Sept. 26-Oct. 1 = 6:00 ss. Oct 2-8 = .01 d short Oct 9-20 = .02 d short Oct 21-22 = .03 d short

Phasis

Year	Sunset 1 Nisan	Horizontal Parallax	After ss.	Moon's Longitude S ° ′ ″				Moon's Velocity	Moon's Velocity ° ′ ″
1767	Apr 1 W			N	1	15	45	35		7-0-7
				M	1	22	45	42	7.00	
1768	Apr 19 T			N	2	4	49	28		7-14-5
				M	2	12	3	33	7.23	
1769	Apr 8 S	M (7th) = 61′ 0″ N (8th) = 60 59		N	1	14	11	0		7-28-38
				M	1	21	39	38	7.48	
1770	Apr 27 F		(.85)	N	2	1	27	27		7-16-3
				M	2	8	43	30	7.27	
1771	Apr 16 T			N	1	12	50	33		6-33-40
				M	1	19	24	13	6.56	
1772	Apr 5 S		(.76)	N	1	11	10	51		6-3-17
				M	1	17	14	8	6.05	
1773	Apr 24 S		(.80)	N	2	2	20	57		5-56-59
				M	2	8	17	56	5.95	
1774	Apr 13 W			N	1	21	47	7		6-2-15
				M	1	27	49	22	6.04	
1775	Apr 3 M			N	1	22	48	51		6-26-23
				M	1	29	15	14	6.44	
1776	Apr 21 S		(.82)	N	2	13	37	48		6-42-21
				M	2	20	20	9	6.71	
1777	Apr 10 T		(.92)	N	1	26	14	22		7-21-34
				M	2	3	35	56	7.36	
1778	Mar 30 M	N = 60′ 34″ M = 60 33	(.93)	N	1	5	6	50		7-24-15
				M	1	12	31	5	7.40	
1779	Apr 17 S			N	1	8	29	52		7-2-27
				M	1	15	32	29	7.04	
1780	Apr 6 T			N	1	5	7	50		6-22-53
				M	1	11	30	43	6.38	
1781	Apr 25 W			N	1	25	18	45		6-7-37
				M	2	1	26	22	6.13	
1782	Apr 15 M		(.80)	N	1	25	39	34		5-54-31
				M	2	1	34	5	5.91	
1783	Apr 4 F			N	1	15	9	1		6-7-33
				M	1	21	16	34	6.13	
1784	Apr 22 T			N	2	6	37	40		6-22-41
				M	2	13	0	21	6.38	
1785	Apr 11 M			N	1	21	53	49		7-6-46
				M	1	29	0	35	7.11	
1786	Mar 31 F		(31)	M	1	9	52	47		7-31-18
			(1)	N	1	17	24	5	7.52	
1787	Apr 19 T	N = 60′ 53″ M = 60′ 53″	(18)	M	1	12	22	22		7-29-15
			(19)	N	1	19	51	37	7.49	
1788	Apr 7 M			N	1	0	13	8		6-51-26
				M	1	7	4	34	6.86	
1789	Apr 26 S			N	1	19	27	29		6-29-10
				M	1	25	56	39	6.48	
1790	Apr 16 F			N	1	18	16	29		6-0-43
				M	1	24	17	12	6.01	
1791	Apr 6 W		(.79)	N	1	19	6	58		5-53-59
				M	1	25	0	57	5.90	
1792	Apr 24 T		(.85)	N	2	11	2	49		6-0-26
				M	2	17	3	15	6.01	
1793	Apr 13 S			N	1	29	32	53		6-31-47
				M	2	6	4	40	6.53	
1794	Apr 2 W			N	1	13	38	27		7-15-50
				M	1	20	54	17	7.26	
1795	Apr 21 T			N	2	2	0	10		7-26-39
				M	2	9	26	47	7.44	
1796	Apr 9 S	N = 60′ 24″ M = 60′ 27″		N	1	10	50	32		7-22-53
				M	1	18	13	25	7.37	
1797	Mar 29 W			N	0	22	7	51		6-40-9
				M	0	28	48	0	6.67	
1798	Apr 17 T			N	1	11	53	41		6-19-0
				M	1	18	12	41	6.32	
1799	Apr 7 S			N	1	11	25	16		5-56-5
				M	1	17	21	21	5.93	
1800	Apr 26 S			N	2	2	55	1		5-54-10
				M	2	8	49	11	5.90	
1801	Apr 16 T		(.78)	N	2	4	30	8		6-4-59
				M	2	10	35	7	6.08	
1802	Apr 5 M			N	1	22	16	7		6-41-10
				M	1	28	57	17	6.69	
1803	Apr 24 S		(.97)	N	2	12	16	25		6-59-23
				M	2	19	15	48	6.99	
1804	Apr 12 T		Res. Phas.	N	1	23	3	36		7-30-10
				M	2	0	33	46	7.50	
1805	Apr 1 M			N	1	1	56	25		7-14-27
				M	1	9	10	52	7.24	
1806	Apr 20 T		(.89)	N	1	20	9	54		6-52-42
				M	1	27	2	36	6.88	
1807	Apr 9 T			N	1	4	34	8		6-10-34
				M	1	10	44	42	6.18	
1808	Apr 27 W			N	1	25	24	17		5-58-33
				M	2	1	22	50	5.98	
1809	Apr 17 M			N	1	26	21	40		5-54-39
				M	2	2	16	19	5.91	
1810	Apr 6 F			N	1	15	21	14		6-18-28
				M	1	21	39	42	6.31	
1811	Apr 25 T			N	2	6	10	58		6-37-25
				M	2	12	48	23	6.62	
1812	Apr 14 T		(.80)	N	2	4	7	41		7-8-34
				M	2	11	16	15	7.14	
1813	Apr 3 S	M (2nd) = 60′ 56″ N (3rd) = 60′ 50″	(.81)	N	1	13	56	38		7-30-11
				M	1	21	26	49	7.50	
1814	Apr 21 T			N	1	16	37	49		7-20-37
				M	1	23	58	26	7.34	
1815	Apr 11 T		(.81)	N	1	11	52	0		6-41-41
				M	1	18	33	41	6.69	
1816	Mar 30 S			N	0	27	24	48		6-3-59
				M	1	3	28	47	6.07	
1817	Apr 18 T			N	1	18	36	24		5-54-52
				M	1	24	31	16	5.91	
1818	Apr 8 W			N	1	19	51	48		5-57-14
				M	1	25	49	2	5.95	
1819	Apr 27 T			N	2	11	35	6		6-8-10
				M	2	17	43	16	6.13	
1820	Apr 15 S			N	1	28	42	56		6-47-17
				M	2	5	30	13	6.79	
1821	Apr 4 W			N	1	10	52	57		7-27-13
				M	1	18	20	10	7.45	
1822	Apr 23 T	M (22nd) = 61′ 4″ N (23rd) = 60 56		N	1	28	41	15		7-32-50
				M	2	6	14	5	7.55	
1823	Apr 12 S			N	1	7	50	40		7-10-59
				M	1	15	1	39	7.18	
1824	Apr 1 T		(.74)	N	1	3	50	33		6-31-3
				M	1	10	21	36	6.52	
1825	Apr 19 T			N	1	11	31	46		6-7-33
				M	1	17	39	19	6.13	

Year	Sunset 1 Tisri	Horizontal Parallax	Moon's Longitude ° ′ ″				Moon's Velocity	Moon's Velocity
1767	Sept 25 F		N	6	28	14	59	6-1-51
			M	7	4	16	50	6.03
1768	Oct 13 T	M (12th) = 54′ 3″ N (13th) = 54′ 6″	N	7	19	43	53	5-54-39
			M	7	25	38	32	5.91
1769	Oct 2 M		N	7	9	13	35	6-4-25
			M	7	15	18	0	6.07
1770	Oct 21 S		N	8	0	35	47	6-16-21
			M	8	6	52	28	6.27
1771	Oct 10 T		N	7	16	13	38	6-59-52
			M	7	23	13	30	6.99
1772	Sept 29 T		N	7	11	53	49	7-22-44
			M	7	19	16	33	7.38
1773	Oct 18 M	N (17th) 61′ 4″ N (18th) 60 55	N	7	29	16	55	7-27-56
			M	8	6	44	51	7.47
1774	Oct 7 F		N	7	8	19	35	7-2-43
			M	7	15	22	18	7.05
1775	Sept 27 W		N	7	4	19	23	6-25-12
			M	7	10	44	35	6.42
1776	Oct 15 T		N	7	24	34	33	6-9-10
			M	8	0	43	43	6.15
1777	Oct 4 S		N	7	13	5	12	5-54-42
			M	7	18	59	54	5.91
1778	Sept 23 W		N	7	2	30	59	6-11-54
			M	7	8	42	53	6.20
1779	Oct 11 M		N	7	10	33	39	6-36-42
			M	7	17	10	21	6.61
1780	Sept 30 S		N	7	8	12	7	7-9-12
			M	7	15	21	19	7.15
1781	Oct 19 F		N	7	26	22	7	7-23-43
			M	8	3	45	50	7.40
1782	Oct 9 W	M (8th) = 60′ 40″ N (9th) = 60 38	N	7	20	7	1	7-23-41
			M	7	27	30	42	7.40
1783	Sept 28 S		N	6	29	46	23	6-50-7
			M	7	6	36	40	6.84
1784	Oct 16 S		N	7	18	51	45	6-31-37
			M	7	25	28	22	6.53
1785	Oct 5 W		N	7	5	21	25	5-59-54
			M	7	11	21	19	5.99
1786	Sept 24 S		N	6	24	34	32	5-59-36
			M	7	0	34	8	5.99
1787	Oct 13 S		N	7	16	17	27	6-8-8
			M	7	22	25	35	6.14
1788	Oct 1 W		N	7	3	4	28	6-48-18
			M	7	9	52	46	6.81
1789	Oct 20 T		N	7	22	21	15	7-6-22
			M	7	29	27	37	7.11
1790	Oct 10		N	7	17	37	16	7-26-34
			M	7	25	3	50	7.44
1791	Sept 30 F	N 60′ 9″ M 60 10″	N	7	10	58	9	7-16-47
			M	7	18	14	56	7.28
1792	Oct 18 T		N	7	28	26	19	7-3-42
			M	8	5	30	1	7.06
1793	Oct 7 M		N	7	11	1	58	6-21-5
			M	7	17	23	3	6.35
1794	Sept 26 F		N	6	28	30	18	5-56-30
			M	7	4	26	48	5.94
1795	Oct 15 T		N	7	20	19	44	5-55-20
			M	7	26	15	4	5.92
1796	Oct 3 M		N	7	9	28	15	6-16-25
			M	7	15	44	40	6.27
1797	Sept 22 F		N	6	25	16	47	6-59-57
			M	7	2	16	44	6.99
1798	Oct 11 T		N	7	14	10	4	7-15-30
			M	7	21	25	34	7.26
1799	Oct 1 T		N	7	8	42	14	7-26-56
			M	7	16	9	10	7.45
1800	Oct 20	N = 60′ 35″ M = 60 33	N	7	25	49	41	7-23-17
			M	8	3	12	58	7.39
1801	Oct 10 S		N	7	19	39	44	6-52-4
			M	7	26	31	48	6.87
1802	Sept 29 W		N	7	3	31	21	6-11-40
			M	7	9	43	1	6.19
1803	Oct 18 T		N	7	24	27	52	6-0-58
			M	8	0	28	50	6.02
1804	Oct 6		N	7	13	45	4	5-58-0
			M	7	19	43	4	5.97
1805	Sept 25		N	7	2	29	5	6-25-54
			M	7	8	54	59	6.43
1806	Oct 14 T		N	7	23	7	7	6-42-2
			M	7	29	49	9	6.70
1807	Oct 3 S		N	7	5	43	22	7-23-10
			M	7	13	6	32	7.39
1808	Oct 21 F	M (20th) = 61′ 22″ N (21st) = 61′ 13″	N	7	23	18	58	7-29-42
			M	8	0	48	40	7.50
1809	Oct 11 W		N	7	16	47	46	7-14-58
			M	7	24	2	44	7.25
1810	Sept 30 S		N	6	28	0	53	6-33-18
			M	7	4	34	11	6.55
1811	Oct 19 S		N	7	17	49	4	6-17-10
			M	7	24	6	14	6.29
1812	Oct 8 T		N	7	17	33	32	5-57-16
			M	7	23	30	48	5.95
1813	Sept 27 M		N	7	7	8	37	6-2-14
			M	7	13	10	51	6.04
1814	Oct 15 S		N	7	16	19	16	6-21-21
			M	7	22	40	37	6.36
1815	Oct 5 T		N	7	15	31	18	6-53-1
			M	7	22	24	19	6.88
1816	Sept 23 M	N = 60′ 56″ M = 60 39	N	6	26	59	20	7-28-41
			M	7	4	28	1	7.48
1817	Oct 12 S	M (11th) = 61′ 0″ N (12th) = 60 56	N	7	14	23	0	7-28-38
			M	7	21	51	38	7.48
1818	Oct 2 T		N	7	7	54	4	7-4-52
			M	7	14	58	56	7.08
1819	Oct 21 T		N	7	25	54	35	6-47-44
			M	8	2	42	19	6.80
1820	Oct 9 M		N	7	10	27	11	6-8-15
			M	7	16	35	26	6.14
1821	Sept 28 F		N	6	29	1	59	5-54-56
			M	7	4	56	55	5.92
1822	Oct 17 T		N	7	20	55	9	5-59-59
			M	7	26	55	8	5.99
1823	Oct 6 M		N	7	9	11	22	6-31-32
			M	7	15	42	54	6.53
1824	Sept 25 S		N	7	7	37	44	7-3-36
			M	7	14	41	20	7.06
1825	Oct 13 T		N	7	11	28	5	7-28-11
			M	7	18	56	16	7.46

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20-21
21-22 = 8
22-23
23-24
24-25 = 11
25-26
26-27
27-28 = 14
28-29
29-30
30-31 = 17
31-32

6 - 5 = 1

1805 - 1805

1811 - 1810 = 1

1812 - 11

1813 - 12

1814 - 13

1815 -

1816

1817

1818

1819 - 20 = (1)

1820 - 21

1821 - 22 = 3

1822 - 23

1823 - 24

1824 - 25 = 6

1825 - 26

1826 - 27 = 8

1827 - 28

1828 - 29

1829 - 30 = 11

1830 - 31

1831 - 32

1832 - 33 = 14

1833 - 34

1834 - 35

1835 - 36 = 17

1836 - 37

1837 - 38 = 19

1838 - 39

1839 - 40

1840 - 41 = 3

1841 - 42

1842 - 43

1843 - 44 = 6

1844 - 45

19 1805

95 4

95

171

180 5

14 - 15 = 1

1805 1805

1819 - 1826

S o l n

Year	Sunset 1 Nisan	Horizontal Parallax	Moon's Longitude					Moon's Velocity
1826	Apr 9 (2)		N	1	11	57	22	5-53-30
			M	1	17	50	52	5.89
1827	Apr 28 (S)		N	2	3	36	40	5-55-47
			M	2	9	32	27	5.93
1828	Apr 17 (T)		N	2	4	53	42	6-14-46
			M	2	11	8	28	6.25
1829	Apr 6 (M)		N	1	21	1	56	6-56-39
			M	1	27	58	35	6.94
1830	Apr 25 (2)		N	2	10	7	2	7-14-42
			M	2	17	21	44	7.25
1831	Apr 14 (T)	M(13) = 60' 48" N(14) = 60 45"	N	1	19	33	58	7-31-9
			M	1	27	5	7	7.52
1832	Apr 2 (M)		N	0	29	15	16	6-59-31
			M	1	6	14	47	6.99
1833	Apr 21 (2)		N	1	18	19	12	6-37-26
			M	1	24	56	38	6.62
1834	Apr 10 (T)		N		34	28	29	6-1-49
			M		40	30	18	6.03
1835	Mar 31 (T)		N		35	19	28	5-54-33
			M		41	14	1	5.91
1836	Apr 18 (M)		N		57	4	35	5-59-24
			M		63	3	59	5.99
1837	Apr 8 (S)		N		58	3	43	6-22-33
			M		64	26	16	6.38
1838	Apr 27 (F)		N		78	47	50	6-41-5
			M		85	28	55	6.68
1839	Apr 16 (T)	N = 60' 22"	N		61	32	49	7-21-13
		M = 60 21	M		68	54	2	7.35
1840	Apr 4 (S)	Per. = 4th	N		40	25	12	7-25-54
			M		47	51	6	7.43
1841	Apr 22 (T)		N		43	52	49	7-6-58
			M		50	59	47	7.12
1842	Apr 12		N		40	27	24	6-26-59
			M		46	54	23	6.45
1843	Apr 1 (S)		N		27	33	49	5-57-58
			M		33	31	47	5.97
1844	Apr 19 (F)		N		49	12	45	5-53-45
			M		55	6	30	5.90
1845	Apr 9 (W)		N		50	29	41	6-4-57
			M		56	34	38	6.07
1846	Apr 28 (T)		N		71	51	12	6-19-12
			M		78	10	24	6.32
1847	Apr 17							
1848	Apr 5							
1849	Apr 24							
1850	Apr 13							
1851	Apr 3							
1852	Apr 21							
1853	Apr 10							
1854	Mar 31							
1855	Apr 19							
1856	Apr 7							
1857	Apr 26							
1858	Apr 15							
1859	Apr 4							
1860	Apr 22							
1861	Apr 12							
1862	Apr 1							
1863	Apr 20							
1864	Apr 9							

Year	Sunset 1 Nisan	Horizontal Parallax	Moon's Longitude					Moon's Velocity
1826	Oct 3 (T)	N = 60 42 M = 60 39	N	7	5	23	22	7-25-2
			M	7	12	48	24	7.42
1827	Oct 22 (M)		N	7	22	40	44	7-12-22
			M	7	29	53	6	7.21
1828	Oct 11		N	7	17	37	34	6-35-31
			M	7	24	13	5	6.59
1829	Sept 30 (W)		N	7	3	21	26	6-1-11
			M	7	9	22	37	6.02
1830	Oct 19 (T)		N	7	24	45	28	5-56-10
			M	8	0	41	38	5.94
1831	Oct 8 (S)		N	7	14	15	56	6-5-4
			M	7	20	21	0	6.08
1832	Sept 26 (F)		N	8	5	54	31	6-17-1
			M	8	12	11	32	6.28
1833	Oct 15 (T)		N	7	21	46	19	6-59-59
			M	7	28	46	18	6.99
1834	Oct 4 (S)	N = 60 10.9	N	2	12	46	38.9	7-32-34
		M = 60 13.9	M	2	20	19	12.8	7.54
1835	Sept 24 (T)	Par. = 24	N		206	27	27	7-19-7
			M		213	46	34	7.32
1836	Oct 12 (W)		N		224	4	15	7-1-33
			M		231	5	48	7.03
1837	Oct 2		N		219	45	39	6-24-20
			M		226	9	59	6.41
1838	Oct 21 (2)		N		239	48	14	6-10-24
			M		245	58	38	6.17
1839	Oct 10		N		228	12	8	5-55-0
			M		234	7	8	5.92
1840	Sept 28 (M)		N		217	38	28	6-11-30
			M		223	49	58	6.19
1841	Oct 16		N		225	55	53	6-37-26
			M		232	33	19	6.62
1842	Oct 6		N		223	49	20	7-10-24
			M		230	59	44	7.17
1843	Sept 25 (M)	N = 60' 35" M = 60 37"	N		203	46	14	7-33-47
			M		211	20	1	7.56
1844	Oct 13 (2)	Par 13d 10h	14th = N		221	15	51	7-24-32
			7.37 M		228	40	23	7.41
1845	Oct 3 (F)		N		215	31	25	6-50-10
			M		222	21	35	6.84
1846	Oct 22 (T)		N		234	18	11	6-31-7
			M		240	49	18	6.52
1847	Oct 11							
1848	Sept 29							
1849	Oct 18							
1850	Oct 7							
1851	Sept 27							
1852	Oct 15							
1853	Oct 4							
1854	Sept 24							
1855	Oct 13							
1856	Oct 1							
1857	Oct 20							
1858	Oct 9							
1859	Sept 28							
1860	Oct 16							
1861	Oct 6							
1862	Sept 25							
1863	Oct 14							
1864	Oct 3							

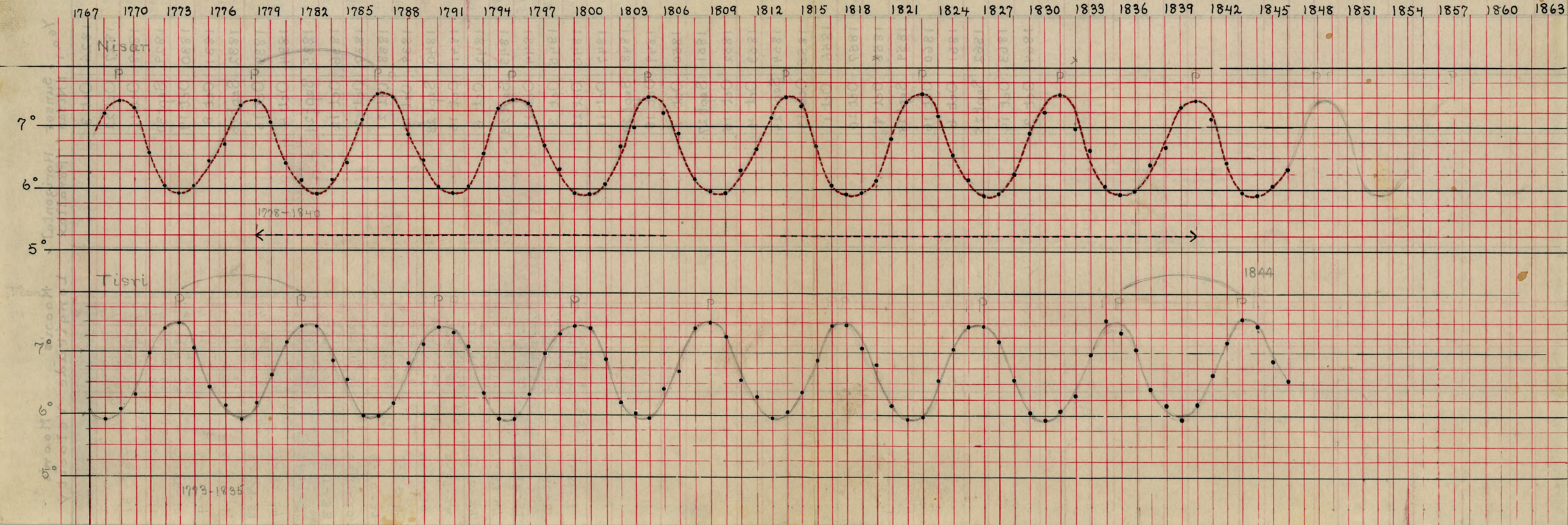
Moon's Sunset Velocity — Moon's Horizontal Parallax — Moon's Age

Year	Sunset	Parallax	Age
1820	Apr 4	54′ 25″	18
1821	Apr 23	54′ 38″	7
1822	Apr 12	54′ 25″	26
1823	Apr 1	54′ 14″	15
1824	Apr 20	54′ 32″	4
1825	Apr 9	54′ 21″	23
1826	Apr 28	54′ 38″	12
1827	Apr 17	54′ 25″	1
1828	Apr 6	54′ 14″	20
1829	Apr 25	54′ 32″	9
1830	Apr 14	54′ 21″	28
1831	Apr 3	54′ 10″	17
1832	Apr 22	54′ 27″	6
1833	Apr 11	54′ 16″	25
1834	Mar 31	54′ 3″	14
1835	Apr 19	54′ 21″	3
1836	Apr 8	54′ 10″	22
1837	Apr 27	54′ 27″	11
1838	Apr 16	54′ 16″	30
1839	Apr 5	54′ 5″	19
1840	Apr 24	54′ 21″	8
1841	Apr 13	54′ 10″	27
1842	Apr 2	53′ 59″	16
1843	Apr 21	54′ 16″	5
1844	Apr 10	54′ 5″	24
1845	Mar 30	53′ 54″	13
1846	Apr 18	54′ 10″	2
1847	Apr 7	53′ 59″	21
1848	Apr 26	54′ 16″	10
1849	Apr 15	54′ 5″	29
1850	Apr 4	53′ 54″	18
1851	Apr 23	54′ 10″	7
1852	Apr 12	53′ 59″	26
1853	Apr 1	53′ 48″	15
1854	Apr 20	54′ 5″	4
1855	Apr 9	53′ 54″	23
1856	Apr 28	54′ 10″	12
1857	Apr 17	53′ 59″	1
1858	Apr 6	53′ 48″	20
1859	Apr 25	54′ 5″	9
1860	Apr 14	53′ 54″	28
1861	Apr 3	53′ 43″	17
1862	Apr 22	53′ 59″	6
1863	Apr 11	53′ 48″	25
1864	Apr 30	54′ 5″	14

1840
1778
62

12-hr. curve
Moon's velocity at Nisan phasis (sunset)

1834 = more complete records



Sept 26 – Oct 1 = 6 o'clock sunset Oct 2-8 = .01d short Oct 9-20 = .02d short Oct 21-22 = .03

Year	1 Nisan	1 Tisri	Day of Week	Horizontal Parallax	Moon's Longitude at Eliul Conjn. S ° ′ ″	Eliul Conjunction G.M.T.	J.C.T.		Tr Per	Moon's Velocity
1767	Apr 2	Sept 26	Sa	→	22 5 28 24 55 23 6 4 20 54	22.62 Sept 22 14 48	S 23.21	23.21 26 S	2.54	5.93 5 55 59
1768	Apr 20	Oct. 14	F	←	10 6 14 8 22 6 20 6 13	10.32 Oct 10 7 46	O 10.91	10.91 14 O	2.82	5.96 5 57 51
1769	Apr 9	Oct 3	Tu	←	29 6 7 58 27 30 6 14 20 55	29.42 Sept 29 10 10	S 30.01	30.01 3 O	2.73	6.37 6 22 28
1770	Apr 28	Oct 22	M	←	17 6 14 28 12 18 6 21 17 19	18.31 Oct 18 7 24	O 18.90	18.90 22 O	2.80	6.82 6 49 7
1771	Apr 17	Oct 11	F	←	7 6 9 50 31 8 6 17 16 10	7.83 Oct 7 20 1	O 8.42	8.42 11 O	2.31	7.43 7 25 39
1772	Apr 6	Sept 30	W (☽)	→ 27th 6′ 29″ M	26 6 4 9 34 27 6 11 45 41	26.52 Sept 26 12 23	S 27.11	27.11 30 S	2.64	7.60 7 36 7
1773	Apr 25	Oct 19	Tu	→	15 6 21 45 45 16 6 29 13 45	15.58 Oct 15 14 0	O 16.17	16.17 19 O	2.56	7.47 7 28 0
1774	Apr 14	Oct 8	Sa	→	4 6 3 58 51 5 6 10 42 31	5.13 Oct 5 3 0	O 5.72	5.72 8 O	2.02	6.73 6 43 40
1775	Apr 4	Sept 28	Th	→	24 5 26 53 14 6 3 0 15	24.38 Sept 24 9 14	S 24.97	24.97 28 S	2.78	6.12 6 7 1
1776	Apr 22	Oct 16	W	→	12 6 18 18 17 6 24 17 9	12.13 Oct 12 3 5	O 12.72	12.72 16 O	3.01	5.98 5 58 52
1777	Apr 11	Oct 5	Su	←	1 6 7 14 39 6 13 16 47	1.12 Oct 1 2 57	O 1.71	1.71 5 O	3.03	6.04 6 2 8
1778	Mar 31	Sept 24	Th	←	20 6 0 26 42 21 6 7 0 15	20.30 Sept 20 7 18	S 20.89	20.89 24 S	2.86	6.56 6 33 33
1779	Apr 18	Oct 12	Tu	←	8 6 6 9 58 9 6 13 12 21	9.22 Oct 9 5 13	O 9.81	9.81 12 O	1.92	7.04 7 2 23
1780	Apr 7	Oct 1	Su	←	27 6 1 4 21 28 6 8 37 56	27.81 Sept 27 19 23	S 28.40	28.40 1 O	2.35	7.56 7 33 35
1781	Apr 26	Oct 20		← 17 = 61′ 34″ N	16 6 18 33 2 17 6 26 9 56	16.88 Oct 16 21 9	O 17.47	17.47 20 O	2.26	7.62 7 36 54
1782	Apr 16	Oct 10	Th		6 6 13 15 32 7 6 20 33 48	6.54 Oct 6 13 0	O 7.13	7.13 10 O	2.60	7.30 7 18 16
1783	Apr 5	Sept 29	M	→	26 6 3 1 14 6 9 36 41	26.02 Sept 26 0 26	S 26.61	26.61 29 S	2.14	6.59 6 35 27
1784	Apr 23	Oct 17	Su	→	13 6 17 2 21 14 6 23 17 36	13.87 Oct 13 20 49	O 14.46	14.46 17 O	2.27	6.26 6 15 15
1785	Apr 12	Oct 6			3 6 11 32 29 6 17 28 30	2.91 Oct 2 22 0	O 3.50	3.50 6 O	2.24 X	5.93 5 56 1
1786	Apr 1	Sept 25	M	←	22 6 6 23 49 23 6 12 29 32	21.94 Sept 21 22 34	S 22.53	22.53 25 S	2.22	6.01 6 5 43
1787	Apr 20	Oct 14	Su		10 6 14 39 50 11 6 21 7 6	10.75 Oct 10 17 53	O 11.34	11.34 14 O	2.39	6.45 6 27 16
1788 ✓	Apr 8	Oct 2	Th		29 6 4 52 52 6 12 3 37	29.16 Sept 29 3 45	S 29.75	29.75 2 O	2.00	7.18 7 10 45
1789 ✓	Apr 27	Oct 21	W		18 7 0 28 37 19 7 7 51 8	18.18 Oct 18 4 19	O 18.77	18.77 21 O	1.96	7.54 7 32 31
1790 ✓	Apr 17	Oct 11	M	8th = 61′ 28″ M	7 6 9 48 3 8 6 17 23 3	7.86 Oct 7 20 36	O 8.45	8.45 11 O	2.28	7.58 7 35 0
1791 ✓	Apr 7	Oct 1	Sa		28 6 12 3 17 6 19 13 42	27.49 Sept 27 11 43	S 28.08	28.08 1 O	2.67	7.17 7 10 25
1792 ✓	Apr 25	Oct 19	F	→	15 6 17 9 30 6 23 52 19	15.46 Oct 15 10 56	O 16.05	16.05 19 O	2.68	6.71 6 42 49
1793 ✓	Apr 14	Oct 8	Tu	→	4 6 10 1 10 5 6 16 7 40	4.69 Oct 4 16 37	O 5.28	5.28 8 O	2.46	6.11 6 6 30
1794 ✓	Apr 3	Sept 27	Sa	←	23 5 28 53 42 24 6 4 48 55	23.71 Sept 23 16 54	S 24.30	24.30 27 S	2.45	5.92 5 55 13
1795 ✓	Apr 22	Oct 16	F	←	12 6 20 23 5 13 6 26 25 43	12.43 Oct 12 10 21	O 13.02	13.02 16 O	2.71	6.04 6 2 38
1796 ✓	Apr 10	Oct 4	Tu	←	30 6 6 58 17 1 6 13 37 8	30.62 Sept 30 14 59	O 1.21	1.21 4 O	2.58	6.65 6 38 57
1797 ✓	Mar 30	Sept 23	Sa	←	20 5 26 18 13 6 3 40 15	20.12 Sept 20 2 51	S 20.71	20.71 23 S	2.04 X	7.37 7 22 2
1798 ✓	Apr 18	Oct 12	F	← 9th = 61′ 19″ N	9 6 14 17 12 6 21 51 10	9.15 Oct 9 3 37	O 9.74	9.74 12 O	1.99	7.57 7 33 38
1799 ✓	Apr 8	Oct 2	W	←	29 6 8 36 54 6 16 8 48	28.84 Sept 28 20 4	S 29.43	29.43 2 O	2.31	7.53 7 31 54
1800 ✓	Apr 27	Oct 21	Tu	→	17 6 19 13 10 18 6 26 26 53	17.88 Oct 17 21 12	O 18.47	18.47 21 O	2.26	7.23 7 13 43
1801 ✓	Apr 17	Oct 11	Su	→	7 6 9 39 31 6 16 9 59	7.34 Oct 7 8 8	O 7.93	7.93 11 O	2.80	6.57 6 30 26
1802 ✓	Apr 6	Sept 30	Th	→	26 6 3 10 35 27 6 9 10 22	26.50 Sept 26 11 56	S 27.09	27.09 30 S	2.66	6.00 5 59 47
1803 ✓	Apr 25	Oct 19	W	→	15 6 18 44 44 6 24 40 11	15.22 Oct 15 5 22	O 15.81	15.81 19 O	2.92	5.92 5 55 27
1804 ✓	Apr 13	Oct 7	Su	←	3 6 13 24 24 4 6 19 33 10	3.25 Oct 3 5 57	O 3.84	3.84 7 O	2.90	6.15 6 8 46
1805 ✓	Apr 2	Sept 26	Th	←	23 6 5 54 5 6 12 40 18	22.53 Sept 22 12 49	S 23.12	23.12 26 S	2.63	6.77 6 46 13
1806 ✓	Apr 21	Oct 15	W	←	11 6 10 48 27 6 18 4 21	11.49 Oct 11 11 50	O 12.08	12.08 15 O	2.65	7.27 7 15 54
1807	Apr 10	Oct 4	Su	× 1st = 61′ 32″ N ←	1 6 5 26 23 6 13 5 2	1.13 Oct 1 3 18	O 1.72	1.72 4 O	2.02	7.64 7 38 39
1808	Apr 28	Oct 22	Sa	→	19 6 23 1 50 7 0 36 37	19.20 Oct 19 4 54	O 19.79	19.79 22 O	1.94	7.58 7 34 47
1809	Apr 18	Oct 12	Th	→	9 6 18 6 45 6 25 12 50	8.82 Oct 8 19 42	O 9.41	9.41 12 O	2.32	7.10 7 6 5
1810	Apr 7	Oct 1	M	→	28 6 8 41 35 29 6 15 4 34	28.20 Sept 28 4 46	S 28.79	28.79 1 O	1.95 X	6.38 6 22 59

69
3

Longitude

1784 19 0 26 42 35 = 6 - 50 - 10 = 6,84
1 3 32 45

1785 8 0 14 59 12 = 7 - 30 - 32 = 7,57
9 0 22 29 44

1786 29 0 9 22 37 = 7 - 38 - 34 = 7,64
30 0 17 1 11

61' 27"

1787

19 6 29 18 17
7 35 51 48
6 - 33 31

19 7 5 51 48
20 7 12 29 67
6 37 18

6 9 59 6
6 16 53 16
10

113
59
4

54.16
.90

57.68
196

5 - 57 - 41

6 - 29 - 36

19.23 .49
4.89

6 - 39 - 54
12 6 13 12 56
13 6 20 6 59
6 44 3

13 6 26 46 53
14 7 3 22 21
28

7 - 22 - 46
22.76
.37
3.05
.625
.12

10 6 21 49 59
11 6 29 21 16
7 31 7

7 - 29 - 44
.67
.25
1.50
2.42

6 - 50 - 26 4.45
.94
17.8

50.43

7 - 39 - 42
39.76
31.116
65.91
3.98
.6
.52

98
75
23
1.96

81 98
32 75
42 46
2.19

22.85
5.71
.95
41.05
65.91
3.98
.66
22

99
75
97
247 96
10.91
2.727
.45
2.70
77

113
59
54
39.9
.66
3.04

81
53
28

81
46
35

102
56
46

28
75
1.00
4.25
1.0462
.177
2.03

29.73
.495

66

Year	1 Nisan	1 Tisri		Hor. Par.	Moon: Long. at Elul Conj.					Elul Conjunction G.M.T.		J.C.T.		Elul Tr. Per.	Moon's Velocity
1811	Apr 26	Oct 20	Su	→	16	6	11	4	8		17.01				6.00
						6	17	5	19	Oct	17 0 9	☌	17.60	2.13	6 1 11
1812	Apr 15	Oct 9	F	←	5	6	12	0	15		5.01				5.92
						6	17	55	44	Oct	5 0 10	☌	5.60	3.14	5 55 29
1813	Apr 4	Sept 28	Tu	←	24	6	6	16	22		24.09				6.27
					25	6	12	32	45	Sept	24 2 11	☍	24.68	3.07	6 16 23
1814	Apr 22	Oct 16	Su	←	12	6	6	35	5		12.95				6.80
						6	13	22	56	Oct	12 22 51	☌	13.54	2.19	6 47 51
1815	Apr 12	Oct 6	F	←	2	6	9	30	56		2.45				7.38
					3	6	16	53	42	Oct	2 10 55	☌	3.04	2.70	7 22 46
1816	Mar 31	Sept 24	Tu	21st = 61' 21" M →	21	5	26	30	39		21.18				7.66
						6	4	10	21	Sept	21 3 3	☍	21.72	2.03	7 39 42
1817	Apr 19	Oct 13	M	→ 10	10	6	21	49	59		10.18				7.52
					11	6	29	21	6	Oct	10 4 15	☌	10.77	1.96	7 31 7
1818	Apr 9	Oct 3	Sa	→	30	6	9	59	6		29.74				6.90
						6	16	53	16	Sept	29 17 48	☍	30.33	2.41	6 54 10
1819	Apr 28	Oct 22	F	→	18	6	16	23	1		18.66				6.43
						6	22	48	41	Oct	18 15 55	☌	19.25	2.48	6 25 40
1820	Apr 16	Oct 10	Tu	→	7	6	16	17	24		6.80				5.99
						6	22	16	47	Oct	6 19 14	☌	7.39	2.34	5 59 23
1821	Apr 5	Sept 29	Sa	←	25	5	29	17	45		25.79				5.98
					26	6	5	16	38	Sept	25 19 6	☍	26.38	2.37	5 58 53
1822	Apr 24	Oct 18	F	←	14	6	14	5	34		14.56				6.25
						6	20	20	16	Oct	14 13 32	☌	15.15	2.58	6 14 42
1823	Apr 13	Oct 7	Tu	←	3	6	5	19	9		3.86				6.93
					4	6	12	13	12	Oct	3 20 41	☌	4.45	2.29	6 56 3
1824	Apr 2	Sept 26		←	23	6	8	19	7		22.44				7.46
						6	15	46	56	Sept	22 10 27	☍	23.03	2.72	7 27 49
1825	Apr 20	Oct 14	F	← 12th = 61' 19" N	11	6	18	40	6		11.48				7.65
					12	6	26	18	48	Oct	11 11 30	☌	12.07	1.66	7 38 42
1826	Apr 10	Oct 4	W	→	1	6	13	7	37		1.15				7.40
					2	6	20	32	0	Oct	1 3 29	☌	1.74	2.00	7 24 3
1827	Apr 29	Oct 23	Tu	→	20	6	24	16	6		20.16				7.02
						7	1	17	19	Oct	20 3 47	☌	20.75	1.97	7 1 13
1828	Apr 18	Oct 12	Su	→	8	6	9	15	12		8.51				6.26
						6	15	30	39	Oct	8 12 18	☌	9.10	2.63	6 15 27
1829	Apr 7	Oct 1	Th	→	27	6	3	38	54		27.59				5.91
					28	6	9	33	12	Sept	27 14 3	☍	28.18	2.57	5 54 18
1830	Apr 26	Oct 20	W	←	16	6	19	11	57		16.31				5.94
						6	25	8	13	Oct	16 7 31	☌	16.90	2.83	5 56 16
1831	Apr 15	Oct 9	Su		5	6	13	5	11		5.41				6.34
					6	6	19	25	40	Oct	5 9 44	☌	6.00	2.74	6 20 29
1832	Apr 3	Sept 27	Th	←	24	6	4	5	16		23.80				7.06
						6	11	8	43	Sept	23 19 8	☍	24.39	2.36	7 3 27
1833	Apr 22	Oct 16	W	←	12	6	7	46	52		12.80				7.50
						6	15	16	43	Oct	12 19 7	☌	13.39	2.34	7 29 51
1834	Apr 11	Oct 5	Su	3 = 61' 22" N → Per = 3 J.C.T.	2		189	52	17		2.46				7.66
					3		197	31	52	Oct	2 11 2	☌	3.05	1.69	7 39 35
1835	Apr 1	Sept 25	F	→	22		184	35	32		22.10				7.28
					23		191	51	63	Sept	22 2 26	☍	22.69	2.06	7 16 31
1836	Apr 19	Oct 13	Th	→	10		196	26	20		10.06				6.82
							203	15	47	Oct	10 1 29	☌	10.65	2.08	6 49 27
1837	Apr 9	Oct 3	Tu	→	30		194	38	52		29.33				6.21
							200	51	17	Sept	29 8 1	☍	29.92	2.82	6 12 25
1838	Apr 28	Oct 22	M	→	18		203	34	46		18.10				5.96
							209	32	15	Oct	18 2 25	☌	18.69	3.03	5 57 29
1839	Apr 17	Oct 11	F		7		192	30	45		7.09				5.99
							198	30	12	Oct	7 2 13	☌	7.68	3.05	5 59 27
1840	Apr 5	Sept 29	Tu	←	26		192	15	23		25.27				6.44
							198	41	52	Sept	25 6 27	☍	25.86	2.89	6 26 29
1841	Apr 23	Oct 17	Su	←	13		191	33	27		14.19				7.02
					14		198	34	36	Oct	14 4 27	☌	14.78	1.95	7 1 9
1842	Apr 13	Oct 7	F	←	3		186	33	52		3.76				7.58
					4		194	8	43	Oct	3 18 24	☌	4.35	2.39	7 34 57
1843	Apr 2	Sept 26	Tu	→ Per = 24 J.C.T. 24th = 61' 10" N	23		180	56	38		23.45				7.61
					24		188	33	11	Sept	23 10 53	☍	24.04	1.71	7 36 33
1844	Apr 20	Oct 14	M	→	12		206	27	59		11.48				7.39
							213	51	23	Oct	11 11 24	☌	12.07	1.65	7 23 24
1845	Apr 10	Oct 4	Sa	→	1		188	40	13		30.96				6.63
							195	18	7	Sept	30 22 59	☌	1.55	2.19	6 37 54
1846	Apr 29	Oct 23	F	→	19		196	20	20		19.82				6.20
							202	32	5	Oct	19 19 44	☌	20.41	2.31	6 11 45
1847	Apr 18	Oct 12	Tu	→	9		196	52	26		8.88				5.90
							202	46	40	Oct	8 21 7	☌	9.47	2.25	5 54 14
1848	Apr 6	Sept 30	Sa	←	27		185	36	52		26.90				6.08
							191	41	41	Sept	26 21 35	☍	27.49	2.26	6 4 49
1849	Apr 25	Oct 19	F	←	15		199	56	38		15.72				6.41
					16		206	21	25	Oct	15 17 13	☌	16.31	2.42	6 24 47
1850	Apr 14	Oct 8	Tu	←	5		190	15	14		5.12				7.14
							197	23	58	Oct	5 2 56	☌	5.71	2.03	7 8 44
1851	Apr 4	Sept 28	Su	24th = 61' 18" M Per = 25 J.C.T.	23		162	20	58		24.76				7.62
					24		169	58	17	Sept	24 18 12	☍	25.35	2.40	7 32 19
1852	Apr 22	Oct 16	Sa	* ← Per = 13 J.C.T.	12		195	29	48		12.80				7.65
					13		203	8	49	Oct	12 19 14	☌	13.39	2.34	7 39 1
1853	Apr 11	Oct 5	W	→	3		197	49	10		2.43				7.24
							205	3	26	Oct	2 10 18	☌	3.02	1.72	7 14 16
1854	Apr 1	Sept 25	M	→	22		181	5	3		21.84				6.45
							187	32	15	Sept	21 20 3	☍	22.45	2.32	6 27 12

b 1 = 0 off 2-8 = 1 off 9-20 = 2 off 21-23 = 3 off

Year	1 Nisan	1 Tisri		Hor. Par.	Moon's Long. Elul Conj.		Elul Conjunction G.M.T.	J.C.T.		Tr. Per.	Moon's Velocity
1855	Apr 20	Oct 14	Su	→	10	189 27 17 195 31 42	10.64 Oct 10 15 24	O 11.23	11.23 140	2.50	6.07 6 4 25
1856	Apr 8	Oct 2	Th	→	28 29	184 18 33 190 12 23	28.66 Sept 28 15 48	S 29.25	29.25 20	2.49	5.90 5 53 50
1857	Apr 27	Oct 21	W	→	18	211 39 31 217 38 6	17.40 Oct 17 9 38	O 17.99	17.99 210	2.74	5.98 5 58 35
1858	Apr 16	Oct 10	Su	←	7	198 56 15 205 27 32	6.59 Oct 6 14 7	O 7.18	7.18 100	2.55	6.52 6 31 17
1859	Apr 5	Sept 29	Th	←	26	181 45 16 189 4 4	26.08 Sept 26 1 56	S 26.67	26.67 295	2.08	7.31 7 18 48
1860	Apr 24	Oct 18	W	× Sheet P. ←	14	199 49 16 207 24 48	14.11 Oct 14 2 37	O 14.70	14.70 180	3.03	7.59 7 35 32
1861	Apr 13	Oct 7	M	Per = 5 J.C.T. 4th = 61 9" M	3 4	186 39 12 194 13 32	3.79 Oct 3 18 56	O 4.38	4.38 70	2.36	7.57 7 34 20
1862	Apr 2	Sept 26	F	←	24	189 19 5 196 22 31	23.37 Sept 23 8 58	S 23.96	23.96 265	1.79	7.06 7 3 26
1863	Apr 21	Oct 15	Th		12	195 17 26 201 50 39	12.28 Oct 12 6 42	O 12.87	12.87 150	1.86	6.55 6 33 13
1864	Apr 10	Oct 4	Tu		30 1	188 38 28 194 39 4	30.45 Sept 30 10 43	O 1.04	1.04 40	2.70	6.01 6 0 36

Year	Lunar Year	Jerusalem N. Year (Nisan) Conjunc.	1 Nisan	179° N. Year (Nisan) (−.59) Conjunc.	1 Nisan	Tr. Per. Nisan	Conjunc	1 Nisan	Tr. Per H.C.T. Tisri	Year Length H.C.T.
1767	16 384	Mar 30.07	Apr 2	Mar 29.48						
1768	354	Apr 17.10	Apr 20	Apr 16.51						
1769	18 384	Apr 6.78	Apr 9	Apr 6.19						
1770	354	Apr 25.78	Apr 28	Apr 25.19						
1771	355	Apr 15.20	Apr 17	Apr 14.61						
1772	2 384	Apr 3.31	Apr 6	Apr 2.72						
1773	354	Apr 22.03	Apr 25	Apr 21.44						
1774	355	Apr 11.10	Apr 14	Apr 10.51						
1775	5 384	Mar 31.45	Apr 4	Mar 30.86						
1776	354	Apr 18.43	Apr 22	Apr 17.84						
1777	354	Apr 8.10	Apr 11	Apr 7.51						
1778	8 383	Mar 28.75	Mar 31	Mar 28.16						
1779	355	Apr 16.72	Apr 18	Apr 16.13	Apr 18	1.59				355
1780	10 384	Apr 5.05	Apr 7	Apr 4.46	Apr 7	2.26				
1781	355	Apr 23.81	Apr 26	Apr 23.27						
1782	354	Apr 12.82	Apr 16	Apr 12.28						
1783	13 384	Apr 1.96	Apr 5	Apr 1.42						
1784	354	Apr 19.85	Apr 23	Apr 19.31						
1785	354	Apr 9.41	Apr 12	Apr 8.87						
1786	16 384	Mar 30.09	Apr 1	Mar 29.55						
1787	354	Apr 18.12	Apr 20	Apr 17.58						
1788	18 384	Apr 6.64	Apr 8	Apr 6.10	Apr 8					
1789	355	Apr 25.50	Apr 27	Apr 24.96						
1790	355	Apr 14.61	Apr 17	Apr 14.07						
1791	2 384	Apr 3.62	Apr 7	Apr 3.08						
1792	354	Apr 21.40	Apr 25	Apr 20.86						
1793	354	Apr 10.78	Apr 14	Apr 10.24						
1794	5 384	Mar 31.39	Apr 3	Mar 30.80						
1795	354	Apr 19.43	Apr 22	Apr 18.84						
1796	354	Apr 8.09	Apr 10	Apr 7.50						
1797	8 384	Mar 28.53	Mar 30	Mar 27.94	Mar 30					
1798	355	Apr 16.35	Apr 18	Apr 15.76						
1799	10 384	Apr 5.39	Apr 8	Apr 4.80						
1800	355	Apr 24.11	Apr 27	Apr 23.52						
1801	354	Apr 13.27	Apr 17	Apr 12.68	Apr 16	3.09				355
1802	13 384	Apr 2.72	Apr 6	Apr 2.13	Apr 6	3.64				384
1803	354	Apr 21.74	Apr 25	Apr 21.15	Apr 25	3.62				354
1804	354	Apr 10.43	Apr 13	Apr 9.84	Apr 13	2.93				354
1805	16 384	Mar 31.04	Apr 2	Mar 30.45	Apr 2	2.31				383
1806	354	Apr 18.96	Apr 21	Apr 18.37	Apr 20	1.40				354
1807	18 384	Apr 8.18	Apr 10	Apr 7.59	Apr 9	1.18				384
1808	355	Apr 25.90	Apr 28	Apr 25.31	Apr 27	1.47				355
1809	354	Apr 14.92	Apr 18	Apr 14.33	Apr 17	2.44				354
1810	2 384	Apr 4.15	Apr 7	Apr 3.56	Apr 6	2.21				355
1811	355	Apr 23.10	Apr 26	Apr 22.51	Apr 26	3.26				354
1812	354	Apr 11.73	Apr 15	Apr 11.14	Apr 14	2.63				354
1813	5 383	Apr 1.42	Apr 4	Mar 31.83	Apr 3	1.94				384
1814	355	Apr 20.42	Apr 22	Apr 19.83	Apr 22	1.94				354
1815	354	Apr 9.85	Apr 12	Apr 9.26	Apr 11	1.51				355
1816	8 384	Mar 28.98	Mar 31	Mar 28.39	Mar 31	2.36				384
1817	355	Apr 16.69	Apr 19	Apr 16.10	Apr 19	2.67				355
1818	10 384	Apr 5.74	Apr 9	Apr 5.15	Apr 9	3.62				383
1819	354	Apr 24.58	Apr 28	Apr 23.99	Apr 27	2.79				354
1820	354	Apr 13.06	Apr 16	Apr 12.47	Apr 15	2.30				355
1821	13 384	Apr 2.72	Apr 5	Apr 2.13	Apr 5	2.63				384
1822	354	Apr 22.39	Apr 24	Apr 21.80	Apr 24	1.97				354
1823	355	Apr 11.37	Apr 13	Apr 10.78	Apr 13	1.99				355
1824	16 383	Mar 30.71	Apr 2	Mar 30.12	Apr 1	1.63				384
1825	355	Apr 18.47	Apr 20	Apr 17.88	Apr 20	1.89				355
1826	18 384	Apr 7.48	Apr 10	Apr 6.89	Apr 10	2.88				384
1827	355	Apr 26.21	Apr 29	Apr 25.62	Apr 29	3.16				354
1828	354	Apr 14.47	Apr 18	Apr 13.88	Apr 17	2.89				354
1829	2 384	Apr 4.02	Apr 7	Apr 3.43	Apr 6	2.34				384
1830	354	Apr 23.06	Apr 26	Apr 22.47	Apr 25	2.30				355
1831	354	Apr 12.75	Apr 15	Apr 12.16	Apr 15	2.61				354
1832	5 384	Apr 1.30	Apr 3	Mar 31.71	Apr 3	2.05				383
1833	354	Apr 20.16	Apr 22	Apr 19.57	Apr 21	1.20				354
1834	355	Apr 9.28	Apr 11	Apr 8.69	Apr 11	2.06				355
1835	8 384	Mar 29.28	Apr 1	Mar 28.69	Mar 31	2.06				384
1836	355	Apr 15.95	Apr 19	Apr 15.36	Apr 18	2.41				355
1837	10 384	Apr 5.39	Apr 9	Apr 4.80	Apr 8	2.97				384
1838	354	Apr 24.38	Apr 28	Apr 23.79	Apr 27	2.93				354
1839	354	Apr 14.06	Apr 17	Apr 13.47	Apr 16	2.25				355
1840	13 383	Apr 2.73	Apr 5	Apr 2.14	Apr 5	2.58				383
1841	355	Apr 21.69	Apr 23	Apr 21.10	Apr 23	1.67				354
1842	354	Apr 11.03	Apr 13	Apr 10.44	Apr 12	1.33				354
1843	16 384	Mar 31.08	Apr 2	Mar 30.49	Apr 1	1.27				384
1844	355	Apr 17.78	Apr 20	Apr 17.19	Apr 19	1.58				355
1845	18 384	Apr 6.91	Apr 10	Apr 6.32	Apr 9	2.45				384
1846	354	Apr 25.79	Apr 29	Apr 25.20	Apr 28	2.58				355
1847	354	Apr 15.35	Apr 18	Apr 14.76	Apr 18	3.01				354
1848	2 384	Apr 4.05	Apr 6	Apr 3.46	Apr 6	2.31				384
1849	354	Apr 23.04	Apr 25	Apr 22.45	Apr 25	2.32				354
1850	355	Apr 12.62	Apr 14	Apr 12.03	Apr 14	1.74				354
1851	5 384	Apr 1.86	Apr 4	Apr 1.27	Apr 3	1.49				384
1852	354	Apr 19.58	Apr 22	Apr 18.99	Apr 21	1.78				354
1853	355	Apr 8.58	Apr 11	Apr 7.99	Apr 10	1.78				355
1854	8 384	Mar 28.79	Apr 1	Mar 28.20	Mar 31	2.55				
1855	354	Apr 16.71	Apr 20	Apr 16.12						
1856	10 384	Apr 5.33	Apr 8	Apr 4.74						
1857	354	Apr 24.35	Apr 27	Apr 23.76						
1858	354	Apr 14.05	Apr 16	Apr 13.46						

(4939)

Year	Lunar Year	Jerusalem N. Year (Nisan) Conjunc.	1 Nisan	Honolulu N. Year (Nisan) Conjunc.	1 Nisan	Tr. Per Nisan	Honolulu Elul Con.	1 Tisri	Tr. Per. Tisri	Year Length H.C.T.
	354									
1859	13 384	Apr 3.52	Apr 5	Apr 2.98						
1860	355	Apr 21.33	Apr 23	Apr 20.79						
1861	354	Apr 10.38	Apr 13	Apr 9.84						
1862	6 384	Mar 30.41	Apr 2	Mar 29.87						
1863		Apr 18.22	Apr 21	Apr 17.68						
1864	8	Apr 6.65	Apr 10	Apr 6.11						
1865		Apr 25.68	Apr 29	Apr 25.14						
1866		Apr 15.38	Apr 18	Apr 14.84						
1867	2	Apr 5.01	Apr 7	Apr 4.47						
1868		Apr 22.93	Apr 25	Apr 22.39						
1869		Apr 12.16	Apr 14	Apr 11.62						

	Year	Sunset Beginning 1 Nisan	Day of Week	Apogee and Perigee	Longitude S ° ' "				Latitude ° ' "				Declination ° '				Trans. Period	
30.07 31 1 2 A	1767	Apr 1/	Wed		29	0	9	15	47	Noon	5	1	8	N	Noon	21	25	N	2.69	7 27 16
					30	0	16	43	3	Mid.	4	58	41	N	Mid.	23	12	N		7.45
17.10 18 20 A	1768	Apr 19/	Tu	✕16th = 61' 27"	16	0	27	15	21	Noon	3	16	40	N	Noon	24	21	N	2.67	7 38 30
					17	1	4	53	51	Mid.	2	46	13	N	Mid.	25	1	N		7.64
6.78 7 9 A	1769	Apr 8/	Sa		6	0	21	40	12	Noon	3	23	39	N	Noon	19	21	N	1.99	7 29 53
					7	0	29	10	5	Mid.	2	52	38	N	Mid.	20	59	N		7.50
25.78 28 A	1770	Apr 27/	Fri		25	1	9	48	41	Noon	0	24	8	N	Noon	20	52	N	1.99	7 10 34
					26	1	16	59	15	Mid.	0	15	46	S	Mid.	21	32	N		7.17
15.20 17 A	1771	Apr 16/	Tu		14	0	23	29	34	Noon	0	24	18	N	Noon	16	6	N	1.57	6 23 44
					15	0	29	53	18	Mid.	0	11	50	S	Mid.	17	25	N		6.39
3.31 4 6 A	1772	Apr 5/	Su		2	0	11	20	29	Noon	1	8	22	S	Noon	14	7	N	2.46	5 55 30
					3	0	17	15	59	Mid.	1	40	42	S	Mid.	16	23	N		5.93
22.03 23 25 A	1773	Apr 24/	Sa		21	1	2	47	38	Noon	4	7	29	S	Noon	16	56	N	2.74	5 54 1
					22	1	8	41	39	Mid.	4	26	12	S	Mid.	17	20	N		5.90
11.10 12 14 A	1774	Apr 13/	Wed		10	0	20	59	47	Noon	4	29	46	S	Noon	13	55	N	2.67	6 14 46
					11	0	27	14	33	Mid.	4	44	39	S	Mid.	15	4	N		6.25
31.45 1 2 4 A	1775	Apr 3/	M		31	0	12	21	57	Noon	5	5	19	S	Noon	5	16	N	3.31	6 56 37
						0	19	12	34	Mid.	5	9	25	S	Mid	2	18	N		6.94
18.43 19 20 22 A	1776	Apr 21/	Su		17	0	13	45	56	Noon	4	15	39	S	Noon	18	15	N	3.34	7 22 17
					18	1	0	8	15	Mid.	3	56	19	S	Mid	19	11	N		7.37
8.10 9 11 A	1777	Apr 10/	Th	✕7th = 61' 33"	7	0	18	17	29	Noon	4	10	40	S	Noon	15	16	N	2.67	7 40 32
					8	0	25	58	1	Mid.	3	47	15	S	Mid.	17	11	N		7.68
28.75 29 31 M	1778	Mar 30/	M		28	0	5	38	1	Noon	4	16	24	S	Noon	9	13	N	2.02	7 18 51
						0	12	56	52	Mid.	3	53	42	S	Mid.	11	54	N		7.31
16.72 17 18 A	1779	Apr 17/	Sa		16	0	24	34	0	Noon	2	51	3	S	Noon	11	29	N	1.05	6 56 11
						1	1	30	11	Mid.	2	18	2	S	Mid.	14	19	N		6.94
5.05 6 7 A	1780	Apr 6/	Th		4	0	16	16	8	Noon	1	36	35	S	Noon	11	44	N	1.72	6 14 30
					5	0	22	30	38	Mid.	1	9	0	S	Mid.	14	18	N		6.24
23.81 25 26 A	1781	Apr 25/	W		23	1	1	11	1	Noon	1	53	27	N	Noon	20	59	N	1.96	5 59 0
						1	7	10	1	Mid.	2	24	32	N	Mid.	22	50	N		5.98
12.82 15 16 A	1782	Apr 15/	M		12	0	20	9	45	Noon	3	21	41	N	Noon	22	28	N	2.95	5 56 46
						0	26	6	31	Mid.	3	45	48	N	Mid.	24	11	N		5.95
1.96 4 5 A	1783	Apr 4/	Fri		1	0	15	42	41	Noon	3	52	11	N	Noon	20	6	N	2.81	6 24 8
					2	0	20	6	48	Mid.	4	19	36	N	Mid.	22	10	N		6.40
19.85 20 21 23 A	1784	Apr 22/	Th		19	0	26	42	35	Noon	5	5	44	N	Noon	26	27	N	2.92	6 50 10
						1	3	32	45	Mid.	5	4	30	N	Mid.	27	25	N		6.84
9.41 10 11 13 A	1785	Apr 12/ (11	Tu M		8	0	14	59	12	Noon	4	50	57	N	Noon	26	7	N	3.36	7 30 32
					9	0	22	29	44	Mid.	4	38	12	N	Mid.	26	58	N		7.51
30.09 31 2 A	1786	Apr 1/ (Mar 31	Sa F	30th = 61' 27"	29	0	9	22	37	Noon	4	48	2	N	Noon	21	39	N	2.67	7 38 34
					30	0	17	1	11	Mid	4	33	50	N	Mid.	23	25	N		7.64
18.12 20 A	1787	Apr 17/	Th		17	0	27	26	46	Noon	3	44	38	N	Noon	21	19	N	1.65	7 26 56
					18	1	4	25	41	Mid.	3	16	11	N	Mid.	22	46	N		7.45
6.64 8 A	1788	Apr 7/	M		6	0	16	40	10	Noon	3	48	5	N	Noon	15	7	N	1.13	6 44 45
						0	23	24	55	Mid.	3	22	21	N	Mid.	17	5	N		6.75
25.30 27 A	1789	Apr 26/	Su		24	1	0	19	21	Noon	0	49	44	N	Noon	18	25	N	1.27	6-19 30
					25	1	6	38	51	Mid.	0	14	13	N	Mid.	19	30	N		6.32
14.61 15 17 A	1790	Apr 16/	F		14	0	24	28	34	Noon	0	45	33	S	Noon	16	34	N	2.16	5 55 17
						1	0	23	51	Mid	1	18	15	S	Mid	17	36	N		5.92
3.62 4 7 A	1791	Apr 6/	W		3	0	19	21	21	Noon	2	25	57	S	Noon	15	11	N	3.15	6 1 40
						0	19	23	1	Mid	2	54	14	S	Mid	16	14	N		6.03
21.40 22 23 25 A	1792	Apr 24/	Tu		20	0	27	51	1	Noon	4	48	55	S	Noon	17	21	N	3.37	6 18 46
					21	1	4	9	47	Mid	4	59	29	S	Mid	17	52	N		6.31
10.78 11 12 14 A	1793	Apr 13/	Sa		10	0	18	39	4	Noon	5	0	5	S	N	15	11	N	2.99	7 1 36
						0	25	34	40	Mid	5	7	6	S	M	16	18	N		7.03
31.39 1 3 A	1794	Apr 2/	W		30	0	6	8	57	Noon	5	1	33	S	N	11	9	N	2.37	7 35 38
					31	0	13	44	35	Mid	5	7	15	S	M	13	4	N		7.59
19.43 20 22 A	1795	Apr 21/	Tu	19th 61' 35"	18	0	23	53	35	Noon	4	25	37	S	N	16	15	N	2.34	7-40 2
					19	1	1	33	37	Mid	4	5	6	S	M	17	51	N		7.66
18.09 10 A	1796	Apr 9/	Sa		7	0	18	50	20	Noon	4	30	24	S	N	10	49	N	1.68	7 27 37
					8	0	26	7	57	Mid	4	11	10	S	M	13	15	N		7.46
28.53 30 M	1797	Mar 29/	W		28	0	15	30	53	Noon	4	29	48	S	N	4	27	N	1.23	6 36 58
					29	0	22	7	51	Mid	4	12	26	S	M	7	7	N		6.62
16.35 18 A	1798	Apr 17/	Tu		15	0	23	12	52	Noon	1	59	31	S	N	13	32	N	1.42	6 11 0
					16	0	29	23	52	Mid	1	27	9	S	M	15	53	N		6.18
5.39 6 8 A	1799	Apr 7/	Su		4	0	11	53	34	Noon	0	23	59	S	N	14	54	N	2.38	5 54 8
					5	0	17	47	42	Mid	0	8	38	N	M	17	10	N		5.90
24.11 25 27 A	1800	Apr 26/	Sa		23	1	3	18	8	Noon	3	4	9	N	N	23	47	N	2.66	5 57 9
					24	1	9	15	17	Mid	3	29	44	N	M	25	15	N		5.95
13.27 14 15 17 A	1801	Apr 16/	Th		12	0	13	51	36	Noon	4	20	0	N	N	25	19	N	3.50	6 32 21
					13	0	20	23	57	Mid	4	37	22		M	26	38	N		6.54
2.72 6 A	1802	Apr 5/	M		2	0	19	12	32	Noon	4	37	25	N	N	22	49	N	3.05	7 12 28
						0	17	25	0	Mid	4	52	43	N	M	24	42	N		7.21
21.74 22 23 25 A	1803	Apr 24/	Su		21	0	28	14	32	Noon	4	57	49	N	N	27	13	N	3.03	7 31 8
						1	5	45	40	Mid	4	47	54	N	M	27	49	N		7.52
10.43 11 13 A	1804	Apr 12/	Th	✕10th 61' 22"	9	0	15	0	44	Noon	4	55	40	N	N	23	19	N	2.34	7 36 20
					10	0	22	37	4	Mid	4	45	2	N	M	24	56	N		7.61
31.04 1 3 A	1805	Apr 1/	M		30	0	10	27	43	Noon	4	56	34	N	N	16	48	N	1.73	7 6 18
					31	0	17	34	1	Mid	4	47	41	N	M	19	6	N		7.11
18.96 19 21 A	1806	Apr 20/	Su		17	0	16	33	58	Noon	3	15	11	N	N	20	56	N	1.81	6 35 46
					18	0	23	9	44	Mid	2	46	42	N	M	22	12	N		6.60
8.18 9 10 A	1807	Apr 9/	Th		7	0	16	15	58	Noon	3	1	28	N	N	15	54	N	1.59	6 4 26
					8	0	22	19	24	Mid	2	33	51	N	M	17	30	N		6.07
25.90 26 28 A	1808	Apr 27/	W		25	1	1	41	53	Noon	0	22	41	S	N	18	46	N	1.87	5-54-23
						1	7	36	16	Mid	0	55	34	S	M	19	33	N		5.91
14.92 15 16 18 A	1809	Apr 17/	M		14	0	20	24	26	Noon	2	5	51	S	N	17	19	N	2.85	6 4 25
						0	26	28	51	Mid	2	35	17	S	M	18	6	N		6.07
4.15 5 6 8 A	1810	Apr 7/ (6	Sa		4	0	19	24	14	Noon	3	37	31	S	N	16	11	N	3.62	6 35 49
						0	26	0	3	Mid	4	1	4	S	M	17	2	N		6.60

Year	Sunset Beginning Nis.	Day of Week	Horizontal Parallax	Moon's Mean Longitude in Tr. Period					Latitude on Evening of Phasis					Declination Eve of Phasis					Trans. Per.	Moon's Velocity in 12 hrs.
				Day	S	°	'	"												
1899	Apr 13/	Th		9		16	28	19	10.35 14A	2	23	56	N		18	23	59	19	N	3.42	6 59 3
				10		23	27	22		1	53	23	N		23	24	4	35	N		6.98
1900	Apr 2/	M		30		4	18	46	30.94 3A	2	4	6	N		18	21	9	45	N	2.82	7 35 10
						11	53	56		1	28	52	N		24	21	34	59	N		7.59
1901	Apr 21/	Su	* 18th 61' 23" M Per = Apr 18	18		22	2	30	18.99 22A	1	19	30	S		18	20	39	37	N	2.78	7 37 11
						29	39	41		1	57	40	S		23	20	38	45	N		7.62
1902	Apr 10/	Th		8		23	59	32	8.66 11A	1	4	40	S		18	17	32	10	N	2.11	7 20 41
				9		31	20	13		1	44	6	S		24	18	1	35	N		7.34
1903	Apr 28/	Tu		27		35	14	13	27.65 29A	2	53	27	S		18	16	34	31	N	1.12	6 58 42
						42	12	55		3	24	35	S		24	17	3	22	N		6.98
1904	Apr 17/	Su		15		26	35	59	16.00 18A	3	54	8	S		18	14	48	23	N	1.77	6 17 22
				16		32	53	21		4	15	58	S		23	15	17	54	N		6.29
1905	Apr 6/	Th		4		14	49	17	5.06 7A	4	10	49	S		18	10	55	44	N	1.71	5 54 58
				5		20	44	15		4	28	29	S		24	11	42	14	N		5.92
1906	Apr 25/	W		23		30	32	26	23.76 26A	4	58	11	S		18	16	4	48	N	2.01	5 58 7
						36	30	33		4	52	53	S		23	16	34	56	N		5.97
1907	Apr 15/	M		12		17	54	8	12.88 16A	4	26	35	S		18	17	9	43	N	2.89	6 27 24
						24	21	32		4	10	16	S		23	17	43	12	N		6.46
1908	Apr 4/	Sa		31		8	3	27	1.30 5A	3	23	51	S		18	18	40	34	N	3.47	7 11 24
				1		15	14	51		2	57	17	S		24	19	25	14	N		7.19
1909	Apr 22/	Th		19		18	56	49	20.29 23A	1	17	28	S		18	22	3	20	N	2.48	7 30 21
						26	27	10		0	40	24	S		24	22	44	30	N		7.51
1910	Apr 11/	M	* 9th 61'18" M Per = Apr 9	9		20	47	16	9.98 12A	1	21	28	S		18	18	17	53	N	1.79	7 36 42
				10		28	23	58		0	41	24	S		23	19	37	37	N		7.61
1911	Apr 1/	Sa		31		29	52	8	31.61 2A	0	16	48	S		18	17	53	25	N	1.15	7 16 56
				1		37	7	4		0	23	2	N		23	18	58	40	N		7.28
1912	Apr 18/	Th		16		20	35	14	17.55 19A	1	44	57	N		18	20	36	15	N	1.22	6 41 48
				17		27	17	2		2	20	6	N		24	21	45	44	N		6.69
1913	Apr 8/	Tu		7		31	48	2	6.83 9A	3	1	12	N		18	20	35	24	N	1.94	6 18 58
						38	1	60		3	28	28	N		24	21	40	13	N		6.23
1914	Apr 27/	M		25		40	41	44	25.56 28A	4	55	32	N		18	26	38	3	N	2.21	5 59 22
						46	41	6		5	2	4	N		23	27	3	16	N		5.99
1915	Apr 16/	F		14		29	40	58	14.57 17A	5	6	50	N		18	24	17	58	N	2.20	6 0 30
						35	41	28		5	2	56	N		24	24	58	5	N		6.00
1916	Apr 5/	W		2		16	49	11	2.77 6A	4	53	40	N		18	24	18	27	N	3.00	6 34 27
				3		23	23	38		4	44	10	N		23	24	46	56	N		6.57
1917	Apr 24/	Tu		21		29	41	55	21.67 25A	2	44	22	N		18	25	3	18	N	3.10	6 59 58
						36	41	53		2	14	40	N		24	24	59	55	N		6.99
1918	Apr 13/	Sa		11		25	10	23	11.28 14A	2	18	51	N		18	22	49	30	N	2.49	7 32 21
						32	42	44		1	54	29	N		23	23	4	25	N		7.54
1919	Apr 2/	W	* 1st = 61' 9" M Apr 1 = Per	31		11	55	55	31.97 3A	3	39	22	N		18	18	12	26	N	1.79	7 33 38
				1		19	29	33		3	9	18	N		24	18	57	11	N		7.56
1920	Apr 20/	Tu		18		29	55		18.99 21A	0	34	38	S		18	19	12	21	N	1.78	7 16 54
				19		37	11	54		1	14	47	S		24	19	33	6	N		7.28
1921	Apr 9/	Sa		8		19	34	26	8.47 10A	0	31	13	S		18	14	19	38	N	1.30	6 34 2
						26	8	28		1	7	49	S		23	14	55	8	N		6.57
1922	Apr 28/	F		26		33	32	8	27.30 29A	3	37	3	S		18	16	27	3	N	1.47	6 13 14
				27		39	45	22		4	0	49	S		24	16	52	52			6.22
1923	Apr 18/	W		15		33	53	13	16.36 19A	4	33	36	S		18	15	31	41	N	2.41	5 55 44
				16		39	48	57		4	47	18	S		24	16	1	33	N		5.93
1924	Apr 6/	Su		4		16	40	4	4.39 7A	4	48	36	S		18	12	53	27	N	2.38	6 7 49
						22	47	53		4	58	5	S		24	13	36	17	N		6.13
1925	Apr 26/	Su		22		24	33	17	23.69 27A	4	47	28	S		18	19	0	52	N	3.08	6 31 57
				23		31	5	54		4	36	15	S		24	19	24	50	N		6.53
1926	Apr 15/	Th		12		21	17	42	13.13 16A	4	03	40	S		18	17	57	54	N	2.64	7 12 14
				13		28	29	56		3	41	15	S		23	18	34	26	N		7.20
1927	Apr 4/	M	2nd = 61'25" N Per = 1	2		8	37	29	2.77 5A	3	58	7	S		18	14	35	32	N	2.00	7 39 58
						16	17	27		3	32	18	S		24	15	45	22	N		7.67
1928	Apr 22/	Su	* 21 = 61' 17" Apr 20 = Per	20		26	27	33	20.51 23A	1	11	16	S		18	21	28	20	N	1.96	7 35 43
						34	3	16		0	31	3	S		24	22	21	6	N		7.60
1929	Apr 11/	Th		10		21	31	53	10.44 12A	1	24	43	S		18	16	23	2	N	1.33	7 6 36
						28	38	29		0	46	13	S		23	17	29	2	N		7.11
1930	Apr 1/	Tu		30		5	45	38	30.83 2A	0	7	44	S		18	15	56	48	N	1.93	6 20 1
						12	5	39		0	28	16	N		23	17	1	29	N		6.33
1931	Apr 20/	M		17		20	29	49	18.59 21A	3	9	28	N		18	23	59	53	N	2.18	6 2 33
				18		26	32	22		3	35	58	N		24	24	50	5	N		6.04
1932	Apr 8/	F		6		15	22	10	6.64 9A	3	34	23	N		18	21	7	14	N	3.13	5 54 29
						21	16	39		3	56	57	N		23	21	56	28	N		5.91
1933	Apr 27/	Th		25		36	49	32	25.36 28A	5	2	3	+		18	26	54	24	+	2.41	6 2 33
						42	52	5		5	3	6	+		23	27	14	41	+		6.04
1934	Apr 17/	Tu		14		23	23	3	14.58 18A	4	51	13	+		18	26	42	19	+	3.19	6 39 25
						30	2	28		4	40	37			23	26	56	30	+		6.66
1935	Apr 6/	Sa		3		5	16	20	4.10 7A	4	41	19	+		18	24	8	53	+	2.67	7 25 57
				4		12	42	17		4	26	10	+		24	24	42	29	+		7.43
1936	Apr 24/	F	21st = 61' 17" N Per = 20d 20h	21		23	15	6	22.11 25A	2	19	36	+		18	24	25	4	+	2.66	7 37 30
				22		30	52	36		1	14	44	+		23	24	23	1	+		7.63
1937	Apr 13/	W		11		17	40	10	11.80 14A	2	27	2	+		18	21	16	18	+	1.97	7 31 14
						25	11	24		1	50	34	+		23	21	49	41	+		7.52
1938	Apr 2/	Sa		1		13	20	45	1.37 3A	2	36	25	+		18	15	46	0	+	1.39	6 55 27
						29	16	12		2	2	39	+		24	16	36	29	+		6.92
1939	Apr 21/	F		20		26	15	16	20.28 22A	0	4	32	−		18	17	41	26	+	1.49	6 29 11
						32	44	27		1	17	48	−		23	18	5	5	+		6.49
1940	Apr 10/	W		8		19	41	40	18.43 11A	2	8	37	−		18	15	43	48	+	2.34	5 58 49
						25	40	29		2	38	56	−		23	16	9	36	+		5.98
1941	Apr 29/	Tu		26		35	13	34	27.14 30A	4	38	18	−		18	17	13	54	+	2.63	5 54 25
				27		41	7	59		4	51	7	−		23	17	46	15			5.91

	Year	Sunset Beginning 1 Nisan	Day of Week	Apogee and Perigee Day Hour	Moon's Synodic Longitude at Conjunction S ° ' "	Latitude ° ' "		Declination Hour ° '		Trans. Period	Moon's Velocity in 12 hrs. ° ' "
23.10 24 25 26	1811	Apr. 25/	Th		22 1 1 45 6 23 1 8 47 43	4 53 2 S 5 2 56 S		Noon 16 33 N Mid 17 21 N		2.67	7 2 37 7.04
11.73 12 13 14 15	1812	Apr. 14/	Tu	11th = 61'24" N	11 0 19 23 4 0 26 59 3	5 8 11 S 5 7 41 S		15 56 N 17 4 N		3.03	7 33 59 7.57
1.42 2 3 4	1813	Apr. 3/	Sa		31 0 6 16 27 1 0 13 45 32	5 4 41 S 5 4 57 S		11 11 N 13 14 N		2.34	7 29 5 7.48
20.42 21 22	1814	Apr 21/	Th		19 0 24 49 43 20 1 2 2 29	4 41 53 S 4 26 8 S		12 19 N 14 29 N		1.35	7 12 46 7.21
9.85 10 11 12	1815	Apr 11/	Tu		9 0 15 36 21 0 22 5 11	4 7 13 S 3 45 24 S		11 29 N 13 45 N		1.92	6 28 50 6.48
28.98 29 30 31 M	1816	Mar. 30/	Sa		28 0 3 23 26 0 9 21 55	3 52 28 S 3 30 47 S		6 57 N 9 23 N		1.84	5 58 29 5.97
16.69 17 18 19	1817	Apr 18/	F		16 0 25 0 24 1 0 54 28	0 46 22 S 0 14 4 S		16 39 N 18 42 N		2.08	5 54 4 5.90
5.74 6 7 8 9 Q	1818	Apr 8/	W		5 0 18 19 13 0 19 31 46	1 0 55 N 1 31 48 N		18 42 N 20 44 N		3.23	6 12 33 6.21
24.58 25 26 27 28 Q	1819	Apr 27/	Tu		23 0 26 59 26 24 1 3 32 50	4 6 17 N 4 25 51 N		26 15 N 27 18 N		3.19	6 43 24 6.72
13.06 14 15 16 Q	1820	Apr 15/	Sa		12 0 23 24 10 13 1 0 37 23	4 23 58 N 4 42 18 N		24 12 N 25 53 N		2.71	7 18 13 7.22
2.72 3 4 5 Q	1821	Apr 4/	W	2nd = 61'24" N	2 0 10 32 17 0 18 9 49	4 24 3 N 4 43 31 N		19 17 N 21 51 N		2.05	7 37 32 7.63
22.39 23 24 Q	1822	Apr 23/	Tu		21 1 5 51 25 22 1 13 28 34	5 6 14 N 4 53 23 N		24 46 N Hours earlier = S 26 11 N		1.38	7 37 9 7.62
11.37 12 13 Q	1823	Apr 12/	Sa		10 0 16 36 28 11 0 28 37 20	5 0 0 N 4 54 41 N		18 51 48 N 21 3 3 N		1.40	7 0 52 7.01
30.71 31 1 2 Q	1824	Apr 1/	Th		30 0 8 16 38 0 14 35 24	4 42 39 N 4 29 20 N		17 14 15 N 19 11 57 N		2.06	6 18 46 6.31
18.47 19 20 21 Q	1825	Apr 20/	W		18 0 29 22 28 1 5 26 12	2 25 17 N 1 55 13 N		21 5 23 N 22 3 0 N		2.30	6 3 44 6.06
7.48 8 9 10 Q	1826	Apr 9/	Su		7 0 18 18 3 0 24 14 12	1 52 27 N 1 22 11 N		17 13 10 N 18 28 54 N		2.29	5 56 9 5.94
26.21 27 28 29 Q	1827	Apr 28/	Sa		25 1 3 32 51 26 1 9 37 50	1 44 55 S 2 15 23 S		19 10 34 N 19 40 12 N		2.56	6 4 59 6.08
14.47 15 16 17 18 Q	1828	Apr 17/	Th		13 0 19 8 58 14 0 25 54 18	3 19 39 S 3 45 14 S		17 51 26 N 18 24 48 N		3.30	6 45 17 6.75
4.02 5 6 7 Q	1829	Apr 6/	M		3 0 14 54 50 4 0 22 17 29	3 38 54 S 4 5 3 S		14 30 30 N 15 44 36		2.75	7 22 39 7.38
23.06 24 25 26 Q	1830	Apr 25/	Su	22nd = 61'20" N	22 1 2 38 38 23 1 10 14 50	5 5 33 S 5 8 38 S		16 56 44 N 17 44 12 N		2.71	7 36 12 7.60
12.75 13 14 15 Q	1831	Apr 14/	Th		12 0 19 30 7 0 26 58 29	5 1 3 S 5 5 17 S		12 48 16 N 14 34 3 N		2.02	7 28 22 7.47
1.30 2 3 Q	1832	Apr 2/	M		31 0 8 38 34 1 0 15 26 41	4 57 52 S 5 2 47 S		6 34 16 N 8 50 46 N		1.46	6 48 7 6.80
20.16 21 22 Q	1833	Apr 21/	Su		19 0 28 45 51 20 1 5 13 37	4 20 51 S 4 1 44 S		13 7 3 N 15 6 29 N		1.61	6 27 46 6.46
9.28 10 11 Q	1834	Apr 10/	Th		8 16 30 36 9 22 28 48	4 6 1 S 3 46 18 S	18th 24	12 29 11 N 13 32 38 N		1.49	5 58 12 5.97
29.28 30 31 1 Q	1835	Mar 31/	Tu		28 5 25 7 29 11 27 36	2 53 4 S 2 26 16 S	18 23	14 0 15 N 14 54 11 N		2.48	6 2 29 6.04
15.95 16 17 18 19 Q	1836	Apr 18/	M		15 20 11 40 26 28 19	0 38 36 N 1 11 9 N	18 24	22 46 1 N 23 31 0 N		2.82	6 16 39 6.27
5.39 6 7 8 9 Q	1837	Apr 8/	Sa		5 18 0 5 24 53 31	2 21 15 N 2 51 50 N	18 24	24 39 34 N 25 22 30 N		3.38	6 53 26 6.89
24.38 25 26 27 28 Q	1838	Apr 27/	F		23 29 21 53 24 36 39 31	4 47 2 N 5 0 0 N	18 23	28 32 20 N 28 35 26 N		3.39	7 17 38 7.29
14.06 15 16 17 Q	1839	Apr 16/	Tu	13th = 61'23" M Per = 13	13 23 46 30 14 31 24 2	4 47 52 N 5 1 6 N	18 24	27 22 29 N 27 52 6 N		2.71	7 37 32 7.63
2.73 3 4 5 Q	1840	Apr 4/	Sa		2 18 13 52 3 25 35 33	4 39 30 N 4 54 21 N	18 24	22 59 54 N 24 1 3 N		2.04	7 21 41 7.36
21.69 22 23 Q	1841	Apr 22/	Th		21 29 49 18 36 49 5	5 0 57 N 4 59 9 N	18 24	23 43 4 N 24 31 6 N	2.08	1.08	6 59 47 6.99
11.03 12 13 Q	1842	Apr 12/	Tu		10 21 24 24 11 27 42 21	4 49 57 N 4 39 24 N	18 24	22 10 19 N 22 54 56 N		1.74	6 17 57 6.80
31.08 1 2 Q	1843	Apr 1/	Sa		30 9 43 42 31 15 39 57	4 39 2 N 4 26 12 N	18 24	17 46 11 N 18 29 9 N		1.68	5 56 15 5.94
17.78 18 19 20 Q	1844	Apr 19/	F		17 25 29 6 31 26 49	2 12 25 N 1 42 58 N	18 23	21 10 8 N 21 29 45 N		1.99	5 57 43 5.96
6.91 7 8 9 10 Q	1845	Apr 9/	W		6 19 10 55 7 25 34 28	0 29 55 N 0 3 15 S	18 23	19 45 34 N 20 3 14 N		2.86	6 23 33 6.39
25.79 26 27 28 29 Q	1846	Apr 28/	Tu		25 32 20 51 39 7 12	3 0 39 S 3 28 14 S	18 24	19 29 47 N 19 27 34 N		2.98	6 46 21 6.77
15.35 16 17 18 Q	1847	Apr 17/	Sa		14 20 42 18 15 28 8 41	3 17 51 S 3 46 49 S	18 23	17 40 29 N 17 56 4 N		2.42	7 26 23 7.44
4.05 5 6 Q	1848	Apr 5/	W	3rd 61'15" M Per = 3	3 14 56 4 4 22 31 35	3 11 28 S 3 42 54 S	18 23	13 40 46 N 14 18 32 N		1.72	7 35 31 7.59
23.04 24 25 Q	1849	Apr 24/	Tu		22 32 45 39 23 40 13 17	4 54 38 S 5 2 46 S	18 24	16 24 9 N 16 57 37 N		1.73	7 27 38 7.46
12.62 13 14 Q	1850	Apr 13/	Sa		12 21 48 20 28 35 24	4 51 38 S 4 59 45 S	18 23	11 45 57 N 12 32 49 N		1.15	6 47 4 6.78
1.86 2 3 4 Q	1851	Apr 3/	F		1 8 6 38 14 13 25	5 1 47 S 4 59 53 S	18 23	10 48 20 N 11 37 19 N		1.90	6 6 47 6.11
19.58 20 21 22 Q	1852	Apr 21/	W		19 29 40 27 35 38 17	3 39 47 S 3 16 42 S	18 23	17 42 23 N 18 20 53 N		2.19	5 57 50 5.96
8.58 9 10 11	1853	Apr 10/	Su		8 18 35 5 24 37 60	3 10 19 S 2 44 42 S	18 24	15 42 34 N 16 40 13 N		2.19	6 2 55 6.05
28.79 29 30 31 1 Q	1854	Mar 31/	F		28 4 59 12 11 39 1	1 38 8 S 1 5 59 S	18 23	17 45 35 N 18 36 10 N		2.97	6 39 49 6.66

Year	Sunset beginning 1 Nis.	Day of Week	Hor. Par. Perigee and Apogee	Moon's Mean Longitude during Tr. Period S ° ′ ″				Latitude (beginning of phase) ° ′ ″ Noon and Mid					Declination Hour ° ′ ″					Trans. Period	Velocity in 12 hrs. ° ′ ″
1855	Apr 19/	Th		15		17	11	55	16.71	17	20 A	1	58	52	N	18	25	19	3	N	3.06	7 3 12
				16		24	15	7				2	31	7	N	23	25	48	21	N		7.05
1856	Apr 7/	M		5		19	29	13	15.33		18 A	2	13	2	N	18	23	8	24	N	2.44	7 30 32
						26	59	45				2	48	7	N	23	23	57	52	N		7.51
1857	Apr 26/	Su	24th = 61′ 24″ N Per = 23° 22h	23		29	26	38	24.35		27 A	4	35	2	N	18	27	54	60	N	2.42	7 39 6
				24		37	3	44				4	51	59	N	24	28	16	56	N		7.62
1858	Apr 15/	Th		13		24	9	51	14.05		16 A	4	25	32	N	18	24	17	28	N	1.72	7 17 15
				14		31	27	6				4	43	51	N	23	25	4	25	N		7.29
1859	Apr 4/	M		3		14	3	59	3.52		5 A	4	23	32	N	18	18	29	59	N	1.25	6 34 26
13						20	38	25				4	40	16	N	24	19	41	55	N		6.57
1860	Apr 23	Su	Should be 21–22	20		28	20	32	21.33		24 A	4	55	11	N	18	24	1	27	N	2.44	6 14 4
				21		34	34	36				4	47	23	N	24	24	39	30	N		6.23
1861	Apr 12/	F		9		11	1	28	10.38		13 A	4	21	38	N	18	22	59	48	N	2.39	5 56 0
				10		16	57	28				4	4	57	N	23	23	32	14	N		5.93
1862	Apr 1/	Tu		30		17	43	17	30.41		2 A	3	58	30	N	18	19	37	9	N	2.36	6 17 18
16				31		23	50	30				3	37	56	N	23	20	11	25	N		6.12
1863	Apr 20/	M		17		25	54	35	18.22		21	0	52	35	N	18	21	30	7	N	2.59	6 28 22
				18		32	22	57				0	19	20	N	24	21	42	35	N		6.47
1864	Apr 9/	Sa		6		15	55	23	6.65		10 A	0	49	29	S	18	19	54	46	N	3.12	7 11 21
18						23	6	44				1	24	55	S	23	20	5	42	N		7.19
1865	Apr 28/	F		24		26	29	21	25.68		29 A	3	4	27	S	18	18	57	15	N	3.09	7 29 10
				25		33	58	31				4	18	34	S	24	18	48	18	N		7.49
1866	Apr 17/	Tu	× 15th = 61′ 15″ M Per = 15	14		20	38	17	15.38		18 A	3	50	24	S	18	17	29	24	N	2.39	7 33 38
				15		28	11	55				4	16	37	S	23	17	45	40	N		7.56
1867	Apr 6/	Sa		5		22	53	27	5.01		7 A	3	38	10	S	18	13	7	14	N	1.76	7 8 57
2						30	2	24				4	4	53	S	24	13	53	60	N		7.15
1868	Apr 24/	F		21		21	41	58	22.93		25 A	5	1	22	S	18	16	19	29	N	1.84	6 36 53
				22		28	18	51				5	3	56	S	24	16	54	0			6.61
1869	Apr 13/	Tu		11		21	16	53	12.16		14 A	5	1	2	S	18	12	40	33	N	1.61	6 6 10
				12		27	23	3				5	1	44	S	23	13	22	48	N		6.12
1870	Apr 3/	Su		31		10	10	9	1.17		4 A	4	49	50	S	18	19	1	1	N	2.59	5 56 49
5				1		16	6	58				4	40	11	S	23	13	45	22	N		5.95
1871	Apr 22/	Sa		19		25	40	7	19.88		23 A	2	36	15	S	18	20	10	0	N	2.89	6 5 38
						31	45	45				2	8	23	S	24	20	47	48	N		6.09
1872	Apr 10/	W		7		18	11	22	18.11		11 A	1	59	54	S	18	19	1	42	N	2.66	6 40 40
				8		24	52	2				1	28	11	S	24	19	54	48	N		6.68
1873	Mar 31/	M		28		7	21	52	28.62		1 A	0	24	48	S	18	20	44	27	N	3.14	7 22 47
8						14	44	39				0	11	58	N	23	21	32	38	N		7.38
1874	Apr 19/	Su	15th = 61′ 17″ M Per = 15	16		25	12	31	16.66		20 A	2	57	13	N	18	26	47	18	N	3.11	7 33 9
						32	45	40				3	28	20	N	23	27	9	45	N		7.55
1875	Apr 8/	Th	6th = 60′ 58″ M Per = 6	5		11	57	50	6.33		9 A	2	48	23	N	18	23	49	60	N	2.44	7 27 30
10				6		19	25	20				3	21	56	N	24	24	48	58	N		7.46
1876	Apr 25/	Tu		23		30	11	48	24.38		26 A	4	9	16	N	18	25	21	21	N	1.39	7 12 10
				24		37	23	58				4	30	48	N	23	26	2	49	N		7.20
1877	Apr 15/	Su		13		20	45	6	13.83		16 A	4	44	18	N	18	24	25	40	N	1.94	6 29 16
						27	14	22				4	56	9	N	23	25	7	7	N		6.49
1878	Apr 4/	Th		2		8	24	9	2.97		5 A	4	49	41	N	18	20	6	28	N	1.79	5 58 23
13						14	22	32				4	58	17	N	24	21	5	31	N		5.97
1879	Apr 23/	W		21		30	7	33	21.67		24 A	4	31	29	N	18	24	47	40	N	2.10	5 55 56
						36	3	29				4	16	51	N	23	25	8	52	N		5.93
1880	Apr 12/	M							9.72		13 A	3	30	53	N	18	23	50	23	N	3.05	
												3	7	17	N	24	24	9	34	N		
1881	Apr 1/	F		29		10	13	18	30.03		2 A	3	1	32	N	18	20	52	26	N	2.73	6 53 33
16				30		17	6	51				2	33	4	N	23	21	19	9	N		6.89
1882	Apr 20/	Th		17		21	54	18	17.99		21 A	0	23	50	S	18	21	14	14	N	2.78	7 16 16
						29	10	34				1	0	19	S	24	21	17	27	N		7.27
1883	Apr 9/	M	7th = 61′ 24″ N Per = 6 22h	7		16	22	38	7.65		10 A	0	28	42	S	18	18	12	7	N	2.12	7 36 48
18						23	59	26				1	8	59	S	23	18	35	40	N		7.61
1884	Apr 27/	Su		25		33	55	10	25.71		28 A	3	28	21	S	18	18	29	47	N	2.06	7 33 9
						41	28	19				3	57	42	S	23	18	37	21	N		7.55
1885	Apr 16/	Th		14		22	0	49	15.33		17 A	3	16	27	S	18	14	55	4	N	1.44	6 59 47
				15		29	0	36				3	45	34	S	24	15	33	10	N		6.98
1886	Apr 5/	M		4		13	25	59	4.69		6 A	3	21	40	S	18	9	41	11	N	1.08	6 18 12
2						19	44	11				3	47	10	S	23	10	24	38	N		
1887	Apr 24/	Su		22		28	23	39	23.46		25 A	4	58	33	S	18	14	21	27	N	1.31	6 3 20
				23		34	26	59				5	1	44	S	24	15	3	11	N		6.05
1888	Apr 13/	F		11		23	20	4	11.47		14 A	4	54	46	S	18	14	41	3	N	2.30	5 57 3
						29	17	7				4	47	16	S	23	15	18	36	N		5.95
1889	Apr 3/	W		31		11	9	39	31.57		4 A	4	15	38	S	18	15	56	57	N	3.19	6 22 59
5						17	32	38				3	57	30	S	23	16	37	36	N		6.38
1890	Apr 22/	Tu		18		24	38	23	19.42		23 A	1	18	1	S	18	22	34	1	N	3.35	6 46 5
				19		31	24	28				0	45	19	S	24	23	2	40	N		6.77
1891	Apr 11/	Sa		8		13	10	43	8.96		12 A	0	51	3	S	18	21	33	14	N	2.81	7 26 58
						20	37	41				0	14	1	S	23	22	14	59	N		7.45
1892	Mar 30/	W	28th = 61′ 22″ M Per = 28	28		7	30	52	28.64		31 M	0	51	49	S	18	17	37	17	N	2.12	7 37 21
8						15	8	13				0	11	23	S	24	18	54	59	N		7.62
1893	Apr 18/	Tu		16		25	13	22	16.70		19 A	2	21	25	N	18	24	33	41	N	2.07	7 36 41
						32	40	3				2	57	14	N	24	25	25	39	N		7.61
1894	Apr 7/	Sa	×	6		27	43	57	6.25		8 A	2	10	42	N	18	19	15	56	N	1.52	6 55 6
10				7		34	39	3				2	44	46	N	23	20	19	27	N		6.92
1895	Apr 26/	F		24		27	32	6	25.14		27 A	4	33	31	N	18	25	41	10	N	1.63	6 24 17
						33	56	23				4	48	5	N	24	26	23	17	N		6.40
1896	Apr 15/	W		12		21	33	55	13.27		16 A	5	0	19	N	18	25	19	38	N	2.50	5 58 6
				13		27	32	1				5	4	29	N	23	25	51	16	N		5.97
1897	Apr 4/	~~Sa~~		1		10	29	25	2.27		5 A	5	2	29	N	18	22	23	4	N	2.50	6 1 30
13				2		16	30	55				5	2	20	N	24	23	9	22	N		6.03
1898	Apr 23/	Sa		20		31	42	3	21.02		24 A	3	45	45	N	18	25	19	15	N	2.75	6 14 14
				21		37	56	17				3	23	35	N	23	25	28	37	N		6.24