

# ALMANAC

All times U.T for B.S.T. Add one hour

Rise and set times are for Worthing

## November / December

### LUNAR

November		Rise	Set
Full Moon	23rd 05.39	16.48	06.57
Perigee	26th 12.12	366,620 km	
Last quarter	30th 00.19	23.20	12.51

### December

New Moon	7th 07.20	07.39	16.25
Apogee	12th 12.25	405,177 km	
First quarter	15th 11.49	12.40	23.55
Full Moon	22nd 17.49	16.13	07.03

### EARTH

November	Sunrise	Sunset
23rd	07.27	16.04
30th	07.38	15.59

### December

7th	07.47	15.55
15th	07.56	15.54
22nd	08.00	15.57

## PLANETS

(As at November 22nd)

	Rises	Sets	Mag
<b>Mercury</b>	08.34	16.32	+2.0
Becoming a morning object visible in the south-east pre-dawn in December			
<b>Venus</b>	04.17	14.44	-4.6
Now a very bright morning object in the south-east pre-dawn			
<b>Mars</b>	13.13	23.24	-0.2
Bright evening object in Aquarius, visible until late evening			
<b>Jupiter</b>	07.41	16.16	-1.7
Possible to find as a morning object in mid-December low in the south-east			
<b>Saturn</b>	10.23	18.25	+0.6
Evening object in Sagittarius, but sinking into the sunset in mid-December			
<b>Uranus</b>	14.46	04.44	+5.7
Evening object in Aries, visible until the early hours			
<b>Neptune</b>	13.28	00.26	+7.9
Evening object in Aquarius, visible until after midnight			

## PHENOMENA

### November

Day	Hour	
20th	20	Uranus 5° N of Moon
24th	02	Antares 4° S of Mercury
26th	06	Jupiter at solar conjunction
27th	09	Mercury at inferior solar conjunction
28th	00	Jupiter 0.5° S of Mercury
30th	14	Venus at greatest brilliancy -4.7

### December

3rd	19	Venus 4° S of Moon
5th	21	Mercury 2° S of Moon
6th	13	Jupiter 3° S of Moon
7th	15	Neptune 0.04° S of Mars
9th	05	Saturn 1° S of Moon
14th	06	Geminid meteor shower peak
14th	14	Neptune 3° N of Moon
14th	23	Mars 4° N of Moon
15th	11	Mercury at western elongation 21.3°
18th	04	Uranus 5° N of Moon
21st	15	Jupiter 1° S of Mercury
21st	22	Winter solstice

### Minima of Algol

<b>November</b>	21st 16.24	30th 06.54	
<b>December</b>	3rd 03.42	6th 00.30	8th 21.18
	11th 18.06	20th 08.36	

### Lunar Occultations Times as at Greenwich U.T.

Date	Z.C. No	Mag	Phase	U.T.
<b>November</b>				
21st	405	4.3	Diss	20.49
25th	894	4.4	Diss	06.17
30th	1576	5.3	Reapp	03.25
<b>December</b>				
19th	364	4.3	Diss	00.44
19th	462	6.0	Diss	18.21
21st	650	5.6	Diss	03.29
21st	764	4.9	Diss	19.23

Richard Godley