·3	+22 07	23 40·6	–07 47
11–12	Sa	17:21	18:13	18:43		22:55	05:36	06:05	06:57	10:53	13:58	00:53	0·63	07 25·4	+21 59	00 24·7	–03 01
12–13	Su	17:22	18:14	18:43	—	23:48	05:36	06:05	06:57	10:52	14:02	00:57	0·54	07 29·5	+21 51	01 08·1	+01 49
13–14	Mo	17:23	18:14	18:43	—	00:41	05:36	06:05	06:56	10:52	14:06	01:00	0·44	07 33·5	+21 42	01 51·6	+06 35
14–15	Tu	17:23	18:15	18:44		01:35	05:35	06:05	06:56	10:51	14:11	01:04	0·35	07 37·6	+21 33	02 36·1	+11 07
15–16	We	17:24	18:15	18:44		02:31	05:35	06:04	06:56	10:50	14:15	01:08	0·26	07 41·6	+21 23	03 22·6	+15 18
16–17	Th	17:24	18:16	18:45		03:28	05:35	06:04	06:55	10:50	14:20	01:12	0·18	07 45·7	+21 13	04 11·7	+18 54
17–18	Fr	17:25	18:16	18:45		04:26	05:35	06:04	06:55	10:49	14:24	01:15	0·11	07 49·7	+21 03	05 03·9	+21 43
18–19	Sa	17:25	18:17	18:46		05:25	05:34	06:03	06:55	10:48	14:28	01:19	0·05	07 53·7	+20 52	05 59·2	+23 31
19–20	Su	17:26	18:17	18:46			05:34	06:03	06:54	10:47	14:33	01:22	0·02	07 57·7	+20 41	06 56·9	+24 04
20–21	Mo	17:26	18:18	18:47			05:34	06:03	06:54	10:46	14:37	01:26	0·00	08 01·7	+20 30	07 55·9	+23 14
21–22	Tu	17:27	18:18	18:47			05:33	06:02	06:53	10:45	14:42	01:29	0·01	08 05·7	+20 18	08 54·8	+20 59
22–23	We	17:28	18:19	18:48	18:59		05:33	06:02	06:53	10:45	14:46	01:33	0·04	08 09·7	+20 06	09 52·4	+17 27
23–24	Th	17:28	18:19	18:48	20:06		05:32	06:01	06:52	10:44	14:51	01:37	0·10	08 13·6	+19 54	10 48·2	+12 53
24–25	Fr	17:29	18:20	18:49	21:12		05:32	06:01	06:51	10:43	14:55	01:40	0·18	08 17·6	+19 41	11 42·2	+07 33
25–26	Sa	17:29	18:20	18:49	22:18		05:31	06:00	06:51	10:42	14:59	01:43	0·28	08 21·6	+19 28	12 34·8	+01 50
26–27	Su	17:30	18:21	18:50	23:23		05:31	06:00	06:50	10:41	15:04	01:47	0·39	08 25·5	+19 14	13 27·0	–03 59
27–28	Mo	17:31	18:21	18:50	00:29		05:30	05:59	06:50	10:40	15:08	01:50	0·51	08 29·4	+19 01	14 19·6	–09 33
28–29	Tu	17:31	18:22	18:51	01:34	—	05:30	05:59	06:49	10:39	15:13	01:54	0·62	08 33·3	+18 47	15 13·4	–14 35
29–30	We	17:32	18:22	18:51	02:40		05:29	05:58	06:48	10:38	15:17	01:57	0·73	08 37·3	+18 33	16 09·0	–18 47
30–31	Th	17:32	18:23	18:52	03:45		05:29	05:57	06:48	10:37	15:22	02:00	0·82	08 41·2	+18 18	17 06·5	–21 52
31–01	Fr	17:33	18:23	18:52	04:48		05:28	05:57	06:47	10:35	15:26	02:04	0·90	08 45·0	+18 03	18 05·1	–23 40

Siding Spring Observatory

August 2020

DATE	EVENING SUN			MOON		MORNING SUN			HOURS	TWILIGHTS		MOON	SUN		MOON	
	set	–12°	–18°	set	rise	–18°	–12°	rise	twi–twi	sidereal time		phase	(apparent)		(apparent)	
01–02 Sa	17:34	18:24	18:53			05:27	05:56	06:46	10:34	15:31	02:07	0·95	08 48·9	+17 48	19 03·9	–24 03
02–03 Su	17:34	18:24	18:53			05:27	05:55	06:45	10:33	15:35	02:10	0·99	08 52·8	+17 32	20 01·5	–23 05
03–04 Mo	17:35	18:25	18:54			05:26	05:55	06:45	10:32	15:39	02:14	1·00	08 56·6	+17 17	20 56·8	–20 52
04–05 Tu	17:35	18:25	18:54			05:25	05:54	06:44	10:31	15:44	02:17	0·99	09 00·5	+17 01	21 49·1	–17 40
05–06 We	17:36	18:26	18:55			05:25	05:53	06:43	10:30	15:48	02:20	0·96	09 04·3	+16 44	22 38·4	–13 43
06–07 Th	17:37	18:26	18:55		19:51	05:24	05:52	06:42	10:28	15:53	02:23	0·92	09 08·1	+16 28	23 25·2	–09 15
07–08 Fr	17:37	18:27	18:56		20:45	05:23	05:52	06:41	10:27	15:57	02:26	0·85	09 12·0	+16 11	00 10·0	–04 30
08–09 Sa	17:38	18:28	18:56		21:39	05:22	05:51	06:40	10:26	16:02	02:30	0·78	09 15·8	+15 54	00 53·6	+00 22
09–10 Su	17:39	18:28	18:57		22:32	05:22	05:50	06:39	10:24	16:06	02:33	0·70	09 19·6	+15 36	01 37·0	+05 10
10–11 Mo	17:39	18:29	18:57		23:25	05:21	05:49	06:38	10:23	16:11	02:36	0·61	09 23·4	+15 19	02 21·0	+09 48
11–12 Tu	17:40	18:29	18:58		00:20	05:20	05:48	06:38	10:22	16:15	02:39	0·51	09 27·1	+15 01	03 06·4	+14 05
12–13 We	17:40	18:30	18:58	—	01:16	05:19	05:47	06:37	10:20	16:19	02:42	0·41	09 30·9	+14 43	03 54·0	+17 51
13–14 Th	17:41	18:30	18:59		02:13	05:18	05:46	06:36	10:19	16:24	02:45	0·32	09 34·7	+14 24	04 44·4	+20 56
14–15 Fr	17:42	18:31	18:59		03:11	05:17	05:46	06:35	10:18	16:28	02:48	0·23	09 38·4	+14 06	05 37·9	+23 05
15–16 Sa	17:42	18:31	19:00		04:08	05:16	05:45	06:34	10:16	16:33	02:51	0·15	09 42·2	+13 47	06 34·3	+24 06
16–17 Su	17:43	18:32	19:00		05:04	05:15	05:44	06:33	10:15	16:37	02:54	0·08	09 45·9	+13 28	07 32·7	+23 47
17–18 Mo	17:43	18:32	19:01			05:14	05:43	06:32	10:13	16:42	02:57	0·03	09 49·6	+13 09	08 32·0	+22 02
18–19 Tu	17:44	18:33	19:01			05:13	05:42	06:31	10:12	16:46	03:00	0·00	09 53·4	+12 49	09 30·9	+18 54
19–20 We	17:45	18:33	19:02			05:13	05:41	06:29	10:10	16:51	03:03	0·00	09 57·1	+12 30	10 28·5	+14 33
20–21 Th	17:45	18:34	19:02			05:12	05:40	06:28	10:09	16:55	03:06	0·03	10 00·8	+12 10	11 24·4	+09 17
21–22 Fr	17:46	18:35	19:03	20:06		05:10	05:39	06:27	10:07	17:00	03:09	0·09	10 04·5	+11 50	12 18·8	+03 27
22–23 Sa	17:46	18:35	19:03	21:13		05:09	05:38	06:26	10:06	17:04	03:12	0·16	10 08·1	+11 29	13 12·5	–02 34
23–24 Su	17:47	18:36	19:04	22:20		05:08	05:37	06:25	10:04	17:09	03:15	0·26	10 11·8	+11 09	14 06·2	–08 23
24–25 Mo	17:48	18:36	19:04	23:27		05:07	05:35	06:24	10:03	17:13	03:18	0·37	10 15·5	+10 48	15 00·5	–13 40
25–26 Tu	17:48	18:37	19:05	00:34		05:06	05:34	06:23	10:01	17:17	03:21	0·48	10 19·2	+10 28	15 56·2	–18 07
26–27 We	17:49	18:37	19:05	01:39	—	05:05	05:33	06:22	09:59	17:22	03:23	0·59	10 22·8	+10 07	16 53·3	–21 28
27–28 Th	17:49	18:38	19:06	02:42	—	05:04	05:32	06:20	09:58	17:26	03:26	0·70	10 26·5	+09 46	17 51·3	–23 32
28–29 Fr	17:50	18:38	19:06	03:40		05:03	05:31	06:19	09:56	17:31	03:29	0·79	10 30·1	+09 25	18 49·5	–24 13
29–30 Sa	17:50	18:39	19:07	04:32		05:02	05:30	06:18	09:54	17:35	03:32	0·87	10 33·8	+09 03	19 46·7	–23 33
30–31 Su	17:51	18:39	19:07			05:01	05:29	06:17	09:53	17:40	03:35	0·93	10 37·4	+08 42	20 41·8	–21 39
31–01 Mo	17:52	18:40	19:08			04:59	05:28	06:16	09:51	17:44	03:37	0·97	10 41·0	+08 20	21 34·3	–18 42

Siding Spring Observatory

September 2020

DATE	EVENING SUN			MOON		MORNING SUN			HOURS	TWILIGHTS		MOON	SUN		MOON	
	set	–12°	–18°	set	rise	–18°	–12°	rise	twi–twi	sidereal time		phase	(apparent)		(apparent)	
01–02 Tu	17:52	18:40	19:09			04:58	05:26	06:15	09:49	17:49	03:40	1·00	10 44·6	+07 58	22 24·0	–14 55
02–03 We	17:53	18:41	19:09			04:57	05:25	06:13	09:48	17:53	03:43	1·00	10 48·3	+07 36	23 11·1	–10 34
03–04 Th	17:53	18:42	19:10			04:56	05:24	06:12	09:46	17:58	03:46	0·98	10 51·9	+07 14	23 56·3	–05 51
04–05 Fr	17:54	18:42	19:10		19:31	04:55	05:23	06:11	09:44	18:02	03:48	0·95	10 55·5	+06 52	00 40·2	–00 58
05–06 Sa	17:54	18:43	19:11		20:25	04:53	05:22	06:10	09:42	18:07	03:51	0·90	10 59·1	+06 30	01 23·6	+03 54
06–07 Su	17:55	18:43	19:11		21:18	04:52	05:20	06:08	09:40	18:11	03:54	0·83	11 02·7	+06 07	02 07·3	+08 37
07–08 Mo	17:56	18:44	19:12		22:11	04:51	05:19	06:07	09:39	18:16	03:56	0·76	11 06·3	+05 45	02 52·0	+13 02
08–09 Tu	17:56	18:44	19:12		23:06	04:50	05:18	06:06	09:37	18:20	03:59	0·67	11 09·9	+05 22	03 38·4	+16 58
09–10 We	17:57	18:45	19:13		00:02	04:48	05:17	06:05	09:35	18:25	04:02	0·58	11 13·5	+05 00	04 27·2	+20 15
10–11 Th	17:57	18:45	19:14		00:59	04:47	05:15	06:03	09:33	18:29	04:04	0·48	11 17·1	+04 37	05 18·8	+22 41
11–12 Fr	17:58	18:46	19:14	—	01:56	04:46	05:14	06:02	09:31	18:34	04:07	0·38	11 20·7	+04 14	06 13·1	+24 06
12–13 Sa	17:58	18:47	19:15		02:51	04:45	05:13	06:01	09:29	18:38	04:10	0·28	11 24·3	+03 51	07 09·7	+24 16
13–14 Su	17:59	18:47	19:15		03:43	04:43	05:11	05:59	09:27	18:43	04:12	0·19	11 27·8	+03 28	08 07·8	+23 05
14–15 Mo	18:00	18:48	19:16		04:31	04:42	05:10	05:58	09:26	18:47	04:15	0·11	11 31·4	+03 05	09 06·2	+20 30
15–16 Tu	18:00	18:48	19:17			04:41	05:09	05:57	09:24	18:52	04:18	0·05	11 35·0	+02 42	10 04·1	+16 36
16–17 We	18:01	18:49	19:17			04:39	05:08	05:56	09:22	18:57	04:20	0·01	11 38·6	+02 19	11 00·9	+11 36
17–18 Th	18:01	18:49	19:18			04:38	05:06	05:54	09:20	19:01	04:23	0·00	11 42·2	+01 56	11 56·7	+05 48
18–19 Fr	18:02	18:50	19:18			04:37	05:05	05:53	09:18	19:06	04:25	0·02	11 45·8	+01 32	12 51·8	–00 23
19–20 Sa	18:03	18:51	19:19	20:03		04:35	05:04	05:52	09:16	19:10	04:28	0·07	11 49·4	+01 09	13 47·0	–06 32
20–21 Su	18:03	18:51	19:20	21:13		04:34	05:02	05:50	09:14	19:15	04:31	0·14	11 53·0	+00 46	14 42·9	–12 16
21–22 Mo	18:04	18:52	19:20	22:22		04:33	05:01	05:49	09:12	19:19	04:33	0·23	11 56·5	+00 23	15 39·9	–17 11
22–23 Tu	18:04	18:52	19:21	23:31		04:31	05:00	05:48	09:10	19:24	04:36	0·34	12 00·1	–00 01	16 38·2	–20 58
23–24 We	18:05	18:53	19:22	00:36		04:30	04:58	05:46	09:08	19:29	04:38	0·45	12 03·7	–00 24	17 37·3	–23 25
24–25 Th	18:06	18:54	19:22	01:36		04:28	04:57	05:45	09:06	19:33	04:41	0·55	12 07·3	–00 48	18 36·2	–24 26
25–26 Fr	18:06	18:54	19:23	02:30	—	04:27	04:56	05:44	09:04	19:38	04:43	0·66	12 10·9	–01 11	19 34·0	–24 03
26–27 Sa	18:07	18:55	19:24	03:18		04:26	04:54	05:43	09:02	19:43	04:46	0·75	12 14·5	–01 34	20 29·5	–22 22
27–28 Su	18:07	18:56	19:24	03:59		04:24	04:53	05:41	08:59	19:47	04:49	0·83	12 18·1	–01 58	21 22·2	–19 37
28–29 Mo	18:08	18:56	19:25			04:23	04:52	05:40	08:57	19:52	04:51	0·90	12 21·7	–02 21	22 12·0	–16 01
29–30 Tu	18:09	18:57	19:26			04:22	04:50	05:39	08:55	19:57	04:54	0·95	12 25·3	–02 44	22 59·3	–11 47
30–01 We	18:09	18:58	19:27			04:20	04:49	05:37	08:53	20:01	04:56	0·98	12 29·0	–03 08	23 44·5	–07 08

Siding Spring Observatory

October 2020

DATE	EVENING SUN			MOON		MORNING SUN			HOURS	TWILIGHTS		MOON	SUN		MOON	
	set	–12°	–18°	set	rise	–18°	–12°	rise	twi–twi	sidereal time		phase	(apparent)		(apparent)	
01–02 Th	18:10	18:58	19:27			04:19	04:48	05:36	08:51	20:06	04:59	1·00	12 32·6	–03 31	00 28·4	–02 15
02–03 Fr	18:10	18:59	19:28			04:17	04:46	05:35	08:49	20:11	05:01	1·00	12 36·2	–03 54	01 11·8	+02 41
03–04 Sa	18:11	19:00	19:29			04:16	04:45	05:34	08:47	20:15	05:04	0·97	12 39·8	–04 17	01 55·2	+07 30
04–05 Su	18:12	19:00	19:30		20:06	04:15	04:44	05:32	08:45	20:20	05:06	0·94	12 43·5	–04 40	02 39·5	+12 03
05–06 Mo	18:12	19:01	19:30		21:00	04:13	04:42	05:31	08:42	20:25	05:09	0·88	12 47·1	–05 03	03 25·4	+16 09
06–07 Tu	18:13	19:02	19:31		21:55	04:12	04:41	05:30	08:40	20:29	05:12	0·81	12 50·8	–05 26	04 13·3	+19 38
07–08 We	18:14	19:03	19:32		22:51	04:10	04:40	05:29	08:38	20:34	05:14	0·73	12 54·4	–05 49	05 03·5	+22 20
08–09 Th	18:14	19:03	19:33		23:47	04:09	04:38	05:27	08:36	20:39	05:17	0·64	12 58·1	–06 12	05 56·2	+24 03
09–10 Fr	18:15	19:04	19:34		00:42	04:08	04:37	05:26	08:34	20:44	05:19	0·55	13 01·7	–06 35	06 51·0	+24 37
10–11 Sa	18:16	19:05	19:34	—	01:34	04:06	04:36	05:25	08:31	20:49	05:22	0·44	13 05·4	–06 58	07 47·1	+23 55
11–12 Su	18:16	19:06	19:35	—	02:22	04:05	04:35	05:24	08:29	20:53	05:24	0·34	13 09·1	–07 20	08 43·9	+21 53
12–13 Mo	18:17	19:06	19:36		03:06	04:04	04:33	05:23	08:27	20:58	05:27	0·24	13 12·8	–07 43	09 40·5	+18 32
13–14 Tu	18:18	19:07	19:37		03:47	04:02	04:32	05:21	08:25	21:03	05:30	0·15	13 16·5	–08 05	10 36·4	+14 02
14–15 We	18:18	19:08	19:38			04:01	04:31	05:20	08:22	21:08	05:32	0·07	13 20·2	–08 27	11 31·7	+08 35
15–16 Th	18:19	19:09	19:39			04:00	04:30	05:19	08:20	21:13	05:35	0·02	13 23·9	–08 49	12 26·7	+02 29
16–17 Fr	18:20	19:10	19:40			03:58	04:28	05:18	08:18	21:17	05:37	0·00	13 27·7	–09 11	13 22·1	–03 50
17–18 Sa	18:21	19:11	19:41			03:57	04:27	05:17	08:16	21:22	05:40	0·01	13 31·4	–09 33	14 18·5	–09 58
18–19 Su	18:21	19:11	19:42	20:01		03:56	04:26	05:16	08:13	21:27	05:43	0·05	13 35·2	–09 55	15 16·6	–15 28
19–20 Mo	18:22	19:12	19:43	21:13		03:54	04:25	05:15	08:11	21:32	05:45	0·11	13 38·9	–10 17	16 16·4	–19 54
20–21 Tu	18:23	19:13	19:44	22:22		03:53	04:23	05:14	08:09	21:37	05:48	0·20	13 42·7	–10 38	17 17·5	–22 59
21–22 We	18:24	19:14	19:45	23:27		03:52	04:22	05:13	08:07	21:42	05:51	0·29	13 46·5	–10 59	18 18·6	–24 31
22–23 Th	18:24	19:15	19:46	00:26		03:50	04:21	05:12	08:04	21:47	05:53	0·40	13 50·3	–11 21	19 18·5	–24 32
23–24 Fr	18:25	19:16	19:47	01:16		03:49	04:20	05:10	08:02	21:52	05:56	0·50	13 54·1	–11 42	20 15·8	–23 09
24–25 Sa	18:26	19:17	19:48	02:00	—	03:48	04:19	05:09	08:00	21:57	05:59	0·61	13 57·9	–12 02	21 09·9	–20 36
25–26 Su	18:27	19:18	19:49	02:38		03:47	04:18	05:08	07:58	22:02	06:01	0·70	14 01·7	–12 23	22 00·6	–17 08
26–27 Mo	18:28	19:18	19:50	03:11		03:45	04:17	05:07	07:55	22:07	06:04	0·79	14 05·6	–12 43	22 48·4	–13 00
27–28 Tu	18:28	19:19	19:51	03:41		03:44	04:15	05:06	07:53	22:12	06:07	0·86	14 09·4	–13 04	23 33·8	–08 25
28–29 We	18:29	19:20	19:52			03:43	04:14	05:06	07:51	22:17	06:09	0·92	14 13·3	–13 24	00 17·7	–03 33
29–30 Th	18:30	19:21	19:53			03:42	04:13	05:05	07:49	22:22	06:12	0·96	14 17·2	–13 44	01 00·9	+01 24
30–31 Fr	18:31	19:22	19:54			03:41	04:12	05:04	07:46	22:27	06:15	0·99	14 21·1	–14 03	01 44·1	+06 18
31–01 Sa	18:32	19:23	19:55			03:39	04:11	05:03	07:44	22:32	06:18	1·00	14 25·0	–14 22	02 28·1	+10 58

Siding Spring Observatory

November 2020

DATE	EVENING SUN			MOON		MORNING SUN			HOURS	TWILIGHTS		MOON	SUN		MOON	
	set	–12°	–18°	set	rise	–18°	–12°	rise	twi–twi	sidereal time		phase	(apparent)		(apparent)	
01–02 Su	18:32	19:24	19:56			03:38	04:10	05:02	07:42	22:37	06:20	0·99	14 28·9	–14 42	03 13·6	+15 15
02–03 Mo	18:33	19:25	19:57			03:37	04:09	05:01	07:40	22:42	06:23	0·97	14 32·8	–15 00	04 01·1	+18 58
03–04 Tu	18:34	19:26	19:58		20:46	03:36	04:08	05:00	07:37	22:47	06:26	0·92	14 36·8	–15 19	04 50·8	+21 55
04–05 We	18:35	19:27	19:59		21:42	03:35	04:07	04:59	07:35	22:52	06:29	0·86	14 40·7	–15 38	05 42·9	+23 54
05–06 Th	18:36	19:28	20:00		22:37	03:34	04:06	04:59	07:33	22:57	06:32	0·79	14 44·7	–15 56	06 36·8	+24 47
06–07 Fr	18:37	19:29	20:02		23:29	03:33	04:05	04:58	07:31	23:02	06:35	0·70	14 48·7	–16 14	07 31·9	+24 26
07–08 Sa	18:37	19:30	20:03		00:18	03:32	04:04	04:57	07:29	23:07	06:38	0·60	14 52·7	–16 31	08 27·4	+22 49
08–09 Su	18:38	19:31	20:04		01:02	03:31	04:04	04:56	07:26	23:12	06:41	0·50	14 56·7	–16 48	09 22·5	+19 57
09–10 Mo	18:39	19:32	20:05	—	01:42	03:30	04:03	04:56	07:24	23:17	06:44	0·39	15 00·7	–17 06	10 16·7	+15 56
10–11 Tu	18:40	19:33	20:06		02:20	03:29	04:02	04:55	07:22	23:23	06:46	0·28	15 04·8	–17 22	11 10·3	+10 58
11–12 We	18:41	19:34	20:07		02:56	03:28	04:01	04:54	07:20	23:28	06:50	0·18	15 08·8	–17 39	12 03·5	+05 15
12–13 Th	18:42	19:35	20:09			03:27	04:00	04:54	07:18	23:33	06:53	0·10	15 12·9	–17 55	12 57·2	–00 55
13–14 Fr	18:43	19:36	20:10			03:26	04:00	04:53	07:16	23:38	06:56	0·04	15 17·0	–18 11	13 52·1	–07 08
14–15 Sa	18:44	19:37	20:11			03:25	03:59	04:53	07:14	23:43	06:59	0·01	15 21·1	–18 26	14 49·0	–13 00
15–16 Su	18:45	19:38	20:12			03:24	03:58	04:52	07:12	23:48	07:02	0·00	15 25·2	–18 41	15 48·5	–18 04
16–17 Mo	18:45	19:39	20:13			03:24	03:58	04:52	07:10	23:53	07:05	0·03	15 29·3	–18 56	16 50·3	–21 54
17–18 Tu	18:46	19:40	20:14	21:08		03:23	03:57	04:51	07:08	23:58	07:08	0·08	15 33·5	–19 11	17 53·3	–24 12
18–19 We	18:47	19:42	20:16	22:12		03:22	03:56	04:51	07:06	00:04	07:11	0·15	15 37·6	–19 25	18 56·0	–24 51
19–20 Th	18:48	19:43	20:17	23:09		03:21	03:56	04:50	07:04	00:09	07:15	0·24	15 41·8	–19 39	19 56·4	–23 56
20–21 Fr	18:49	19:44	20:18	23:57		03:21	03:55	04:50	07:02	00:14	07:18	0·34	15 46·0	–19 52	20 53·3	–21 41
21–22 Sa	18:50	19:45	20:19	00:37		03:20	03:55	04:49	07:01	00:19	07:21	0·44	15 50·2	–20 05	21 46·3	–18 23
22–23 Su	18:51	19:46	20:20	01:13	—	03:20	03:54	04:49	06:59	00:24	07:24	0·54	15 54·4	–20 18	22 35·6	–14 21
23–24 Mo	18:52	19:47	20:21	01:44		03:19	03:54	04:49	06:57	00:29	07:28	0·64	15 58·6	–20 31	23 22·1	–09 48
24–25 Tu	18:53	19:48	20:23	02:13		03:18	03:53	04:48	06:55	00:34	07:31	0·72	16 02·8	–20 43	00 06·4	–04 58
25–26 We	18:53	19:49	20:24	02:40		03:18	03:53	04:48	06:54	00:39	07:35	0·81	16 07·1	–20 54	00 49·6	+00 00
26–27 Th	18:54	19:50	20:25	03:08		03:17	03:52	04:48	06:52	00:44	07:38	0·87	16 11·4	–21 05	01 32·7	+04 57
27–28 Fr	18:55	19:51	20:26			03:17	03:52	04:48	06:50	00:49	07:42	0·93	16 15·6	–21 16	02 16·3	+09 43
28–29 Sa	18:56	19:52	20:27			03:17	03:52	04:48	06:49	00:54	07:45	0·97	16 19·9	–21 27	03 01·4	+14 09
29–30 Su	18:57	19:53	20:28			03:16	03:52	04:47	06:47	01:00	07:49	0·99	16 24·2	–21 37	03 48·4	+18 04
30–01 Mo	18:58	19:54	20:29			03:16	03:51	04:47	06:46	01:05	07:52	1·00	16 28·5	–21 46	04 37·9	+21 16

Siding Spring Observatory

December 2020

DATE	EVENING SUN			MOON		MORNING SUN			HOURS	TWILIGHTS		MOON	SUN		MOON	
	set	–12°	–18°	set	rise	–18°	–12°	rise	twi–twi	sidereal time		phase	(apparent)		(apparent)	
01–02 Tu	18:59	19:55	20:30			03:15	03:51	04:47	06:45	01:10	07:56	0·99	16 32·8	–21 56	05 29·9	+23 33
02–03 We	18:59	19:56	20:31		20:33	03:15	03:51	04:47	06:43	01:15	08:00	0·95	16 37·2	–22 04	06 23·8	+24 45
03–04 Th	19:00	19:56	20:32		21:27	03:15	03:51	04:47	06:42	01:19	08:03	0·90	16 41·5	–22 13	07 19·1	+24 42
04–05 Fr	19:01	19:57	20:33		22:16	03:15	03:51	04:47	06:41	01:24	08:07	0·84	16 45·8	–22 21	08 14·6	+23 23
05–06 Sa	19:02	19:58	20:34		23:01	03:15	03:51	04:47	06:40	01:29	08:11	0·75	16 50·2	–22 28	09 09·4	+20 50
06–07 Su	19:03	19:59	20:35		23:42	03:15	03:51	04:47	06:39	01:34	08:15	0·66	16 54·6	–22 35	10 03·0	+17 09
07–08 Mo	19:03	20:00	20:36		00:20	03:14	03:51	04:47	06:38	01:39	08:18	0·55	16 58·9	–22 42	10 55·4	+12 31
08–09 Tu	19:04	20:01	20:37	—	00:55	03:14	03:51	04:48	06:37	01:44	08:22	0·44	17 03·3	–22 48	11 47·0	+07 10
09–10 We	19:05	20:02	20:38		01:29	03:14	03:51	04:48	06:36	01:49	08:26	0·33	17 07·7	–22 54	12 38·4	+01 20
10–11 Th	19:06	20:02	20:39		02:03	03:15	03:51	04:48	06:35	01:54	08:30	0·22	17 12·1	–22 59	13 30·8	–04 42
11–12 Fr	19:06	20:03	20:40		02:40	03:15	03:51	04:48	06:34	01:58	08:34	0·13	17 16·5	–23 04	14 24·9	–10 35
12–13 Sa	19:07	20:04	20:41			03:15	03:51	04:48	06:34	02:03	08:38	0·06	17 20·9	–23 08	15 21·8	–15 56
13–14 Su	19:08	20:05	20:41			03:15	03:52	04:49	06:33	02:08	08:43	0·02	17 25·3	–23 12	16 21·7	–20 19
14–15 Mo	19:08	20:05	20:42			03:15	03:52	04:49	06:33	02:13	08:47	0·00	17 29·8	–23 15	17 24·1	–23 21
15–16 Tu	19:09	20:06	20:43			03:15	03:52	04:49	06:32	02:17	08:51	0·01	17 34·2	–23 18	18 27·8	–24 47
16–17 We	19:10	20:07	20:44	20:53		03:16	03:52	04:50	06:32	02:22	08:55	0·05	17 38·6	–23 21	19 30·5	–24 32
17–18 Th	19:10	20:07	20:44	21:46		03:16	03:53	04:50	06:31	02:27	08:59	0·11	17 43·0	–23 23	20 30·5	–22 46
18–19 Fr	19:11	20:08	20:45	22:32		03:16	03:53	04:50	06:31	02:31	09:04	0·18	17 47·5	–23 24	21 26·6	–19 47
19–20 Sa	19:11	20:09	20:45	23:10		03:17	03:54	04:51	06:31	02:36	09:08	0·27	17 51·9	–23 25	22 18·6	–15 52
20–21 Su	19:12	20:09	20:46	23:44		03:17	03:54	04:51	06:31	02:40	09:13	0·36	17 56·4	–23 26	23 07·0	–11 23
21–22 Mo	19:12	20:10	20:46	00:14	—	03:18	03:55	04:52	06:31	02:45	09:17	0·46	18 00·8	–23 26	23 52·6	–06 32
22–23 Tu	19:13	20:10	20:47	00:42	—	03:18	03:55	04:52	06:31	02:49	09:21	0·56	18 05·2	–23 26	00 36·6	–01 32
23–24 We	19:13	20:11	20:47	01:10		03:19	03:56	04:53	06:31	02:53	09:26	0·65	18 09·7	–23 25	01 19·7	+03 27
24–25 Th	19:14	20:11	20:48	01:38		03:19	03:56	04:53	06:31	02:58	09:31	0·74	18 14·1	–23 24	02 03·1	+08 18
25–26 Fr	19:14	20:11	20:48	02:08		03:20	03:57	04:54	06:31	03:02	09:35	0·82	18 18·6	–23 22	02 47·6	+12 51
26–27 Sa	19:15	20:12	20:48	02:41		03:21	03:57	04:55	06:32	03:06	09:40	0·88	18 23·0	–23 20	03 33·9	+16 56
27–28 Su	19:15	20:12	20:49	03:17		03:21	03:58	04:55	06:32	03:11	09:44	0·94	18 27·4	–23 17	04 22·7	+20 23
28–29 Mo	19:15	20:12	20:49			03:22	03:59	04:56	06:33	03:15	09:49	0·98	18 31·9	–23 14	05 14·2	+22 58
29–30 Tu	19:16	20:13	20:49			03:23	04:00	04:57	06:33	03:19	09:54	1·00	18 36·3	–23 11	06 08·2	+24 31
30–31 We	19:16	20:13	20:49			03:24	04:00	04:57	06:34	03:23	09:58	1·00	18 40·7	–23 06	07 03·9	+24 50
31–01 Th	19:16	20:13	20:49			03:25	04:01	04:58	06:35	03:27	10:03	0·98	18 45·1	–23 02	08 00·3	+23 50