

# MOONRISE AND MOONSET TIMES

## LYTTELTON

July 2009 - December 2009

|      | July |       | August |       | September |       | October |       | November |       | December |       |       |
|------|------|-------|--------|-------|-----------|-------|---------|-------|----------|-------|----------|-------|-------|
|      | Rise | Set   | Rise   | Set   | Rise      | Set   | Rise    | Set   | Rise     | Set   | Rise     | Set   |       |
| 2009 | 1    | 12:27 | 2:01   | 12:49 | 4:13      | 14:32 | 5:04    | 15:31 | 4:22     | 17:38 | 3:48     | 18:54 | 3:13  |
|      | 2    | 12:55 | 3:09   | 13:40 | 5:07      | 15:35 | 5:33    | 16:35 | 4:43     | 18:50 | 4:13     | 20:06 | 3:55  |
|      | 3    | 13:27 | 4:16   | 14:37 | 5:53      | 16:39 | 5:57    | 17:40 | 5:03     | 20:04 | 4:43     | 21:11 | 4:50  |
|      | 4    | 14:06 | 5:20   | 15:38 | 6:31      | 17:43 | 6:18    | 18:47 | 5:24     | 21:17 | 5:20     | 22:05 | 5:56  |
|      | 5    | 14:52 | 6:18   | 16:41 | 7:03      | 18:47 | 6:39    | 19:56 | 5:47     | 22:25 | 6:07     | 22:48 | 7:11  |
|      | 6    | 15:45 | 7:10   | 17:45 | 7:29      | 19:52 | 6:58    | 21:08 | 6:13     | 23:23 | 7:04     | 23:23 | 8:30  |
|      | 7    | 16:44 | 7:53   | 18:48 | 7:52      | 20:59 | 7:19    | 22:20 | 6:44     | ---   | 8:12     | 23:52 | 9:48  |
|      | 8    | 17:46 | 8:29   | 19:52 | 8:13      | 22:08 | 7:42    | 23:30 | 7:23     | 0:11  | 9:27     | ---   | 11:05 |
|      | 9    | 18:50 | 8:59   | 20:55 | 8:32      | 23:19 | 8:09    | ---   | 8:12     | 0:50  | 10:44    | 0:17  | 12:18 |
|      | 10   | 19:53 | 9:24   | 22:00 | 8:52      | ---   | 8:42    | 0:34  | 9:12     | 1:21  | 12:00    | 0:40  | 13:30 |
|      | 11   | 20:56 | 9:46   | 23:07 | 9:13      | 0:30  | 9:23    | 1:28  | 10:21    | 1:48  | 13:14    | 1:04  | 14:41 |
|      | 12   | 21:59 | 10:06  | ---   | 9:36      | 1:38  | 10:15   | 2:13  | 11:36    | 2:12  | 14:27    | 1:29  | 15:51 |
|      | 13   | 23:03 | 10:26  | 0:17  | 10:05     | 2:40  | 11:18   | 2:49  | 12:53    | 2:36  | 15:39    | 1:56  | 17:01 |
|      | 14   | ---   | 10:46  | 1:29  | 10:40     | 3:32  | 12:31   | 3:19  | 14:10    | 2:59  | 16:50    | 2:29  | 18:08 |
|      | 15   | 0:09  | 11:07  | 2:41  | 11:25     | 4:14  | 13:49   | 3:45  | 15:25    | 3:25  | 18:02    | 3:08  | 19:10 |
|      | 16   | 1:17  | 11:33  | 3:49  | 12:22     | 4:49  | 15:09   | 4:09  | 16:40    | 3:55  | 19:12    | 3:54  | 20:05 |
|      | 17   | 2:30  | 12:04  | 4:49  | 13:32     | 5:18  | 16:28   | 4:33  | 17:53    | 4:30  | 20:19    | 4:47  | 20:51 |
|      | 18   | 3:44  | 12:44  | 5:39  | 14:51     | 5:44  | 17:45   | 4:58  | 19:07    | 5:12  | 21:19    | 5:45  | 21:30 |
|      | 19   | 4:58  | 13:36  | 6:19  | 16:13     | 6:08  | 19:01   | 5:25  | 20:19    | 6:01  | 22:12    | 6:47  | 22:01 |
|      | 20   | 6:06  | 14:41  | 6:52  | 17:35     | 6:32  | 20:16   | 5:57  | 21:29    | 6:56  | 22:55    | 7:50  | 22:28 |
|      | 21   | 7:03  | 15:58  | 7:19  | 18:55     | 6:58  | 21:29   | 6:35  | 22:34    | 7:56  | 23:31    | 8:52  | 22:51 |
|      | 22   | 7:49  | 17:21  | 7:44  | 20:12     | 7:27  | 22:41   | 7:19  | 23:31    | 8:59  | ---      | 9:54  | 23:11 |
|      | 23   | 8:25  | 18:44  | 8:07  | 21:27     | 8:00  | 23:48   | 8:11  | ---      | 10:01 | 0:00     | 10:55 | 23:31 |
|      | 24   | 8:54  | 20:05  | 8:32  | 22:40     | 8:40  | ---     | 9:08  | 0:20     | 11:03 | 0:25     | 11:57 | 23:51 |
|      | 25   | 9:20  | 21:22  | 8:58  | 23:51     | 9:27  | 0:49    | 10:09 | 1:00     | 12:05 | 0:47     | 13:01 | ---   |
|      | 26   | 9:43  | 22:36  | 9:28  | ---       | 10:21 | 1:42    | 11:11 | 1:33     | 13:08 | 1:08     | 14:07 | 0:13  |
|      | 27   | 10:06 | 23:48  | 10:04 | 1:00      | 11:19 | 2:27    | 12:14 | 2:00     | 14:12 | 1:28     | 15:16 | 0:37  |
|      | 28   | 10:30 | ---    | 10:45 | 2:03      | 12:21 | 3:03    | 13:17 | 2:24     | 15:18 | 1:49     | 16:28 | 1:06  |
|      | 29   | 10:57 | 0:58   | 11:34 | 3:01      | 13:24 | 3:34    | 14:20 | 2:45     | 16:27 | 2:12     | 17:41 | 1:43  |
|      | 30   | 11:28 | 2:07   | 12:29 | 3:50      | 14:27 | 3:59    | 15:24 | 3:06     | 17:40 | 2:39     | 18:50 | 2:31  |
|      | 31   | 12:05 | 3:12   | 13:29 | 4:31      | ---   | ---     | 16:30 | 3:26     | ---   | ---      | 19:50 | 3:31  |

ASTRONOMICAL

January 2010 - June 2010

|      | January |       | February |       | March |       | April |       | May   |       | June  |       |       |
|------|---------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|      | Rise    | Set   | Rise     | Set   | Rise  | Set   | Rise  | Set   | Rise  | Set   | Rise  | Set   |       |
| 2010 | 1       | 20:40 | 4:43     | 20:44 | 7:37  | 19:08 | 6:24  | 19:01 | 9:06  | 19:04 | 10:13 | 20:54 | 11:05 |
|      | 2       | 21:20 | 6:03     | 21:10 | 8:56  | 19:34 | 7:44  | 19:39 | 10:20 | 20:01 | 11:10 | 21:56 | 11:33 |
|      | 3       | 21:52 | 7:26     | 21:35 | 10:13 | 20:01 | 9:02  | 20:24 | 11:29 | 21:01 | 11:56 | 22:58 | 11:57 |
|      | 4       | 22:19 | 8:46     | 22:02 | 11:27 | 20:31 | 10:18 | 21:16 | 12:29 | 22:04 | 12:35 | 23:59 | 12:19 |
|      | 5       | 22:44 | 10:04    | 22:32 | 12:40 | 21:05 | 11:32 | 22:14 | 13:21 | 23:07 | 13:06 | ---   | 12:40 |
|      | 6       | 23:08 | 11:19    | 23:07 | 13:50 | 21:46 | 12:42 | 23:14 | 14:03 | ---   | 13:32 | 1:00  | 13:00 |
|      | 7       | 23:33 | 12:31    | 23:49 | 14:56 | 22:32 | 13:46 | ---   | 14:37 | 0:09  | 13:55 | 2:02  | 13:22 |
|      | 8       | ---   | 13:43    | ---   | 15:55 | 23:25 | 14:41 | 0:17  | 15:06 | 1:10  | 14:16 | 3:06  | 13:46 |
|      | 9       | 0:00  | 14:53    | 0:37  | 16:47 | ---   | 15:28 | 1:19  | 15:31 | 2:11  | 14:37 | 4:12  | 14:14 |
|      | 10      | 0:31  | 16:00    | 1:31  | 17:30 | 0:23  | 16:06 | 2:21  | 15:53 | 3:13  | 14:58 | 5:20  | 14:48 |
|      | 11      | 1:07  | 17:03    | 2:31  | 18:06 | 1:24  | 16:38 | 3:22  | 16:13 | 4:16  | 15:20 | 6:30  | 15:32 |
|      | 12      | 1:50  | 18:00    | 3:32  | 18:35 | 2:27  | 17:04 | 4:24  | 16:34 | 5:22  | 15:46 | 7:36  | 16:25 |
|      | 13      | 2:41  | 18:49    | 4:35  | 19:00 | 3:29  | 17:28 | 5:26  | 16:55 | 6:30  | 16:17 | 8:37  | 17:30 |
|      | 14      | 3:37  | 19:30    | 5:37  | 19:23 | 4:30  | 17:49 | 6:31  | 17:19 | 7:39  | 16:55 | 9:28  | 18:43 |
|      | 15      | 4:38  | 20:03    | 6:39  | 19:43 | 5:32  | 18:09 | 7:37  | 17:46 | 8:48  | 17:42 | 10:10 | 20:00 |
|      | 16      | 5:40  | 20:31    | 7:40  | 20:03 | 6:34  | 18:29 | 8:45  | 18:18 | 9:51  | 18:39 | 10:45 | 21:18 |
|      | 17      | 6:43  | 20:55    | 8:42  | 20:23 | 7:37  | 18:51 | 9:53  | 18:58 | 10:47 | 19:46 | 11:14 | 22:34 |
|      | 18      | 7:45  | 21:17    | 9:45  | 20:45 | 8:41  | 19:15 | 10:59 | 19:48 | 11:33 | 20:59 | 11:40 | 23:49 |
|      | 19      | 8:46  | 21:37    | 10:49 | 21:09 | 9:48  | 19:43 | 11:59 | 20:47 | 12:11 | 22:14 | 12:06 | ---   |
|      | 20      | 9:48  | 21:56    | 11:56 | 21:38 | 10:55 | 20:17 | 12:51 | 21:55 | 12:43 | 23:30 | 12:31 | 1:02  |
|      | 21      | 10:50 | 22:17    | 13:04 | 22:15 | 12:02 | 20:58 | 13:34 | 23:08 | 13:11 | ---   | 12:58 | 2:15  |
|      | 22      | 11:53 | 22:39    | 14:11 | 23:00 | 13:06 | 21:50 | 14:10 | ---   | 13:36 | 0:44  | 13:29 | 3:28  |
|      | 23      | 12:59 | 23:05    | 15:15 | 23:57 | 14:04 | 22:52 | 14:40 | 0:23  | 14:01 | 1:58  | 14:05 | 4:39  |
|      | 24      | 14:08 | 23:37    | 16:12 | ---   | 14:54 | ---   | 15:07 | 1:39  | 14:27 | 3:11  | 14:48 | 5:46  |
|      | 25      | 15:18 | ---      | 17:00 | 1:04  | 15:35 | 0:03  | 15:33 | 2:55  | 14:56 | 4:25  | 15:39 | 6:48  |
|      | 26      | 16:27 | 0:18     | 17:40 | 2:21  | 16:09 | 1:19  | 15:58 | 4:10  | 15:29 | 5:39  | 16:36 | 7:42  |
|      | 27      | 17:31 | 1:10     | 18:13 | 3:42  | 16:39 | 2:38  | 16:26 | 5:26  | 16:08 | 6:50  | 17:37 | 8:27  |
|      | 28      | 18:25 | 2:14     | 18:42 | 5:04  | 17:06 | 3:56  | 16:56 | 6:42  | 16:54 | 7:58  | 18:41 | 9:04  |
|      | 29      | 19:10 | 3:30     | ---   | ---   | 17:32 | 5:15  | 17:32 | 7:57  | 17:48 | 8:58  | 19:44 | 9:34  |
|      | 30      | 19:47 | 4:52     | ---   | ---   | 17:59 | 6:32  | 18:15 | 9:08  | 18:47 | 9:49  | 20:46 | 10:00 |
|      | 31      | 20:17 | 6:15     | ---   | ---   | 18:28 | 7:50  | ---   | ---   | 19:50 | 10:30 | ---   | ---   |

Times listed are in New Zealand Standard Time (NZST)

Add 1 hour when New Zealand Daylight Time (NZDT) is in force