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This is a complete reconstruction of the Second Temple Era's observed calendar for the years 531 BC through 377 BC. **The purpose of this table is to demonstrate that the rules of their observed calendar are known with certainty**, were used consistently, and that the reconstruction matches all of the historical data. The reconstruction stops at 377 BC because consistency in using the same rules are demonstrated for the remainder of the Second Temple Era in the other documents. Most readers will not find it necessary to study this reconstruction. However, it must be provided as substantial evidence for those who wish to completely verify the accuracy of the calendar rules.

This is a working table. The new crescent and astronomical data were automatically computed and written to this file. The author then inserted the historical data from discovered artifacts and historical documents. Each year's first and seventh months were then identified, thus exposing the simple and consistent rules that they used.

The reader will understand this process more clearly when they scan through the years and notice that it is the historical data which informs that "such and such" a year was intercalated, and that the author's reconstruction matches the historical data using the same set of consistent rules.

For example, you could follow along, artifact by artifact, in the list of itemized intercalated years in Parker and Dubberstein's "Babylonian Chronology", pg. 7-9, and verify that all artifacts are included in this reconstruction, and that the resulting reconstruction does demonstrate that the same rules were consistently used.

This reconstruction has a secondary purpose. It demonstrates that the ancient astronomy scholars would add a 2<sup>nd</sup> 6<sup>th</sup> month or a 2<sup>nd</sup> 12<sup>th</sup> month as was needed to keep Atonement and the first month in their proper season. However, it may be difficult for some readers to accept the idea that the new year's new crescent was allowed to be one night in winter (prior to the astronomical spring equinox) as long as the equinox still occurred that same lunar day. Also, a 2<sup>nd</sup> 6<sup>th</sup> month was inserted based upon the rule that the autumn equinox had to occur prior to the 10<sup>th</sup> lunar day, thus ensuring the 10<sup>th</sup> day (Atonement) to be in the autumn. This reconstruction demonstrates that: **"Whatever the reasoning was behind these rules, these were the rules they used"**. It is outside of the scope of this presentation to discuss the possible astronomical reasons why they felt it was necessary to employ these rules rather than some other rules. What is important right now is to establish that these were the rules that they did use.

The net result is a 70 page historically validated reconstruction of the observed calendar for this 154 year period.

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For Location **Babylon** ( -44.420000 Lon, 32.550000 Lat)

(all times are LMT, Equinox Times are the Observed Morning at Location)

(Year dates are Astronomical, i.e. "-530" is "531 BC")

Abbreviations: EL <sup>1</sup>, Newton <sup>2</sup>, PD <sup>3</sup>

### Explanation of Headings:

	Minutes	Percent	Days	Potential
Moonset <sup>4</sup>	After	Moon	Between	Solar Eclipse
Mn/Dy Wk Time	Sunset <sup>5</sup>	Illuminated <sup>6</sup>	Months <sup>7</sup>	Lunar Eclipse <sup>8</sup>
Year -530 Spring Equinox <sup>9</sup>	jd= 1527561.75	03/28 w3	06:05,	Selucid=-220
Fall Equinox <sup>10</sup>	jd= 1527745.74	09/28 w5	05:52,	184 <sup>11</sup> days later

<sup>1</sup> Elephantine Letters. About 21 letters, written mostly in Aramaic, between officials and priests in Babylon, Jerusalem, and Elephantine Egypt. They are extremely important as they are all double dated and span 134 years. Each letter has both an observed calendar date and an Egyptian calendar date. Being double dated, and that the Egyptian calendar has a fixed 365 day year, we know the exact Julian date of each letter. Knowing the Julian date, the rules for determining the observed calendar date can then be deduced. These letters are used to verify that the rules used to determine the observed calendar remained consistent between the years 485 and 351 BC.

<sup>2</sup> "Ancient Planetary Observations And The Validity Of Ephemeris Time", by Robert R. Newton. Copyright 1976. The John Hopkins University Press, Baltimore, Maryland 21218. ISBN 0-8018-1842-7.

<sup>3</sup> "Babylonian Chronology 626 B.C. - A.D. 75", by Richard Parker and Waldo Dubberstein. Copyright 1956 by Brown University Press, Providence, Rhode Island. Library of Congress CCN 56-10735

<sup>4</sup> The local mean time the moon sets. "Mn/Dy Wk Time" is the Month/Day, Weekday, and Time. The Weekday has Sunday as day #1, and Sabbath as day #7, so w=2 is a Monday.

<sup>5</sup> The number of minutes after the sun sets that the moon will set. On 01/07 you have 47 minutes to see the crescent before the moon dips below the horizon.

<sup>6</sup> The amount of the moon which is reflecting light. 100% is a full moon, 0% is a solar eclipse. Typically you need at least 1% before you can hope to see a crescent moon.

<sup>7</sup> The number of days in the previous month. Notice that 31 day months are listed because the program is calculating, not observing. The observed calendar never allows 31 day months.

<sup>8</sup> A flag: 'S' is for solar and 'L' is for lunar eclipse. Signals that an eclipse of "that" type is likely to be visible somewhere on the earth. It is not saying that an eclipse actually occurs, nor that it can be seen at the location of the table.

<sup>9</sup> The Julian Day Number, followed by the Date, Weekday, and time of the Observed Spring Equinox at the location of the table, and the year according to the Selucid Era.

<sup>10</sup> The Julian Day Number, followed by the Date, Weekday, and time of the Observed Autumn Equinox.

<sup>11</sup> The number of days after the Spring Equinox.

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Moonset		Minutes	Percent	Days	Potential
Mn/Dy	Wk Time	After	Moon	Between	Solar Eclipse
		Sunset	Illuminated	Months	Lunar Eclipse
Year -530	Spring Equinox	jd= 1527561.75	03/28	w3	06:05, Selucid=-220
	Fall Equinox	jd= 1527745.74	09/28	w5	05:52, 184 days later
->	01/05 w5	17:59, 57m	1.25	0d	SL
	02/03 w6	17:43, 16m	0.21		
->	02/04 w7	18:40, 72m	2.04	30d	
	03/05 w1	18:29, 38m	0.76		
->	03/06 w2	19:27, 96m	3.58	30d	
[ CYRUS Yr08 <sup>12</sup> ]					
1>	04/04 w3	19:19, 69m	2.03	29d	
->	05/03 w4	19:14, 47m	1.00	29d	
	06/01 w5	19:13, 27m	0.35		
->	06/02 w6	20:23, 97m	3.36	30d	L
->	07/01 w7	20:15, 76m	2.24	29d	S
->	07/30 w1	19:51, 56m	1.29	29d	

<sup>12</sup> "Babylonian Chronology 626 B.C. - A.D. 75", by Richard Parker and Waldo Dubberstein. Copyright 1956 by Brown University Press, Providence, Rhode Island. Library of Congress CCN 56-10735. Page 3, quote: **"However, the Egyptian regnal year of a given Persian king began with the Egyptian calendar year, on Thoth 1** [the Egyptians had two calendars that called its first month 'Thoth'. In one calendar Thoth slid backwards in the Julian calendar so that between -530 and -431 Thoth 1 moved from January 3 down to December 9. The other Sothic calendar had Thoth begin with the helical rising of the star Sirius, nearly always Julian July 19<sup>th</sup> ], **which during the fifth century b.c. fell four to five months before** [eight to nine months with the Sothic calendar] **Nisan, the first month of the Babylonian calendar. The reader is reminded that although the Persians used the accession year system, calling the interval between the accession of a king and the next New Year's Day 'accession year', the Egyptians called the interval between the king's accession and the next Egyptian New Year's Day "year 1". Therefore the Egyptians began any regnal year of a Persian king several months earlier than the Persians themselves did. Hence, any Egyptian document dated after Thoth 1, and before the Persian New Year's Day in spring, had a regnal year number which was higher by one than the corresponding Persian year number."**

Moonset		Minutes	Percent	Days	Potential		
Mn/Dy	Wk	Time	After Sunset	Moon Illuminated	Between Months	Solar Eclipse	Lunar Eclipse
08/28	w2	19:09,	39m	0.55			
->	08/29	w3 19:47,	78m	3.62	30d		
7>	09/27	w4 18:50,	57m	1.76	29d		
	10/26	w5 17:52,	34m	0.45			
->	10/27	w6 18:26,	69m	2.92	30d		
	11/25	w7 17:37,	42m	0.86			
->	11/26	w1 18:20,	85m	3.80	30d	L	
->	12/25	w2 17:50,	54m	1.35	29d	S	
Year	-529	Spring Equinox	jd= 1527926.75	03/28	w4 06:06,	Selucid=-219	
		Fall Equinox	jd= 1528110.74	09/28	w6 05:51,	184 days later	
	01/23	w3 17:31,	14m	0.23			
->	01/24	w4 18:27,	69m	1.98	30d		
	02/22	w5 18:13,	30m	0.59			
->	02/23	w6 19:08,	85m	2.84	30d		
[ CYRUS Yr09, CAMBYSES CO-REIGN ]							
	03/24	w7 18:53,	50m	1.15	29d	[ did not see it ]	
[ Allowed spring on 01/03 ]							
1>	03/25	w1			30d		
	04/22	w1 18:40,	20m	0.27			
->	04/23	w2 19:40,	79m	2.29	30d		
->	05/22	w3 19:35,	56m	1.08	29d	L	
	06/20	w4 19:32,	37m	0.39			
->	06/21	w5 20:36,	100m	3.37	30d	S	
[ PD: Cyrus dies near V,23,Yr09 ]							
5>	07/20	w6 20:15,	77m	2.25	29d		
[ PD: Pg1, around VI,12 is Cambyses' accession ]							
6>	08/18	w7 19:36,	55m	1.27	29d		
[ PD: 2 <sup>nd</sup> 6 <sup>th</sup> in CAMBYSES accession year ]							
[ Intercalated rather than allow autumn on 07/11 ]							
	09/16	w1 18:43,	36m	0.48			
6>	09/17	w2 19:18,	72m	3.43	30d	[ 2 <sup>nd</sup> 6 <sup>th</sup> ]	
7>	10/16	w3 18:19,	50m	1.57	29d		
	11/14	w4 17:25,	25m	0.33			
->	11/15	w5 18:07,	67m	3.02	30d	L	
->	12/14	w6 17:33,	41m	1.07	29d	S	
Year	-528	Spring Equinox	jd= 1528291.75	03/27	w5 06:06,	Selucid=-218	
		Fall Equinox	jd= 1528475.74	09/27	w7 05:51,	184 days later	
->	01/13	w1 18:14,	66m	2.00	30d		
	02/11	w2 18:03,	29m	0.60			
->	02/12	w3 19:00,	86m	2.90	30d		
->	03/12	w4 18:44,	48m	1.05	29d		
[ CAMBYSES Yr01 ]							
	04/10	w5 18:27,	14m	0.15			
1>	04/11	w6 19:22,	68m	1.68	30d		
	05/10	w7 19:10,	38m	0.47			
->	05/11	w1 20:09,	97m	2.92	30d	SL	
->	06/09	w2 20:03,	72m	1.50	29d		
	07/08	w3 19:49,	49m	0.65			
->	07/09	w4 20:40,	100m	3.62	30d		
->	08/07	w5 20:00,	71m	2.24	29d		
->	09/05	w6 19:07,	47m	1.06	29d		

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    10/04 w7 18:08,    24m  0.24
7> 10/05 w1 18:41,    59m  2.86   30d
    11/03 w2 17:46,    37m  1.21
-> 11/04 w3 18:30,    82m  5.50   30d SL
    12/02 w3 17:04,    11m  0.27
-> 12/03 w4 17:59,    66m  3.02   29d
Year  -527 Spring Equinox jd= 1528656.75  03/27 w6 06:06, Selucid=-217
      Fall Equinox  jd= 1528841.74  09/28 w2 05:52, 185 days later
-> 01/01 w5 17:44,    44m  1.30   29d
    01/30 w6 17:40,    16m  0.38
-> 01/31 w7 18:45,    80m  2.61   30d
    03/01 w1 18:34,    46m  0.94
-> 03/02 w2 19:32,   103m  3.84   30d
[  CAMBYSES Yr02  ]
    03/30 w2 18:19,    13m  0.11
1> 03/31 w3 19:15,    67m  1.64   29d
    04/29 w4 19:00,    35m  0.40
-> 04/30 w5 19:57,    92m  2.61   30d SL
-> 05/29 w6 19:47,    63m  1.08   29d
    06/27 w7 19:34,    36m  0.32
-> 06/28 w1 20:25,    87m  2.24   30d
    07/27 w2 19:51,    55m  0.97
-> 07/28 w3 20:28,    92m  3.96   30d
    08/25 w3 19:01,    28m  0.24
-> 08/26 w4 19:32,    60m  2.14   29d
    09/24 w5 18:30,    34m  0.79
7> 09/25 w6 19:00,    65m  4.21   30d
-> 10/24 w7 18:04,    44m  2.29   29d SL
    11/22 w1 17:20,    25m  0.95
-> 11/23 w2 18:16,    80m  4.98   30d
-> 12/22 w3 18:06,    71m  2.90   29d
Year  -526 Spring Equinox jd= 1529022.75  03/28 w1 06:05, Selucid=-216
      Fall Equinox  jd= 1529206.74  09/28 w3 05:52, 184 days later
-> 01/20 w4 18:06,    52m  1.35   29d
    02/18 w5 18:05,    25m  0.39
-> 02/19 w6 19:12,    91m  3.00   30d
-> 03/20 w7 19:00,    60m  1.26   29d  L
[  CAMBYSES Yr03  ]
    04/18 w1 18:48,    30m  0.29
1> 04/19 w2 19:48,    90m  2.53   30d S
-> 05/18 w3 19:39,    62m  1.05   29d
    06/16 w4 19:28,    34m  0.30
-> 06/17 w5 20:21,    87m  2.03   30d
    07/16 w6 19:50,    51m  0.72
-> 07/17 w7 20:28,    89m  3.08   30d
-> 08/15 w1 19:33,    50m  1.25   29d
    09/13 w2 18:30,    19m  0.19
[  PD:  Ululu II in 3rd year, but date is broken, not 3rd yr  ]
6> 09/14 w3 18:56,    46m  2.13   30d  L
    10/13 w4 17:52,    20m  0.68
7> 10/14 w5 18:23,    52m  3.80   30d S
    11/12 w6 17:37,    35m  1.98
-> 11/13 w7 18:28,    87m  6.71   30d
    12/11 w7 17:11,    19m  0.81
-> 12/12 w1 18:19,    87m  4.44   29d
Year  -525 Spring Equinox jd= 1529387.75  03/28 w2 06:06, Selucid=-215

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          Fall Equinox jd= 1529571.74  09/28 w4 05:51, 184 days later
-> 01/10 w2 18:23,   77m 2.57  29d
-> 02/08 w3 18:26,   55m 1.18  29d
   03/09 w4 18:23,   30m 0.32
-> 03/10 w5 19:31,   97m 3.24  30d SL
[ CAMBYSES Yr04 ]
1> 04/08 w6 19:24,   72m 1.69  29d S
   05/07 w7 19:19,   49m 0.72
-> 05/08 w1 20:24,  114m 3.67  30d
-> 06/06 w2 20:14,   86m 1.91  29d
   07/05 w3 19:51,   51m 0.68
-> 07/06 w4 20:33,   93m 3.05  30d
-> 08/04 w5 19:41,   50m 1.14  29d
   09/03 w7 19:03,   40m 1.65
-> 09/04 w1 19:27,   65m 5.03  31d L
   10/03 w2 18:21,   36m 2.44
7> 10/04 w3 18:50,   65m 6.55  30d S
   11/01 w3 17:24,   12m 0.84
-> 11/02 w4 18:01,   50m 3.80  29d
   12/01 w5 17:32,   39m 1.86
-> 12/02 w6 18:32,  100m 6.15  30d
   12/30 w6 17:23,   25m 0.65
-> 12/31 w7 18:35,   96m 3.87  29d
Year -524 Spring Equinox jd= 1529752.75  03/27 w3 06:06, Selucid=-214
          Fall Equinox jd= 1529936.74  09/27 w5 05:51, 184 days later
-> 01/29 w1 18:40,   78m 2.13  29d
   02/27 w2 18:40,   54m 0.96
-> 02/28 w3 19:51,  124m 5.14  30d SL
[ CAMBYSES Yr05 ]
   03/27 w3 18:36,   31m 0.34
1> 03/28 w4 19:48,  102m 3.43  29d
-> 04/26 w5 19:48,   85m 2.13  29d
-> 05/25 w6 19:47,   66m 1.13  29d
   06/23 w7 19:37,   40m 0.40
-> 06/24 w1 20:29,   92m 2.67  30d
-> 07/23 w2 19:47,   49m 1.03  29d
   08/22 w4 19:16,   40m 1.70
-> 08/23 w5 19:40,   65m 5.13  31d SL
   09/21 w6 18:32,   32m 2.34
7> 09/22 w7 18:58,   59m 6.11  30d
   10/21 w1 17:59,   37m 3.05
-> 10/22 w2 18:35,   73m 7.28  30d
   11/19 w2 17:15,   18m 1.09
-> 11/20 w3 18:02,   66m 4.05  29d
-> 12/19 w4 17:49,   55m 1.82  29d
Year -523 Spring Equinox jd= 1530117.75  03/27 w4 06:06, Selucid=-213
          Fall Equinox jd= 1530302.74  09/28 w7 05:52, 185 days later
   01/17 w5 17:47,   34m 0.51
-> 01/18 w6 18:55,  102m 3.45  30d
-> 02/16 w7 18:54,   76m 1.86  29d SL
[ PD: Addaru II in Cambyses' 5th year ]
   03/17 w1 18:50,   52m 0.92
-> 03/18 w2 20:02,  122m 4.92  30d  [ 2nd 12th ]
[ CAMBYSES Yr06 ]
   04/15 w2 18:50,   33m 0.44
1> 04/16 w3 20:04,  108m 3.55  29d

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-> 05/15 w4 20:08, 93m 2.38 29d
-> 06/13 w5 20:02, 69m 1.31 29d
    07/12 w6 19:36, 36m 0.43
-> 07/13 w7 20:18, 78m 3.20 30d L
    08/11 w1 19:23, 37m 1.42
-> 08/12 w2 19:52, 66m 5.04 30d SL
    09/10 w3 18:46, 32m 2.44
-> 09/11 w4 19:12, 59m 6.45 30d
    10/10 w5 18:11, 35m 3.22
7> 10/11 w6 18:43, 68m 7.43 30d
    11/08 w6 17:20, 15m 1.07
-> 11/09 w7 18:00, 56m 3.79 29d
-> 12/08 w1 17:33, 41m 1.36 29d
Year -522 Spring Equinox jd= 1530483.75 03/28 w6 06:05, Selucid=-212
      Fall Equinox jd= 1530667.74 09/28 w1 05:52, 184 days later
    01/06 w2 17:19, 16m 0.16
-> 01/07 w3 18:19, 75m 1.98 30d L
    02/05 w4 18:12, 44m 0.59
-> 02/06 w5 19:14, 105m 3.47 30d S
-> 03/07 w6 19:08, 75m 1.93 29d
[ CAMBYSES Yr07 ]
1> 04/05 w7 19:04, 54m 1.01 29d
    05/04 w1 19:05, 37m 0.47
-> 05/05 w2 20:19, 110m 3.49 30d
-> 06/03 w3 20:16, 89m 2.32 29d
[ Newton: Pg 131, Confirms 07/16/-522 lunar eclipse
was IV,14; and matches
Ptolomy confirms same eclipse as Phamenoth(7) 17 ]
4> 07/02 w4 19:55, 56m 1.27 29d L
    07/31 w5 19:14, 21m 0.46
-> 08/01 w6 19:52, 58m 3.55 30d S
[ Newton: Pg 144 Confirms 09/13/-522 was VI,13 ]
    08/30 w7 18:53, 25m 1.79
6> 08/31 w1 19:23, 56m 5.93 30d
[ Newton: Pg 714 Confirms 10/13/-522 was VII,13 ]
    09/29 w2 18:23, 32m 3.12
7> 09/30 w3 18:56, 67m 7.70 30d
    10/28 w3 17:29, 14m 1.09
-> 10/29 w4 18:08, 54m 4.02 29d
-> 11/27 w5 17:34, 40m 1.43 29d
[ Newton: Pg 139 Confirms 01/10/-521 lunar eclipse was X,14 ]
    12/26 w6 17:12, 16m 0.14
-> 12/27 w7 18:08, 71m 1.82 30d L
Year -521 Spring Equinox jd= 1530848.75 03/28 w7 06:06, Selucid=-211
      Fall Equinox jd= 1531032.74 09/28 w2 05:52, 184 days later
    01/25 w1 17:55, 36m 0.37
-> 01/26 w2 18:51, 91m 2.56 30d
[ Newton: Pg 139 Confirms 03/04/-521 was XII,7 ]
    02/24 w3 18:37, 53m 0.97
-> 02/25 w4 19:35, 110m 3.99 30d
[ CAMBYSES Yr08 ]
[ Allowed spring on 01/02 ]
    03/25 w4 18:25, 21m 0.29
1> 03/26 w5 19:25, 81m 2.23 29d
-> 04/24 w6 19:21, 59m 1.10 29d

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    05/23 w7 19:18,    38m  0.40
-> 05/24 w1 20:24,   104m  3.31   30d
-> 06/22 w2 20:08,    71m  2.15   29d SL
[ Newton: Pg 144 Confirms 08/02/-521 was V,12 ]
    07/21 w3 19:33,    35m  1.20
5> 07/22 w4 20:14,    77m  5.52   30d S
6> 08/20 w5 19:21,    43m  3.67   29d
[ PD: Darius Accession Year, note Pohl was correct ]
[ Newton: Pg 712 Confirms 2nd 6th as 09/23/-521 was VI,4 ]
[ Intercalated rather than allow autumn on 07/09 ]
    09/18 w6 18:25,    20m  1.94
6> 09/19 w7 19:01,    57m  6.42   30d   [ 2nd 6th ]
7> 10/18 w1 18:12,    45m  3.49   29d
    11/16 w2 17:34,    34m  1.27
-> 11/17 w3 18:24,    86m  4.72   30d
    12/15 w3 17:08,    16m  0.12
-> 12/16 w4 18:03,    71m  1.92   29d SL
Year -520 Spring Equinox jd= 1531213.75  03/27 w1 06:06, Selucid=-210
      Fall Equinox  jd= 1531397.74  09/27 w3 05:51, 184 days later
    01/14 w5 17:48,    39m  0.42
-> 01/15 w6 18:43,    94m  2.63   30d
    02/13 w7 18:27,    52m  0.88
-> 02/14 w1 19:20,   104m  3.52   30d
-> 03/14 w2 19:03,    66m  1.54   29d
[ DARIUS I Yr01 ]
    04/12 w3 18:49,    34m  0.45
1> 04/13 w4 19:47,    92m  2.66   30d
-> 05/12 w5 19:38,    65m  1.25   29d
    06/10 w6 19:25,    34m  0.42
-> 06/11 w7 20:20,    88m  3.30   30d SL
-> 07/10 w1 19:50,    50m  2.11   29d
    08/08 w2 19:07,    18m  1.18
-> 08/09 w3 19:45,    58m  5.28   30d
    09/07 w4 18:55,    37m  3.47
-> 09/08 w5 19:34,    77m  9.38   30d
    10/06 w5 18:05,    25m  1.75
7> 10/07 w6 18:49,    70m  6.35   29d
    11/04 w6 17:23,    15m  0.48
-> 11/05 w7 18:14,    67m  3.52   29d
-> 12/04 w1 17:50,    58m  1.41   29d SL
Year -519 Spring Equinox jd= 1531578.75  03/27 w2 06:06, Selucid=-209
      Fall Equinox  jd= 1531763.74  09/28 w5 05:52, 185 days later
    01/02 w2 17:34,    33m  0.30
-> 01/03 w3 18:34,    92m  2.56   30d
    02/01 w4 18:19,    53m  0.89
-> 02/02 w5 19:14,   108m  3.65   30d
-> 03/03 w6 18:56,    66m  1.51   29d
[ DARIUS I Yr02 ]
    04/01 w7 18:37,    29m  0.35
1> 04/02 w1 19:31,    82m  2.23   30d
    05/01 w2 19:15,    49m  0.73
-> 05/02 w3 20:09,   102m  3.40   30d L
-> 05/31 w4 19:51,    65m  1.70   29d S
    06/29 w5 19:25,    26m  0.70
-> 06/30 w6 20:10,    71m  3.64   30d
    07/29 w7 19:30,    35m  2.22

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-> 07/30 w1 20:08, 74m 6.84 30d
    08/27 w1 18:43, 12m 1.10
-> 08/28 w2 19:21, 51m 4.86 29d
7> 09/26 w3 18:35, 41m 2.97 29d
    10/25 w4 17:54, 35m 1.35
-> 10/26 w5 18:45, 88m 5.83 30d L
    11/23 w5 17:22, 27m 0.32
-> 11/24 w6 18:22, 87m 3.36 29d S
-> 12/23 w7 18:07, 72m 1.54 29d
Year -518 Spring Equinox jd= 1531944.75 03/28 w4 06:05, Selucid=-208
      Fall Equinox jd= 1532128.74 09/28 w6 05:52, 184 days later
    01/21 w1 17:56, 40m 0.50
-> 01/22 w2 18:58, 102m 3.14 30d
-> 02/20 w3 18:44, 62m 1.30 29d
[ DARIUS I Yr03 ]
[ Intercalated not allowing spring on 01/06 ]
    03/21 w4 18:27, 26m 0.28
-> 03/22 w5 19:23, 81m 2.18 30d
    04/20 w6 19:04, 45m 0.67
1> 04/21 w7 19:58, 98m 3.23 30d L
-> 05/20 w1 19:38, 59m 1.40 29d S
    06/18 w2 19:13, 18m 0.42
-> 06/19 w3 19:59, 63m 2.56 30d
    07/18 w4 19:22, 23m 1.15
-> 07/19 w5 20:00, 62m 4.24 30d
    08/17 w6 19:14, 33m 2.36
-> 08/18 w7 19:50, 70m 6.72 30d
    09/15 w7 18:25, 17m 0.95
[ OPAR: PD: Ullul II, Yr 3 did not occur ]
[ This is the only OPAR in this reconstruction, and may be
reconciled as the 11th year, -510. The artifact reference is
Kruckmann NBRVT, No. 165 ]
-> 09/16 w1 19:03, 56m 4.39 29d
7> 10/15 w2 18:21, 51m 2.45 29d L
-> 11/13 w3 17:48, 47m 1.04 29d S
    12/12 w4 17:25, 33m 0.29
-> 12/13 w5 18:30, 97m 3.11 30d
Year -517 Spring Equinox jd= 1532309.75 03/28 w5 06:06, Selucid=-207
      Fall Equinox jd= 1532493.74 09/28 w7 05:52, 184 days later
-> 01/11 w6 18:20, 73m 1.53 29d
    02/09 w7 18:11, 39m 0.52
-> 02/10 w1 19:17, 104m 3.44 30d
-> 03/11 w2 19:03, 68m 1.58 29d
[ DARIUS I Yr04 ]
    04/09 w3 18:49, 36m 0.45
1> 04/10 w4 19:47, 94m 3.03 30d SL
-> 05/09 w5 19:29, 58m 1.34 29d
    06/07 w6 19:07, 18m 0.41
-> 06/08 w7 19:56, 66m 2.46 30d
    07/07 w1 19:23, 24m 0.98
-> 07/08 w2 20:04, 64m 3.65 30d
    08/06 w3 19:19, 29m 1.64
-> 08/07 w4 19:54, 64m 4.98 30d
-> 09/05 w5 19:04, 43m 2.56 29d
    10/04 w6 18:14, 30m 0.91

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7> 10/05 w7 18:53, 70m 4.17 30d SL
    11/02 w7 17:29, 19m 0.12
-> 11/03 w1 18:14, 65m 2.20 29d
    12/02 w2 17:46, 54m 0.91
-> 12/03 w3 18:46, 113m 4.63 30d
Year -516 Spring Equinox jd= 1532674.75 03/27 w6 06:06, Selucid=-206
      Fall Equinox jd= 1532858.74 09/27 w1 05:51, 184 days later
    12/31 w3 17:29, 30m 0.28
-> 01/01 w4 18:35, 96m 2.73 29d
-> 01/30 w5 18:28, 66m 1.30 29d
    02/28 w6 18:21, 34m 0.39
-> 02/29 w7 19:29, 101m 3.46 30d
[ DARIUS I Yr05 ]
1> 03/29 w1 19:18, 72m 1.84 29d SL
    04/27 w2 19:06, 43m 0.80
-> 04/28 w3 20:07, 103m 4.05 30d
    05/26 w3 18:53, 10m 0.27
-> 05/27 w4 19:49, 66m 2.23 29d
    06/25 w5 19:24, 26m 0.92
-> 06/26 w6 20:10, 72m 3.65 30d
    07/25 w7 19:31, 34m 1.60
-> 07/26 w1 20:07, 71m 4.83 30d
-> 08/24 w2 19:17, 44m 2.23 29d
    09/22 w3 18:25, 26m 0.58
7> 09/23 w4 18:57, 60m 3.05 30d SL
-> 10/22 w5 18:09, 47m 1.15 29d
    11/20 w6 17:26, 30m 0.26
-> 11/21 w7 18:12, 76m 2.21 30d
    12/20 w1 17:48, 54m 0.83
-> 12/21 w2 18:48, 114m 4.12 30d
Year -515 Spring Equinox jd= 1533039.75 03/27 w7 06:06, Selucid=-205
      Fall Equinox jd= 1533224.74 09/28 w3 05:52, 185 days later
-> 01/19 w3 18:40, 86m 2.26 29d
    02/17 w4 18:34, 55m 0.99
-> 02/18 w5 19:43, 123m 5.14 30d L
    03/18 w5 18:28, 28m 0.30
-> 03/19 w6 19:37, 97m 3.40 29d S
[ DARIUS I Yr06 ]
1> 04/17 w7 19:30, 72m 2.12 29d
-> 05/16 w1 19:21, 45m 1.17 29d
    06/14 w2 19:09, 15m 0.48
-> 06/15 w3 20:05, 72m 3.01 30d
    07/14 w4 19:36, 37m 1.37
-> 07/15 w5 20:20, 81m 4.79 30d
    08/12 w5 18:57, 12m 0.27
-> 08/13 w6 19:34, 50m 2.29 29d L
    09/11 w7 18:43, 30m 0.63
-> 09/12 w1 19:15, 63m 3.10 30d S
7> 10/11 w2 18:20, 45m 1.06 29d
-> 11/10 w4 18:06, 63m 1.57 30d
    12/09 w5 17:28, 36m 0.36
-> 12/10 w6 18:15, 83m 2.31 30d
Year -514 Spring Equinox jd= 1533405.75 03/28 w2 06:05, Selucid=-204
      Fall Equinox jd= 1533589.74 09/28 w4 05:52, 184 days later
    01/08 w7 17:55, 51m 0.73
-> 01/09 w1 18:55, 109m 3.76 30d

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-> 02/07 w2 18:47, 77m 1.94 29d SL
    03/08 w3 18:41, 48m 0.88
-> 03/09 w4 19:48, 114m 4.77 30d S
[ DARIUS I Yr07 ]
    04/06 w4 18:35, 24m 0.37
1> 04/07 w5 19:44, 93m 3.38 29d
-> 05/06 w6 19:40, 71m 2.28 29d
-> 06/04 w7 19:34, 47m 1.33 29d
    07/03 w1 19:21, 22m 0.52
-> 07/04 w2 20:17, 77m 3.53 30d
-> 08/02 w3 19:42, 49m 1.76 29d L
    08/31 w4 18:56, 30m 0.51
-> 09/01 w5 19:32, 66m 3.11 30d S
7> 09/30 w6 18:36, 47m 1.15 29d
    10/29 w7 17:41, 27m 0.23
-> 10/30 w1 18:14, 61m 1.64 30d
    11/28 w2 17:27, 33m 0.32
-> 11/29 w3 18:07, 74m 2.00 30d
    12/28 w4 17:35, 38m 0.40
-> 12/29 w5 18:26, 88m 2.55 30d
Year -513 Spring Equinox jd= 1533770.75 03/28 w3 06:06, Selucid=-203
      Fall Equinox jd= 1533954.74 09/28 w5 05:52, 184 days later
    01/27 w6 18:10, 49m 0.81
-> 01/28 w7 19:08, 106m 3.83 30d SL
    02/25 w7 17:58, 13m 0.11
-> 02/26 w1 18:59, 73m 2.03 29d
[ DARIUS I Yr08 ]
[ Note spring exactly On 01/01 ]
1> 03/27 w2 18:51, 46m 1.00 29d
    04/25 w3 18:45, 23m 0.45
-> 04/26 w4 19:53, 91m 3.33 30d
-> 05/25 w5 19:52, 70m 2.23 29d
-> 06/23 w6 19:46, 49m 1.27 29d
    07/22 w7 19:27, 30m 0.49
-> 07/23 w1 20:19, 82m 3.79 30d SL
-> 08/21 w2 19:37, 60m 2.09 29d
[ Allowed autumn on 07/08 ]
    09/19 w3 18:45, 42m 0.80
7> 09/20 w4 19:20, 77m 3.84 30d
-> 10/19 w5 18:23, 58m 1.60 29d
    11/17 w6 17:31, 32m 0.32
-> 11/18 w7 18:08, 70m 2.13 30d
    12/17 w1 17:29, 36m 0.41
-> 12/18 w2 18:16, 82m 2.53 30d L
Year -512 Spring Equinox jd= 1534135.75 03/27 w4 06:06, Selucid=-202
      Fall Equinox jd= 1534319.74 09/27 w6 05:51, 184 days later
    01/16 w3 17:53, 42m 0.65
-> 01/17 w4 18:47, 95m 3.19 30d SL
-> 02/15 w5 18:32, 55m 1.25 29d
    03/15 w6 18:18, 21m 0.36
-> 03/16 w7 19:16, 78m 2.47 30d
[ DARIUS I Yr09 ]
1> 04/14 w1 19:06, 50m 1.21 29d
    05/13 w2 19:00, 26m 0.46
-> 05/14 w3 20:07, 92m 3.26 30d
-> 06/12 w4 20:04, 72m 2.09 29d L

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-> 07/11 w5 19:52, 52m 1.18 29d SL
    08/09 w6 19:24, 37m 0.51
-> 08/10 w7 20:10, 83m 3.85 30d
-> 09/08 w1 19:20, 63m 2.22 29d
    10/07 w2 18:24, 45m 0.88
7> 10/08 w3 18:59, 81m 4.17 30d
-> 11/06 w4 18:06, 60m 1.77 29d
    12/05 w5 17:22, 30m 0.32
-> 12/06 w6 18:08, 76m 2.57 30d L
Year -511 Spring Equinox jd= 1534500.75 03/27 w5 06:06, Selucid=-201
      Fall Equinox jd= 1534684.74 09/27 w7 05:51, 184 days later
    01/04 w7 17:42, 40m 0.69
-> 01/05 w1 18:36, 94m 3.35 30d S
-> 02/03 w2 18:20, 53m 1.24 29d
    03/04 w3 18:05, 15m 0.30
-> 03/05 w4 19:00, 68m 1.97 30d
[ DARIUS I Yr10 ]
    04/03 w5 18:43, 34m 0.67
1> 04/04 w6 19:39, 89m 3.10 30d
-> 05/03 w7 19:29, 61m 1.48 29d
    06/01 w1 19:22, 36m 0.51
-> 06/02 w2 20:26, 99m 3.38 30d L
-> 07/01 w3 20:15, 76m 2.13 29d S
-> 07/30 w4 19:50, 56m 1.20 29d
    08/28 w5 19:08, 39m 0.53
-> 08/29 w6 19:47, 78m 3.65 30d
7> 09/27 w7 18:51, 59m 2.00 29d
    10/26 w1 17:55, 38m 0.67
-> 10/27 w2 18:34, 78m 4.01 30d
-> 11/25 w3 17:50, 56m 1.74 29d L
    12/24 w4 17:21, 25m 0.41
-> 12/25 w5 18:19, 83m 3.08 30d S
Year -510 Spring Equinox jd= 1534865.75 03/27 w6 06:07, Selucid=-200
      Fall Equinox jd= 1535050.74 09/28 w2 05:52, 185 days later
-> 01/23 w6 18:06, 49m 1.18 29d
    02/21 w7 17:55, 13m 0.29
-> 02/22 w1 18:52, 69m 2.00 30d
[ Note close call, spring on 03 ]
    03/23 w2 18:35, 33m 0.60
-> 03/24 w3 19:29, 86m 2.85 30d
[ DARIUS I Yr11 ]
1> 04/22 w4 19:13, 53m 1.08 29d
    05/21 w5 19:01, 22m 0.17
-> 05/22 w6 19:59, 80m 2.04 30d SL
    06/20 w7 19:50, 54m 0.85
-> 06/21 w1 20:45, 109m 3.93 30d
    07/19 w1 19:30, 32m 0.26
-> 07/20 w2 20:18, 80m 2.41 29d
-> 08/18 w3 19:35, 55m 1.25 29d
[ Note close call, if allowed spring on 03 would make
  this 2nd 6th month, but no record of it unless -518 opar
  is really 11th year instead of 3rd ]
    09/16 w4 18:41, 34m 0.43
-> 09/17 w5 19:14, 68m 3.18 30d
7> 10/16 w6 18:16, 47m 1.52 29d
    11/14 w7 17:24, 24m 0.39

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-> 11/15 w1 18:10, 71m 3.57 30d SL
-> 12/14 w2 17:44, 51m 1.67 29d
Year -509 Spring Equinox jd= 1535231.75 03/28 w1 06:06, Selucid=-199
      Fall Equinox jd= 1535415.74 09/28 w3 05:52, 184 days later
  01/12 w3 17:33, 25m 0.57
-> 01/13 w4 18:41, 93m 3.56 30d
-> 02/11 w5 18:35, 61m 1.63 29d
  03/12 w6 18:24, 28m 0.47
-> 03/13 w7 19:22, 86m 2.77 30d
[ DARIUS I Yr12 ]
1> 04/11 w1 19:06, 52m 1.02 29d
  05/10 w2 18:52, 21m 0.14
-> 05/11 w3 19:50, 77m 1.85 30d SL
  06/09 w4 19:38, 48m 0.61
-> 06/10 w5 20:34, 103m 3.09 30d
-> 07/09 w6 20:10, 70m 1.48 29d
  08/07 w7 19:30, 41m 0.50
-> 08/08 w1 20:05, 76m 2.78 30d
-> 09/06 w2 19:08, 48m 1.22 29d
  10/05 w3 18:05, 23m 0.24
7> 10/06 w4 18:36, 54m 2.64 30d
  11/04 w5 17:41, 33m 1.10
-> 11/05 w6 18:25, 77m 5.21 30d SL
-> 12/04 w7 17:58, 66m 3.11 29d
Year -508 Spring Equinox jd= 1535596.75 03/27 w2 06:06, Selucid=-198
      Fall Equinox jd= 1535780.74 09/27 w4 05:51, 184 days later
-> 01/02 w1 17:51, 51m 1.58 29d
  01/31 w2 17:52, 28m 0.60
-> 02/01 w3 19:05, 100m 3.77 30d
-> 03/01 w4 18:59, 70m 1.88 29d
[ DARIUS I Yr13 ]
  03/30 w5 18:48, 41m 0.63
1> 03/31 w6 19:50, 102m 3.58 30d L
-> 04/29 w7 19:39, 74m 1.71 29d S
  05/28 w1 19:31, 47m 0.59
-> 05/29 w2 20:29, 105m 3.06 30d
-> 06/27 w3 20:10, 71m 1.38 29d
  07/26 w4 19:34, 38m 0.39
-> 07/27 w5 20:09, 74m 2.21 30d
  08/25 w6 19:12, 39m 0.68
-> 08/26 w7 19:38, 67m 3.15 30d
  09/24 w1 18:33, 37m 1.22
7> 09/25 w2 18:59, 65m 4.59 30d L
-> 10/24 w3 18:02, 43m 2.37 29d S
  11/22 w4 17:18, 22m 0.95
-> 11/23 w5 18:10, 75m 4.62 30d
-> 12/22 w6 18:03, 68m 2.74 29d
Year -507 Spring Equinox jd= 1535961.75 03/27 w3 06:06, Selucid=-197
      Fall Equinox jd= 1536145.74 09/27 w5 05:51, 184 days later
-> 01/20 w7 18:08, 53m 1.36 29d
  02/18 w1 18:10, 30m 0.45
-> 02/19 w2 19:23, 102m 3.64 30d
-> 03/20 w3 19:17, 76m 1.99 29d L
[ DARIUS I Yr14 ]
  04/18 w4 19:11, 53m 0.89
1> 04/19 w5 20:19, 121m 4.46 30d S

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    05/17 w5 19:08,    32m  0.30
-> 05/18 w6 20:15,    98m  2.62  29d
-> 06/16 w7 20:04,    70m  1.24  29d
    07/15 w1 19:37,    38m  0.36
-> 07/16 w2 20:17,    78m  2.20  30d
    08/14 w3 19:22,    39m  0.64
-> 08/15 w4 19:49,    66m  2.97  30d
    09/13 w5 18:42,    31m  0.95
-> 09/14 w6 19:05,    56m  3.74  30d  L
    10/13 w7 18:00,    28m  1.48
7> 10/14 w1 18:29,    58m  4.90  30d  S
-> 11/12 w2 17:42,    41m  2.47  29d
    12/11 w3 17:16,    24m  0.96
-> 12/12 w4 18:18,    86m  4.29  30d
Year  -506 Spring Equinox jd= 1536326.75  03/27 w4 06:07, Selucid=-196
      Fall Equinox  jd= 1536511.74  09/28 w7 05:52, 185 days later
-> 01/10 w5 18:21,    74m  2.37  29d
-> 02/08 w6 18:24,    53m  1.05  29d
    03/09 w7 18:23,    29m  0.30
-> 03/10 w1 19:34,   100m  3.39  30d  SL
[ DARIUS I Yr15 ]
1> 04/08 w2 19:33,    81m  2.11  29d
-> 05/07 w3 19:35,    65m  1.21  29d
    06/05 w4 19:36,    47m  0.57
-> 06/06 w5 20:40,   111m  3.43  30d
-> 07/05 w6 20:14,    74m  1.78  29d
    08/03 w7 19:28,    36m  0.52
-> 08/04 w1 19:59,    68m  2.95  30d
    09/02 w2 18:54,    30m  1.00
-> 09/03 w3 19:18,    55m  3.88  30d  SL
    10/02 w4 18:11,    24m  1.49
7> 10/03 w5 18:36,    51m  4.69  30d
    11/01 w6 17:40,    29m  2.03
-> 11/02 w7 18:17,    67m  5.63  30d
-> 12/01 w1 17:48,    56m  2.79  29d
    12/30 w2 17:37,    39m  0.99
-> 12/31 w3 18:41,   102m  4.15  30d
Year  -505 Spring Equinox jd= 1536692.75  03/28 w6 06:06, Selucid=-195
      Fall Equinox  jd= 1536876.74  09/28 w1 05:52, 184 days later
    01/28 w3 17:34,    13m  0.13
-> 01/29 w4 18:41,    79m  2.13  29d
    02/27 w5 18:39,    52m  0.90
-> 02/28 w6 19:46,   119m  4.71  30d  SL
    03/28 w6 18:35,    29m  0.31
[ DARIUS I Yr16 ]
1> 03/29 w7 19:46,   100m  3.27  29d
-> 04/27 w1 19:50,    87m  2.22  29d
-> 05/26 w2 19:54,    72m  1.38  29d
    06/24 w3 19:47,    50m  0.63
-> 06/25 w4 20:42,   105m  3.86  30d
-> 07/24 w5 19:59,    62m  2.08  29d
    08/22 w6 19:01,    25m  0.71
-> 08/23 w7 19:29,    54m  3.68  30d  SL
[ Note allowed autumn on 07/06 ]
    09/21 w1 18:23,    22m  1.52
7> 09/22 w2 18:50,    50m  4.96  30d

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10/21 w3 17:50, 27m 2.19  
 -> 10/22 w4 18:24, 62m 5.85 30d  
 -> 11/20 w5 17:44, 48m 2.67 29d  
 12/19 w6 17:21, 28m 0.73  
 -> 12/20 w7 18:18, 84m 3.24 30d  
 Year -504 Spring Equinox jd= 1537057.75 03/27 w7 06:06, Selucid=-194  
           Fall Equinox jd= 1537241.74 09/27 w2 05:51, 184 days later  
 -> 01/18 w1 18:10, 57m 1.14 29d L  
 02/16 w2 18:01, 24m 0.17  
 -> 02/17 w3 19:02, 83m 2.26 30d S  
**[ PD: Addaru II in DARIUS I Yr16 ]**  
 -> 03/17 w4 18:54, 55m 1.05 29d [ 2<sup>nd</sup> 12<sup>th</sup> ]  
**[ DARIUS I Yr17 ]**  
 04/15 w5 18:50, 33m 0.45  
 1> 04/16 w6 20:01, 103m 3.29 30d  
 -> 05/15 w7 20:05, 90m 2.21 29d  
 -> 06/13 w1 20:01, 68m 1.30 29d  
 07/12 w2 19:36, 37m 0.53  
 -> 07/13 w3 20:22, 82m 3.89 30d L  
 -> 08/11 w4 19:28, 43m 2.22 29d S  
 09/09 w5 18:28, 13m 0.91  
 -> 09/10 w6 18:58, 44m 4.29 30d  
 10/09 w7 17:59, 22m 2.00  
 7> 10/10 w1 18:33, 58m 5.94 30d  
 -> 11/08 w2 17:49, 45m 2.80 29d  
 12/07 w3 17:19, 28m 0.78  
 -> 12/08 w4 18:13, 81m 3.37 30d  
 Year -503 Spring Equinox jd= 1537422.75 03/27 w1 06:06, Selucid=-193  
           Fall Equinox jd= 1537606.74 09/27 w3 05:51, 184 days later  
 -> 01/06 w5 17:59, 55m 1.07 29d L  
 02/04 w6 17:46, 18m 0.09  
 -> 02/05 w7 18:42, 73m 1.66 30d  
 03/06 w1 18:27, 36m 0.48  
 -> 03/07 w2 19:24, 91m 2.83 30d  
**[ DARIUS I Yr18 ]**  
 1> 04/05 w3 19:14, 64m 1.39 29d  
 05/04 w4 19:10, 42m 0.56  
 -> 05/05 w5 20:16, 108m 3.35 30d  
 -> 06/03 w6 20:11, 83m 2.10 29d  
 -> 07/02 w7 19:50, 50m 1.14 29d SL  
 07/31 w1 19:11, 18m 0.45  
 -> 08/01 w2 19:50, 57m 3.75 30d S  
 08/30 w3 18:55, 28m 2.23  
 -> 08/31 w4 19:29, 63m 7.27 30d  
 7> 09/29 w5 18:35, 45m 4.56 29d  
 10/28 w6 17:48, 33m 2.18  
 -> 10/29 w7 18:35, 81m 6.59 30d  
 11/26 w7 17:14, 20m 0.57  
 -> 11/27 w1 18:08, 75m 3.29 29d  
 -> 12/26 w2 17:51, 55m 1.09 29d SL  
 Year -502 Spring Equinox jd= 1537787.75 03/27 w2 06:07, Selucid=-192  
           Fall Equinox jd= 1537972.74 09/28 w5 05:52, 185 days later  
 01/24 w3 17:38, 20m 0.12  
 -> 01/25 w4 18:35, 76m 1.73 30d  
 02/23 w5 18:18, 34m 0.45  
 -> 02/24 w6 19:12, 87m 2.53 30d

03/25 w7 18:55, 51m 0.95  
 [ DARIUS I Yr19 ]  
 [ **Note spring on 01/01** ]  
 1> 03/26 w1 19:50, 106m 3.67 30d  
 04/23 w1 18:41, 20m 0.22  
 -> 04/24 w2 19:39, 77m 1.82 29d  
 05/23 w3 19:29, 49m 0.67  
 -> 05/24 w4 20:27, 106m 3.57 30d  
 -> 06/22 w5 20:05, 68m 2.13 29d SL  
 07/21 w6 19:29, 31m 1.13  
 -> 07/22 w7 20:09, 71m 5.10 30d  
 6> 08/20 w1 19:19, 41m 3.53 29d  
 [ **PD: Ululu II in DARIUS I Yr19** ]  
 [ **Intercalated not allowing autumn on 07/09** ]  
 09/18 w2 18:26, 22m 2.03  
 6> 09/19 w3 19:05, 62m 6.95 30d [ 2<sup>nd</sup> 6<sup>th</sup> ]  
 7> 10/18 w4 18:23, 56m 4.34 29d  
 -> 11/16 w5 17:51, 52m 2.08 29d  
 12/15 w6 17:32, 39m 0.59  
 -> 12/16 w7 18:35, 102m 3.71 30d SL  
 Year -501 Spring Equinox jd= 1538153.75 03/28 w4 06:05, Selucid=-191  
 Fall Equinox jd= 1538337.74 09/28 w6 05:52, 184 days later  
 -> 01/14 w1 18:22, 73m 1.55 29d  
 02/12 w2 18:09, 34m 0.43  
 -> 02/13 w3 19:05, 90m 2.59 30d  
 03/14 w4 18:47, 50m 0.93  
 -> 03/15 w5 19:41, 104m 3.59 30d  
 [ DARIUS I Yr20 ]  
 1> 04/13 w6 19:24, 69m 1.53 29d  
 05/12 w7 19:08, 35m 0.36  
 -> 05/13 w1 20:02, 88m 2.49 30d L  
 -> 06/11 w2 19:41, 49m 1.03 29d SL  
 07/10 w3 19:10, 10m 0.28  
 -> 07/11 w4 19:52, 52m 2.49 30d  
 08/09 w5 19:07, 19m 1.28  
 -> 08/10 w6 19:43, 56m 5.01 30d  
 09/08 w7 18:53, 36m 3.21  
 -> 09/09 w1 19:31, 75m 8.74 30d  
 10/07 w1 18:06, 25m 1.62  
 7> 10/08 w2 18:50, 72m 6.20 29d  
 [ **Ptolomy: eclipse on Yr 20 Epiphi(11) 28, is 11/19/-501** ]  
 11/05 w2 17:26, 18m 0.47  
 -> 11/06 w3 18:20, 73m 3.80 29d L  
 -> 12/05 w4 18:01, 69m 1.88 29d S  
 Year -500 Spring Equinox jd= 1538518.75 03/27 w5 06:06, Selucid=-190  
 Fall Equinox jd= 1538702.74 09/27 w7 05:51, 184 days later  
 01/03 w5 17:50, 49m 0.67  
 -> 01/04 w6 18:57, 115m 4.03 30d  
 -> 02/02 w7 18:46, 80m 1.99 29d  
 03/02 w1 18:32, 43m 0.70  
 -> 03/03 w2 19:31, 101m 3.41 30d  
 [ DARIUS I Yr21 ]  
 1> 04/01 w3 19:14, 66m 1.44 29d  
 04/30 w4 18:57, 32m 0.31  
 -> 05/01 w5 19:51, 85m 2.38 30d L



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    05/30 w6 19:30, 45m 0.86
-> 05/31 w7 20:18, 93m 3.62 30d S
-> 06/29 w1 19:45, 46m 1.77 29d
-> 07/29 w3 19:39, 45m 3.08 30d
    08/27 w4 18:49, 18m 1.43
-> 08/28 w5 19:23, 54m 4.99 30d
7> 09/26 w6 18:35, 42m 2.85 29d
    10/25 w7 17:54, 36m 1.24
-> 10/26 w1 18:44, 87m 5.39 30d L
    11/23 w1 17:23, 28m 0.29
-> 11/24 w2 18:22, 88m 3.27 29d S
-> 12/23 w3 18:11, 75m 1.69 29d
Year -499 Spring Equinox jd= 1538883.75 03/27 w6 06:06, Selucid=-189
      Fall Equinox jd= 1539067.74 09/27 w1 05:51, 184 days later
    01/21 w4 18:03, 48m 0.69
-> 01/22 w5 19:13, 116m 4.09 30d
-> 02/20 w6 19:03, 81m 2.17 29d
[ PD: Addaru II, DARIUS I Yr22, Egyptian Dating ]
[ Intercalated not allowing spring on 01/05 ]
    03/21 w7 18:51, 50m 0.84
-> 03/22 w1 19:53, 111m 4.12 30d [ 2nd 12th ]
[ DARIUS I Yr22 ]
    04/19 w1 18:39, 20m 0.12
1> 04/20 w2 19:38, 78m 2.09 29d SL
    05/19 w3 19:20, 42m 0.78
-> 05/20 w4 20:13, 94m 3.60 30d
-> 06/18 w5 19:44, 49m 1.73 29d
-> 07/18 w7 19:45, 47m 2.71 30d
    08/16 w1 18:57, 15m 1.01
-> 08/17 w2 19:30, 49m 3.75 30d
    09/15 w3 18:38, 30m 1.60
-> 09/16 w4 19:12, 65m 5.16 30d
    10/14 w4 17:48, 17m 0.32
7> 10/15 w5 18:27, 57m 2.73 29d SL
-> 11/13 w6 17:51, 50m 1.11 29d
    12/12 w7 17:26, 34m 0.31
-> 12/13 w1 18:27, 95m 2.90 30d
Year -498 Spring Equinox jd= 1539248.75 03/27 w7 06:06, Selucid=-188
      Fall Equinox jd= 1539433.74 09/28 w3 05:52, 185 days later
-> 01/11 w2 18:18, 71m 1.46 29d
    02/09 w3 18:12, 40m 0.53
-> 02/10 w4 19:22, 109m 3.80 30d
-> 03/11 w5 19:14, 79m 2.12 29d
[ DARIUS I Yr23 ]
    04/09 w6 19:05, 52m 0.96
1> 04/10 w7 20:10, 116m 4.77 30d SL
    05/08 w7 18:55, 24m 0.32
-> 05/09 w1 19:56, 85m 2.87 29d
-> 06/07 w2 19:37, 47m 1.45 29d
-> 07/07 w4 19:53, 53m 2.70 30d
    08/05 w5 19:10, 19m 0.99
-> 08/06 w6 19:45, 55m 3.71 30d
    09/04 w7 18:53, 31m 1.44
-> 09/05 w1 19:25, 64m 4.60 30d
    10/03 w1 18:00, 15m 0.19
7> 10/04 w2 18:33, 49m 2.01 29d SL

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11/02 w3 17:45, 35m 0.52
-> 11/03 w4 18:26, 77m 2.99 30d
-> 12/02 w5 17:54, 62m 1.23 29d
Year -497 Spring Equinox jd= 1539614.75 03/28 w2 06:05, Selucid=-187
      Fall Equinox jd= 1539798.74 09/28 w4 05:52, 184 days later
12/31 w6 17:33, 34m 0.33
-> 01/01 w7 18:33, 94m 2.61 30d
-> 01/30 w1 18:25, 62m 1.17 29d
02/28 w2 18:19, 32m 0.32
-> 03/01 w3 19:27, 99m 3.38 30d L
[ DARIUS I Yr24 ]
1> 03/30 w4 19:21, 75m 2.05 29d S
-> 04/28 w5 19:15, 51m 1.15 29d
05/27 w6 19:07, 24m 0.56
-> 05/28 w7 20:09, 86m 3.58 30d
-> 06/26 w1 19:48, 50m 2.02 29d
07/25 w2 19:16, 19m 0.76
-> 07/26 w3 19:58, 62m 3.58 30d
08/24 w4 19:10, 36m 1.46
-> 08/25 w5 19:44, 71m 4.81 30d L
09/22 w5 18:18, 18m 0.22
7> 09/23 w6 18:50, 52m 2.11 29d S
10/22 w7 17:57, 35m 0.52
-> 10/23 w1 18:32, 71m 2.74 30d
11/21 w2 17:48, 51m 0.88
-> 11/22 w3 18:30, 94m 3.52 30d
-> 12/21 w4 18:03, 68m 1.39 29d
Year -496 Spring Equinox jd= 1539979.75 03/27 w3 06:06, Selucid=-186
      Fall Equinox jd= 1540163.74 09/27 w5 05:51, 184 days later
01/19 w5 17:44, 31m 0.27
-> 01/20 w6 18:43, 89m 2.43 30d
02/18 w7 18:34, 55m 0.99
-> 02/19 w1 19:38, 118m 4.73 30d L
[ PD: Addaru II, DARIUS I Yr24 ]
[ Intercalated not allowing spring on 01/08 ]
03/18 w1 18:26, 26m 0.28
-> 03/19 w2 19:33, 92m 3.14 29d S [ 2nd 12th ]
[ DARIUS I Yr25 ]
1> 04/17 w3 19:28, 70m 2.07 29d
-> 05/16 w4 19:24, 48m 1.28 29d
06/14 w5 19:17, 23m 0.64
-> 06/15 w6 20:19, 85m 3.94 30d
-> 07/14 w7 19:54, 55m 2.31 29d
08/12 w1 19:17, 32m 0.93
-> 08/13 w2 19:57, 73m 4.32 30d L
09/10 w2 18:30, 16m 0.13
-> 09/11 w3 19:06, 53m 2.02 29d S
10/10 w4 18:12, 36m 0.57
7> 10/11 w5 18:45, 71m 2.95 30d
11/09 w6 17:55, 51m 0.96
-> 11/10 w7 18:32, 89m 3.59 30d
-> 12/09 w1 17:54, 62m 1.23 29d
Year -495 Spring Equinox jd= 1540344.75 03/27 w4 06:06, Selucid=-185
      Fall Equinox jd= 1540528.74 09/27 w6 05:51, 184 days later
01/07 w2 17:26, 22m 0.13
-> 01/08 w3 18:17, 72m 1.62 30d

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    02/06 w4 18:01,    31m  0.31
-> 02/07 w5 18:58,    87m  2.59   30d SL
-> 03/08 w6 18:47,    54m  1.14   29d
[ DARIUS I Yr26 ]
    04/06 w7 18:37,    26m  0.44
1> 04/07 w1 19:41,    89m  3.20   30d
-> 05/06 w2 19:37,    68m  2.10   29d
-> 06/04 w3 19:34,    46m  1.24   29d
    07/03 w4 19:24,    25m  0.54
-> 07/04 w5 20:24,    84m  3.93   30d
-> 08/02 w6 19:53,    61m  2.39   29d SL
-> 08/31 w7 19:09,    43m  1.09   29d
    09/29 w1 18:19,    29m  0.30
7> 09/30 w2 18:54,    66m  2.53   30d
    10/29 w3 18:01,    47m  0.86
-> 10/30 w4 18:38,    85m  3.67   30d
-> 11/28 w5 17:53,    60m  1.29   29d
    12/27 w6 17:19,    22m  0.13
-> 12/28 w7 18:08,    70m  1.63   30d L
Year  -494 Spring Equinox jd= 1540709.75  03/27 w5 06:06, Selucid=-184
      Fall Equinox  jd= 1540894.74  09/28 w1 05:52, 185 days later
    01/26 w1 17:46,    26m  0.24
-> 01/27 w2 18:40,    79m  2.18   30d SL
    02/25 w3 18:24,    39m  0.67
-> 02/26 w4 19:19,    93m  3.26   30d
[ DARIUS I Yr27 ]
[ Note allowed spring on 01/01 ]
1> 03/27 w5 19:05,    60m  1.59   29d
    04/25 w6 18:54,    32m  0.65
-> 04/26 w7 19:55,    93m  3.43   30d
-> 05/25 w1 19:51,    70m  2.11   29d
-> 06/23 w2 19:45,    48m  1.13   29d
    07/22 w3 19:28,    30m  0.44
-> 07/23 w4 20:21,    84m  3.76   30d SL
-> 08/21 w5 19:41,    64m  2.36   29d
[ Allowed autumn on 07/08 ]
    09/19 w6 18:52,    49m  1.14   29d [ did not see it ]
7> 09/20 w7
    10/18 w7 17:58,    32m  0.34
-> 10/19 w1 18:35,    70m  2.70   30d
    11/17 w2 17:47,    48m  0.91
-> 11/18 w3 18:30,    92m  4.09   30d
-> 12/17 w4 17:57,    64m  1.56   29d L
Year  -493 Spring Equinox jd= 1541075.75  03/28 w7 06:05, Selucid=-183
      Fall Equinox  jd= 1541259.74  09/28 w2 05:52, 184 days later
    01/15 w5 17:35,    24m  0.25
-> 01/16 w6 18:30,    79m  2.29   30d S
    02/14 w7 18:14,    38m  0.68
-> 02/15 w1 19:08,    91m  3.16   30d
-> 03/16 w2 18:51,    53m  1.29   29d
[ DARIUS I Yr28 ]
    04/14 w3 18:34,    19m  0.35
1> 04/15 w4 19:29,    73m  2.20   30d
    05/14 w5 19:18,    43m  0.87
-> 05/15 w6 20:17,   103m  3.84   30d
    06/12 w6 19:09,    17m  0.16

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-> 06/13 w7 20:10, 77m 2.26 29d L
-> 07/12 w1 19:54, 54m 1.18 29d S
    08/10 w2 19:24, 37m 0.49
-> 08/11 w3 20:08, 82m 3.60 30d
-> 09/09 w4 19:19, 63m 2.19 29d
    10/08 w5 18:25, 46m 0.96
7> 10/09 w6 19:02, 84m 4.75 30d
    11/06 w6 17:31, 24m 0.18
-> 11/07 w7 18:13, 67m 2.45 29d
    12/06 w1 17:34, 42m 0.79
-> 12/07 w2 18:28, 96m 4.27 30d L
Year -492 Spring Equinox jd= 1541440.75 03/27 w1 06:06, Selucid=-182
      Fall Equinox jd= 1541624.74 09/27 w3 05:51, 184 days later
-> 01/05 w3 18:10, 67m 1.91 29d S
    02/03 w4 17:58, 32m 0.58
-> 02/04 w5 18:58, 91m 3.18 30d
-> 03/04 w6 18:44, 53m 1.29 29d
[ DARIUS I Yr29 ]
    04/02 w7 18:27, 18m 0.32
1> 04/03 w1 19:21, 71m 2.04 30d
    05/02 w2 19:05, 38m 0.62
-> 05/03 w3 20:01, 93m 3.04 30d
-> 06/01 w4 19:49, 63m 1.33 29d SL
    06/30 w5 19:35, 36m 0.38
-> 07/01 w6 20:27, 88m 2.79 30d
-> 07/30 w7 19:55, 62m 1.46 29d
    08/28 w1 19:10, 40m 0.59
-> 08/29 w2 19:44, 76m 3.44 30d
7> 09/27 w3 18:48, 56m 1.83 29d
    10/26 w4 17:52, 35m 0.60
-> 10/27 w5 18:31, 75m 4.02 30d
-> 11/25 w6 17:52, 58m 2.02 29d SL
    12/24 w7 17:29, 33m 0.71
-> 12/25 w1 18:36, 99m 4.33 30d
Year -491 Spring Equinox jd= 1541805.75 03/27 w2 06:06, Selucid=-181
      Fall Equinox jd= 1541989.74 09/27 w4 05:51, 184 days later
-> 01/23 w2 18:30, 73m 2.25 29d
    02/21 w3 18:24, 41m 0.90
-> 02/22 w4 19:26, 103m 4.01 30d
[ Intercalated not allowing spring on 01/04 or 03 ]
-> 03/23 w5 19:12, 69m 1.88 29d
[ DARIUS I Yr30 ]
    04/21 w6 18:57, 37m 0.55
1> 04/22 w7 19:54, 93m 2.99 30d
-> 05/21 w1 19:42, 62m 1.21 29d SL
    06/19 w2 19:29, 33m 0.28
-> 06/20 w3 20:22, 85m 2.24 30d
    07/19 w4 19:53, 54m 0.89
-> 07/20 w5 20:33, 94m 3.64 30d
-> 08/18 w6 19:42, 62m 1.81 29d
    09/16 w7 18:43, 37m 0.58
-> 09/17 w1 19:12, 67m 3.22 30d
7> 10/16 w2 18:12, 44m 1.44 29d
    11/14 w3 17:20, 20m 0.34
-> 11/15 w4 18:05, 66m 3.32 30d SL
-> 12/14 w5 17:42, 49m 1.68 29d

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Year -490 Spring Equinox jd= 1542170.75 03/27 w3 06:06, Selucid=-180  
 Fall Equinox jd= 1542355.74 09/28 w6 05:52, 185 days later

01/12 w6 17:36, 28m 0.68  
 -> 01/13 w7 18:52, 103m 4.23 30d  
 -> 02/11 w1 18:51, 77m 2.37 29d  
 -> 03/12 w2 18:45, 49m 1.02 29d

[ DARIUS I Yr31 ]

[ Ptolomy: eclipse on Tybi(5) 3, is 04/25/-490 ]

04/10 w3 18:36, 23m 0.22  
 1> 04/11 w4 19:39, 85m 2.48 30d L  
 -> 05/10 w5 19:30, 58m 1.03 29d S  
 06/08 w6 19:22, 32m 0.26  
 -> 06/09 w7 20:20, 89m 2.22 30d  
 07/08 w1 19:56, 56m 0.86  
 -> 07/09 w2 20:39, 99m 3.44 30d  
 -> 08/07 w3 19:50, 61m 1.48 29d  
 09/05 w4 18:50, 30m 0.32  
 -> 09/06 w5 19:16, 56m 2.14 30d  
 10/05 w6 18:10, 28m 0.56  
 7> 10/06 w7 18:37, 56m 3.16 30d L  
 11/04 w1 17:41, 33m 1.28  
 -> 11/05 w2 18:21, 73m 5.05 30d S  
 -> 12/04 w3 17:54, 62m 2.93 29d

Year -489 Spring Equinox jd= 1542536.75 03/28 w5 06:05, Selucid=-179  
 Fall Equinox jd= 1542720.74 09/28 w7 05:52, 184 days later

-> 01/02 w4 17:48, 48m 1.48 29d  
 01/31 w5 17:52, 28m 0.57  
 -> 02/01 w6 19:08, 103m 3.88 30d  
 -> 03/02 w7 19:07, 78m 2.22 29d

[ DARIUS I Yr32 ]

1> 03/31 w1 19:02, 54m 1.04 29d L  
 04/29 w2 18:58, 33m 0.34  
 -> 04/30 w3 20:08, 103m 3.16 30d S  
 -> 05/29 w4 20:04, 80m 1.73 29d  
 06/27 w5 19:52, 54m 0.72  
 -> 06/28 w6 20:42, 103m 3.36 30d  
 -> 07/27 w7 19:59, 63m 1.48 29d  
 08/25 w1 19:02, 29m 0.30  
 -> 08/26 w2 19:28, 56m 2.07 30d  
 09/24 w3 18:20, 23m 0.45  
 7> 09/25 w4 18:43, 48m 2.63 30d L  
 10/24 w5 17:39, 20m 0.77  
 -> 10/25 w6 18:09, 51m 3.49 30d S  
 11/23 w7 17:26, 30m 1.45  
 -> 11/24 w1 18:14, 79m 5.04 30d  
 -> 12/23 w2 18:05, 70m 2.80 29d

Year -488 Spring Equinox jd= 1542901.75 03/27 w6 06:06, Selucid=-178  
 Fall Equinox jd= 1543085.74 09/27 w1 05:51, 184 days later

-> 01/21 w3 18:07, 52m 1.28 29d  
 02/19 w4 18:09, 29m 0.38  
 -> 02/20 w5 19:20, 99m 3.39 30d

[ PD: Addaru II, DARIUS I Yr32 ]

[ Intercalated not allowing spring on 01/07 ]

-> 03/20 w6 19:18, 77m 2.01 29d SL [ 2<sup>nd</sup> 12<sup>th</sup> ]

[ DARIUS I Yr33 ]

1> 04/18 w7 19:17, 59m 1.10 29d

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    05/17 w1 19:21,    44m 0.55
-> 05/18 w2 20:35,   118m 3.79  30d
-> 06/16 w3 20:26,    92m 2.33  29d
-> 07/15 w4 19:57,    58m 1.05  29d
    08/13 w5 19:09,    25m 0.19
-> 08/14 w6 19:39,    56m 2.00  30d
    09/12 w7 18:33,    21m 0.47
-> 09/13 w1 18:56,    46m 2.77  30d SL
    10/12 w2 17:49,    16m 0.82
7> 10/13 w3 18:16,    44m 3.43  30d
    11/11 w4 17:22,    20m 1.22
-> 11/12 w5 18:02,    60m 4.19  30d
-> 12/11 w6 17:36,    44m 1.78  29d
Year  -487 Spring Equinox jd= 1543266.75  03/27 w7 06:06, Selucid=-177
      Fall Equinox  jd= 1543450.74  09/27 w2 05:51, 184 days later
    01/09 w7 17:27,    21m 0.45
-> 01/10 w1 18:31,    84m 2.80  30d
-> 02/08 w2 18:29,    57m 1.16  29d
    03/09 w3 18:24,    30m 0.30
-> 03/10 w4 19:31,    96m 3.12  30d SL
[ DARIUS I Yr34 ]
1> 04/08 w5 19:30,    78m 1.97  29d
-> 05/07 w6 19:35,    65m 1.22  29d
    06/05 w7 19:40,    51m 0.67
-> 06/06 w1 20:49,   120m 4.09  30d
-> 07/05 w2 20:24,    84m 2.57  29d
-> 08/03 w3 19:38,    46m 1.17  29d
    09/01 w4 18:39,    14m 0.22
-> 09/02 w5 19:06,    43m 2.47  30d SL
    10/01 w6 18:00,    13m 0.80
7> 10/02 w7 18:27,    42m 3.61  30d
    10/31 w1 17:30,    18m 1.35
-> 11/01 w2 18:06,    55m 4.42  30d
    11/30 w3 17:31,    38m 1.75
-> 12/01 w4 18:22,    89m 5.08  30d
    12/29 w4 17:12,    13m 0.33
-> 12/30 w5 18:09,    70m 2.20  29d
Year  -486 Spring Equinox jd= 1543631.75  03/27 w1 06:06, Selucid=-176
      Fall Equinox  jd= 1543816.74  09/28 w4 05:52, 185 days later
    01/28 w6 18:01,    39m 0.55
-> 01/29 w7 19:00,    97m 3.09  30d L
-> 02/27 w1 18:50,    63m 1.33  29d S
    03/28 w2 18:41,    35m 0.46
[ DARIUS I Yr35 ]
1> 03/29 w3 19:46,    99m 3.24  30d
-> 04/27 w4 19:47,    84m 2.09  29d
-> 05/26 w5 19:51,    69m 1.25  29d
    06/24 w6 19:45,    47m 0.58
-> 06/25 w7 20:41,   103m 3.97  30d
-> 07/24 w1 20:00,    63m 2.47  29d L
    08/22 w2 19:05,    29m 1.17
-> 08/23 w3 19:36,    61m 5.19  30d S
    09/21 w4 18:33,    33m 2.85
7> 09/22 w5 19:05,    66m 7.76  30d
    10/20 w5 17:35,    11m 1.11
-> 10/21 w6 18:12,    49m 4.36  29d

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11/19 w7 17:31, 34m 1.79  
 -> 11/20 w1 18:21, 84m 5.38 30d  
 12/18 w1 17:07, 13m 0.34  
 -> 12/19 w2 18:02, 69m 2.30 29d  
 Year -485 Spring Equinox jd= 1543997.75 03/28 w3 06:05, Selucid=-175  
           Fall Equinox jd= 1544181.74 09/28 w5 05:52, 184 days later  
 01/17 w3 17:50, 38m 0.52  
 -> 01/18 w4 18:47, 94m 2.87 30d L  
 02/16 w5 18:33, 55m 0.97  
 -> 02/17 w6 19:28, 109m 3.87 30d  
 03/17 w6 18:18, 19m 0.19  
 -> 03/18 w7 19:14, 74m 1.89 29d  
 [ DARIUS I Yr36 ]  
 04/16 w1 19:04, 47m 0.79  
 1> 04/17 w2 20:07, 110m 3.67 30d  
 -> 05/16 w3 20:05, 90m 2.24 29d  
 -> 06/14 w4 19:57, 64m 1.19 29d  
 07/13 w5 19:32, 32m 0.44  
 -> 07/14 w6 20:16, 77m 3.65 30d SL  
 -> 08/12 w7 19:26, 41m 2.28 29d S  
 09/10 w1 18:29, 14m 1.13  
 -> 09/11 w2 19:03, 49m 5.20 30d  
 10/10 w3 18:09, 32m 2.96  
 7> 10/11 w4 18:50, 75m 8.21 30d  
 11/08 w4 17:25, 20m 1.17  
 -> 11/09 w5 18:15, 70m 4.77 29d  
 -> 12/08 w6 17:53, 61m 2.09 29d  
 Year -484 Spring Equinox jd= 1544362.75 03/27 w4 06:06, Selucid=-174  
           Fall Equinox jd= 1544546.74 09/27 w6 05:51, 184 days later  
 01/06 w7 17:40, 37m 0.48  
 -> 01/07 w1 18:40, 96m 3.00 30d SL  
 -> 02/05 w2 18:26, 57m 1.02 29d  
 03/05 w3 18:09, 18m 0.20  
 -> 03/06 w4 19:03, 71m 1.73 30d  
 [ DARIUS I Yr37, XERXES Yr01 ]  
 04/04 w5 18:47, 36m 0.55  
 1> 04/05 w6 19:42, 91m 2.71 30d  
 -> 05/04 w7 19:31, 63m 1.17 29d  
 06/02 w1 19:20, 33m 0.29  
 -> 06/03 w2 20:16, 88m 2.49 30d  
 -> 07/02 w3 19:49, 50m 1.23 29d SL  
 07/31 w4 19:08, 15m 0.46  
 -> 08/01 w5 19:46, 53m 3.47 30d  
 08/30 w6 18:52, 25m 2.11  
 -> 08/31 w7 19:27, 62m 7.07 30d  
 7> 09/29 w1 18:37, 48m 4.83 29d  
 [ **EL: C17 proves this is 8<sup>th</sup> month, Darius I 37<sup>th</sup> year,  
 and Xerxes accession year** ]  
 8> 10/28 w2 17:57, 42m 2.68 29d  
 11/26 w3 17:29, 35m 1.00  
 -> 11/27 w4 18:31, 98m 4.84 30d  
 12/25 w4 17:15, 18m 0.12  
 -> 12/26 w5 18:20, 84m 2.34 29d SL  
 Year -483 Spring Equinox jd= 1544727.75 03/27 w5 06:06, Selucid=-173  
           Fall Equinox jd= 1544911.74 09/27 w7 05:51, 184 days later  
 01/24 w6 18:10, 52m 0.79

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-> 01/25 w7 19:11, 112m 3.85 30d
-> 02/23 w1 18:55, 71m 1.71 29d
[ XERXES Yr02 ]
[ Note allowed spring on 01/01 ]
  03/24 w2 18:38, 35m 0.52
1> 03/25 w3 19:33, 89m 2.66 30d
  04/23 w4 19:17, 56m 0.98
-> 04/24 w5 20:12, 110m 3.73 30d
  05/22 w5 19:02, 22m 0.13
-> 05/23 w6 19:55, 74m 1.73 29d L
  06/21 w7 19:30, 34m 0.53
-> 06/22 w1 20:15, 78m 3.08 30d SL
  07/21 w2 19:33, 35m 1.57
-> 07/22 w3 20:09, 71m 5.35 30d
  08/20 w4 19:17, 40m 3.47
6> 08/21 w5 19:51, 74m 8.82 30d
[ PD: Ululu II, Xerxes Yr02 ]
[ Intercalated not allowing autumn on 07/08 ]
  09/18 w5 18:25, 21m 1.90
6> 09/19 w6 19:03, 60m 6.43 29d [ 2nd 6th ]
7> 10/18 w7 18:23, 57m 4.15 29d
-> 11/16 w1 17:56, 57m 2.18 29d L
  12/15 w2 17:40, 48m 0.81
-> 12/16 w3 18:49, 117m 4.69 30d S
Year -482 Spring Equinox jd= 1545092.75 03/27 w6 06:06, Selucid=-172
      Fall Equinox jd= 1545277.74 09/28 w2 05:52, 185 days later
  01/13 w3 17:33, 24m 0.18
-> 01/14 w4 18:42, 92m 2.54 29d
-> 02/12 w5 18:33, 58m 1.10 29d
  03/13 w6 18:21, 24m 0.32
-> 03/14 w7 19:21, 83m 2.36 30d
[ XERXES Yr03 ]
  04/12 w1 19:06, 51m 0.86
1> 04/13 w2 20:03, 107m 3.68 30d
  05/11 w2 18:51, 18m 0.09
-> 05/12 w3 19:45, 72m 1.65 29d L
  06/10 w4 19:22, 31m 0.45
-> 06/11 w5 20:08, 76m 2.70 30d S
  07/10 w6 19:30, 30m 1.13
-> 07/11 w7 20:07, 67m 4.09 30d
  08/09 w1 19:17, 29m 2.11
-> 08/10 w2 19:49, 62m 5.94 30d
  09/08 w3 18:57, 40m 3.53
-> 09/09 w4 19:32, 76m 8.55 30d
  10/07 w4 18:08, 28m 1.66
7> 10/08 w5 18:49, 71m 5.79 29d
  11/05 w5 17:28, 20m 0.44
-> 11/06 w6 18:19, 72m 3.50 29d L
-> 12/05 w7 18:01, 69m 1.78 29d S
Year -481 Spring Equinox jd= 1545457.75 03/27 w7 06:07, Selucid=-171
      Fall Equinox jd= 1545642.74 09/28 w3 05:52, 185 days later
  01/03 w1 17:52, 51m 0.72
-> 01/04 w2 19:03, 121m 4.41 30d
-> 02/02 w3 18:57, 91m 2.56 29d
-> 03/03 w4 18:48, 59m 1.20 29d
[ XERXES Yr04 ]

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    04/01 w5 18:39,    31m  0.34
1> 04/02 w6 19:42,    93m  2.89   30d
-> 05/01 w7 19:28,    62m  1.30   29d SL
    05/30 w1 19:11,    27m  0.36
-> 05/31 w2 20:03,    78m  2.65   30d
    06/29 w3 19:32,    33m  1.12
-> 06/30 w4 20:12,    74m  4.04   30d
    07/29 w5 19:26,    31m  1.91
-> 07/30 w6 19:59,    65m  5.33   30d
    08/28 w7 19:05,    36m  2.69
-> 08/29 w1 19:37,    68m  6.70   30d
    09/26 w1 18:12,    18m  0.88
7> 09/27 w2 18:46,    53m  3.71   29d
-> 10/26 w3 18:02,    45m  1.59   29d SL
    11/24 w4 17:29,    34m  0.41
-> 11/25 w5 18:22,    88m  3.18   30d
-> 12/24 w6 18:09,    74m  1.60   29d
Year  -480 Spring Equinox jd= 1545823.75  03/27 w2 06:06, Selucid=-170
      Fall Equinox  jd= 1546007.74  09/27 w4 05:51, 184 days later
    01/22 w7 18:02,    46m  0.64
-> 01/23 w1 19:11,   114m  3.98   30d
-> 02/21 w2 19:06,    84m  2.32   29d
[ PD: Addaru II, Xerxes Yr04 ]
[ Intercalated not allowing spring on 01/06 or 05 ]
-> 03/21 w3 18:59,    57m  1.11   29d   [ 2nd 12th ]
[ XERXES Yr05 ]
    04/19 w4 18:51,    32m  0.36
1> 04/20 w5 19:57,    98m  3.34   30d SL
-> 05/19 w6 19:44,    66m  1.88   29d
    06/17 w7 19:24,    29m  0.84
-> 06/18 w1 20:13,    78m  3.80   30d
    07/17 w2 19:35,    36m  1.87
-> 07/18 w3 20:13,    74m  5.45   30d
-> 08/16 w4 19:22,    41m  2.71   29d
    09/14 w5 18:28,    20m  0.81
-> 09/15 w6 19:00,    53m  3.40   30d
    10/14 w7 18:09,    38m  1.18
7> 10/15 w1 18:45,    76m  4.26   30d SL
    11/12 w1 17:24,    22m  0.15
-> 11/13 w2 18:06,    65m  1.88   29d
    12/12 w3 17:37,    45m  0.57
-> 12/13 w4 18:32,    99m  3.18   30d
Year  -479 Spring Equinox jd= 1546188.75  03/27 w3 06:06, Selucid=-169
      Fall Equinox  jd= 1546372.74  09/27 w5 05:51, 184 days later
-> 01/11 w5 18:19,    72m  1.49   29d
    02/09 w6 18:11,    38m  0.48
-> 02/10 w7 19:17,   104m  3.47   30d
-> 03/11 w1 19:12,    76m  2.00   29d L
[ XERXES Yr06 ]
1> 04/09 w2 19:06,    53m  1.03   29d S
    05/08 w3 19:00,    29m  0.48
-> 05/09 w4 20:07,    96m  3.74   30d
-> 06/07 w5 19:54,    64m  2.39   29d
    07/06 w6 19:30,    30m  1.21
-> 07/07 w7 20:17,    78m  4.76   30d
-> 08/05 w1 19:35,    44m  2.49   29d

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    09/03 w2 18:45,    23m  0.79
-> 09/04 w3 19:19,    58m  3.56   30d  L
7> 10/03 w4 18:25,    41m  1.28   29d  S
    11/01 w5 17:35,    24m  0.18
-> 11/02 w6 18:11,    61m  1.78   30d
    12/01 w7 17:31,    38m  0.42
-> 12/02 w1 18:16,    83m  2.39   30d
Year  -478 Spring Equinox jd= 1546553.75  03/27 w4 06:06, Selucid=-168
      Fall Equinox  jd= 1546737.74  09/27 w6 05:51, 184 days later
    12/31 w2 17:51,    51m  0.73
-> 01/01 w3 18:45,   105m  3.35   30d
-> 01/30 w4 18:32,    68m  1.42   29d
    02/28 w5 18:21,    34m  0.37
-> 03/01 w6 19:24,    96m  3.17   30d  L
[ XERXES Yr07 ]
1> 03/30 w7 19:18,    71m  1.88   29d  S
-> 04/28 w1 19:12,    48m  1.09   29d
    05/27 w2 19:07,    24m  0.59
-> 05/28 w3 20:14,    91m  3.93   30d
-> 06/26 w4 19:59,    61m  2.60   29d
    07/25 w5 19:31,    34m  1.32
-> 07/26 w6 20:17,    81m  5.35   30d
    08/23 w6 18:51,    16m  0.35
-> 08/24 w7 19:31,    57m  2.97   29d  L
7> 09/22 w1 18:39,    41m  1.14   29d  S
    10/21 w2 17:47,    25m  0.20
-> 10/22 w3 18:23,    61m  1.92   30d
    11/20 w4 17:36,    40m  0.48
-> 11/21 w5 18:17,    80m  2.50   30d
    12/20 w6 17:43,    49m  0.67
-> 12/21 w7 18:31,    96m  2.97   30d
Year  -477 Spring Equinox jd= 1546918.75  03/27 w5 06:07, Selucid=-167
      Fall Equinox  jd= 1547103.74  09/28 w1 05:52, 185 days later
    01/19 w1 18:09,    56m  0.92
-> 01/20 w2 19:03,   109m  3.74   30d
-> 02/18 w3 18:48,    69m  1.62   29d  SL
    03/19 w4 18:35,    35m  0.53
-> 03/20 w5 19:35,    94m  3.34   30d
[ XERXES Yr08 ]
1> 04/18 w6 19:27,    69m  2.04   29d
-> 05/17 w7 19:22,    45m  1.19   29d
    06/15 w1 19:15,    22m  0.57
-> 06/16 w2 20:20,    85m  3.83   30d
-> 07/15 w3 19:59,    60m  2.49   29d
-> 08/13 w4 19:25,    41m  1.27   29d  SL
    09/11 w5 18:41,    28m  0.39
-> 09/12 w6 19:20,    68m  3.29   30d
7> 10/11 w7 18:29,    54m  1.46   29d
    11/09 w1 17:39,    35m  0.38
-> 11/10 w2 18:19,    75m  2.46   30d
    12/09 w3 17:39,    48m  0.67
-> 12/10 w4 18:26,    94m  3.14   30d
Year  -476 Spring Equinox jd= 1547284.75  03/27 w7 06:06, Selucid=-166
      Fall Equinox  jd= 1547468.74  09/27 w2 05:51, 184 days later
    01/08 w5 18:00,    55m  0.93
-> 01/09 w6 18:52,   107m  3.72   30d  L

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-> 02/07 w7 18:33,    63m  1.38   29d  SL
    03/07 w1 18:16,    23m  0.28
-> 03/08 w2 19:10,    76m  2.27   30d
[ XERXES Yr09 ]
    04/06 w3 18:55,    43m  0.94
1> 04/07 w4 19:52,   100m  3.92   30d
    05/05 w4 18:42,    13m  0.32
-> 05/06 w5 19:43,    73m  2.34   29d
-> 06/04 w6 19:36,    47m  1.23   29d
    07/03 w7 19:25,    25m  0.47
-> 07/04 w1 20:23,    83m  3.60   30d
-> 08/02 w2 19:54,    62m  2.30   29d  SL
-> 08/31 w3 19:12,    47m  1.20   29d
    09/29 w4 18:23,    34m  0.44
7> 09/30 w5 19:02,    74m  3.34   30d
-> 10/29 w6 18:12,    58m  1.52   29d
    11/27 w7 17:28,    34m  0.35
-> 11/28 w1 18:15,    82m  2.70   30d
    12/27 w2 17:46,    49m  0.80
-> 12/28 w3 18:41,   103m  3.77   30d  L
Year  -475 Spring Equinox jd= 1547649.75  03/27 w1 06:06, Selucid=-165
      Fall Equinox  jd= 1547833.74  09/27 w3 05:51, 184 days later
-> 01/26 w4 18:23,    63m  1.43   29d  S
    02/24 w5 18:07,    22m  0.30
-> 02/25 w6 19:01,    75m  2.23   30d
[ XERXES Yr10 ]
[ Note allowed spring on 01/01 ]
    03/26 w7 18:43,    38m  0.78
1> 03/27 w1 19:36,    90m  3.27   30d
-> 04/25 w2 19:20,    57m  1.49   29d
    05/24 w3 19:07,    26m  0.45
-> 05/25 w4 20:05,    83m  2.77   30d
-> 06/23 w5 19:53,    56m  1.38   29d  L
    07/22 w6 19:32,    35m  0.51
-> 07/23 w7 20:21,    84m  3.55   30d  S
-> 08/21 w1 19:40,    64m  2.20   29d
[ Allowed autumn on 07/07 ]
    09/19 w2 18:51,    48m  1.10   29d  [ did not see it ]
7> 09/20 w3
    10/18 w3 17:58,    32m  0.35
-> 10/19 w4 18:37,    72m  2.99   30d
-> 11/17 w5 17:52,    54m  1.25   29d
    12/16 w6 17:18,    25m  0.21
-> 12/17 w7 18:15,    82m  2.74   30d  L
Year  -474 Spring Equinox jd= 1548014.75  03/27 w2 06:06, Selucid=-164
      Fall Equinox  jd= 1548198.74  09/27 w4 05:51, 184 days later
-> 01/15 w1 18:00,    49m  1.00   29d  S
    02/13 w2 17:49,    14m  0.22
-> 02/14 w3 18:49,    73m  2.14   30d
[ PD: Addaru II, Xerxes Yr10 ]
[ 2nd 12th also proved by eclipse text BM 36910 ]
[ Intercalated not allowing spring on 01/11 ]
    03/15 w4 18:35,    37m  0.75
-> 03/16 w5 19:30,    91m  3.29   30d  [ 2nd 12th ]
[ XERXES Yr11 ]

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1> 04/14 w6 19:12, 56m 1.39 29d
    05/13 w7 18:56, 22m 0.31
-> 05/14 w1 19:52, 77m 2.21 30d
    06/12 w2 19:38, 46m 0.78
-> 06/13 w3 20:32, 99m 3.55 30d SL
-> 07/12 w4 20:09, 69m 1.85 29d
    08/10 w5 19:32, 45m 0.76
-> 08/11 w6 20:10, 84m 3.76 30d
-> 09/09 w7 19:18, 62m 2.13 29d
    10/08 w1 18:22, 44m 0.88
7> 10/09 w2 18:57, 80m 4.40 30d
-> 11/07 w3 18:09, 64m 2.37 29d
    12/06 w4 17:34, 42m 0.89
-> 12/07 w5 18:33, 101m 4.90 30d SL
Year -473 Spring Equinox jd= 1548379.75 03/27 w3 06:07, Selucid=-163
      Fall Equinox jd= 1548564.74 09/28 w6 05:52, 185 days later
    01/04 w5 17:14, 12m 0.16
-> 01/05 w6 18:23, 80m 2.71 29d
-> 02/03 w7 18:18, 51m 1.23 29d
    03/04 w1 18:12, 22m 0.42
-> 03/05 w2 19:15, 84m 2.80 30d
[ XERXES Yr12 ]
1> 04/03 w3 19:01, 52m 1.17 29d
    05/02 w4 18:48, 21m 0.24
-> 05/03 w5 19:45, 78m 2.15 30d
    06/01 w6 19:33, 47m 0.71
-> 06/02 w7 20:29, 102m 3.34 30d SL
-> 07/01 w1 20:08, 69m 1.52 29d
    07/30 w2 19:34, 40m 0.47
-> 07/31 w3 20:12, 78m 2.62 30d
-> 08/29 w4 19:19, 50m 1.07 29d
    09/27 w5 18:19, 26m 0.23
7> 09/28 w6 18:48, 56m 2.02 30d
    10/27 w7 17:49, 33m 0.61
-> 10/28 w1 18:26, 70m 3.71 30d
-> 11/26 w2 17:47, 53m 1.84 29d SL
    12/25 w3 17:26, 30m 0.69
-> 12/26 w4 18:36, 99m 4.41 30d
Year -472 Spring Equinox jd= 1548745.75 03/27 w5 06:06, Selucid=-162
      Fall Equinox jd= 1548929.74 09/27 w7 05:51, 184 days later
-> 01/24 w5 18:37, 79m 2.62 29d
-> 02/22 w6 18:36, 54m 1.31 29d
[ PD: Addaru II, Xerxes Yr12 ]
[ Intercalated not allowing spring on 01/04 ]
    03/22 w7 18:31, 29m 0.45
-> 03/23 w1 19:37, 94m 3.24 30d [ 2nd 12th ]
[ XERXES Yr13 ]
1> 04/21 w2 19:28, 67m 1.58 29d L
    05/20 w3 19:20, 42m 0.52
-> 05/21 w4 20:23, 103m 3.19 30d S
-> 06/19 w5 20:08, 72m 1.50 29d
    07/18 w6 19:41, 42m 0.47
-> 07/19 w7 20:21, 82m 2.53 30d
    08/17 w1 19:29, 49m 0.91
-> 08/18 w2 19:57, 78m 3.46 30d
-> 09/16 w3 18:53, 47m 1.33 29d

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    10/15 w4 17:48,    19m 0.17
7> 10/16 w5 18:16,    48m 2.00    30d  L
    11/14 w6 17:22,    22m 0.53
-> 11/15 w7 18:03,    64m 3.38    30d  S
-> 12/14 w1 17:39,    47m 1.64    29d
Year  -471 Spring Equinox jd= 1549110.75  03/27 w6 06:06, Selucid=-161
      Fall Equinox  jd= 1549294.74  09/27 w1 05:51, 184 days later
    01/12 w2 17:34,    26m 0.65
-> 01/13 w3 18:48,    99m 3.98    30d
-> 02/11 w4 18:52,    78m 2.36    29d
-> 03/12 w5 18:50,    54m 1.16    29d
[ XERXES Yr14 ]
    04/10 w6 18:46,    33m 0.39
1> 04/11 w7 19:57,   103m 3.51    30d  L
-> 05/10 w1 19:56,    83m 2.05    29d  S
-> 06/08 w2 19:52,    62m 1.00    29d
    07/07 w3 19:38,    38m 0.35
-> 07/08 w4 20:26,    86m 2.40    30d
    08/06 w5 19:40,    50m 0.89
-> 08/07 w6 20:10,    82m 3.53    30d
-> 09/05 w7 19:06,    46m 1.32    29d
    10/04 w1 17:58,    15m 0.13
7> 10/05 w2 18:22,    40m 1.71    30d  L
    11/03 w3 17:20,    11m 0.29
-> 11/04 w4 17:52,    44m 2.32    30d  S
    12/03 w5 17:11,    19m 0.72
-> 12/04 w6 18:01,    69m 3.51    30d
Year  -470 Spring Equinox jd= 1549475.75  03/27 w7 06:06, Selucid=-160
      Fall Equinox  jd= 1549659.74  09/27 w2 05:51, 184 days later
-> 01/02 w7 17:53,    52m 1.66    29d
    01/31 w1 17:54,    29m 0.58
-> 02/01 w2 19:04,    99m 3.57    30d
-> 03/02 w3 19:04,    75m 2.02    29d
[ XERXES Yr15 ]
    03/31 w4 19:01,    54m 0.99
1> 04/01 w5 20:14,   126m 5.20    30d  SL
    04/29 w5 19:02,    37m 0.42
-> 04/30 w6 20:18,   112m 3.73    29d
-> 05/29 w7 20:21,    97m 2.51    29d
-> 06/27 w1 20:11,    72m 1.42    29d
    07/26 w2 19:39,    43m 0.52
-> 07/27 w3 20:17,    81m 3.08    30d
[ EL: AP5 proves this was a 6th month ]
6> 08/25 w4 19:17,    44m 1.20    29d
    09/24 w6 18:35,    38m 1.82
7> 09/25 w7 18:59,    64m 5.36    31d  SL
    10/24 w1 17:57,    38m 2.36
-> 10/25 w2 18:29,    71m 6.15    30d
    11/22 w2 17:06,    11m 0.64
-> 11/23 w3 17:48,    53m 2.98    29d
    12/22 w4 17:26,    31m 1.04
-> 12/23 w5 18:24,    89m 3.92    30d
Year  -469 Spring Equinox jd= 1549840.75  03/27 w1 06:07, Selucid=-159
      Fall Equinox  jd= 1550025.74  09/28 w4 05:52, 185 days later
-> 01/21 w6 18:21,    65m 1.75    29d
    02/19 w7 18:16,    36m 0.51

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-> 02/20 w1 19:20, 99m 3.34 30d
[ PD: Addaru II, Xerxes Yr15 ]
[ Intercalated not allowing spring on 01/06 or 05 ]
-> 03/21 w2 19:16, 74m 1.87 29d SL [ 2nd 12th ]
[ XERXES Yr16 ]
1> 04/19 w3 19:15, 57m 1.01 29d
  05/18 w4 19:21, 43m 0.54
-> 05/19 w5 20:37, 119m 3.88 30d
-> 06/17 w6 20:32, 98m 2.70 29d
-> 07/16 w7 20:04, 65m 1.51 29d
  08/14 w1 19:16, 32m 0.50
-> 08/15 w2 19:48, 65m 3.42 30d
  09/13 w3 18:43, 32m 1.46
-> 09/14 w4 19:10, 60m 5.21 30d SL
  10/13 w5 18:06, 33m 2.43
7> 10/14 w6 18:37, 66m 6.53 30d
-> 11/12 w7 17:50, 48m 3.18 29d
  12/11 w1 17:19, 27m 1.05
-> 12/12 w2 18:12, 80m 3.78 30d
Year -468 Spring Equinox jd= 1550206.75 03/27 w3 06:05, Selucid=-158
      Fall Equinox jd= 1550390.74 09/27 w5 05:52, 184 days later
-> 01/10 w3 18:01, 55m 1.38 29d
  02/08 w4 17:52, 21m 0.19
-> 02/09 w5 18:50, 78m 2.05 30d L
  03/09 w6 18:39, 45m 0.67
-> 03/10 w7 19:38, 103m 3.59 30d S
[ XERXES Yr17 ]
1> 04/08 w1 19:33, 81m 2.10 29d
-> 05/07 w2 19:35, 64m 1.20 29d
  06/05 w3 19:38, 49m 0.60
-> 06/06 w4 20:45, 115m 3.83 30d
-> 07/05 w5 20:22, 82m 2.55 29d
-> 08/03 w6 19:38, 46m 1.34 29d L
  09/01 w7 18:40, 16m 0.43
-> 09/02 w1 19:11, 48m 3.51 30d S
  10/01 w2 18:09, 22m 1.66
7> 10/02 w3 18:41, 56m 5.82 30d
  10/31 w4 17:51, 39m 2.97
-> 11/01 w5 18:35, 84m 7.61 30d
  11/29 w5 17:15, 22m 1.01
-> 11/30 w6 18:08, 75m 3.96 29d
-> 12/29 w7 17:53, 55m 1.44 29d
Year -467 Spring Equinox jd= 1550571.75 03/27 w4 06:06, Selucid=-157
      Fall Equinox jd= 1550755.74 09/27 w6 05:51, 184 days later
  01/27 w1 17:42, 21m 0.18
-> 01/28 w2 18:39, 77m 1.94 30d L
  02/26 w3 18:24, 38m 0.47
-> 02/27 w4 19:19, 92m 2.79 30d S
[ XERXES Yr18 ]
1> 03/28 w5 19:04, 58m 1.18 29d
  04/26 w6 18:55, 32m 0.40
-> 04/27 w7 19:58, 94m 2.58 30d
-> 05/26 w1 19:55, 72m 1.38 29d
  06/24 w2 19:43, 45m 0.55
-> 06/25 w3 20:35, 97m 3.62 30d
-> 07/24 w4 19:55, 58m 2.26 29d SL

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    08/22 w5 19:01,    26m  1.15
-> 08/23 w6 19:34,    60m  5.39   30d S
    09/21 w7 18:36,    36m  3.41
7> 09/22 w1 19:12,    73m  9.25   30d
    10/20 w1 17:43,    19m  1.68
-> 10/21 w2 18:26,    64m  6.05   29d
-> 11/19 w3 17:55,    58m  3.21   29d
-> 12/18 w4 17:39,    45m  1.15   29d
Year  -466 Spring Equinox jd= 1550936.75  03/27 w5 06:06, Selucid=-156
      Fall Equinox  jd= 1551120.74  09/27 w7 05:51, 184 days later
    01/16 w5 17:29,    18m  0.12
-> 01/17 w6 18:30,    78m  1.95   30d SL
    02/15 w7 18:17,    39m  0.50
-> 02/16 w1 19:12,    94m  2.86   30d
[ PD: Addaru II, Xerxes Yr18 ]
[ Intercalated not allowing spring on 01/10 or 09 ]
-> 03/17 w2 18:55,    55m  1.10   29d   [ 2nd 12th ]
    04/15 w3 18:39,    22m  0.29
[ XERXES Yr19 ]
1> 04/16 w4 19:35,    78m  1.92   30d
    05/15 w5 19:25,    49m  0.69
-> 05/16 w6 20:22,   106m  3.22   30d
-> 06/14 w7 20:04,    71m  1.62   29d
    07/13 w1 19:33,    33m  0.58
-> 07/14 w2 20:13,    73m  3.58   30d SL
    08/12 w3 19:22,    37m  2.14
-> 08/13 w4 19:55,    71m  6.96   30d
    09/10 w4 18:25,    11m  1.06
-> 09/11 w5 19:00,    47m  4.97   29d
    10/10 w6 18:10,    34m  3.05
7> 10/11 w7 18:55,    80m  8.75   30d
    11/08 w7 17:31,    26m  1.40
-> 11/09 w1 18:27,    84m  5.76   29d
    12/07 w1 17:08,    16m  0.32
-> 12/08 w2 18:13,    82m  3.14   29d
Year  -465 Spring Equinox jd= 1551301.75  03/27 w6 06:06, Selucid=-155
      Fall Equinox  jd= 1551486.74  09/28 w2 05:52, 185 days later
-> 01/06 w3 18:06,    63m  1.26   29d SL
    02/04 w4 17:58,    30m  0.29
-> 02/05 w5 19:00,    91m  2.62   30d
-> 03/06 w6 18:45,    54m  1.03   29d
[ XERXES Yr20 ]
    04/04 w7 18:30,    20m  0.27
1> 04/05 w1 19:26,    75m  1.88   30d
    05/04 w2 19:11,    43m  0.57
-> 05/05 w3 20:07,    98m  2.83   30d
-> 06/03 w4 19:48,    60m  1.12   29d   L
    07/02 w5 19:19,    20m  0.20
-> 07/03 w6 20:00,    61m  2.14   30d SL
    08/01 w7 19:14,    21m  0.86
-> 08/02 w1 19:47,    54m  3.91   30d
    08/31 w2 18:52,    25m  2.21
-> 09/01 w3 19:24,    59m  6.69   30d
7> 09/30 w4 18:35,    46m  4.46   29d
-> 10/29 w5 17:56,    42m  2.50   29d
    11/27 w6 17:32,    38m  1.00

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-> 11/28 w7 18:37, 104m 5.15 30d L
    12/26 w7 17:21, 24m 0.18
-> 12/27 w1 18:32, 95m 2.93 29d S
Year -464 Spring Equinox jd= 1551667.75 03/27 w1 06:05, Selucid=-154
      Fall Equinox jd= 1551851.74 09/27 w3 05:52, 184 days later
-> 01/25 w2 18:27, 68m 1.38 29d
    02/23 w3 18:19, 36m 0.50
-> 02/24 w4 19:23, 99m 3.23 30d
[ XERXES Yr21 ]
[ Allowed spring on 01/02 ]
    03/24 w5 19:10, 66m 1.51 29d [ did not see it ]
1> 03/25 w6 30d
    04/22 w6 18:57, 36m 0.44
-> 04/23 w7 19:55, 94m 2.72 30d
[ BM 32234: Eclipse on Egyptian 6/21, Bab 3/15,
  Julian -464/06/05 proves this was a 3rd month ]
3> 05/22 w1 19:38, 58m 1.05 29d L
    06/20 w2 19:13, 17m 0.17
-> 06/21 w3 19:57, 60m 1.92 30d S
    07/20 w4 19:15, 17m 0.63
-> 07/21 w5 19:49, 51m 3.04 30d
    08/19 w6 18:55, 16m 1.33
6> 08/20 w7 19:25, 48m 4.50 30d
[ PD: Ululu II, Xerxes Yr21 ]
[ Intercalated not allowing autumn on 07/08 ]
    09/18 w1 18:31, 27m 2.32
6> 09/19 w2 19:05, 63m 6.54 30d [ 2nd 6th ]
    10/17 w2 17:42, 15m 0.80
7> 10/18 w3 18:24, 58m 3.97 29d
-> 11/16 w4 17:55, 57m 2.01 29d L
[ BM 32234: Eclipse on Egyptian 12/18, Bab 9/14,
  Julian -464/11/29 proves this was a 9th month ]
[ EL: AP6 proves this was a 9th month ]
    12/15 w5 17:40, 48m 0.75
9> 12/16 w6 18:49, 116m 4.54 30d S
Year -463 Spring Equinox jd= 1552032.75 03/27 w2 06:06, Selucid=-153
      Fall Equinox jd= 1552216.74 09/27 w4 05:51, 184 days later
    01/13 w6 17:34, 25m 0.20
-> 01/14 w7 18:46, 96m 2.72 29d
-> 02/12 w1 18:41, 65m 1.40 29d
    03/13 w2 18:34, 37m 0.54
-> 03/14 w3 19:41, 103m 3.57 30d
[ ARTAXERXES I Yr01 ]
1> 04/12 w4 19:31, 76m 1.86 29d
    05/11 w5 19:19, 46m 0.69
-> 05/12 w6 20:17, 104m 3.69 30d SL
-> 06/10 w7 19:53, 61m 1.83 29d
    07/09 w1 19:18, 18m 0.64
-> 07/10 w2 19:56, 56m 3.05 30d
    08/08 w3 19:06, 18m 1.25
-> 08/09 w4 19:37, 50m 4.14 30d
    09/07 w5 18:41, 24m 1.81
-> 09/08 w6 19:12, 56m 5.21 30d
7> 10/07 w7 18:21, 42m 2.51 29d
    11/05 w1 17:39, 32m 0.77

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-> 11/06 w2 18:25, 79m 3.81 30d SL
-> 12/05 w3 18:03, 72m 1.85 29d
Year -462 Spring Equinox jd= 1552397.75 03/27 w3 06:06, Selucid=-152
      Fall Equinox jd= 1552581.74 09/27 w5 05:51, 184 days later
  01/03 w4 17:52, 51m 0.71
-> 01/04 w5 18:59, 117m 4.10 30d
-> 02/02 w6 18:55, 88m 2.43 29d
-> 03/03 w7 18:50, 60m 1.22 29d
[ ARTAXERXES I Yr02 ]
  04/01 w1 18:44, 36m 0.43
1> 04/02 w2 19:53, 104m 3.63 30d
-> 05/01 w3 19:45, 79m 2.15 29d SL
-> 05/30 w4 19:32, 47m 1.07 29d
  06/28 w5 19:09, 11m 0.40
-> 06/29 w6 19:57, 58m 2.74 30d
  07/28 w7 19:15, 20m 1.19
-> 07/29 w1 19:51, 57m 4.22 30d
  08/27 w2 18:58, 28m 1.85
-> 08/28 w3 19:30, 60m 5.29 30d
7> 09/26 w4 18:36, 42m 2.37 29d
  10/25 w5 17:46, 27m 0.57
-> 10/26 w6 18:23, 66m 3.00 30d SL
-> 11/24 w7 17:47, 53m 1.03 29d
  12/23 w1 17:22, 27m 0.22
-> 12/24 w2 18:17, 82m 1.98 30d
Year -461 Spring Equinox jd= 1552762.75 03/27 w4 06:06, Selucid=-151
      Fall Equinox jd= 1552947.74 09/28 w7 05:52, 185 days later
  01/22 w3 18:06, 49m 0.73
-> 01/23 w4 19:09, 111m 3.78 30d
-> 02/21 w5 19:02, 80m 2.11 29d
[ PD: Addaru II, Artaxerxes I Yr02 ]
[ Intercalated not allowing spring on 01/04 ]
  03/22 w6 18:56, 54m 0.99
-> 03/23 w7 20:05, 122m 5.10 30d L [ 2nd 12th ]
  04/20 w7 18:51, 31m 0.36
[ ARTAXERXES I Yr03 ]
1> 04/21 w1 20:00, 100m 3.60 29d S
-> 05/20 w2 19:52, 74m 2.42 29d
-> 06/18 w3 19:37, 41m 1.42 29d
  07/17 w4 19:10, 11m 0.61
-> 07/18 w5 19:56, 57m 3.44 30d
  08/16 w6 19:10, 29m 1.58
-> 08/17 w7 19:47, 66m 5.23 30d
  09/14 w7 18:20, 10m 0.32
-> 09/15 w1 18:54, 45m 2.46 29d L
  10/14 w2 18:01, 30m 0.65
7> 10/15 w3 18:36, 67m 3.16 30d S
-> 11/13 w4 17:52, 51m 1.03 29d
-> 12/13 w6 18:02, 70m 1.50 30d
Year -460 Spring Equinox jd= 1553128.75 03/27 w6 06:05, Selucid=-150
      Fall Equinox jd= 1553312.74 09/27 w1 05:52, 184 days later
  01/11 w7 17:40, 33m 0.34
-> 01/12 w1 18:35, 87m 2.22 30d
  02/10 w2 18:21, 48m 0.72
-> 02/11 w3 19:20, 106m 3.65 30d
-> 03/11 w4 19:11, 75m 1.95 29d L

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## [ ARTAXERXES I Yr04 ]

04/09 w5 19:03, 50m 0.95  
 1> 04/10 w6 20:09, 116m 4.87 30d S  
 05/08 w6 18:57, 26m 0.45  
 -> 05/09 w7 20:05, 93m 3.62 29d  
 -> 06/07 w1 19:56, 66m 2.55 29d  
 07/06 w2 19:37, 37m 1.52  
 -> 07/07 w3 20:30, 90m 5.93 30d  
 08/04 w3 19:06, 15m 0.60  
 -> 08/05 w4 19:51, 61m 3.77 29d  
 -> 09/03 w5 19:04, 42m 1.82 29d L  
 10/02 w6 18:13, 28m 0.48  
 7> 10/03 w7 18:49, 66m 3.12 30d S  
 -> 11/01 w1 18:01, 50m 1.10 29d

[ EL: AP8 proves this was a 9<sup>th</sup> month ]

9> 12/01 w3 18:02, 70m 1.60 30d  
 12/30 w4 17:32, 33m 0.32  
 -> 12/31 w5 18:22, 82m 2.01 30d  
 Year -459 Spring Equinox jd= 1553493.75 03/27 w7 06:06, Selucid=-149  
 Fall Equinox jd= 1553677.74 09/27 w2 05:51, 184 days later  
 01/29 w6 18:01, 38m 0.44  
 -> 01/30 w7 18:55, 91m 2.62 30d  
 02/28 w1 18:39, 51m 0.90  
 -> 03/01 w2 19:35, 106m 3.96 30d SL

## [ ARTAXERXES I Yr05 ]

03/29 w2 18:24, 18m 0.16  
 1> 03/30 w3 19:23, 76m 2.20 29d  
 -> 04/28 w4 19:14, 49m 1.17 29d  
 05/27 w5 19:06, 23m 0.57  
 -> 05/28 w6 20:11, 87m 3.63 30d  
 -> 06/26 w7 19:58, 60m 2.46 29d  
 07/25 w1 19:34, 37m 1.37  
 -> 07/26 w2 20:23, 87m 5.82 30d  
 08/23 w2 18:57, 23m 0.48  
 -> 08/24 w3 19:41, 67m 3.79 29d SL  
 7> 09/22 w4 18:52, 54m 1.96 29d  
 10/21 w5 18:03, 41m 0.68  
 -> 10/22 w6 18:43, 82m 3.66 30d  
 -> 11/20 w7 18:00, 64m 1.48 29d  
 12/19 w1 17:26, 32m 0.29  
 -> 12/20 w2 18:15, 81m 2.09 30d  
 Year -458 Spring Equinox jd= 1553858.75 03/27 w1 06:06, Selucid=-148  
 Fall Equinox jd= 1554042.74 09/27 w3 05:51, 184 days later  
 01/18 w3 17:52, 39m 0.44  
 -> 01/19 w4 18:45, 91m 2.64 30d L  
 02/17 w5 18:26, 47m 0.77  
 -> 02/18 w6 19:19, 99m 3.43 30d SL

## [ PD: Addaru II, Artaxerxes I Yr05 ]

## [ Intercalated not allowing spring on 01/08 or 07 ]

-> 03/19 w7 19:01, 61m 1.48 29d [ 2<sup>nd</sup> 12<sup>th</sup> ]

## [ ARTAXERXES I Yr06 ]

04/17 w1 18:45, 27m 0.50  
 1> 04/18 w2 19:41, 83m 2.82 30d  
 -> 05/17 w3 19:30, 53m 1.49 29d  
 06/15 w4 19:20, 26m 0.62  
 -> 06/16 w5 20:19, 84m 3.61 30d

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-> 07/15 w6 19:59, 59m 2.27 29d
-> 08/13 w7 19:26, 42m 1.18 29d SL
    09/11 w1 18:43, 30m 0.42
-> 09/12 w2 19:24, 73m 3.61 30d
7> 10/11 w3 18:35, 61m 1.93 29d
    11/09 w4 17:48, 45m 0.69
-> 11/10 w5 18:34, 91m 3.82 30d
-> 12/09 w6 18:00, 68m 1.58 29d
Year -457 Spring Equinox jd= 1554223.75 03/27 w2 06:06, Selucid=-147
      Fall Equinox jd= 1554408.74 09/28 w5 05:52, 185 days later
    01/07 w7 17:36, 32m 0.29
-> 01/08 w1 18:32, 88m 2.55 30d L
    02/06 w2 18:15, 46m 0.76
-> 02/07 w3 19:11, 101m 3.57 30d S
-> 03/08 w4 18:53, 60m 1.47 29d
[ ARTAXERXES I Yr07 ]
    04/06 w5 18:34, 23m 0.42
1> 04/07 w6 19:27, 75m 2.39 30d
    05/06 w7 19:11, 41m 0.94
-> 05/07 w1 20:06, 96m 3.68 30d
-> 06/05 w2 19:52, 64m 1.89 29d
    07/04 w3 19:36, 36m 0.72
-> 07/05 w4 20:27, 87m 3.77 30d L
    08/02 w4 19:09, 17m 0.12
-> 08/03 w5 19:55, 63m 2.25 29d S
-> 09/01 w6 19:12, 47m 1.14 29d
    09/30 w7 18:23, 34m 0.42
7> 10/01 w1 19:01, 74m 3.27 30d
-> 10/30 w2 18:12, 59m 1.63 29d
    11/28 w3 17:31, 38m 0.46
-> 11/29 w4 18:24, 91m 3.54 30d
-> 12/28 w5 18:02, 65m 1.52 29d L
Year -456 Spring Equinox jd= 1554589.75 03/27 w4 06:05, Selucid=-146
      Fall Equinox jd= 1554773.74 09/27 w6 05:52, 184 days later
    01/26 w6 17:49, 30m 0.38
-> 01/27 w7 18:53, 92m 3.07 30d S
-> 02/25 w1 18:40, 55m 1.30 29d
[ ARTAXERXES I Yr08 ]
[ Note spring on 01/01 ]
    03/25 w2 18:25, 21m 0.39
1> 03/26 w3 19:21, 76m 2.37 30d
    04/24 w4 19:03, 41m 0.87
-> 04/25 w5 19:58, 95m 3.48 30d
-> 05/24 w6 19:43, 61m 1.53 29d
    06/22 w7 19:26, 29m 0.38
-> 06/23 w1 20:17, 80m 2.58 30d SL
-> 07/22 w2 19:49, 51m 1.10 29d S
    08/20 w3 19:08, 31m 0.31
-> 08/21 w4 19:44, 68m 2.50 30d
[ Allowed autumn on 07/07 ]
    09/19 w5 18:51, 49m 1.16 29d [ did not see it ]
7> 09/20 w6 30d
    10/18 w6 17:56, 31m 0.32
-> 10/19 w7 18:33, 69m 2.75 30d
-> 11/17 w1 17:48, 50m 1.16 29d
    12/16 w2 17:16, 23m 0.21

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-> 12/17 w3 18:18, 85m 3.07 30d SL
Year -455 Spring Equinox jd= 1554954.75 03/27 w5 06:06, Selucid=-145
      Fall Equinox jd= 1555138.74 09/27 w7 05:51, 184 days later
-> 01/15 w4 18:10, 59m 1.46 29d
    02/13 w5 18:05, 29m 0.54
-> 02/14 w6 19:13, 97m 3.56 30d
-> 03/15 w7 19:03, 65m 1.80 29d
[ ARTAXERXES I Yr09 ]
    04/13 w1 18:50, 35m 0.65
1> 04/14 w2 19:50, 94m 3.28 30d
-> 05/13 w3 19:36, 62m 1.44 29d
    06/11 w4 19:23, 31m 0.34
-> 06/12 w5 20:17, 85m 2.47 30d SL
    07/11 w6 19:52, 52m 0.93
-> 07/12 w7 20:35, 95m 3.72 30d
-> 08/10 w1 19:50, 63m 1.76 29d
    09/08 w2 18:55, 39m 0.55
-> 09/09 w3 19:24, 69m 2.84 30d
7> 10/08 w4 18:24, 46m 1.11 29d
    11/06 w5 17:27, 21m 0.16
-> 11/07 w6 18:05, 60m 2.24 30d
    12/06 w7 17:29, 37m 0.80
-> 12/07 w1 18:27, 96m 4.55 30d SL
Year -454 Spring Equinox jd= 1555319.75 03/27 w6 06:06, Selucid=-144
      Fall Equinox jd= 1555503.74 09/27 w1 05:51, 184 days later
-> 01/05 w2 18:21, 79m 2.69 29d
-> 02/03 w3 18:22, 55m 1.41 29d
    03/04 w4 18:21, 31m 0.59
-> 03/05 w5 19:31, 100m 3.78 30d
[ ARTAXERXES I Yr10 ]
1> 04/03 w6 19:23, 74m 2.09 29d
    05/02 w7 19:16, 49m 0.87
-> 05/03 w1 20:21, 113m 4.20 30d L
    05/31 w1 19:10, 24m 0.17
-> 06/01 w2 20:12, 85m 2.25 29d S
    06/30 w3 19:55, 56m 0.90
-> 07/01 w4 20:43, 104m 3.77 30d
-> 07/30 w5 20:01, 67m 1.75 29d
    08/28 w6 19:07, 38m 0.49
-> 08/29 w7 19:35, 67m 2.48 30d
    09/27 w1 18:30, 38m 0.73
7> 09/28 w2 18:56, 65m 3.20 30d
    10/27 w3 17:55, 39m 1.11
-> 10/28 w4 18:28, 73m 4.32 30d L
-> 11/26 w5 17:47, 53m 2.06 29d S
    12/25 w6 17:26, 30m 0.75
-> 12/26 w7 18:31, 95m 4.13 30d
Year -453 Spring Equinox jd= 1555684.75 03/27 w7 06:06, Selucid=-143
      Fall Equinox jd= 1555869.74 09/28 w3 05:52, 185 days later
-> 01/24 w1 18:34, 76m 2.44 29d
-> 02/22 w2 18:36, 53m 1.25 29d
[ PD: Addaru II, Artaxerxes I Yr10 ]
[ Intercalated not allowing spring on 01/03 ]
    03/23 w3 18:34, 31m 0.47
-> 03/24 w4 19:45, 102m 3.69 30d [ 2nd 12th ]
[ ARTAXERXES I Yr11 ]

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1> 04/22 w5 19:43, 82m 2.23 29d L
-> 05/21 w6 19:42, 63m 1.16 29d S
    06/19 w7 19:39, 43m 0.47
-> 06/20 w1 20:39, 103m 3.19 30d
-> 07/19 w2 20:08, 69m 1.58 29d
    08/17 w3 19:19, 38m 0.47
-> 08/18 w4 19:49, 69m 2.54 30d
    09/16 w5 18:44, 37m 0.74
-> 09/17 w6 19:08, 63m 3.19 30d
    10/16 w7 18:02, 33m 0.97
7> 10/17 w1 18:29, 61m 3.76 30d L
    11/15 w2 17:35, 36m 1.39
-> 11/16 w3 18:15, 76m 4.71 30d S
-> 12/15 w4 17:50, 58m 2.28 29d
Year -452 Spring Equinox jd= 1556050.75 03/27 w2 06:05, Selucid=-142
      Fall Equinox jd= 1556234.74 09/27 w4 05:52, 184 days later
    01/13 w5 17:42, 34m 0.86
-> 01/14 w6 18:49, 100m 4.00 30d
-> 02/12 w7 18:50, 76m 2.22 29d
-> 03/12 w1 18:48, 52m 1.03 29d
[ ARTAXERXES I Yr12 ]
    04/10 w2 18:45, 31m 0.34
1> 04/11 w3 19:58, 104m 3.51 30d SL
-> 05/10 w4 20:03, 91m 2.37 29d
-> 06/08 w5 20:06, 75m 1.48 29d
    07/07 w6 19:53, 53m 0.73
-> 07/08 w7 20:44, 104m 3.90 30d
-> 08/06 w1 19:55, 66m 2.03 29d
    09/04 w2 18:54, 34m 0.60
-> 09/05 w3 19:21, 61m 3.18 30d
    10/04 w4 18:13, 30m 1.04
7> 10/05 w5 18:39, 57m 4.00 30d SL
    11/03 w6 17:39, 30m 1.47
-> 11/04 w7 18:13, 66m 4.69 30d
-> 12/03 w1 17:36, 44m 1.98 29d
Year -451 Spring Equinox jd= 1556415.75 03/27 w3 06:06, Selucid=-141
      Fall Equinox jd= 1556599.74 09/27 w5 05:51, 184 days later
    01/01 w2 17:17, 17m 0.53
-> 01/02 w3 18:16, 75m 2.73 30d
    01/31 w4 18:11, 46m 0.99
-> 02/01 w5 19:13, 107m 4.06 30d
    03/01 w5 18:04, 16m 0.15
-> 03/02 w6 19:07, 78m 2.13 29d
[ ARTAXERXES I Yr13 ]
    03/31 w7 19:01, 54m 0.97
1> 04/01 w1 20:09, 121m 4.78 30d SL
    04/29 w1 19:01, 35m 0.39
-> 04/30 w2 20:15, 109m 3.49 29d
-> 05/29 w3 20:21, 97m 2.50 29d
-> 06/27 w4 20:14, 76m 1.60 29d
    07/26 w5 19:43, 47m 0.74
-> 07/27 w6 20:24, 88m 4.13 30d
-> 08/25 w7 19:24, 52m 2.17 29d
    09/23 w1 18:19, 22m 0.68
7> 09/24 w2 18:47, 51m 3.71 30d SL
    10/23 w3 17:45, 25m 1.46

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-> 10/24 w4 18:18, 59m 4.94 30d
    11/22 w5 17:35, 39m 2.13
-> 11/23 w6 18:22, 87m 5.84 30d
    12/21 w6 17:09, 14m 0.55
-> 12/22 w7 18:04, 69m 2.68 29d
Year -450 Spring Equinox jd= 1556780.75 03/27 w4 06:06, Selucid=-140
      Fall Equinox jd= 1556964.74 09/27 w6 05:51, 184 days later
    01/20 w1 17:54, 39m 0.78
-> 01/21 w2 18:52, 96m 3.32 30d
-> 02/19 w3 18:41, 60m 1.25 29d L
[ PD: Addaru II, Artaxerxes I Yr13 ]
[ Intercalated not allowing spring on 01/06 ]
    03/20 w4 18:28, 27m 0.24
-> 03/21 w5 19:27, 85m 2.44 30d S [ 2nd 12th ]
[ ARTAXERXES I Yr14 ]
1> 04/19 w6 19:21, 62m 1.23 29d
    05/18 w7 19:23, 45m 0.59
-> 05/19 w1 20:33, 115m 3.62 30d
[ EL: KR1 proves this was a 3rd month ]
3> 06/17 w2 20:28, 93m 2.49 29d
-> 07/16 w3 20:01, 62m 1.44 29d
    08/14 w4 19:14, 31m 0.54
-> 08/15 w5 19:48, 66m 3.92 30d L
    09/13 w6 18:46, 36m 2.11
-> 09/14 w7 19:17, 68m 6.98 30d S
    10/12 w7 17:44, 11m 0.77
7> 10/13 w1 18:18, 46m 4.08 29d
    11/11 w2 17:31, 29m 1.82
-> 11/12 w3 18:18, 77m 5.78 30d
-> 12/11 w4 17:56, 64m 2.73 29d
Year -449 Spring Equinox jd= 1557145.75 03/27 w5 06:06, Selucid=-139
      Fall Equinox jd= 1557330.74 09/28 w1 05:52, 185 days later
    01/09 w5 17:45, 39m 0.79
-> 01/10 w6 18:44, 98m 3.45 30d
-> 02/08 w7 18:31, 60m 1.19 29d L
    03/09 w1 18:16, 22m 0.16
-> 03/10 w2 19:10, 75m 1.91 30d S
[ ARTAXERXES I Yr15 ]
    04/08 w3 18:55, 43m 0.66
1> 04/09 w4 19:54, 101m 3.22 30d
-> 05/08 w5 19:49, 78m 1.72 29d
    06/06 w6 19:44, 55m 0.77
-> 06/07 w7 20:43, 114m 3.79 30d
-> 07/06 w1 20:17, 77m 2.36 29d
-> 08/04 w2 19:33, 41m 1.20 29d L
    09/02 w3 18:36, 12m 0.40
-> 09/03 w4 19:08, 46m 3.56 30d S
    10/02 w5 18:10, 23m 1.96
7> 10/03 w6 18:47, 62m 6.84 30d
-> 11/01 w7 18:04, 53m 4.14 29d
-> 11/30 w1 17:37, 44m 1.92 29d
    12/29 w2 17:25, 27m 0.50
-> 12/30 w3 18:30, 92m 3.19 30d
Year -448 Spring Equinox jd= 1557510.75 03/26 w6 06:07, Selucid=-138
      Fall Equinox jd= 1557695.74 09/27 w2 05:52, 185 days later
-> 01/28 w4 18:21, 59m 1.13 29d SL

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    02/26 w5 18:08,    22m  0.17
-> 02/27 w6 19:03,    77m  1.95   30d
[ ARTAXERXES I Yr16 ]
    03/27 w7 18:46,    41m  0.62
1> 03/28 w1 19:41,    95m  2.98   30d
-> 04/26 w2 19:29,    65m  1.29   29d
    05/25 w3 19:18,    36m  0.37
-> 05/26 w4 20:14,    91m  2.32   30d
[ EL: KR2 proves this was a 4th month ]
    06/24 w5 19:53,    55m  0.95
4> 06/25 w6 20:37,    99m  4.07   30d
    07/23 w6 19:16,    18m  0.18
-> 07/24 w7 19:53,    56m  2.36   29d SL
    08/22 w1 18:58,    23m  1.13
-> 08/23 w2 19:29,    55m  4.99   30d
    09/21 w3 18:33,    34m  3.21
7> 09/22 w4 19:10,    72m  8.92   30d
    10/20 w4 17:43,    20m  1.68
-> 10/21 w5 18:30,    68m  6.31   29d
-> 11/19 w6 18:06,    69m  3.80   29d
-> 12/18 w7 17:56,    62m  1.77   29d
Year  -447 Spring Equinox jd= 1557876.75  03/27 w1 06:06, Selucid=-137
      Fall Equinox  jd= 1558060.74  09/27 w3 05:51, 184 days later
    01/16 w1 17:52,    40m  0.50
-> 01/17 w2 19:00,   107m  3.58   30d SL
-> 02/15 w3 18:48,    71m  1.61   29d
[ PD: Addaru II, Artaxerxes I Yr16 ]
[ Intercalated not allowing spring on 01/10 ]
    03/16 w4 18:35,    36m  0.53
-> 03/17 w5 19:33,    93m  2.94   30d   [ 2nd 12th ]
[ ARTAXERXES I Yr17 ]
1> 04/15 w6 19:18,    62m  1.24   29d
    05/14 w7 19:06,    31m  0.30
-> 05/15 w1 20:01,    85m  2.06   30d
    06/13 w2 19:40,    47m  0.65
-> 06/14 w3 20:26,    92m  3.13   30d  L
-> 07/13 w4 19:45,    45m  1.37   29d SL
    08/12 w6 19:25,    40m  2.69
-> 08/13 w7 19:54,    70m  7.20   31d
    09/10 w7 18:26,    13m  1.25
-> 09/11 w1 18:58,    46m  4.84   29d
    10/10 w2 18:08,    33m  2.85
7> 10/11 w3 18:52,    78m  8.07   30d
    11/08 w3 17:31,    26m  1.27
-> 11/09 w4 18:27,    83m  5.48   29d
    12/07 w4 17:09,    17m  0.28
-> 12/08 w5 18:17,    86m  3.24   29d  L
Year  -446 Spring Equinox jd= 1558241.75  03/27 w2 06:06, Selucid=-136
      Fall Equinox  jd= 1558425.74  09/27 w4 05:51, 184 days later
-> 01/06 w6 18:15,    71m  1.57   29d S
    02/04 w7 18:11,    43m  0.58
-> 02/05 w1 19:20,   111m  3.88   30d
-> 03/06 w2 19:10,    78m  2.08   29d
[ ARTAXERXES I Yr18 ]
    04/04 w3 18:59,    49m  0.86
1> 04/05 w4 20:01,   110m  3.89   30d

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    05/03 w4 18:49,    21m  0.19
-> 05/04 w5 19:48,    80m  1.90   29d
    06/02 w6 19:31,    44m  0.58
-> 06/03 w7 20:21,    93m  3.07   30d  L
-> 07/02 w1 19:45,    45m  1.26   29d  S
    08/01 w3 19:29,    37m  2.14
-> 08/02 w4 19:59,    67m  5.84   31d
    08/31 w5 19:01,    35m  3.26
-> 09/01 w6 19:31,    66m  7.74   30d
    09/29 w6 18:05,    15m  1.39
7> 09/30 w7 18:39,    51m  4.81   29d
-> 10/29 w1 17:59,    45m  2.52   29d
    11/27 w2 17:33,    40m  0.94
-> 11/28 w3 18:35,   101m  4.73   30d  L
    12/26 w3 17:21,    24m  0.16
-> 12/27 w4 18:31,    94m  2.78   29d  S
Year  -445 Spring Equinox jd= 1558606.75  03/27 w3 06:06, Selucid=-135
      Fall Equinox   jd= 1558790.74  09/27 w5 05:51, 184 days later
-> 01/25 w5 18:28,    69m  1.44   29d
    02/23 w6 18:24,    40m  0.62
-> 02/24 w7 19:34,   109m  3.96   30d
[ ARTAXERXES I Yr19 ]
[ Allowed spring on 01/02 or 01 ]
1> 03/25 w1 19:27,    83m  2.30   29d
-> 04/23 w2 19:19,    58m  1.05   29d
    05/22 w3 19:10,    30m  0.26
-> 05/23 w4 20:08,    87m  2.63   30d  SL
-> 06/21 w5 19:41,    45m  1.14   29d
-> 07/21 w7 19:38,    40m  2.18   30d
    08/20 w2 19:14,    36m  3.09
-> 08/21 w3 19:44,    67m  7.18   31d
    09/18 w3 18:17,    13m  1.11
[ Allowed autumn on 07/08 or 07 ]
7> 09/19 w4 18:47,    45m  3.91   29d
    10/18 w5 17:57,    31m  1.55
-> 10/19 w6 18:36,    71m  4.99   30d
[ EL: AP13 proves this was a 9th month ]
    11/16 w6 17:17,    18m  0.25
9> 11/17 w7 18:05,    66m  2.45   29d  SL
    12/16 w1 17:46,    53m  0.90
-> 12/17 w2 18:48,   115m  4.37   30d
Year  -444 Spring Equinox jd= 1558971.75  03/26 w4 06:07, Selucid=-134
      Fall Equinox   jd= 1559156.74  09/27 w7 05:52, 185 days later
    01/14 w2 17:36,    27m  0.23
-> 01/15 w3 18:43,    93m  2.54   29d
-> 02/13 w4 18:39,    63m  1.30   29d
[ PD: Addaru II, Artaxerxes I Yr19 ]
[ Intercalated not allowing spring on 01/12 ]
    03/13 w5 18:33,    36m  0.52
-> 03/14 w6 19:43,   106m  3.75   30d   [ 2nd 12th ]
[ ARTAXERXES I Yr20 ]
1> 04/12 w7 19:39,    84m  2.29   29d
-> 05/11 w1 19:32,    59m  1.20   29d  SL
    06/09 w2 19:19,    27m  0.48
-> 06/10 w3 20:14,    82m  3.41   30d

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    07/09 w4 19:39,    39m  1.81
-> 07/10 w5 20:20,    80m  5.71   30d
-> 08/08 w6 19:29,    41m  3.11   29d
    09/06 w7 18:34,    16m  1.15
-> 09/07 w1 19:05,    48m  4.03   30d
    10/06 w2 18:11,    31m  1.51
7> 10/07 w3 18:46,    67m  4.72   30d
    11/04 w3 17:23,    16m  0.17
-> 11/05 w4 18:03,    56m  1.95   29d SL
    12/04 w5 17:30,    38m  0.46
-> 12/05 w6 18:21,    89m  2.80   30d
Year  -443 Spring Equinox jd= 1559337.75  03/27 w6 06:06, Selucid=-133
      Fall Equinox  jd= 1559521.74  09/27 w1 05:51, 184 days later
-> 01/03 w7 18:04,    63m  1.10   29d
    02/01 w1 17:52,    27m  0.30
-> 02/02 w2 18:55,    88m  2.42   30d
-> 03/03 w3 18:47,    57m  1.12   29d
[ ARTAXERXES I Yr21 ]
    04/01 w4 18:41,    32m  0.35
1> 04/02 w5 19:50,   101m  3.42   30d L
-> 05/01 w6 19:45,    79m  2.24   29d S
-> 05/30 w7 19:37,    52m  1.36   29d
    06/28 w1 19:19,    20m  0.71
-> 06/29 w2 20:11,    72m  4.02   30d
    07/28 w3 19:33,    38m  2.29
-> 07/29 w4 20:12,    78m  6.77   30d
    08/26 w4 18:45,    14m  0.86
-> 08/27 w5 19:21,    51m  3.85   29d
    09/25 w6 18:28,    34m  1.53
7> 09/26 w7 19:03,    70m  4.99   30d L
    10/24 w7 17:37,    19m  0.22
-> 10/25 w1 18:14,    57m  2.11   29d S
    11/23 w2 17:34,    39m  0.49
-> 11/24 w3 18:18,    83m  2.69   30d
    12/23 w4 17:50,    55m  0.85
-> 12/24 w5 18:42,   106m  3.44   30d
Year  -442 Spring Equinox jd= 1559702.75  03/27 w7 06:06, Selucid=-132
      Fall Equinox  jd= 1559886.74  09/27 w2 05:51, 184 days later
-> 01/22 w6 18:25,    68m  1.37   29d
    02/20 w7 18:10,    28m  0.29
-> 02/21 w1 19:08,    86m  2.42   30d
[ PD: Addaru II, Artaxerxes I Yr21 ]
[ Intercalated not allowing spring on 01/05 or 04 ]
-> 03/22 w2 18:58,    55m  1.05   29d L [ 2nd 12th ]
[ ARTAXERXES I Yr22 ]
    04/20 w3 18:49,    30m  0.35
1> 04/21 w4 19:55,    95m  3.31   30d S
-> 05/20 w5 19:49,    70m  2.29   29d
-> 06/18 w6 19:37,    42m  1.47   29d
    07/17 w7 19:14,    15m  0.74
-> 07/18 w1 20:05,    66m  4.21   30d
-> 08/16 w2 19:23,    42m  2.42   29d
    09/14 w3 18:36,    27m  0.92
-> 09/15 w4 19:14,    66m  4.37   30d L
    10/13 w4 17:46,    15m  0.10
7> 10/14 w5 18:25,    54m  1.96   29d S

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    11/12 w6 17:40,    38m 0.51
-> 11/13 w7 18:22,    81m 2.88   30d
    12/12 w1 17:48,    56m 0.92
-> 12/13 w2 18:37,   105m 3.57   30d
Year  -441 Spring Equinox jd= 1560067.75  03/27 w1 06:06, Selucid=-131
      Fall Equinox  jd= 1560251.74  09/27 w3 05:51, 184 days later
-> 01/11 w3 18:13,    66m 1.26   29d
    02/09 w4 17:54,    21m 0.16
-> 02/10 w5 18:47,    74m 1.73   30d
    03/11 w6 18:30,    34m 0.40
-> 03/12 w7 19:25,    89m 2.79   30d SL
[ ARTAXERXES I Yr23 ]
1> 04/10 w1 19:12,    58m 1.33   29d
    05/09 w2 19:01,    30m 0.57
-> 05/10 w3 20:03,    91m 3.51   30d
-> 06/08 w4 19:53,    63m 2.36   29d
    07/07 w5 19:36,    36m 1.40
-> 07/08 w6 20:30,    90m 5.74   30d
    08/05 w6 19:07,    17m 0.58
-> 08/06 w7 19:55,    65m 3.99   29d
-> 09/04 w1 19:11,    50m 2.30   29d SL
    10/03 w2 18:24,    39m 0.94
7> 10/04 w3 19:05,    82m 4.66   30d
    11/01 w3 17:37,    26m 0.22
-> 11/02 w4 18:20,    70m 2.31   29d
    12/01 w5 17:42,    50m 0.75
-> 12/02 w6 18:31,    99m 3.53   30d
-> 12/31 w7 18:05,    66m 1.26   29d
Year  -440 Spring Equinox jd= 1560432.75  03/26 w2 06:07, Selucid=-130
      Fall Equinox  jd= 1560617.74  09/27 w5 05:52, 185 days later
    01/29 w1 17:44,    22m 0.15
-> 01/30 w2 18:38,    75m 1.75   30d
    02/28 w3 18:19,    31m 0.34
-> 02/29 w4 19:11,    83m 2.45   30d SL
[ ARTAXERXES I Yr24 ]
    03/29 w5 18:52,    45m 0.88
1> 03/30 w6 19:46,    98m 3.68   30d
    04/27 w6 18:35,    11m 0.23
-> 04/28 w7 19:31,    66m 1.94   29d
    05/27 w1 19:18,    34m 0.87
-> 05/28 w2 20:15,    91m 3.88   30d
-> 06/26 w3 19:59,    61m 2.40   29d
    07/25 w4 19:34,    38m 1.24
-> 07/26 w5 20:22,    86m 5.35   30d
    08/23 w5 18:58,    24m 0.42
-> 08/24 w6 19:41,    68m 3.63   29d SL
7> 09/22 w7 18:55,    57m 2.10   29d
    10/21 w1 18:08,    46m 0.90
-> 10/22 w2 18:52,    92m 4.62   30d
-> 11/20 w3 18:14,    78m 2.36   29d
    12/19 w4 17:45,    51m 0.76
-> 12/20 w5 18:42,   108m 3.89   30d
Year  -439 Spring Equinox jd= 1560798.75  03/27 w4 06:06, Selucid=-129
      Fall Equinox  jd= 1560982.74  09/27 w6 05:51, 184 days later
-> 01/18 w6 18:23,    70m 1.55   29d L
    02/16 w7 18:07,    29m 0.31

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-> 02/17 w1 19:03, 84m 2.50 30d S
[ PD: Addaru II, Artaxerxes I Yr24 ]
[ Intercalated not allowing spring on 01/08 ]
  03/18 w2 18:45, 45m 0.88
-> 03/19 w3 19:38, 97m 3.61 30d [ 2nd 12th ]
[ ARTAXERXES I Yr25 ]
1> 04/17 w4 19:19, 61m 1.66 29d
  05/16 w5 19:01, 25m 0.55
-> 05/17 w6 19:56, 79m 2.74 30d
-> 06/15 w7 19:39, 45m 1.20 29d
  07/14 w1 19:17, 18m 0.29
-> 07/15 w2 20:05, 66m 2.58 30d L
[ EL: AP14 proves this was a 5th month ]
5> 08/13 w3 19:29, 45m 1.25 29d S
  09/11 w4 18:44, 32m 0.43
-> 09/12 w5 19:23, 72m 3.36 30d
7> 10/11 w6 18:34, 60m 1.85 29d
  11/09 w7 17:48, 45m 0.70
-> 11/10 w1 18:36, 93m 4.15 30d
-> 12/09 w2 18:07, 75m 2.05 29d
Year -438 Spring Equinox jd= 1561163.75 03/27 w5 06:06, Selucid=-128
      Fall Equinox jd= 1561347.74 09/27 w7 05:51, 184 days later
  01/07 w3 17:49, 44m 0.64
-> 01/08 w4 18:54, 109m 4.03 30d L
-> 02/06 w5 18:42, 72m 1.91 29d S
  03/07 w6 18:30, 37m 0.68
-> 03/08 w7 19:28, 95m 3.48 30d
[ ARTAXERXES I Yr26 ]
1> 04/06 w1 19:11, 60m 1.61 29d
  05/05 w2 18:55, 26m 0.50
-> 05/06 w3 19:49, 80m 2.61 30d
  06/04 w4 19:33, 45m 0.98
-> 06/05 w5 20:25, 97m 3.77 30d
  07/03 w5 19:13, 13m 0.12
-> 07/04 w6 20:01, 62m 1.77 29d L
  08/02 w7 19:28, 35m 0.55
-> 08/03 w1 20:07, 75m 3.11 30d S
-> 09/01 w2 19:19, 54m 1.51 29d
  09/30 w3 18:25, 37m 0.52
7> 10/01 w4 18:59, 72m 3.16 30d
-> 10/30 w5 18:09, 57m 1.50 29d
  11/28 w6 17:28, 34m 0.39
-> 11/29 w7 18:21, 88m 3.42 30d
-> 12/28 w1 18:03, 66m 1.65 29d SL
Year -437 Spring Equinox jd= 1561528.75 03/27 w6 06:06, Selucid=-127
      Fall Equinox jd= 1561712.74 09/27 w1 05:51, 184 days later
  01/26 w2 17:56, 36m 0.58
-> 01/27 w3 19:07, 106m 4.08 30d
-> 02/25 w4 19:00, 75m 2.27 29d
[ ARTAXERXES I Yr27 ]
[ Note spring on 01/01 ]
1> 03/26 w5 18:50, 46m 1.03 29d
  04/24 w6 18:39, 17m 0.31
-> 04/25 w7 19:39, 77m 2.33 30d
  05/24 w1 19:27, 46m 0.87

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-> 05/25 w2 20:24, 102m 3.74 30d
    06/22 w2 19:12, 15m 0.10
-> 06/23 w3 20:04, 67m 1.71 29d SL
    07/22 w4 19:35, 37m 0.48
-> 07/23 w5 20:15, 78m 2.74 30d
-> 08/21 w6 19:27, 50m 1.08 29d
[ Allowed autumn on 07/07 ]
    09/19 w7 18:31, 28m 0.26
7> 09/20 w1 19:00, 58m 1.84 30d
    10/19 w2 18:01, 36m 0.51
-> 10/20 w3 18:33, 69m 2.96 30d
-> 11/18 w4 17:46, 48m 1.16 29d
    12/17 w5 17:13, 20m 0.19
-> 12/18 w6 18:13, 79m 2.82 30d SL
Year -436 Spring Equinox jd= 1561893.75 03/26 w7 06:07, Selucid=-126
      Fall Equinox jd= 1562078.74 09/27 w3 05:52, 185 days later
-> 01/16 w7 18:07, 56m 1.40 29d
    02/14 w1 18:07, 31m 0.60
-> 02/15 w2 19:20, 103m 4.01 30d
-> 03/15 w3 19:16, 77m 2.41 29d
[ ARTAXERXES I Yr28 ]
1> 04/13 w4 19:09, 53m 1.19 29d
    05/12 w5 19:03, 29m 0.37
-> 05/13 w6 20:09, 95m 3.02 30d L
-> 06/11 w7 19:59, 67m 1.45 29d SL
    07/10 w1 19:39, 39m 0.45
-> 07/11 w2 20:25, 86m 2.77 30d
-> 08/09 w3 19:41, 54m 1.11 29d
[ EL: KR3 proves this was a 6th month ]
6> 09/08 w5 19:12, 56m 1.66 30d
    10/07 w6 18:08, 30m 0.33
7> 10/08 w7 18:34, 57m 2.16 30d
    11/06 w1 17:36, 30m 0.49
-> 11/07 w2 18:10, 66m 2.94 30d L
[ EL: AP10 proves this was a 9th month ]
9> 12/06 w3 17:33, 41m 1.08 29d S
Year -435 Spring Equinox jd= 1562259.75 03/27 w2 06:05, Selucid=-125
      Fall Equinox jd= 1562443.74 09/27 w4 05:51, 184 days later
    01/04 w4 17:13, 11m 0.23
-> 01/05 w5 18:19, 76m 2.59 30d
-> 02/03 w6 18:20, 52m 1.31 29d
    03/04 w7 18:20, 29m 0.54
-> 03/05 w1 19:31, 100m 3.73 30d
[ ARTAXERXES I Yr29 ]
1> 04/03 w2 19:29, 79m 2.31 29d
-> 05/02 w3 19:28, 60m 1.23 29d L
    05/31 w4 19:28, 42m 0.51
-> 06/01 w5 20:37, 111m 3.71 30d S
-> 06/30 w6 20:22, 83m 2.14 29d
    07/29 w7 19:48, 53m 0.92
-> 07/30 w1 20:25, 91m 3.85 30d
-> 08/28 w2 19:26, 58m 1.69 29d
    09/26 w3 18:22, 29m 0.34
7> 09/27 w4 18:46, 55m 2.20 30d
    10/26 w5 17:42, 25m 0.44
-> 10/27 w6 18:10, 55m 2.62 30d L

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11/25 w7 17:20, 26m 0.71  
 -> 11/26 w1 18:02, 69m 3.34 30d S  
 -> 12/25 w2 17:40, 44m 1.34 29d  
 Year -434 Spring Equinox jd= 1562624.75 03/27 w3 06:06, Selucid=-124  
           Fall Equinox jd= 1562808.74 09/27 w5 05:51, 184 days later  
 01/23 w3 17:32, 15m 0.38  
 -> 01/24 w4 18:38, 80m 2.63 30d  
 -> 02/22 w5 18:36, 53m 1.23 29d

[ PD: Addaru II, Artaxerxes I Yr29 ]

[ Intercalated not allowing spring on 01/03 ]

03/23 w6 18:32, 29m 0.40  
 -> 03/24 w7 19:41, 98m 3.38 30d [ 2<sup>nd</sup> 12<sup>th</sup> ]

[ ARTAXERXES I Yr30 ]

1> 04/22 w1 19:42, 81m 2.15 29d SL  
 -> 05/21 w2 19:47, 68m 1.31 29d  
 06/19 w3 19:49, 53m 0.71  
 -> 06/20 w4 20:53, 117m 4.25 30d  
 -> 07/19 w5 20:22, 84m 2.64 29d  
 -> 08/17 w6 19:32, 52m 1.18 29d  
 09/15 w7 18:31, 24m 0.21  
 -> 09/16 w1 18:58, 51m 2.10 30d  
 10/15 w2 17:51, 22m 0.46  
 7> 10/16 w3 18:19, 51m 2.81 30d SL  
 11/14 w4 17:22, 22m 0.79  
 -> 11/15 w5 17:59, 60m 3.41 30d  
 12/14 w6 17:26, 34m 1.20  
 -> 12/15 w7 18:19, 86m 4.16 30d

Year -433 Spring Equinox jd= 1562989.75 03/27 w4 06:06, Selucid=-123  
           Fall Equinox jd= 1563173.74 09/27 w6 05:51, 184 days later

-> 01/13 w1 18:09, 60m 1.79 29d  
 02/11 w2 18:02, 28m 0.48  
 -> 02/12 w3 19:02, 87m 2.81 30d  
 -> 03/13 w4 18:54, 58m 1.22 29d

[ ARTAXERXES I Yr31 ]

04/11 w5 18:48, 33m 0.37  
 1> 04/12 w6 19:55, 101m 3.27 30d SL  
 -> 05/11 w7 20:00, 88m 2.19 29d  
 -> 06/09 w1 20:05, 74m 1.43 29d  
 07/08 w2 19:55, 55m 0.79  
 -> 07/09 w3 20:47, 107m 4.39 30d  
 -> 08/07 w4 20:00, 71m 2.70 29d  
 -> 09/05 w5 19:00, 40m 1.16 29d

[ EL: KR4 proves this was a 7<sup>th</sup> month ]

10/04 w6 17:55, 12m 0.18  
 7> 10/05 w7 18:24, 42m 2.40 30d SL  
 11/03 w1 17:24, 15m 0.72  
 -> 11/04 w2 18:00, 52m 3.53 30d  
 12/03 w3 17:22, 30m 1.29  
 -> 12/04 w4 18:12, 80m 4.41 30d

Year -432 Spring Equinox jd= 1563354.75 03/26 w5 06:06, Selucid=-122  
           Fall Equinox jd= 1563539.74 09/27 w1 05:52, 185 days later

-> 01/02 w5 17:57, 56m 1.79 29d  
 01/31 w6 17:47, 23m 0.38  
 -> 02/01 w7 18:45, 80m 2.32 30d  
 03/01 w1 18:32, 43m 0.67  
 -> 03/02 w2 19:28, 98m 3.29 30d L

## [ ARTAXERXES I Yr32 ]

1> 03/31 w3 19:16, 68m 1.54 29d S  
 04/29 w4 19:10, 45m 0.62  
 -> 04/30 w5 20:17, 111m 3.59 30d  
 -> 05/29 w6 20:20, 95m 2.40 29d  
 -> 06/27 w7 20:11, 72m 1.46 29d  
 07/26 w1 19:40, 44m 0.66  
 -> 07/27 w2 20:21, 86m 4.08 30d  
 -> 08/25 w3 19:24, 52m 2.41 29d L  
 09/23 w4 18:21, 24m 1.02  
 7> 09/24 w5 18:52, 57m 4.96 30d S  
 10/23 w6 17:55, 36m 2.60  
 -> 10/24 w7 18:36, 78m 7.50 30d  
 11/21 w7 17:12, 16m 0.95  
 -> 11/22 w1 18:03, 67m 4.16 29d  
 -> 12/21 w2 17:45, 51m 1.73 29d

Year -431 Spring Equinox jd= 1563720.75 03/27 w7 06:05, Selucid=-121  
 Fall Equinox jd= 1563904.74 09/27 w2 05:51, 184 days later

01/19 w3 17:36, 22m 0.36  
 -> 01/20 w4 18:36, 81m 2.40 30d  
 02/18 w5 18:23, 43m 0.64  
 -> 02/19 w6 19:18, 97m 3.14 30d L

## [ PD: Addaru II, Artaxerxes I Yr32 ]

## [ Intercalated not allowing spring on 01/07 or 06 ]

-> 03/20 w7 19:01, 60m 1.21 29d S [ 2<sup>nd</sup> 12<sup>th</sup> ]

## [ ARTAXERXES I Yr33 ]

04/18 w1 18:47, 28m 0.31  
 1> 04/19 w2 19:46, 86m 2.29 30d  
 -> 05/18 w3 19:40, 63m 1.07 29d  
 06/16 w4 19:33, 38m 0.37  
 -> 06/17 w5 20:30, 94m 2.62 30d  
 -> 07/16 w6 19:58, 59m 1.37 29d  
 08/14 w7 19:10, 27m 0.47  
 -> 08/15 w1 19:43, 61m 3.62 30d L  
 09/13 w2 18:43, 33m 2.07  
 -> 09/14 w3 19:15, 66m 7.15 30d S  
 10/12 w3 17:43, 11m 0.90  
 7> 10/13 w4 18:22, 50m 4.72 29d  
 11/11 w5 17:41, 40m 2.57  
 -> 11/12 w6 18:38, 96m 7.72 30d  
 12/10 w6 17:19, 27m 0.97  
 -> 12/11 w7 18:25, 93m 4.49 29d

Year -430 Spring Equinox jd= 1564085.75 03/27 w1 06:06, Selucid=-120  
 Fall Equinox jd= 1564269.74 09/27 w3 05:51, 184 days later

-> 01/09 w1 18:19, 73m 2.01 0d  
 02/07 w2 18:11, 40m 0.52  
 -> 02/08 w3 19:10, 99m 3.15 30d SL  
 -> 03/09 w4 18:54, 60m 1.22 29d

## [ ARTAXERXES I Yr34 ]

04/07 w5 18:38, 26m 0.31  
 1> 04/08 w6 19:34, 81m 2.14 30d  
 05/07 w7 19:22, 52m 0.81  
 -> 05/08 w1 20:20, 109m 3.34 30d  
 -> 06/06 w2 20:06, 77m 1.59 29d  
 07/05 w3 19:40, 40m 0.48  
 -> 07/06 w4 20:21, 81m 2.91 30d

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-> 08/04 w5 19:32, 41m 1.39 29d SL
    09/02 w6 18:34, 10m 0.45
-> 09/03 w7 19:04, 42m 3.34 30d
    10/02 w1 18:06, 21m 1.83
7> 10/03 w2 18:43, 59m 6.50 30d
-> 11/01 w3 18:05, 54m 4.22 29d
-> 11/30 w4 17:45, 52m 2.23 29d
    12/29 w5 17:39, 41m 0.79
-> 12/30 w6 18:51, 113m 4.48 30d
Year -429 Spring Equinox jd= 1564450.75 03/27 w2 06:06, Selucid=-119
      Fall Equinox jd= 1564634.74 09/27 w4 05:51, 184 days later
    01/27 w6 17:37, 16m 0.08
-> 01/28 w7 18:46, 84m 2.24 29d SL
    02/26 w1 18:36, 50m 0.85
-> 02/27 w2 19:37, 111m 4.07 30d
[ ARTAXERXES I Yr35 ]
    03/27 w2 18:24, 19m 0.23
1> 03/28 w3 19:23, 77m 2.03 29d
    04/26 w4 19:11, 48m 0.76
-> 04/27 w5 20:09, 106m 3.28 30d
-> 05/26 w6 19:55, 72m 1.43 29d
    06/24 w7 19:31, 34m 0.31
-> 06/25 w1 20:14, 76m 2.28 30d L
    07/24 w2 19:29, 32m 0.77
-> 07/25 w3 20:01, 64m 3.52 30d SL
    08/23 w4 19:02, 27m 1.70
-> 08/24 w5 19:30, 56m 5.47 30d
    09/22 w6 18:32, 34m 3.29
7> 09/23 w7 19:06, 69m 8.42 30d
    10/21 w7 17:42, 20m 1.61
-> 10/22 w1 18:27, 65m 5.81 29d
-> 11/20 w2 18:05, 68m 3.55 29d
-> 12/19 w3 17:58, 65m 1.76 29d L
Year -428 Spring Equinox jd= 1564815.75 03/26 w3 06:06, Selucid=-118
      Fall Equinox jd= 1565000.74 09/27 w6 05:52, 185 days later
    01/17 w4 17:57, 46m 0.62
-> 01/18 w5 19:11, 118m 4.30 30d S
-> 02/16 w6 19:05, 87m 2.44 29d
[ PD: Addaru II, Artaxerxes I Yr35 ]
[ Intercalated not allowing spring on 01/10 or 09 ]
-> 03/16 w7 18:56, 57m 1.18 29d [ 2nd 12th ]
    04/14 w1 18:48, 32m 0.43
[ ARTAXERXES I Yr36 ]
1> 04/15 w2 19:52, 95m 2.79 30d
-> 05/14 w3 19:41, 66m 1.22 29d
    06/12 w4 19:23, 30m 0.25
-> 06/13 w5 20:11, 78m 2.23 30d L
    07/12 w6 19:31, 31m 0.73
-> 07/13 w7 20:06, 66m 3.32 30d S
    08/11 w1 19:09, 24m 1.40
-> 08/12 w2 19:37, 53m 4.54 30d
    09/10 w3 18:37, 24m 2.22
-> 09/11 w4 19:06, 54m 6.04 30d
7> 10/10 w5 18:15, 40m 3.35 29d
    11/08 w6 17:36, 32m 1.41
-> 11/09 w7 18:27, 84m 5.23 30d

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    12/07 w7 17:12,    21m  0.28
-> 12/08 w1 18:16,    84m  2.99   29d  L
Year  -427 Spring Equinox jd= 1565181.75  03/27 w5 06:05, Selucid=-117
      Fall Equinox  jd= 1565365.74  09/27 w7 05:51, 184 days later
-> 01/06 w2 18:13,    69m  1.45   29d  S
    02/04 w3 18:11,    43m  0.58
-> 02/05 w4 19:23,   113m  4.06   30d
-> 03/06 w5 19:18,    86m  2.50   29d
[ ARTAXERXES I Yr37 ]
1> 04/04 w6 19:13,    63m  1.32   29d
    05/03 w7 19:08,    40m  0.48
-> 05/04 w1 20:14,   105m  3.38   30d
-> 06/02 w2 19:57,    70m  1.73   29d  SL
    07/01 w3 19:28,    29m  0.60
-> 07/02 w4 20:10,    70m  3.27   30d  S
    07/31 w5 19:20,    26m  1.43
-> 08/01 w6 19:51,    58m  4.64   30d
    08/30 w7 18:51,    25m  2.17
-> 08/31 w1 19:20,    54m  5.74   30d
    09/29 w2 18:23,    34m  2.78
7> 09/30 w3 18:56,    69m  6.79   30d
    10/28 w3 17:34,    20m  0.83
-> 10/29 w4 18:14,    61m  3.56   29d
-> 11/27 w5 17:46,    53m  1.40   29d  SL
    12/26 w6 17:30,    33m  0.30
-> 12/27 w7 18:32,    95m  2.82   30d
Year  -426 Spring Equinox jd= 1565546.75  03/27 w6 06:06, Selucid=-116
      Fall Equinox  jd= 1565730.74  09/27 w1 05:51, 184 days later
-> 01/25 w1 18:27,    68m  1.39   29d
    02/23 w2 18:22,    38m  0.57
-> 02/24 w3 19:31,   106m  3.75   30d
[ ARTAXERXES I Yr38 ]
[ Allowed spring on 01/02 or 01 ]
1> 03/25 w4 19:28,    84m  2.33   29d
-> 04/23 w5 19:25,    63m  1.26   29d
[ EL: KR5 proves this was a 3rd month ]
    05/22 w6 19:19,    39m  0.51
3> 05/23 w7 20:23,   102m  3.83   30d  SL
-> 06/21 w1 19:58,    62m  2.28   29d
    07/20 w2 19:21,    22m  1.06
-> 07/21 w3 19:59,    61m  4.34   30d
    08/19 w4 19:06,    27m  2.14
-> 08/20 w5 19:37,    60m  5.95   30d
[ Allowed autumn on 07/08 ]
    09/18 w6 18:41,    37m  2.91
7> 09/19 w7 19:13,    71m  7.00   30d
    10/17 w7 17:48,    21m  0.83
-> 10/18 w1 18:24,    58m  3.45   29d
-> 11/16 w2 17:44,    45m  1.13   29d  SL
    12/15 w3 17:15,    22m  0.13
-> 12/16 w4 18:07,    74m  1.76   30d
Year  -425 Spring Equinox jd= 1565911.75  03/27 w7 06:06, Selucid=-115
      Fall Equinox  jd= 1566095.74  09/27 w2 05:51, 184 days later
    01/14 w5 17:52,    42m  0.52
-> 01/15 w6 18:51,   100m  2.99   30d
-> 02/13 w7 18:42,    66m  1.41   29d

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[ PD: Addaru II, Artaxerxes I Yr38 ]

[ Intercalated not allowing spring on 01/12 ]

03/14 w1 18:33, 36m 0.48  
 -> 03/15 w2 19:39, 101m 3.42 30d [ 2<sup>nd</sup> 12<sup>th</sup> ]  
 [ ARTAXERXES I Yr39 ]  
 1> 04/13 w3 19:35, 80m 2.10 29d L  
 -> 05/12 w4 19:31, 57m 1.20 29d S  
 06/10 w5 19:21, 29m 0.61  
 -> 06/11 w6 20:21, 89m 4.13 30d  
 -> 07/10 w7 19:50, 50m 2.69 29d  
 08/08 w1 19:08, 20m 1.35  
 -> 08/09 w2 19:47, 60m 5.12 30d  
 09/07 w3 18:55, 37m 2.63  
 -> 09/08 w4 19:30, 73m 7.05 30d  
 10/06 w4 18:03, 22m 0.80  
 7> 10/07 w5 18:39, 59m 3.63 29d L  
 -> 11/05 w6 17:53, 46m 1.25 29d S  
 12/04 w7 17:17, 25m 0.17  
 -> 12/05 w1 18:03, 71m 1.75 30d  
 Year -424 Spring Equinox jd= 1566276.75 03/26 w1 06:06, Selucid=-114  
 Fall Equinox jd= 1566461.74 09/27 w4 05:52, 185 days later  
 01/03 w2 17:39, 38m 0.42  
 -> 01/04 w3 18:32, 90m 2.37 30d  
 02/02 w4 18:15, 49m 0.76  
 -> 02/03 w5 19:10, 103m 3.35 30d  
 -> 03/03 w6 18:57, 67m 1.49 29d

[ ARTAXERXES I Yr40 ]

04/01 w7 18:45, 37m 0.45  
 1> 04/02 w1 19:47, 98m 3.31 30d L  
 -> 05/01 w2 19:41, 74m 2.07 29d S  
 -> 05/30 w3 19:33, 48m 1.27 29d  
 06/28 w4 19:18, 19m 0.70  
 -> 06/29 w5 20:13, 74m 4.21 30d  
 -> 07/28 w6 19:39, 44m 2.75 29d  
 08/26 w7 18:56, 25m 1.33  
 -> 08/27 w1 19:36, 66m 5.43 30d  
 09/24 w1 18:08, 12m 0.30  
 7> 09/25 w2 18:47, 53m 2.90 29d L  
 -> 10/24 w3 18:00, 42m 1.04 29d S  
 11/22 w4 17:19, 24m 0.17  
 -> 11/23 w5 18:05, 70m 1.84 30d  
 12/22 w6 17:36, 41m 0.46  
 -> 12/23 w7 18:26, 91m 2.49 30d  
 Year -423 Spring Equinox jd= 1566642.75 03/27 w3 06:05, Selucid=-113  
 Fall Equinox jd= 1566826.74 09/27 w5 05:51, 184 days later  
 01/21 w1 18:05, 49m 0.71  
 -> 01/22 w2 18:57, 101m 3.08 30d  
 -> 02/20 w3 18:39, 57m 1.04 29d

[ PD: Addaru II, Artaxerxes I Yr40 ]

[ Intercalated not allowing spring on 01/05 ]

03/21 w4 18:20, 19m 0.11  
 -> 03/22 w5 19:15, 73m 1.85 30d SL [ 2<sup>nd</sup> 12<sup>th</sup> ]  
 [ ARTAXERXES I Yr41 ]  
 04/20 w6 19:01, 41m 0.70  
 1> 04/21 w7 19:59, 99m 3.67 30d

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    05/19 w7 18:49,    10m  0.22
-> 05/20 w1 19:49,    70m  2.34  29d
    06/18 w2 19:36,    40m  1.39
-> 06/19 w3 20:32,    96m  5.51  30d
    07/17 w3 19:13,    14m  0.66
-> 07/18 w4 20:04,    65m  3.99  29d
-> 08/16 w5 19:26,    45m  2.48  29d
    09/14 w6 18:42,    33m  1.14
-> 09/15 w7 19:24,    77m  5.34  30d SL
    10/13 w7 17:55,    24m  0.27
7> 10/14 w1 18:38,    68m  3.01  29d
-> 11/12 w2 17:58,    57m  1.25  29d
    12/11 w3 17:25,    33m  0.31
-> 12/12 w4 18:17,    85m  2.32  30d
Year  -422 Spring Equinox jd= 1567007.75  03/27 w4 06:06, Selucid=-112
      Fall Equinox  jd= 1567191.74  09/27 w6 05:51, 184 days later
    01/10 w5 17:55,    48m  0.66
-> 01/11 w6 18:50,   102m  3.18  30d
-> 02/09 w7 18:30,    58m  1.05  29d
    03/10 w1 18:11,    16m  0.09
-> 03/11 w2 19:03,    68m  1.64  30d SL
[ DARIUS II Yr01 ]
    04/09 w3 18:44,    31m  0.44
1> 04/10 w4 19:37,    83m  2.69  30d
-> 05/09 w5 19:21,    49m  1.25  29d
    06/07 w6 19:05,    15m  0.46
-> 06/08 w7 20:00,    70m  2.75  30d
    07/07 w1 19:39,    39m  1.46
-> 07/08 w2 20:29,    89m  5.39  30d
    08/05 w2 19:09,    18m  0.53
-> 08/06 w3 19:54,    65m  3.66  29d
-> 09/04 w4 19:12,    51m  2.15  29d SL
    10/03 w5 18:26,    42m  0.97
7> 10/04 w6 19:09,    86m  5.00  30d
    11/01 w6 17:41,    30m  0.29
-> 11/02 w7 18:28,    78m  2.90  29d
-> 12/01 w1 17:54,    62m  1.24  29d
    12/30 w2 17:30,    31m  0.27
-> 12/31 w3 18:30,    90m  2.53  30d
Year  -421 Spring Equinox jd= 1567372.75  03/27 w5 06:06, Selucid=-111
      Fall Equinox  jd= 1567556.74  09/27 w7 05:51, 184 days later
    01/29 w4 18:14,    51m  0.80
-> 01/30 w5 19:12,   109m  3.86  30d L
-> 02/28 w6 18:55,    67m  1.62  29d S
[ DARIUS II Yr02 ]
    03/29 w7 18:36,    30m  0.45
1> 03/30 w1 19:29,    82m  2.66  30d
-> 04/28 w2 19:10,    46m  1.09  29d
-> 05/28 w4 19:45,    61m  1.96  30d
    06/26 w5 19:25,    27m  0.69
-> 06/27 w6 20:14,    76m  3.29  30d
-> 07/26 w7 19:43,    47m  1.62  29d L
    08/24 w1 19:03,    29m  0.54
-> 08/25 w2 19:42,    69m  3.52  30d S
7> 09/23 w3 18:54,    57m  1.97  29d
    10/22 w4 18:07,    46m  0.85

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-> 10/23 w5 18:51, 90m 4.48 30d
-> 11/21 w6 18:15, 79m 2.49 29d
    12/20 w7 17:50, 56m 0.97
-> 12/21 w1 18:53, 119m 4.90 30d
Year -420 Spring Equinox jd= 1567737.75 03/26 w6 06:06, Selucid=-110
      Fall Equinox jd= 1567922.74 09/27 w2 05:52, 185 days later
    01/18 w1 17:35, 22m 0.14
-> 01/19 w2 18:41, 88m 2.55 29d L
-> 02/17 w3 18:31, 52m 1.01 29d S
[ PD: Addaru II, Darius II Yr02 ]
[ Intercalated not allowing spring on 01/08 ]
    03/17 w4 18:19, 19m 0.27
-> 03/18 w5 19:18, 78m 2.41 30d [ 2nd 12th ]
[ DARIUS II Yr03 ]
1> 04/16 w6 19:02, 44m 1.00 29d
-> 05/16 w1 19:40, 64m 1.87 30d
    06/14 w2 19:22, 28m 0.56
-> 06/15 w3 20:12, 78m 2.85 30d
-> 07/14 w4 19:44, 44m 1.11 29d L
    08/12 w5 19:06, 21m 0.19
-> 08/13 w6 19:43, 59m 2.09 30d S
    09/11 w7 18:53, 41m 0.78
-> 09/12 w1 19:26, 76m 3.70 30d
7> 10/11 w2 18:34, 61m 1.90 29d
    11/09 w3 17:46, 43m 0.66
-> 11/10 w4 18:31, 89m 3.81 30d
-> 12/09 w5 18:03, 71m 1.92 29d
Year -419 Spring Equinox jd= 1568103.75 03/27 w1 06:05, Selucid=-109
      Fall Equinox jd= 1568287.74 09/27 w3 05:51, 184 days later
    01/07 w6 17:48, 44m 0.66
-> 01/08 w7 18:58, 113m 4.42 30d SL
-> 02/06 w1 18:53, 83m 2.54 29d
-> 03/07 w2 18:46, 53m 1.26 29d
[ DARIUS II Yr04 ]
    04/05 w3 18:37, 26m 0.50
1> 04/06 w4 19:40, 89m 3.15 30d
-> 05/05 w5 19:28, 59m 1.53 29d
    06/03 w6 19:16, 28m 0.45
-> 06/04 w7 20:12, 84m 2.78 30d
[ EL: KR6 proves this was a 4th month ]
4> 07/03 w1 19:50, 50m 1.08 29d SL
    08/01 w2 19:16, 24m 0.18
-> 08/02 w3 19:54, 63m 1.89 30d
[ EL: AP20 proves this was a 6th month ]
    08/31 w4 19:04, 38m 0.57
6> 09/01 w5 19:34, 70m 2.84 30d
[ EL: KR7 proves this was a 7th month ]
7> 09/30 w6 18:36, 48m 1.07 29d
-> 10/30 w1 18:12, 60m 1.81 30d
    11/28 w2 17:28, 35m 0.45
-> 11/29 w3 18:16, 84m 3.23 30d
-> 12/28 w4 17:59, 61m 1.51 29d SL
Year -418 Spring Equinox jd= 1568468.75 03/27 w2 06:06, Selucid=-108
      Fall Equinox jd= 1568652.74 09/27 w4 05:51, 184 days later
    01/26 w5 17:53, 33m 0.55

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-> 01/27 w6 19:06, 104m 4.01 30d
-> 02/25 w7 19:04, 79m 2.49 29d
[ DARIUS II Yr05 ]
[ Note spring on 01/01 ]
1> 03/26 w1 19:00, 55m 1.36 29d
  04/24 w2 18:54, 32m 0.56
-> 04/25 w3 20:03, 100m 3.65 30d
-> 05/24 w4 19:56, 75m 2.00 29d L
  06/22 w5 19:45, 48m 0.80
-> 06/23 w6 20:40, 102m 3.88 30d SL
  07/21 w6 19:22, 24m 0.15
-> 07/22 w7 20:06, 69m 1.90 29d
  08/20 w1 19:19, 41m 0.61
-> 08/21 w2 19:50, 73m 2.89 30d
[ Allowed autumn on 07/08 or 07 ]
7> 09/19 w3 18:49, 47m 1.01 29d
-> 10/19 w5 18:14, 49m 1.32 30d
  11/17 w6 17:18, 20m 0.13
-> 11/18 w7 17:54, 57m 1.83 30d L
  12/17 w1 17:20, 27m 0.42
-> 12/18 w2 18:14, 81m 3.06 30d S
Year -417 Spring Equinox jd= 1568833.75 03/27 w3 06:06, Selucid=-107
      Fall Equinox jd= 1569017.74 09/27 w5 05:51, 184 days later
-> 01/16 w3 18:07, 56m 1.45 29d
  02/14 w4 18:06, 29m 0.58
-> 02/15 w5 19:16, 99m 3.72 30d
[ PD: Addaru II, Darius II Yr05 ]
[ Intercalated not allowing spring on 01/11 or 10 ]
-> 03/16 w6 19:14, 76m 2.32 29d [ 2nd 12th ]
[ DARIUS II Yr06 ]
1> 04/14 w7 19:12, 56m 1.26 29d
  05/13 w1 19:12, 38m 0.52
-> 05/14 w2 20:25, 111m 3.94 30d L
-> 06/12 w3 20:21, 89m 2.47 29d S
-> 07/11 w4 20:03, 63m 1.27 29d
  08/09 w5 19:26, 38m 0.44
-> 08/10 w6 20:02, 76m 2.73 30d
-> 09/08 w7 19:03, 47m 1.01 29d
7> 10/08 w2 18:25, 47m 1.38 30d
  11/06 w3 17:23, 17m 0.12
-> 11/07 w4 17:53, 48m 1.68 30d L
  12/06 w5 17:07, 15m 0.26
-> 12/07 w6 17:51, 60m 2.22 30d S
Year -416 Spring Equinox jd= 1569198.75 03/26 w4 06:06, Selucid=-106
      Fall Equinox jd= 1569383.74 09/27 w7 05:52, 185 days later
  01/05 w7 17:32, 29m 0.68
-> 01/06 w1 18:31, 88m 3.36 30d
-> 02/04 w2 18:27, 59m 1.60 29d
  03/04 w3 18:23, 32m 0.58
-> 03/05 w4 19:28, 97m 3.49 30d
[ DARIUS II Yr07 ]
1> 04/03 w5 19:26, 76m 2.08 29d
-> 05/02 w6 19:26, 59m 1.13 29d SL
  05/31 w7 19:31, 45m 0.55
-> 06/01 w1 20:45, 118m 4.13 30d S

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-> 06/30 w2 20:33, 94m 2.83 29d
-> 07/29 w3 20:00, 66m 1.59 29d
    08/27 w4 19:09, 39m 0.57
-> 08/28 w5 19:40, 71m 3.25 30d
7> 09/26 w6 18:35, 42m 1.22 29d
    10/25 w7 17:30, 13m 0.11
-> 10/26 w1 17:59, 43m 1.80 30d SL
    11/24 w2 17:07, 13m 0.31
-> 11/25 w3 17:46, 53m 2.33 30d
    12/24 w4 17:18, 22m 0.63
-> 12/25 w5 18:12, 75m 2.98 30d
Year -415 Spring Equinox jd= 1569563.75 03/26 w5 06:07, Selucid=-105
      Fall Equinox jd= 1569748.74 09/27 w1 05:52, 185 days later
-> 01/23 w6 18:02, 44m 1.07 29d
    02/21 w7 17:53, 10m 0.21
-> 02/22 w1 18:52, 69m 1.83 30d
[ PD: Addaru II, Darius II Yr07 ]
[ Intercalated not allowing spring on 01/02 ]
[ Observed Spring may have been 03/27, 01/03 ]
    03/23 w2 18:42, 39m 0.59
-> 03/24 w3 19:44, 100m 3.48 30d [ 2nd 12th ]
[ DARIUS II Yr08 ]
1> 04/22 w4 19:42, 81m 2.07 29d SL
-> 05/21 w5 19:46, 66m 1.21 29d
    06/19 w6 19:48, 52m 0.67
-> 06/20 w7 20:53, 117m 4.20 30d
-> 07/19 w1 20:25, 86m 2.89 29d
-> 08/17 w2 19:36, 56m 1.55 29d
[ EL: KR8 has this as Tishri, 7th month, but
      this is an error caused by the close call of spring,
      if scribe said Elul instead, then all data would fit ]
    09/15 w3 18:35, 28m 0.46
-> 09/16 w4 19:05, 59m 3.36 30d
    10/15 w5 18:01, 33m 1.34
7> 10/16 w6 18:34, 66m 5.09 30d SL
-> 11/14 w7 17:44, 44m 2.31 29d
[ EL: AP25 proves this was a 9th month, not 10th ]
    12/13 w1 17:10, 18m 0.67
9> 12/14 w2 18:03, 71m 3.17 30d
Year -414 Spring Equinox jd= 1569929.75 03/27 w7 06:06, Selucid=-104
      Fall Equinox jd= 1570113.74 09/27 w2 05:51, 184 days later
-> 01/12 w3 17:50, 42m 1.09 29d
-> 02/11 w5 18:37, 63m 1.52 30d
    03/12 w6 18:23, 26m 0.28
-> 03/13 w7 19:18, 81m 2.29 30d L
[ DARIUS II Yr09 ]
    04/11 w1 19:06, 51m 0.87
1> 04/12 w2 20:07, 112m 3.95 30d S
    05/10 w2 19:00, 27m 0.24
-> 05/11 w3 20:06, 93m 2.44 29d
-> 06/09 w4 20:06, 75m 1.45 29d
    07/08 w5 19:53, 53m 0.73
-> 07/09 w6 20:43, 103m 4.06 30d
-> 08/07 w7 19:57, 68m 2.59 29d
    09/05 w1 18:58, 39m 1.24

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-> 09/06 w2 19:29, 71m 5.53 30d L  
 10/04 w2 17:55, 13m 0.31  
 7> 10/05 w3 18:28, 46m 3.22 29d S  
 11/03 w4 17:33, 25m 1.41  
 -> 11/04 w5 18:17, 69m 5.49 30d  
 -> 12/03 w6 17:48, 56m 2.77 29d  
 Year -413 Spring Equinox jd= 1570294.75 03/27 w1 06:06, Selucid=-103  
 Fall Equinox jd= 1570478.74 09/27 w3 05:51, 184 days later  
 01/01 w7 17:35, 35m 0.97  
 -> 01/02 w1 18:38, 97m 3.96 30d  
 -> 01/31 w2 18:28, 64m 1.54 29d  
 03/01 w3 18:15, 27m 0.26  
 -> 03/02 w4 19:09, 80m 2.21 30d L  
 [ DARIUS II Yr10 ]  
 03/31 w5 18:53, 45m 0.68  
 1> 04/01 w6 19:48, 100m 3.25 30d S  
 -> 04/30 w7 19:38, 72m 1.54 29d  
 05/29 w1 19:32, 48m 0.60  
 -> 05/30 w2 20:32, 107m 3.09 30d  
 -> 06/28 w3 20:15, 76m 1.69 29d  
 07/27 w4 19:39, 43m 0.67  
 -> 07/28 w5 20:16, 81m 3.78 30d  
 -> 08/26 w6 19:18, 47m 2.19 29d L  
 09/24 w7 18:17, 21m 0.97  
 7> 09/25 w1 18:49, 55m 4.97 30d S  
 10/24 w2 17:57, 38m 2.95  
 -> 10/25 w3 18:43, 86m 8.61 30d  
 11/22 w3 17:20, 25m 1.35  
 -> 11/23 w4 18:20, 85m 5.55 29d  
 -> 12/22 w5 18:11, 76m 2.95 29d  
 Year -412 Spring Equinox jd= 1570659.75 03/26 w2 06:06, Selucid=-102  
 Fall Equinox jd= 1570844.74 09/27 w5 05:52, 185 days later  
 -> 01/20 w6 18:07, 53m 1.10 29d  
 02/18 w7 18:00, 21m 0.14  
 -> 02/19 w1 19:00, 80m 2.11 30d SL  
 [ PD: Addaru II, Darius II Yr10 ]  
 [ Intercalated not allowing spring on 01/06 ]  
 03/19 w2 18:45, 44m 0.66  
 -> 03/20 w3 19:41, 99m 3.29 30d [ 2<sup>nd</sup> 12<sup>th</sup> ]  
 [ DARIUS II Yr11 ]  
 1> 04/18 w4 19:27, 68m 1.46 29d  
 05/17 w5 19:16, 39m 0.47  
 -> 05/18 w6 20:14, 96m 2.49 30d  
 -> 06/16 w7 19:57, 62m 1.01 29d  
 07/15 w1 19:26, 27m 0.19  
 -> 07/16 w2 20:04, 65m 1.96 30d  
 08/14 w3 19:11, 28m 0.68  
 -> 08/15 w4 19:40, 59m 3.69 30d SL  
 09/13 w5 18:39, 30m 2.01  
 -> 09/14 w6 19:09, 62m 6.61 30d  
 7> 10/13 w7 18:18, 47m 4.44 29d  
 -> 11/11 w1 17:42, 40m 2.55 29d  
 12/10 w2 17:24, 33m 1.08  
 -> 12/11 w3 18:36, 104m 5.18 30d  
 Year -411 Spring Equinox jd= 1571024.75 03/26 w3 06:07, Selucid=-101  
 Fall Equinox jd= 1571209.74 09/27 w6 05:52, 185 days later

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    01/08 w3 17:22,    17m  0.21
-> 01/09 w4 18:36,    90m  2.84  29d
-> 02/07 w5 18:33,    61m  1.20  29d SL
    03/08 w6 18:24,    30m  0.33
-> 03/09 w7 19:26,    92m  2.83  30d
[ DARIUS II Yr12 ]
1> 04/07 w1 19:14,    62m  1.28  29d
    05/06 w2 19:04,    34m  0.42
-> 05/07 w3 20:03,    93m  2.42  30d
    06/05 w4 19:48,    59m  0.91
-> 06/06 w5 20:38,   108m  3.57  30d
-> 07/05 w6 20:02,    62m  1.55  29d  L
    08/03 w7 19:11,    20m  0.34
-> 08/04 w1 19:41,    50m  2.49  30d SL
    09/02 w2 18:39,    16m  0.94
-> 09/03 w3 19:06,    44m  3.98  30d
    10/02 w4 18:07,    22m  2.06
7> 10/03 w5 18:42,    58m  6.30  30d
-> 11/01 w6 18:03,    53m  3.93  29d
-> 11/30 w7 17:44,    51m  2.04  29d
    12/29 w1 17:40,    41m  0.74
-> 12/30 w2 18:54,   115m  4.57  30d  L
Year  -410 Spring Equinox jd= 1571390.75  03/27 w5 06:06, Selucid=-100
        Fall Equinox  jd= 1571574.74  09/27 w7 05:51, 184 days later
    01/27 w2 17:40,    19m  0.10
-> 01/28 w3 18:54,    92m  2.64  29d S
-> 02/26 w4 18:49,    63m  1.33  29d
[ DARIUS II Yr13 ]
    03/27 w5 18:43,    37m  0.56
1> 03/28 w6 19:49,   103m  3.50  30d
-> 04/26 w7 19:42,    79m  1.87  29d
    05/25 w1 19:33,    51m  0.69
-> 05/26 w2 20:30,   107m  3.41  30d
-> 06/24 w3 20:00,    62m  1.50  29d  L
    07/23 w4 19:16,    19m  0.33
-> 07/24 w5 19:48,    52m  2.40  30d S
    08/22 w6 18:49,    13m  0.81
-> 08/23 w7 19:15,    41m  3.38  30d
    09/21 w1 18:13,    14m  1.39
[ Allowed autumn on 07/05 ]
7> 09/22 w2 18:42,    44m  4.55  30d
    10/21 w3 17:51,    29m  2.17
-> 10/22 w4 18:32,    71m  6.20  30d
    11/19 w4 17:14,    17m  0.64
-> 11/20 w5 18:07,    71m  3.54  29d
-> 12/19 w6 17:58,    65m  1.66  29d  L
Year  -409 Spring Equinox jd= 1571755.75  03/27 w6 06:06, Selucid=-99
        Fall Equinox  jd= 1571939.74  09/27 w1 05:51, 184 days later
[ EL: AP28 proves this was a 11th month ]
    01/17 w7 17:56,    44m  0.57
-> 01/18 w1 19:08,   115m  4.05  30d S
-> 02/16 w2 19:06,    87m  2.49  29d
[ PD: Addaru II, Darius II Yr13 ]
[ Intercalated not allowing spring on 01/10 or 09 ]
-> 03/17 w3 19:02,    63m  1.39  29d  [ 2nd 12th ]

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[ DARIUS II Yr14 ]

[ **Cuneiform Horoscope Ref. #1 confirms 04/16 as Nisan** ]

	04/15	w4	18:59,	42m	0.63	
1>	04/16	w5	20:10,	112m	3.89	30d
->	05/15	w6	20:03,	87m	2.27	29d
	06/13	w7	19:46,	53m	0.99	
->	06/14	w1	20:36,	102m	4.40	30d SL
	07/12	w1	19:14,	14m	0.22	
->	07/13	w2	19:53,	53m	2.29	29d S
	08/11	w3	19:00,	14m	0.83	
->	08/12	w4	19:29,	44m	3.50	30d
	09/10	w5	18:28,	14m	1.41	
->	09/11	w6	18:56,	43m	4.44	30d
	10/10	w7	18:00,	24m	1.85	
->	10/11	w1	18:34,	60m	5.25	30d
->	11/09	w2	17:54,	51m	2.38	29d
	12/08	w3	17:29,	37m	0.65	
->	12/09	w4	18:26,	94m	3.50	30d SL
Year	-408	Spring Equinox	jd= 1572120.75	03/26	w7	06:06, Selucid=-98
		Fall Equinox	jd= 1572304.74	09/26	w2	05:51, 184 days later

-> 01/07 w5 18:18, 74m 1.63 29d

02/05 w6 18:12, 44m 0.62

-> 02/06 w7 19:19, 109m 3.78 30d

-> 03/06 w1 19:15, 83m 2.33 29d

[ DARIUS II Yr15 ]

1> 04/04 w2 19:12, 62m 1.28 29d

05/03 w3 19:11, 43m 0.54

-> 05/04 w4 20:21, 112m 3.97 30d

-> 06/02 w5 20:09, 81m 2.53 29d SL

-> 07/01 w6 19:42, 42m 1.34 29d

-> 07/31 w1 19:37, 44m 3.11 30d

08/29 w2 18:42, 15m 1.33

-> 08/30 w3 19:13, 47m 4.56 30d

09/28 w4 18:16, 26m 1.96

7> 09/29 w5 18:49, 61m 5.49 30d

10/27 w5 17:25, 10m 0.36

-> 10/28 w6 18:03, 49m 2.37 29d

11/26 w7 17:26, 33m 0.53

-> 11/27 w1 18:14, 81m 2.92 30d SL

12/26 w2 17:54, 58m 0.98

-> 12/27 w3 18:50, 113m 3.96 30d

Year -407 Spring Equinox jd= 1572485.75 03/26 w1 06:07, Selucid=-97

Fall Equinox jd= 1572670.74 09/27 w4 05:52, 185 days later

01/24 w3 17:40, 22m 0.21

-> 01/25 w4 18:39, 79m 1.90 29d

02/23 w5 18:29, 44m 0.72

-> 02/24 w6 19:30, 105m 3.68 30d

[ DARIUS II Yr16 ]

[ **Note spring on 01/01** ]

1> 03/25 w7 19:25, 80m 2.15 29d

-> 04/23 w1 19:21, 59m 1.11 29d L

05/22 w2 19:16, 36m 0.48

-> 05/23 w3 20:22, 101m 3.92 30d S

-> 06/21 w4 20:02, 66m 2.70 29d

07/20 w5 19:28, 30m 1.59

-> 07/21 w6 20:11, 73m 5.94 30d



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6> 08/19 w7 19:21, 43m 3.63 29d
[ PD: Ululu II, Darius II Yr16 ]
[ Intercalated not allowing autumn on 01/09 ]
  09/17 w1 18:28, 24m 1.61
6> 09/18 w2 19:04, 61m 5.38 30d [ 2nd 6th ]
7> 10/17 w3 18:15, 49m 2.45 29d L
  11/15 w4 17:33, 34m 0.61
-> 11/16 w5 18:18, 80m 3.13 30d S
-> 12/15 w6 17:50, 58m 1.01 29d
Year -406 Spring Equinox jd= 1572851.75 03/27 w3 06:06, Selucid=-96
      Fall Equinox jd= 1573035.74 09/27 w5 05:51, 184 days later
-> 01/14 w1 18:22, 72m 1.52 30d
  02/12 w2 18:06, 30m 0.37
-> 02/13 w3 19:00, 84m 2.29 30d
  03/14 w4 18:46, 49m 0.81
-> 03/15 w5 19:44, 106m 3.79 30d
[ DARIUS II Yr17 ]
  04/12 w5 18:34, 19m 0.11
1> 04/13 w6 19:35, 80m 2.14 29d L
-> 05/12 w7 19:28, 54m 1.14 29d S
  06/10 w1 19:17, 26m 0.57
-> 06/11 w2 20:17, 85m 3.91 30d
-> 07/10 w3 19:51, 51m 2.74 29d
  08/08 w4 19:13, 25m 1.58
-> 08/09 w5 19:55, 68m 6.05 30d
-> 09/07 w6 19:07, 50m 3.72 29d
  10/06 w7 18:19, 39m 1.69
7> 10/07 w1 19:01, 82m 5.92 30d L
  11/04 w1 17:36, 28m 0.39
-> 11/05 w2 18:21, 74m 2.96 29d S
-> 12/04 w3 17:48, 56m 1.02 29d
Year -405 Spring Equinox jd= 1573216.75 03/27 w4 06:06, Selucid=-95
      Fall Equinox jd= 1573400.74 09/27 w6 05:51, 184 days later
-> 01/03 w5 18:16, 75m 1.61 30d
  02/01 w6 17:57, 31m 0.35
-> 02/02 w7 18:49, 83m 2.14 30d
  03/03 w1 18:30, 40m 0.55
-> 03/04 w2 19:23, 93m 2.88 30d
[ DARIUS II Yr18 ]
1> 04/02 w3 19:06, 57m 1.13 29d SL
  05/01 w4 18:51, 25m 0.28
-> 05/02 w5 19:49, 81m 2.55 30d
-> 05/31 w6 19:36, 50m 1.43 29d
  06/29 w7 19:17, 18m 0.71
-> 06/30 w1 20:10, 71m 3.90 30d
-> 07/29 w2 19:38, 44m 2.55 29d
  08/27 w3 18:57, 27m 1.30
-> 08/28 w4 19:40, 71m 5.66 30d
  09/25 w4 18:12, 17m 0.37
7> 09/26 w5 18:55, 61m 3.49 29d SL
-> 10/25 w6 18:12, 54m 1.67 29d
  11/23 w7 17:36, 41m 0.52
-> 11/24 w1 18:28, 93m 3.37 30d
-> 12/23 w2 18:04, 69m 1.36 29d
Year -404 Spring Equinox jd= 1573581.75 03/26 w5 06:06, Selucid=-94
      Fall Equinox jd= 1573765.74 09/26 w7 05:51, 184 days later

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    01/21 w3 17:45,    29m  0.29
-> 01/22 w4 18:41,    84m  2.14   30d
    02/20 w5 18:22,    41m  0.53
-> 02/21 w6 19:15,    93m  2.90   30d
[ PD: Addaru II, Darius II Yr18 ]
[ Intercalated not allowing spring on 01/06 or 05 ]
-> 03/21 w7 18:55,    53m  1.01   29d SL [ 2nd 12th ]
[ DARIUS II Yr19 ]
    04/19 w1 18:36,    16m  0.17
1> 04/20 w2 19:29,    69m  1.88   30d
    05/19 w3 19:11,    33m  0.73
-> 05/20 w4 20:05,    86m  3.36   30d
-> 06/18 w5 19:45,    49m  1.84   29d
    07/17 w6 19:18,    20m  0.78
-> 07/18 w7 20:05,    66m  3.86   30d
-> 08/16 w1 19:26,    46m  2.28   29d
    09/14 w2 18:42,    34m  1.04
-> 09/15 w3 19:24,    77m  5.10   30d SL
    10/13 w3 17:56,    26m  0.28
7> 10/14 w4 18:41,    72m  3.15   29d
-> 11/12 w5 18:04,    63m  1.56   29d
    12/11 w6 17:35,    43m  0.51
-> 12/12 w7 18:34,   102m  3.44   30d
Year  -403 Spring Equinox jd= 1573946.75  03/26 w6 06:07, Selucid=-93
      Fall Equinox   jd= 1574131.74  09/27 w2 05:52, 185 days later
-> 01/10 w1 18:17,    70m  1.45   29d
    02/08 w2 18:03,    31m  0.29
-> 02/09 w3 19:03,    90m  2.64   30d L
    03/10 w4 18:45,    50m  0.93
-> 03/11 w5 19:41,   105m  3.97   30d S
[ ARTAXERXES II Yr01 ]
    04/08 w5 18:27,    15m  0.17
1> 04/09 w6 19:21,    68m  1.86   29d
    05/08 w7 19:02,    31m  0.65
-> 05/09 w1 19:55,    83m  2.99   30d
-> 06/07 w2 19:34,    44m  1.33   29d
-> 07/07 w4 19:56,    56m  2.32   30d
    08/05 w5 19:20,    30m  0.89
-> 08/06 w6 20:00,    71m  4.01   30d L
    09/03 w6 18:36,    15m  0.13
-> 09/04 w7 19:14,    54m  2.21   29d S
    10/03 w1 18:26,    43m  0.96
7> 10/04 w2 19:07,    84m  4.65   30d
[ EL: KR9 proves this was a 8th month ]
    11/01 w2 17:40,    30m  0.29
8> 11/02 w3 18:26,    77m  2.76   29d
-> 12/01 w4 17:54,    62m  1.26   29d
    12/30 w5 17:33,    34m  0.32
-> 12/31 w6 18:39,    99m  3.14   30d
Year  -402 Spring Equinox jd= 1574312.75  03/27 w1 06:05, Selucid=-92
      Fall Equinox   jd= 1574496.74  09/27 w3 05:51, 184 days later
-> 01/29 w7 18:28,    65m  1.39   29d L
    02/27 w1 18:19,    31m  0.39
-> 02/28 w2 19:22,    94m  3.20   30d S
[ ARTAXERXES II Yr02 ]
1> 03/29 w3 19:07,    60m  1.54   29d

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    04/27 w4 18:52,    28m  0.56
-> 04/28 w5 19:48,    83m  2.92   30d
-> 05/27 w6 19:30,    47m  1.26   29d
    06/25 w7 19:10,    12m  0.28
-> 06/26 w1 19:58,    60m  2.05   30d
    07/25 w2 19:25,    29m  0.60
-> 07/26 w3 20:05,    69m  3.06   30d  L
-> 08/24 w4 19:18,    45m  1.26   29d  S
    09/22 w5 18:27,    29m  0.31
7> 09/23 w6 19:00,    63m  2.43   30d
    10/22 w7 18:09,    49m  0.98
-> 10/23 w1 18:48,    89m  4.30   30d
    11/20 w1 17:24,    28m  0.23
-> 11/21 w2 18:11,    75m  2.29   29d
    12/20 w3 17:46,    52m  0.86
-> 12/21 w4 18:50,   116m  4.70   30d
Year  -401 Spring Equinox jd= 1574677.75  03/27 w2 06:06, Selucid=-91
      Fall Equinox  jd= 1574861.74  09/27 w4 05:51, 184 days later
    01/18 w4 17:33,    20m  0.12
-> 01/19 w5 18:43,    89m  2.71   29d  SL
[ EL: KR10 proves this was a 12th month ]
-> 02/17 w6 18:38,    59m  1.35   29d
[ PD: Addaru II, Artaxerxes II, Yr02 ]
[ Intercalated not allowing spring on 01/08 ]
    03/18 w7 18:32,    32m  0.57
-> 03/19 w1 19:38,    98m  3.72   30d   [ 2nd 12th ]
[ ARTAXERXES II Yr03 ]
1> 04/17 w2 19:28,    70m  2.10   29d
    05/16 w3 19:17,    41m  0.91
-> 05/17 w4 20:17,   100m  3.96   30d
    06/14 w4 19:04,    10m  0.18
-> 06/15 w5 19:59,    65m  1.95   29d
    07/14 w6 19:33,    34m  0.58
-> 07/15 w7 20:17,    77m  3.06   30d  SL
-> 08/13 w1 19:32,    48m  1.19   29d
    09/11 w2 18:40,    27m  0.25
-> 09/12 w3 19:10,    59m  1.91   30d
    10/11 w4 18:12,    38m  0.54
7> 10/12 w5 18:43,    70m  2.76   30d
    11/10 w6 17:52,    49m  0.96
-> 11/11 w7 18:32,    90m  4.04   30d
-> 12/10 w1 18:01,    70m  1.90   29d
Year  -400 Spring Equinox jd= 1575042.75  03/26 w3 06:06, Selucid=-90
      Fall Equinox  jd= 1575226.74  09/26 w5 05:51, 184 days later
    01/08 w2 17:45,    40m  0.62
-> 01/09 w3 18:52,   106m  4.06   30d  SL
-> 02/07 w4 18:51,    80m  2.43   29d
-> 03/07 w5 18:48,    55m  1.35   29d
[ ARTAXERXES II Yr04 ]
    04/05 w6 18:44,    32m  0.64
1> 04/06 w7 19:53,   102m  3.98   30d
-> 05/05 w1 19:48,    79m  2.43   29d
-> 06/03 w2 19:42,    54m  1.18   29d  L
    07/02 w3 19:29,    29m  0.32
-> 07/03 w4 20:22,    82m  2.78   30d  SL
-> 08/01 w5 19:45,    53m  1.17   29d

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    08/30 w6 18:56,    30m 0.28
-> 08/31 w7 19:26,    62m 1.99   30d
    09/29 w1 18:26,    37m 0.54
7> 09/30 w2 18:53,    66m 2.59   30d
    10/29 w3 17:54,    41m 0.71
-> 10/30 w4 18:25,    73m 3.13   30d
-> 11/28 w5 17:40,    47m 1.00   29d L
    12/27 w6 17:08,    11m 0.07
-> 12/28 w7 18:04,    66m 1.85   30d S
Year  -399 Spring Equinox jd= 1575407.75  03/26 w4 06:06, Selucid=-89
      Fall Equinox  jd= 1575592.74  09/27 w7 05:52, 185 days later
    01/26 w1 17:56,    35m 0.66
-> 01/27 w2 19:02,   101m 3.83   30d
-> 02/25 w3 19:01,    75m 2.31   29d
[ ARTAXERXES II Yr05 ]
1> 03/26 w4 18:58,    53m 1.27   29d
    04/24 w5 18:56,    33m 0.55
-> 04/25 w6 20:08,   105m 3.93   30d
-> 05/24 w7 20:09,    87m 2.57   29d L
-> 06/22 w1 20:03,    66m 1.45   29d S
    07/21 w2 19:42,    44m 0.61
-> 07/22 w3 20:28,    91m 3.61   30d
-> 08/20 w4 19:39,    62m 1.77   29d
[ Allowed autumn on 07/08 ]
    09/18 w5 18:40,    37m 0.51
7> 09/19 w6 19:07,    66m 2.70   30d
    10/18 w7 18:04,    39m 0.75
-> 10/19 w1 18:32,    68m 3.24   30d
    11/17 w2 17:38,    40m 0.95
-> 11/18 w3 18:15,    78m 3.72   30d L
-> 12/17 w4 17:42,    49m 1.34   29d S
Year  -398 Spring Equinox jd= 1575773.75  03/27 w6 06:05, Selucid=-88
      Fall Equinox  jd= 1575957.74  09/27 w1 05:51, 184 days later
    01/15 w5 17:24,    13m 0.27
-> 01/16 w6 18:23,    71m 2.22   30d
    02/14 w7 18:17,    40m 0.87
-> 02/15 w1 19:19,   102m 3.91   30d
[ PD: Addaru II, Artaxerxes II, Yr05 ]
[ Intercalated not allowing spring on 01/11 or 10 ]
-> 03/16 w2 19:14,    75m 2.24   29d [ 2nd 12th ]
[ ARTAXERXES II Yr06 ]
1> 04/14 w3 19:10,    54m 1.12   29d
    05/13 w4 19:11,    36m 0.44
-> 05/14 w5 20:25,   110m 3.80   30d SL
-> 06/12 w6 20:26,    93m 2.67   29d S
-> 07/11 w7 20:11,    71m 1.67   29d
    08/09 w1 19:35,    48m 0.80
-> 08/10 w2 20:14,    88m 4.12   30d
-> 09/08 w3 19:15,    59m 2.08   29d
    10/07 w4 18:12,    33m 0.57
7> 10/08 w5 18:40,    63m 3.18   30d
    11/06 w6 17:41,    35m 0.99
-> 11/07 w7 18:16,    71m 3.98   30d SL
-> 12/06 w1 17:35,    44m 1.44   29d
Year  -397 Spring Equinox jd= 1576138.75  03/27 w7 06:06, Selucid=-87
      Fall Equinox  jd= 1576322.74  09/27 w2 05:51, 184 days later

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-> 01/05 w3 18:05,    63m  2.02   30d
    02/03 w4 17:55,    28m  0.58
-> 02/04 w5 18:53,    85m  2.83   30d
-> 03/05 w6 18:42,    51m  1.10   29d
[ ARTAXERXES II Yr07 ]
    04/03 w7 18:30,    21m  0.22
1> 04/04 w1 19:31,    81m  2.32   30d
-> 05/03 w2 19:28,    61m  1.16   29d SL
    06/01 w3 19:31,    44m  0.53
-> 06/02 w4 20:42,   115m  3.82   30d
-> 07/01 w5 20:32,    93m  2.74   29d
-> 07/30 w6 20:01,    67m  1.68   29d
    08/28 w7 19:10,    41m  0.71
-> 08/29 w1 19:44,    76m  4.10   30d
7> 09/27 w2 18:41,    49m  2.03   29d
    10/26 w3 17:39,    23m  0.56
-> 10/27 w4 18:14,    58m  3.52   30d SL
    11/25 w5 17:28,    34m  1.34
-> 11/26 w6 18:16,    82m  4.84   30d
-> 12/25 w7 17:55,    59m  2.13   29d
Year  -396 Spring Equinox jd= 1576503.75  03/26 w1 06:06, Selucid=-86
      Fall Equinox  jd= 1576687.74  09/26 w3 05:51, 184 days later
    01/23 w1 17:44,    26m  0.59
-> 01/24 w2 18:42,    84m  2.82   30d
    02/22 w3 18:29,    46m  0.92
-> 02/23 w4 19:24,   100m  3.60   30d
[ PD: Addaru II, Artaxerxes II, Yr07 ]
[ Intercalated not allowing spring on 01/03 or 02 ]
-> 03/23 w5 19:08,    65m  1.50   29d L [ 2nd 12th ]
[ ARTAXERXES II Yr08 ]
    04/21 w6 18:56,    35m  0.40
1> 04/22 w7 19:57,    95m  2.83   30d S
-> 05/21 w1 19:55,    75m  1.54   29d
    06/19 w2 19:52,    55m  0.77
-> 06/20 w3 20:51,   114m  3.98   30d
-> 07/19 w4 20:21,    83m  2.65   29d
-> 08/17 w5 19:32,    52m  1.43   29d
    09/15 w6 18:33,    26m  0.45
-> 09/16 w7 19:04,    59m  3.66   30d L
    10/15 w1 18:04,    35m  1.81
7> 10/16 w2 18:41,    74m  6.54   30d S
    11/13 w2 17:12,    12m  0.58
-> 11/14 w3 17:59,    59m  3.73   29d
-> 12/13 w4 17:34,    42m  1.65   29d
Year  -395 Spring Equinox jd= 1576868.75  03/26 w2 06:06, Selucid=-85
      Fall Equinox  jd= 1577053.74  09/27 w5 05:52, 185 days later
    01/11 w5 17:25,    17m  0.45
-> 01/12 w6 18:29,    81m  2.74   30d
    02/10 w7 18:20,    46m  0.89
-> 02/11 w1 19:18,   103m  3.69   30d
-> 03/12 w2 19:01,    65m  1.45   29d L
[ ARTAXERXES II Yr09 ]
    04/10 w3 18:44,    30m  0.30
1> 04/11 w4 19:40,    86m  2.35   30d S
    05/10 w5 19:31,    58m  0.96
-> 05/11 w6 20:31,   117m  3.84   30d

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    06/08 w6 19:24,    33m  0.30
-> 06/09 w7 20:22,    90m  2.16   29d
    07/08 w1 19:59,    59m  0.99
-> 07/09 w2 20:42,   102m  4.16   30d
    08/06 w2 19:18,    29m  0.25
-> 08/07 w3 19:53,    65m  2.46   29d
    09/05 w4 18:54,    34m  1.12
-> 09/06 w5 19:23,    65m  5.10   30d  L
7> 10/05 w6 18:24,    43m  3.15   29d  S
    11/03 w7 17:34,    25m  1.57
-> 11/04 w1 18:22,    75m  6.20   30d
-> 12/03 w2 18:02,    70m  3.69   29d
Year  -394 Spring Equinox jd= 1577234.75  03/27 w4 06:05, Selucid=-84
      Fall Equinox  jd= 1577418.74  09/27 w6 05:51, 184 days later
-> 01/01 w3 17:57,    57m  1.73   29d
    01/30 w4 17:56,    32m  0.47
-> 01/31 w5 19:02,    97m  3.21   30d
-> 03/01 w6 18:50,    61m  1.27   29d  SL
[ ARTAXERXES II Yr10 ]
    03/30 w7 18:35,    28m  0.27
1> 03/31 w1 19:32,    84m  2.35   30d
    04/29 w2 19:20,    55m  0.92
-> 04/30 w3 20:19,   113m  3.65   30d
-> 05/29 w4 20:07,    82m  1.78   29d
    06/27 w5 19:47,    48m  0.59
-> 06/28 w6 20:31,    93m  2.87   30d
-> 07/27 w7 19:46,    51m  1.20   29d
    08/25 w1 18:49,    17m  0.22
-> 08/26 w2 19:17,    46m  2.42   30d  SL
    09/24 w3 18:14,    19m  1.02
7> 09/25 w4 18:44,    50m  4.65   30d
    10/24 w5 17:54,    35m  2.75
-> 10/25 w6 18:40,    82m  8.14   30d
    11/22 w6 17:19,    24m  1.31
-> 11/23 w7 18:21,    86m  5.59   29d
    12/21 w7 17:05,    11m  0.39
-> 12/22 w1 18:19,    85m  3.33   29d
Year  -393 Spring Equinox jd= 1577599.75  03/27 w5 06:06, Selucid=-83
      Fall Equinox  jd= 1577783.74  09/27 w7 05:51, 184 days later
-> 01/20 w2 18:21,    66m  1.57   29d
    02/18 w3 18:18,    38m  0.48
-> 02/19 w4 19:25,   104m  3.59   30d  SL
[ PD: Addaru II, Artaxerxes II, Yr10 ]
[ Intercalated not allowing spring on 01/07 or 06 ]
-> 03/20 w5 19:14,    73m  1.80   29d   [ 2nd 12th ]
[ ARTAXERXES II Yr11 ]
    04/18 w6 19:04,    46m  0.72
1> 04/19 w7 20:07,   108m  3.49   30d
-> 05/18 w1 19:57,    79m  1.70   29d
    06/16 w2 19:41,    46m  0.53
-> 06/17 w3 20:28,    93m  2.70   30d
    07/16 w4 19:47,    48m  0.97
-> 07/17 w5 20:20,    81m  3.74   30d
    08/15 w6 19:21,    38m  1.63
-> 08/16 w7 19:46,    65m  5.10   30d  SL
    09/14 w1 18:43,    34m  2.72

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-> 09/15 w2 19:10, 63m 7.13 30d
    10/13 w2 17:43, 11m 1.13
7> 10/14 w3 18:18, 47m 4.49 29d
    11/12 w4 17:41, 40m 2.44
-> 11/13 w5 18:37, 96m 7.31 30d
    12/11 w5 17:24, 32m 0.98
-> 12/12 w6 18:34, 102m 4.82 29d
Year -392 Spring Equinox jd= 1577964.75 03/26 w6 06:06, Selucid=-82
      Fall Equinox jd= 1578148.74 09/26 w1 05:51, 184 days later
    01/09 w6 17:22, 16m 0.17
-> 01/10 w7 18:37, 91m 2.81 29d L
-> 02/08 w1 18:38, 66m 1.39 29d S
    03/08 w2 18:33, 40m 0.56
-> 03/09 w3 19:43, 108m 3.92 30d
[ ARTAXERXES II Yr12 ]
1> 04/07 w4 19:37, 85m 2.32 29d
-> 05/06 w5 19:33, 63m 1.13 29d
    06/04 w6 19:25, 36m 0.33
-> 06/05 w7 20:20, 91m 2.47 30d
    07/04 w1 19:48, 48m 0.90
-> 07/05 w2 20:25, 86m 3.76 30d L
    08/03 w3 19:30, 39m 1.61
-> 08/04 w4 19:57, 67m 4.95 30d S
    09/02 w5 18:53, 30m 2.38
-> 09/03 w6 19:18, 57m 6.18 30d
    10/02 w7 18:19, 34m 3.27
7> 10/03 w1 18:51, 68m 7.68 30d
    10/31 w1 17:29, 18m 1.27
-> 11/01 w2 18:11, 61m 4.51 29d
-> 11/30 w3 17:49, 57m 2.20 29d
    12/29 w4 17:42, 43m 0.74
-> 12/30 w5 18:51, 112m 4.21 30d L
Year -391 Spring Equinox jd= 1578329.75 03/26 w7 06:06, Selucid=-81
      Fall Equinox jd= 1578514.74 09/27 w3 05:52, 185 days later
    01/27 w5 17:40, 19m 0.10
-> 01/28 w6 18:51, 89m 2.45 29d S
-> 02/26 w7 18:49, 62m 1.32 29d
[ ARTAXERXES II Yr13 ]
    03/27 w1 18:46, 40m 0.64
1> 03/28 w2 19:58, 112m 4.05 30d
-> 04/26 w3 19:57, 93m 2.59 29d
-> 05/25 w4 19:52, 69m 1.36 29d
    06/23 w5 19:33, 36m 0.45
-> 06/24 w6 20:21, 83m 3.19 30d SL
    07/23 w7 19:35, 38m 1.46
-> 07/24 w1 20:08, 71m 4.99 30d S
    08/22 w2 19:07, 32m 2.49
-> 08/23 w3 19:34, 60m 6.42 30d
    09/21 w4 18:33, 34m 3.28
7> 09/22 w5 19:02, 65m 7.47 30d
    10/20 w5 17:37, 15m 1.12
-> 10/21 w6 18:13, 51m 3.91 29d
    11/19 w7 17:36, 40m 1.45
-> 11/20 w1 18:26, 90m 4.79 30d
    12/18 w1 17:14, 21m 0.20
-> 12/19 w2 18:12, 78m 2.24 29d SL

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Year -390 Spring Equinox jd= 1578695.75 03/27 w2 06:05, Selucid=-80
      Fall Equinox jd= 1578879.74 09/27 w4 05:51, 184 days later
    01/17 w3 18:05, 52m 0.79
-> 01/18 w4 19:08, 115m 4.04 30d
-> 02/16 w5 19:04, 85m 2.37 29d
[ PD: Addaru II, Artaxerxes II, Yr13 ]
[ Intercalated not allowing spring on 01/10 or 09 ]
-> 03/17 w6 18:59, 60m 1.28 29d [ 2nd 12th ]
[ ARTAXERXES II Yr14 ]
    04/15 w7 18:57, 40m 0.57
1> 04/16 w1 20:10, 112m 3.91 30d
-> 05/15 w2 20:08, 92m 2.58 29d
-> 06/13 w3 19:54, 60m 1.47 29d SL
    07/12 w4 19:24, 24m 0.63
-> 07/13 w5 20:07, 67m 3.85 30d
    08/11 w6 19:15, 29m 2.04
-> 08/12 w7 19:47, 62m 6.18 30d
    09/10 w1 18:48, 35m 3.31
-> 09/11 w2 19:19, 67m 7.83 30d
    10/09 w2 17:52, 16m 1.18
7> 10/10 w3 18:26, 52m 4.13 29d
    11/08 w4 17:43, 39m 1.49
-> 11/09 w5 18:26, 83m 4.71 30d
    12/07 w5 17:10, 19m 0.16
-> 12/08 w6 18:01, 69m 1.90 29d SL
Year -389 Spring Equinox jd= 1579060.75 03/27 w3 06:06, Selucid=-79
      Fall Equinox jd= 1579244.74 09/27 w5 05:51, 184 days later
    01/06 w7 17:43, 40m 0.44
-> 01/07 w1 18:40, 95m 2.73 30d
-> 02/05 w2 18:28, 59m 1.09 29d
    03/06 w3 18:16, 24m 0.32
-> 03/07 w4 19:17, 85m 2.43 30d
[ ARTAXERXES II Yr15 ]
1> 04/05 w5 19:11, 60m 1.21 29d
    05/04 w6 19:07, 39m 0.45
-> 05/05 w7 20:16, 107m 3.67 30d L
-> 06/03 w1 20:06, 79m 2.51 29d S
-> 07/02 w2 19:43, 44m 1.56 29d
    07/31 w3 19:05, 12m 0.78
-> 08/01 w4 19:47, 54m 4.25 30d
    08/30 w5 18:55, 28m 2.35
-> 08/31 w6 19:30, 65m 6.97 30d
    09/28 w6 18:02, 11m 0.83
7> 09/29 w7 18:38, 49m 3.86 29d
    10/28 w1 17:52, 37m 1.47
-> 10/29 w2 18:35, 81m 4.97 30d L
    11/26 w2 17:14, 21m 0.18
-> 11/27 w3 18:02, 69m 2.06 29d S
    12/26 w4 17:38, 42m 0.48
-> 12/27 w5 18:31, 94m 2.70 30d
Year -388 Spring Equinox jd= 1579425.75 03/26 w4 06:06, Selucid=-78
      Fall Equinox jd= 1579609.74 09/26 w6 05:51, 184 days later
    01/25 w6 18:13, 54m 0.89
-> 01/26 w7 19:07, 107m 3.52 30d
-> 02/24 w1 18:51, 66m 1.48 29d
    03/24 w2 18:36, 32m 0.38

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[ ARTAXERXES II Yr16 ]

[ Note spring on 01/01 ]

1> 03/25 w3 19:33, 89m 2.63 30d  
 -> 04/23 w4 19:24, 62m 1.26 29d L  
     05/22 w5 19:15, 35m 0.49  
 -> 05/23 w6 20:17, 95m 3.62 30d S  
 -> 06/21 w7 19:58, 61m 2.52 29d  
     07/20 w1 19:27, 29m 1.57  
 -> 07/21 w2 20:13, 75m 6.13 30d  
 6> 08/19 w3 19:27, 50m 4.21 29d

[ PD: Ululu II Artaxerxes II, Yr16 ]

[ Intercalated not allowing autumn on 07/08 ]

    09/17 w4 18:39, 35m 2.29  
 6> 09/18 w5 19:20, 77m 7.22 30d [ 2<sup>nd</sup> 6<sup>th</sup> ]  
     10/16 w5 17:52, 25m 0.77  
 7> 10/17 w6 18:36, 70m 4.15 29d L  
 -> 11/15 w7 18:00, 61m 1.78 29d S  
     12/14 w1 17:32, 40m 0.45  
 -> 12/15 w2 18:26, 94m 2.80 30d  
 Year -387 Spring Equinox jd= 1579790.75 03/26 w5 06:06, Selucid=-77  
     Fall Equinox jd= 1579975.74 09/27 w1 05:52, 185 days later  
     01/13 w3 18:07, 57m 0.94  
 -> 01/14 w4 19:01, 110m 3.65 30d  
 -> 02/12 w5 18:41, 66m 1.39 29d  
     03/13 w6 18:22, 25m 0.24  
 -> 03/14 w7 19:15, 77m 2.00 30d

[ ARTAXERXES II Yr17 ]

    04/12 w1 18:57, 42m 0.60  
 1> 04/13 w2 19:52, 96m 3.20 30d SL  
 -> 05/12 w3 19:38, 64m 1.66 29d  
     06/10 w4 19:22, 30m 0.77  
 -> 06/11 w5 20:16, 83m 3.89 30d  
 -> 07/10 w6 19:49, 49m 2.57 29d  
     08/08 w7 19:12, 24m 1.44  
 -> 08/09 w1 19:54, 68m 5.72 30d  
     09/06 w1 18:28, 10m 0.51  
 -> 09/07 w2 19:10, 53m 3.78 29d  
 7> 10/06 w3 18:26, 46m 1.99 29d SL  
     11/04 w4 17:46, 38m 0.70  
 -> 11/05 w5 18:37, 90m 4.24 30d  
 -> 12/04 w6 18:10, 78m 2.05 29d  
 Year -386 Spring Equinox jd= 1580156.75 03/27 w7 06:05, Selucid=-76  
     Fall Equinox jd= 1580340.74 09/27 w2 05:51, 184 days later  
     01/02 w7 17:50, 49m 0.67  
 -> 01/03 w1 18:49, 107m 3.44 30d  
 -> 02/01 w2 18:31, 66m 1.32 29d  
     03/02 w3 18:14, 24m 0.21  
 -> 03/03 w4 19:07, 77m 2.00 30d

[ ARTAXERXES II Yr18 ]

    04/01 w5 18:47, 39m 0.53  
 1> 04/02 w6 19:40, 91m 2.92 30d SL  
 -> 05/01 w7 19:21, 54m 1.22 29d  
     05/30 w1 19:02, 16m 0.38  
 -> 05/31 w2 19:54, 67m 2.42 30d  
     06/29 w3 19:29, 30m 1.14  
 -> 06/30 w4 20:16, 77m 4.34 30d

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-> 07/29 w5 19:40, 46m 2.60 29d
    08/27 w6 18:58, 28m 1.23
-> 08/28 w7 19:39, 70m 5.19 30d
    09/25 w7 18:13, 18m 0.32
7> 09/26 w1 18:55, 62m 3.28 29d SL
-> 10/25 w2 18:14, 56m 1.70 29d
    11/23 w3 17:40, 45m 0.65
-> 11/24 w4 18:37, 103m 4.07 30d
-> 12/23 w5 18:18, 83m 2.05 29d
Year -385 Spring Equinox jd= 1580521.75 03/27 w1 06:06, Selucid=-75
      Fall Equinox jd= 1580705.74 09/27 w3 05:51, 184 days later
    01/21 w6 18:04, 48m 0.68
-> 01/22 w7 19:07, 111m 3.79 30d
-> 02/20 w1 18:52, 70m 1.65 29d L
[ Intercalated not allowing spring on 01/05 ]
    03/21 w2 18:36, 34m 0.43
-> 03/22 w3 19:32, 89m 2.88 30d S
[ ARTAXERXES II Yr19 ]
1> 04/20 w4 19:13, 53m 1.20 29d
    05/19 w5 18:54, 15m 0.35
-> 05/20 w6 19:46, 67m 2.19 30d
    06/18 w7 19:22, 27m 0.83
-> 06/19 w1 20:10, 74m 3.37 30d
    07/18 w2 19:37, 38m 1.54
-> 07/19 w3 20:17, 79m 4.95 30d
    08/16 w3 18:56, 15m 0.38
-> 08/17 w4 19:34, 54m 2.75 29d L
    09/15 w5 18:47, 39m 1.20
-> 09/16 w6 19:24, 78m 4.92 30d S
    10/14 w6 17:59, 28m 0.32
7> 10/15 w7 18:40, 71m 2.96 29d
-> 11/13 w1 18:02, 62m 1.47 29d
    12/12 w2 17:34, 42m 0.49
-> 12/13 w3 18:35, 104m 3.58 30d
Year -384 Spring Equinox jd= 1580886.75 03/26 w2 06:06, Selucid=-74
      Fall Equinox jd= 1581070.74 09/26 w4 05:51, 184 days later
-> 01/11 w4 18:24, 76m 1.76 29d
    02/09 w5 18:15, 42m 0.57
-> 02/10 w6 19:21, 108m 3.93 30d L
-> 03/10 w7 19:09, 74m 2.04 29d S
[ ARTAXERXES II Yr20 ]
    04/08 w1 18:56, 43m 0.86
1> 04/09 w2 19:55, 101m 3.97 30d
    05/07 w2 18:41, 11m 0.28
-> 05/08 w3 19:38, 67m 2.07 29d
    06/06 w4 19:20, 30m 0.78
-> 06/07 w5 20:11, 80m 3.30 30d
-> 07/06 w6 19:42, 42m 1.38 29d
    08/04 w7 19:05, 15m 0.25
-> 08/05 w1 19:42, 53m 2.14 30d L
    09/03 w2 18:54, 32m 0.64
-> 09/04 w3 19:27, 67m 3.26 30d S
7> 10/03 w4 18:35, 52m 1.43 29d
    11/01 w5 17:45, 36m 0.42
-> 11/02 w6 18:26, 77m 2.79 30d
-> 12/01 w7 17:52, 60m 1.19 29d

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    12/30 w1 17:30,    31m  0.26
-> 12/31 w2 18:35,    95m  2.94   30d
Year  -383 Spring Equinox jd= 1581251.75  03/26 w3 06:06, Selucid=-73
      Fall Equinox  jd= 1581436.74  09/27 w6 05:52, 185 days later
-> 01/29 w3 18:28,    65m  1.42   29d SL
    02/27 w4 18:23,    36m  0.54
-> 02/28 w5 19:32,   104m  4.00   30d
[ ARTAXERXES II Yr21 ]
1> 03/29 w6 19:24,    77m  2.42   29d
-> 04/27 w7 19:15,    50m  1.26   29d
    05/26 w1 19:04,    21m  0.46
-> 05/27 w2 20:04,    80m  2.89   30d
-> 06/25 w3 19:45,    46m  1.25   29d
    07/24 w4 19:15,    18m  0.23
-> 07/25 w5 19:56,    60m  2.17   30d SL
    08/23 w6 19:09,    35m  0.64
-> 08/24 w7 19:42,    69m  3.09   30d
7> 09/22 w1 18:46,    48m  1.16   29d
    10/21 w2 17:49,    28m  0.25
-> 10/22 w3 18:21,    61m  1.76   30d
    11/20 w4 17:33,    37m  0.42
-> 11/21 w5 18:15,    80m  2.66   30d
    12/20 w6 17:47,    53m  0.95
-> 12/21 w7 18:45,   111m  4.44   30d
Year  -382 Spring Equinox jd= 1581616.75  03/26 w4 06:07, Selucid=-72
      Fall Equinox  jd= 1581801.74  09/27 w7 05:51, 185 days later
    01/18 w7 17:32,    19m  0.12
-> 01/19 w1 18:39,    84m  2.49   29d SL
-> 02/17 w2 18:35,    56m  1.26   29d
[ Intercalated not allowing spring on 01/07 ]
    03/18 w3 18:32,    32m  0.59
-> 03/19 w4 19:42,   101m  3.98   30d
[ ARTAXERXES II Yr21 ]
1> 04/17 w5 19:38,    80m  2.60   29d
-> 05/16 w6 19:33,    57m  1.45   29d
    06/14 w7 19:26,    33m  0.56
-> 06/15 w1 20:28,    93m  3.59   30d
-> 07/14 w2 20:02,    62m  1.82   29d SL
    08/12 w3 19:22,    38m  0.60
-> 08/13 w4 19:59,    75m  3.17   30d
-> 09/11 w5 19:02,    50m  1.25   29d
    10/10 w6 18:03,    28m  0.26
7> 10/11 w7 18:31,    58m  1.72   30d
    11/09 w1 17:34,    31m  0.31
-> 11/10 w2 18:08,    66m  2.09   30d
    12/09 w3 17:26,    35m  0.43
-> 12/10 w4 18:13,    81m  2.76   30d L
Year  -381 Spring Equinox jd= 1581982.75  03/27 w6 06:06, Selucid=-71
      Fall Equinox  jd= 1582166.74  09/27 w1 05:51, 184 days later
    01/08 w5 17:54,    49m  0.97
-> 01/09 w6 18:54,   109m  4.31   30d S
    02/06 w6 17:45,    15m  0.21
-> 02/07 w7 18:50,    79m  2.43   29d
-> 03/08 w1 18:46,    53m  1.28   29d
[ ARTAXERXES II Yr23 ]
    04/06 w2 18:42,    30m  0.58

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1> 04/07 w3 19:52, 100m 3.81 30d
-> 05/06 w4 19:52, 82m 2.53 29d
-> 06/04 w5 19:52, 63m 1.48 29d L
    07/03 w6 19:43, 44m 0.67
-> 07/04 w7 20:41, 101m 4.17 30d S
-> 08/02 w1 20:04, 72m 2.40 29d
-> 08/31 w2 19:14, 48m 1.00 29d
7> 09/30 w4 18:44, 56m 1.75 30d
    10/29 w5 17:43, 30m 0.33
-> 10/30 w6 18:14, 61m 2.20 30d
    11/28 w7 17:23, 30m 0.42
-> 11/29 w1 18:03, 71m 2.58 30d L
    12/28 w2 17:34, 36m 0.69
-> 12/29 w3 18:27, 89m 3.30 30d S
Year -380 Spring Equinox jd= 1582347.75 03/26 w7 06:06, Selucid=-70
      Fall Equinox jd= 1582531.74 09/26 w2 05:51, 184 days later
-> 01/27 w4 18:15, 54m 1.35 29d
    02/25 w5 18:06, 21m 0.41
-> 02/26 w6 19:07, 81m 2.65 30d
[ ARTAXERXES II Yr24 ]
1> 03/26 w7 19:00, 55m 1.31 29d
    04/24 w1 18:55, 33m 0.49
-> 04/25 w2 20:05, 101m 3.58 30d
-> 05/24 w3 20:08, 86m 2.41 29d SL
-> 06/22 w4 20:06, 69m 1.52 29d S
    07/21 w5 19:48, 50m 0.81
-> 07/22 w6 20:37, 100m 4.50 30d
    08/19 w6 19:10, 32m 0.32
-> 08/20 w7 19:49, 72m 2.72 29d
[ Allowed autumn on 07/08 or 07 ]
7> 09/18 w1 18:50, 48m 1.15 29d
    10/17 w2 17:48, 23m 0.18
-> 10/18 w3 18:19, 54m 2.03 30d
    11/16 w4 17:24, 26m 0.41
-> 11/17 w5 18:01, 64m 2.74 30d SL
    12/16 w6 17:26, 33m 0.77
-> 12/17 w7 18:16, 83m 3.42 30d
Year -379 Spring Equinox jd= 1582712.75 03/26 w1 06:06, Selucid=-69
      Fall Equinox jd= 1582897.74 09/27 w4 05:52, 185 days later
-> 01/15 w1 18:00, 49m 1.25 29d
    02/13 w2 17:48, 12m 0.29
-> 02/14 w3 18:45, 68m 1.92 30d
[ PD: Addaru II, Artaxerxes II, Yr24 ]
[ Intercalated not allowing spring on 01/10 ]
    03/15 w4 18:32, 33m 0.59
-> 03/16 w5 19:29, 90m 3.03 30d [ 2nd 12th ]
[ ARTAXERXES II Yr25 ]
1> 04/14 w6 19:19, 63m 1.43 29d
    05/13 w7 19:16, 41m 0.53
-> 05/14 w1 20:24, 109m 3.61 30d SL
-> 06/12 w2 20:24, 91m 2.48 29d
-> 07/11 w3 20:10, 71m 1.59 29d
    08/09 w4 19:35, 49m 0.82
-> 08/10 w5 20:15, 89m 4.42 30d
-> 09/08 w6 19:18, 62m 2.58 29d
    10/07 w7 18:16, 38m 1.00

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7> 10/08 w1 18:49, 72m 4.72 30d
    11/05 w1 17:17, 11m 0.10
-> 11/06 w2 17:55, 49m 2.18 29d SL
    12/05 w3 17:14, 22m 0.62
-> 12/06 w4 18:05, 73m 3.41 30d
Year -378 Spring Equinox jd= 1583077.75 03/26 w2 06:07, Selucid=-68
      Fall Equinox jd= 1583262.74 09/27 w5 05:51, 185 days later
-> 01/04 w5 17:47, 45m 1.29 29d
    02/02 w6 17:37, 10m 0.29
-> 02/03 w7 18:35, 68m 1.93 30d
    03/04 w1 18:21, 30m 0.49
-> 03/05 w2 19:15, 84m 2.61 30d
[ ARTAXERXES II Yr26 ]
    04/03 w3 18:59, 50m 0.89
1> 04/04 w4 19:55, 105m 3.74 30d L
    05/02 w4 18:47, 20m 0.11
-> 05/03 w5 19:47, 79m 1.92 29d S
    06/01 w6 19:44, 57m 0.86
-> 06/02 w7 20:47, 119m 4.07 30d
    06/30 w7 19:36, 37m 0.34
-> 07/01 w1 20:32, 93m 2.70 29d
-> 07/30 w2 19:58, 64m 1.56 29d
    08/28 w3 19:07, 38m 0.63
-> 08/29 w4 19:40, 72m 3.93 30d
7> 09/27 w5 18:39, 47m 2.14 29d L
[ Newton: Pg 133, lunar conjunction with Beta Aries,
  proves this was an 8th month ]
    10/26 w6 17:40, 24m 0.77
8> 10/27 w7 18:19, 64m 4.49 30d S
-> 11/25 w1 17:41, 47m 2.27 29d
    12/24 w2 17:22, 26m 0.83
-> 12/25 w3 18:27, 91m 4.00 30d
Year -377 Spring Equinox jd= 1583443.75 03/27 w4 06:06, Selucid=-67
      Fall Equinox jd= 1583627.74 09/27 w6 05:51, 184 days later
-> 01/23 w4 18:20, 63m 1.75 29d
    02/21 w5 18:11, 29m 0.43
-> 02/22 w6 19:09, 86m 2.64 30d
[ PD: Addaru II, Artaxerxes II, Yr26 ]
[ Intercalated not allowing spring on 01/03 ]
    03/23 w7 18:52, 49m 0.85
-> 03/24 w1 19:47, 103m 3.62 30d L [ 2nd 12th ]
[ ARTAXERXES II Yr27 ]
    04/21 w1 18:37, 16m 0.08
1> 04/22 w2 19:33, 72m 1.61 29d S
    05/21 w3 19:23, 44m 0.53
-> 05/22 w4 20:23, 102m 2.87 30d
-> 06/20 w5 20:10, 73m 1.42 29d
    07/19 w6 19:42, 44m 0.51
-> 07/20 w7 20:22, 84m 2.92 30d
-> 08/18 w1 19:30, 51m 1.43 29d
    09/16 w2 18:29, 23m 0.40
-> 09/17 w3 18:58, 54m 3.35 30d L
    10/16 w4 18:00, 32m 1.72
7> 10/17 w5 18:38, 71m 6.49 30d S
    11/14 w5 17:11, 11m 0.63
-> 11/15 w6 18:02, 63m 4.13 29d

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-> 12/14 w7 17:46,    54m  2.20  29d
Year  -376 Spring Equinox jd= 1583808.75  03/26 w5 06:06, Selucid=-66
      Fall Equinox  jd= 1583992.74  09/26 w7 05:51, 184 days later
    01/12 w1 17:44,    36m  0.84
-> 01/13 w2 18:56,   107m  4.29  30d
-> 02/11 w3 18:50,    76m  2.04  29d
    03/11 w4 18:39,    43m  0.63
-> 03/12 w5 19:38,   101m  3.49  30d SL
[ ARTAXERXES II Yr28 ]
1> 04/10 w6 19:24,    70m  1.57  29d
    05/09 w7 19:13,    41m  0.51
-> 05/10 w1 20:12,    99m  2.75  30d
-> 06/08 w2 20:00,    69m  1.19  29d
    07/07 w3 19:35,    35m  0.31
-> 07/08 w4 20:17,    77m  2.03  30d
    08/06 w5 19:27,    38m  0.64
-> 08/07 w6 19:57,    69m  3.21  30d
    09/05 w7 18:54,    35m  1.42
-> 09/06 w1 19:20,    63m  5.14  30d SL
    10/05 w2 18:20,    40m  3.03
7> 10/06 w3 18:55,    76m  8.29  30d
    11/03 w3 17:30,    23m  1.48
-> 11/04 w4 18:18,    71m  5.80  29d
-> 12/03 w5 18:02,    71m  3.63  29d

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