



SPRING PHENOMENA

25 BCE TO 38 CE

The first table below gives the Julian calendar dates and Greenwich times of the astronomical vernal equinox for the years 25 BCE through 38 CE inclusive. The second table gives, for these years, the Julian calendar dates and Greenwich times of the *astronomical* Full Moons which occurred on or after the date of the equinox, and the dates and times of the astronomical New Moons on or preceding, and after, the date of the equinox. The days of the week are given for the equinoxes and the Full Moons, from which the days of the week may readily be found for the New Moons.

The times given in the tables are accurate to within two or three hours for 25 to 5 BCE, and one or two hours for 4 BCE to 38 CE. The uncertainty in these times arises from the *stochastic*, that is unpredictable, change in the Earth's rotation rate.

VERNAL EQUINOX

Julian Calendar		Greenwich Time	Day of Week	Julian Calendar		Greenwich Time	Day of Week
BCE	March			CE	March		
25	22	8 p.m.	Saturday	7	23	8 a.m.	Wednesday
24	23	2 a.m.	Monday	8	22	2 p.m.	Thursday
23	23	8 a.m.	Tuesday	9	22	8 p.m.	Friday
22	23	1 p.m.	Wednesday	10	23	1 a.m.	Sunday
21	22	7 p.m.	Thursday	11	23	7 a.m.	Monday
20	23	1 a.m.	Saturday	12	22	1 p.m.	Tuesday
19	23	7 a.m.	Sunday	13	22	7 p.m.	Wednesday
18	23	1 p.m.	Monday	14	23	1 a.m.	Friday
17	22	6 p.m.	Tuesday	15	23	7 a.m.	Saturday
16	23	0*	Thursday	16	22	Noon	Sunday
15	23	6 a.m.	Friday	17	22	6 p.m.	Monday
14	23	Noon	Saturday	18	23	0*	Wednesday
13	22	6 p.m.	Sunday	19	23	6 a.m.	Thursday
12	22	11 p.m.	Monday	20	22	Noon	Friday
11	23	5 a.m.	Wednesday	21	22	6 p.m.	Saturday
10	23	11 a.m.	Thursday	22	22	11 p.m.	Sunday
9	22	5 p.m.	Friday	23	23	5 a.m.	Tuesday
8	22	11 p.m.	Saturday	24	22	11 a.m.	Wednesday
7	23	5 a.m.	Monday	25	22	5 p.m.	Thursday
6	23	10 a.m.	Tuesday	26	22	10 p.m.	Friday
5	22	4 p.m.	Wednesday	27	23	4 a.m.	Sunday
4	22	10 p.m.	Thursday	28	22	10 a.m.	Monday
3	23	4 a.m.	Saturday	29	22	4 p.m.	Tuesday
2	23	10 a.m.	Sunday	30	22	10 p.m.	Wednesday
1	22	3 p.m.	Monday	31	23	3 a.m.	Friday
CE				32	22	9 a.m.	Saturday
1	22	9 p.m.	Tuesday	33	22	3 p.m.	Sunday
2	23	3 a.m.	Thursday	34	22	9 p.m.	Monday
3	23	9 a.m.	Friday	35	23	3 a.m.	Wednesday
4	22	3 p.m.	Saturday	36	22	9 a.m.	Thursday
5	22	8 p.m.	Sunday	37	22	2 p.m.	Friday
6	23	2 a.m.	Tuesday	38	22	8 p.m.	Saturday

* Midnight at the beginning of March 23.

FULL MOON

NEW MOON

On or next after date of equinox				On or preceding date of equinox		Following equinox	
Julian Cal. Date	Greenwich Time	Week Day		Julian Cal. Date	Greenwich Time	Julian Cal. Date	Greenwich Time
BCE							
25 April 3	4 a.m.	Thu.		March 19	Noon	April 18	4 a.m.
24 March 23	9 p.m.	Mon.		March 8	2 p.m.	April 7	5 a.m.
23 April 11	9 p.m.	Sun.		Feb. 25	8 p.m.	March 27	9 a.m.
22 April 1	6 a.m.	Fri.		March 16	7 p.m.	April 15	6 a.m.
21 April 19	1 a.m.	Thu.		March 5	11 a.m.	April 3	7 p.m.
20 April 8	3 a.m.	Mon.		Feb. 23	4 a.m.	March 24	1 p.m.
19 March 28	5 a.m.	Fri.		March 14	4 a.m.	April 12	1 p.m.
18 April 16	0*	Thu.		March 3	Noon	April 2	2 a.m.
17 April 4	Noon	Mon.		March 21	8 a.m.	April 19	9 p.m.
16 March 25	4 a.m.	Sat.		March 10	8 a.m.	April 9	0*
15 April 13	5 a.m.	Fri.		Feb. 27	10 a.m.	March 29	1 a.m.
14 April 2	7 p.m.	Tue.		March 18	6 a.m.	April 16	7 p.m.
13 April 20	5 p.m.	Mon.		March 6	6 p.m.	April 5	4 a.m.
12 April 9	9 p.m.	Fri.		Feb. 24	11 a.m.	March 25	7 p.m.
11 March 29	10 p.m.	Tue.		March 15	Noon	April 13	8 p.m.
10 April 17	4 p.m.	Mon.		March 5	2 a.m.	April 3	Noon
9 April 5	10 p.m.	Fri.		March 22	11 p.m.	April 21	11 a.m.
8 March 26	11 a.m.	Wed.		March 12	3 a.m.	April 10	6 p.m.
7 April 14	Noon	Tue.		March 1	3 a.m.	March 30	7 p.m.
6 April 4	5 a.m.	Sun.		March 19	9 p.m.	April 18	Noon
5 March 23	6 p.m.	Thu.		March 8	5 a.m.	April 6	5 p.m.
4 April 11	3 p.m.	Wed.		Feb. 25	6 p.m.	March 27	4 a.m.
3 March 31	6 p.m.	Sun.		March 16	7 p.m.	April 15	4 a.m.
2 April 19	10 a.m.	Sat.		March 6	Noon	April 4	9 p.m.
1 April 7	Noon	Wed.		Feb. 24	0*	March 24	Noon
CE							
1 March 27	9 p.m.	Sun.		March 13	8 p.m.	April 12	9 a.m.
2 April 15	7 p.m.	Sat.		March 2	10 p.m.	April 1	2 p.m.
3 April 5	Noon	Thu.		March 21	3 p.m.	April 20	7 a.m.
4 March 25	5 a.m.	Tue.		March 9	6 p.m.	April 8	9 a.m.
5 April 13	3 a.m.	Mon.		Feb. 27	3 a.m.	March 28	2 p.m.
6 April 2	11 a.m.	Fri.		March 18	3 a.m.	April 16	Noon
7 April 21	5 a.m.	Thu. (1)		March 7	8 p.m.	April 6	4 a.m.
8 April 9	6 a.m.	Mon.		Feb. 25	Noon	March 25	9 p.m.
9 March 29	9 a.m.	Fri.		March 15	10 a.m.	April 13	9 p.m.
10 April 17	6 a.m.	Thu.		March 4	4 p.m.	April 3	6 a.m.

11	April	6	7 p.m.	Mon.	March 23	10 a.m.	April 22	1 a.m.
12	March	26	Noon	Sat.	March 11	11 a.m.	April 10	3 a.m.
13	April	14	Noon	Fri.	Feb. 28	3 p.m.	March 30	5 a.m.
14	April	4	2 a.m.	Wed.	March 19	Noon	April 18	0*
15	March	24	7 a.m.	Sun.	March 9	2 a.m.	April 7	11 a.m.
16	April	11	0*	Sat.	Feb. 26	8 p.m.	March 27	4 a.m.
17	March	31	1 a.m.	Wed.	March 16	8 p.m.	April 15	4 a.m.
18	April	18	7 p.m.	Mon.	March 6	7 a.m.	April 4	7 p.m.
19	April	8	4 a.m.	Sat.	Feb. 23	Noon	March 25	3 a.m.
20	March	27	7 p.m.	Wed.	March 13	5 a.m.	April 11	9 p.m.
21	April	15	8 p.m.	Tue.	March 2	6 a.m.	March 31	10 p.m.
22	April	5	Noon	Sun.	March 21	1 a.m.	April 19	3 p.m.
23	March	25	11 p.m.	Thu.	March 10	11 a.m.	April 8	10 p.m.
24	April	12	6 p.m.	Wed.	Feb. 28	2 a.m.	March 28	11 a.m.
25	April	1	7 p.m.	Sun.	March 18	4 a.m.	April 16	Noon
26	April	20	Noon	Sat. (2)	March 7	7 p.m.	April 6	5 a.m.
27	April	9	4 p.m.	Wed.	Feb. 25	4 a.m.	March 26	5 p.m.
28	March	29	3 a.m.	Mon.	March 15	0*	April 13	2 p.m.
29	April	17	3 a.m.	Sun.	March 4	0*	April 2	5 p.m.
30	April	6	8 p.m.	Thu.	March 22	6 p.m.	April 21	9 a.m.
31	March	27	11 a.m.	Tue.	March 11	11 p.m.	April 10	Noon
32	April	14	9 a.m.	Mon.	Feb. 29	10 a.m.	March 29	8 p.m.
33	April	3	3 p.m.	Fri.	March 19	10 a.m.	April 17	7 p.m.
34	March	23	3 p.m.	Tue.	March 9	4 a.m.	April 7	Noon
35	April	11	8 a.m.	Mon.	Feb. 26	6 p.m.	March 28	4 a.m.
36	March	30	2 p.m.	Fri.	March 16	3 p.m.	April 15	3 a.m.
37	April	18	Noon	Thu.	March 5	7 p.m.	April 4	10 a.m.
38	April	8	3 a.m.	Tue.	Feb. 22	7 p.m.	March 24	Noon

(1) Preceding Full Moon, March 22, 1 p.m.

(2) Preceding Full Moon, March 21, 9 p.m.

* Midnight at the beginning of the given date.