

# 2013-2014 Local<sup>i</sup> Dark Season Calendar

Note: Dates and times are approximate for some of the events. Times to nearest 10 minutes. please note that although very special care has been taken to put this schedule together, I cannot guarantee that it is error free, or includes absolutely everything. It of course doesn't include events that haven't yet happened or discovered.

Clear skies!

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## 2013

Date	Time	Object	Event	Notes
16-08			Start of dark season	
21-08		Moon	●	
26-08		Neptune	Opposition	2.4" diameter
29-08			Start of Dark Evenings <sup>ii</sup>	Good opportunity to see Neptune, last good chance to see Pluto this year. M5 92 12 10 14 17 25 26 102 107 9 23 24 18
05-09		Moon	○ <sup>iii</sup>	
09-09			End of Dark Evenings	
19-09			●	
28-09			Start of Dark Evenings	Neptune at its best (21.6 degrees altitude) M13 11 39 16 57 17 25 26 56 71 27 19 15 23 24 18 72 73 2
05-10		Moon	○	
07-10			End of Dark Evenings	
09-10	PM	Mercury	Elongation	23.5 E
13-10		Uranus	Opposition	3.7" diameter
18-10		Moon	●	
27-10			End of BST	Clocks go back one hour
29-10			Start of Dark Evenings	Good opportunity to see Uranus, M31 32 33 74 76 52 110 103 2
01-11	PM	Venus	Elongation	47.5 E, low on the horizon in the evening
03-11		Moon	○	
07-11			End of Dark Evenings	
17-11		Moon	●	
18-11	AM	Mercury	Elongation	19.5 W, observation possible
26-11			Start of Dark Evenings	Uranus still good, M34 45 77
29-11	15.36	ISON	closest approach	ISON will be at its brightest, just after sunset. ISON will set at 16:13
03-12		Moon	○	
05-12			End of Dark Evenings	
12-12		Geminids	Meteor shower	
17-12		Moon	●	
25-12			Start of Dark Evenings	Good opportunity to observe Jupiter. M42 37 35 38 1 36 43 78

## 2014

01-01		Moon	○	
03-01			End of Dark Evenings	
05-01		Jupiter	Opposition	47" diameter
16-01		Moon	●	
22-01			Start of Dark Evenings	Jupiter still excellent. M48 50 47 46 95 96 105
30-01		Moon	○	
31-01	PM	Mercury	Elongation	18.4 E, observation possible
01-02			End of Dark Evenings	
14-02		Moon	●	
20-02			Start of Dark Evenings	M44 67 81 3 66 106 49 108 97 65
01-03		Moon	○	
02-03			End of Dark Evenings	
14-03	AM	Mercury	Elongation	27.6 W
16-03		Moon	●	
21-03			Start of Dark Evenings	M44 67 81 3 87 104 94 64 53 63 51 101 98 99 61 40 100 84 85 86 88 91 89 90 58 59 60
22-03	AM	Venus	Elongation	46.5 W
30-03		Moon	○	
31-03			End of Dark Evenings	
08-04		Mars	Opposition	15" diameter
15-04		Moon	●	
18-04			Start of Dark Evenings	M87 104 94 64 53 63 51 101 98 99 61 40 100 84 85 86 88 91 89 90 58 59 60
22-04			End of Dark Evenings	
28-04			End of dark season	
29-04		Moon	○	

## Saturn

Saturn is unfortunately not going to be super during the dark season. It will be visible again in the summer of 2014, but will not be very high in the sky.

## Eclipses

There are no eclipses in 2013 and 2014 visible from the JSL Observatory. 2015 is going to be a good year with two major eclipses. Times  $\pm 3$  minutes.

Date	Timings <sup>iv</sup>	Type	% eclipsed	Notes
20-05-15	8:33 9:36 10:43	Solar	94%	The total eclipse will be visible from Faroe or Svalbard (if you like the cold)
28-09-15	1:06 2:46 4:25	Lunar	100%	

## Messier Challenge at the JSL Observatory 2013/2014\*

Friday/Saturday	Possible Solar System Objects	Bronze	Silver	Gold	Plat.
7 September	Pluto (need to check situation with regards to field of view from Observatory, otherwise this may need to be done on location somewhere, using video camera)	5	92	12 10 14	102 107 9
13/14 September	Moon	5 13 11 39	92 16 57	12 10 14 17 25 26 56 71 27 29 15	102 107 9 23 24 18
27/28 September	Neptune	13 11 39	16 57	56 71 27 29 15	23 24 18 72 73 2
04/05 October	Neptune	31	32 33	52 110 103	2
11/12 October	Moon	31	32 33	52 110 103	
25/26 October	Uranus	31	32 33	52 110 103	
01/02 November	Venus, Uranus		33	74	76
08/09 November	Uranus		33		76
29/30 November <sup>v</sup>	Comet ISON (very early)	34 45			77
06/07 December	Some Geminids	34 45			77
20/21 December	Jupiter	42 37 35	1 36	43 78	
January <sup>vi</sup>	Jupiter	42 37 35	1 36	43 78	
Early February	Jupiter	48	50 47	46 82	95 96 105
Late February		48	50 47	46 82	108 97 65
Early March	Mars	44	67 81 3	66 106 49 87 104 94	109 89 99 61 40
March		44	67 81 3	66 106 49 87 104 94	100 84 85 86 88 91 89 90
21 March Special Event	Messier Half Marathon (New Moon)	All Messier objects still to be collected			
Late March	Moon	5	92 67 81 3	87 104 94 64 53 63 51 101	85 86 88 91 89 90 58 59 60
Early April (final session)		5	92	87 104 94 64 53 63 51 101	91 89 90 58 59 60

\*2014 observing schedule available later in 2013

<sup>i</sup> Dates and timings are for Highlands of Scotland

<sup>ii</sup> A Dark Evening is defined here as a period during the dark season where the Moon sets no later than one hour after sunset or not after 20:00 whichever is later, and doesn't rise again until midnight. This does not take the phase of the moon into account, so it is possible that a period of dark evenings is longer because it is followed or preceded by a new moon.

<sup>iii</sup> ○ is new moon, ● is full moon

<sup>iv</sup> 3 timings (UTC) are first contact, maximum and last contact.

<sup>v</sup> Comet ISON only visible right after sunset, which is around 15:30. Observatory possibly not a good location for this, may need to go to top of car park with wide field scopes and binoculars.

<sup>vi</sup> These dates are not yet planned, they will be confirmed near the end of the 2013.