

Summary Solar Ephemeris <sup>a</sup>											
Date	Declination			Equation of Time		Date	Declination			Equation of Time	
	Deg	Min		Min	s		Deg	Min		Min	s
January	−1	−23	−4	−3	−14	February	−1	−17	−19	−13	−34
	−5	−22	−42	−5	−6		−5	−16	−10	−14	−2
	−9	−22	−13	−6	−50		−9	−14	−55	−14	−17
	−13	−21	−37	−8	−27		−13	−13	−37	−14	−20
	−17	−20	−54	−9	−54		−17	−12	−15	−14	−10
	−21	−20	−5	−11	−10		−21	−10	−50	−13	−50
	−25	−19	−9	−12	−14		−25	−9	−23	−13	−19
	−29	−18	−9	−13	−5						
March	−1	−7	−53	−12	−38	April	1	+4	14	−4	−12
	−5	−6	−21	−11	−48		5	5	46	−3	−1
	−9	−5	−48	−10	−51		9	7	17	−1	−52
	−13	−3	−14	−9	−49		13	8	46	−0	−47
	−17	−1	−39	−8	−42		17	10	12	+0	13
	−21	−0	−5	−7	−32		21	11	35	1	6
	25	+1	30	−6	−20		25	12	56	1	53
	29	3	4	−5	−7		29	14	13	2	33
May	1	+14	50	+2	50	June	1	+21	57	2	27
	5	16	2	3	17		5	22	28	1	49
	9	17	9	3	35		9	22	52	1	6
	13	18	11	3	44		13	23	10	+0	18
	17	19	9	3	44		17	23	22	−0	−33
	21	20	2	3	24		21	23	27	−1	−25
	25	20	49	3	16		25	23	25	−2	−17
	29	21	30	2	51		29	23	17	−3	−7
July	1	+23	10	−3	−31	August	1	+18	14	−6	−17
	5	22	52	−4	−16		5	17	12	−5	−59
	9	22	28	−4	−56		9	16	6	−5	−33
	13	21	57	−5	−30		13	14	55	−4	−57
	17	21	21	−5	−57		17	13	41	−4	−12
	21	20	38	−6	−15		21	12	23	−3	−19
	25	19	50	−6	−24		25	11	2	−2	−18
	29	18	57	−6	−23		29	9	39	−1	−10
September	1	+8	35	−0	15	October	1	−2	53	−10	−1
	5	7	7	+1	2		5	4	26	−11	−17
	9	5	37	2	22		9	5	58	−12	−27
	13	4	6	3	45		13	7	29	−13	−30
	17	2	34	5	10		17	8	58	−14	−25
	21	1	1	6	35		21	10	25	−15	−10
	25	−0	−32	8	0		25	11	50	−15	−46
	29	−2	−6	9	22		29	13	12	−16	−10

(continued)

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		Declination		Equation of Time				Declination		Equation of Time	
Date		Deg	Min	Min	s	Date		Deg	Min	Min	s
November	1	-14	-11	+16	21	December	1	-21	-41	11	16
	5	-15	-27	16	23		5	-22	-16	9	43
	9	-16	-38	16	12		9	-22	-45	8	1
	13	-17	-45	15	47		13	-23	-6	6	12
	17	-18	-48	15	10		17	-23	-20	4	47
	21	-19	-45	14	18		21	-23	-26	2	19
	25	-20	-36	13	15		25	-23	-25	+0	20
	29	-21	-21	11	59		29	-23	-17	-1	39

<sup>a</sup> Since each year is 365.25 days long, the precise value of declination varies from year to year. *The American Ephemeris and Nautical Almanac*, published each year by the U.S. Government Printing Office, contains precise values for each day of each year.