

ASTRONOMICAL EPHEMERIS
of
Geocentric Places of Planets
for
1955

(Indian Standard Time observed throughout)

Published by
Shree Jiwaji Observatory, Ujjain
with the sanction of Education Department,
Madhya Bharat.

Price Rupee One and Annas Four Only.

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PREFACE

The heliocentric places of Jupiter, Saturn, Uranus and Neptune were obtained from Newcomb and Hill's Tables and these were later converted into geocentric longitudes and latitudes. The geocentric places of Mercury, Venus and Mars were computed *directly* from their respective elements and this is why the heliocentric co-ordinates have been omitted from the following pages.

Owing to the uncertainty in the elements of Pluto, the positions of this planet cannot be taken as strictly correct. It is estimated that the maximum error in its longitude will hardly exceed five minutes of arc.

As a precaution against accidental errors the, final results were differenced and all the doubtful cases were carefully scrutinised.

Owing to certain unforeseen circumstances, this publication is making its appearance somewhat late. Thanks are due to Shree G. C. Natarajan, the Superintendent of the Government Central Press, Gwalior, for the personal interest taken by him while this Ephemeris was in Press.

UJJAIN,
31st December 1954.

D. K. BELEKAR,
Superintendent,
S. J. Observatory.

Mean Places of Principal Stars on 1st January 1955

Names.	Stars	Mag	R.	A.	Decl.	Long.	Lat.
			H.	M.	°	°	°
♈ Andromeda	U. Bhadra.	2.1	0	6	+ 28 50	13 38	+ 25 41
♈ Pegasi ..	U. Bhadra.	2.8	0	11	+ 14 55	8 30	+ 12 31
♈ Piscium ..	Revati.	5.6	1	11	+ 7 20	19 10	- 0 9
♈ Eridani ..	Achernar.	0.6	1	36	- 57 30	344 36	- 59 28
♈ Polaris ..	Dhruva.	2.1	1	50	+ 89 2	89 53	+ 66 6
♈ Arietes ..	Ashvini.	2.7	1	52	+ 20 35	33 18	+ 8 29
♈ Arietes ..	Ashvini.	2.2	2	5	+ 23 14	37 0	+ 9 58
♈ Arietes ..	Bharani.	3.7	2	47	+ 27 4	49 27	+ 10 27
♈ Persei ..	Algol.	Var	3	5	+ 40 47	55 30	+ 22 25
♈ Tauri ..	Krittika.	3.0	3	45	+ 23 58	59 20	+ 4 3
♈ ..	Rohini.	1.1	4	33	+ 16 25	69 8	- 5 28
♈ Orionis ..	Rigel.	0.3	5	12	- 8 16	76 10	- 31 8
♈ Aurigee ..	Capella.	0.2	5	13	+ 45 57	81 12	+ 22 52
♈ Orionis ..	Bellatrix.	1.7	5	23	+ 6 19	80 17	- 16 49
♈ Orionis ..	Mrigashirsh	4.5	5	32	+ 9 28	82 56	- 13 49
♈ Orionis ..	Mrig Bana.	1.7	5	34	- 1 14	82 49	- 24 31
♈ Orionis ..	Ardra.	0.9	5	53	+ 7 24	88 5	- 16 2
♈ Carinae ..	Agastya.	0.9	6	23	- 52 40	104 19	- 75 46
♈ Canis Majori	Vyadha.	1.6	6	43	- 16 39	103 25	- 39 36
♈ Geminorum ..	Castor.	2.0	7	32	+ 31 59	109 36	+ 10 2
♈ Canis Minor	Prashva.	0.5	7	37	+ 5 21	115 8	- 16 54
♈ Geminorum ..	Punarvasu	1.2	7	42	+ 28 8	112 34	+ 6 51
♈ Cancrī ..	Pushya	4.1	8	42	+ 18 20	128 2	+ 0 10
♈ Cancrī ..	Ashle-ha.	4.3	8	56	+ 12 3	132 58	- 5 5
♈ Leonis ..	Magha.	1.3	10	6	+ 12 12	149 10	+ 0 28
♈ Leonis ..	Purva.	2.6	11	12	+ 20 47	160 39	+ 14 53
♈ Leonis ..	Uttara.	2.2	11	47	+ 14 50	170 58	+ 12 16
♈ Corvi ..	Hasta.	3.1	12	27	- 16 15	192 47	- 13 1
♈ Virginis ..	Chitra.	1.2	13	23	- 10 53	203 10	- 2 1
♈ Bootes ..	Swati.	0.2	14	14	+ 19 26	203 34	+ 30 46
♈ Libra ..	Vishakha.	2.9	14	48	- 15 49	224 25	+ 0 22
♈ Scorpii ..	Anuradha.	2.5	15	58	- 22 28	241 55	- 1 58
♈ Scorpii ..	Jyeshtha.	1.2	16	27	- 26 19	249 5	- 4 23
♈ Scorpii ..	Mool.	1.7	16	26	- 26 19	263 55	- 13 47
♈ Sagittarus..	P. Shadha.	2.8	18	18	- 29 51	273 55	- 6 27
♈ Sagittarus..	P. Shadha.	1.9	18	21	- 34 25	274 25	- 11 3
♈ Sagittarus..	U. Shadha.	2.1	18	52	- 26 22	281 43	- 3 27
♈ Lyrae ..	Abhijit.	0.1	18	35	+ 38 44	284 39	+ 61 44
♈ Aquillae ..	Shravana.	0.9	19	48	+ 8 45	301 16	+ 29 19
♈ Delphini ..	Dhanistha.	3.7	20	35	+ 14 26	315 40	+ 31 55
♈ Delphini ..	Dhanistha.	2.8	20	37	+ 15 45	316 43	+ 33 2
♈ Cygni ..	Deneb.	1.3	20	40	+ 45 7	334 41	+ 59 54
♈ Aquarii ..	Shatabhij.	3.8	22	50	- 7 31	340 51	- 0 6
♈ Piscis Astr.	Fomalhaut	1.3	22	55	- 29 54	333 11	- 21 9
♈ Pegasi ..	P. Bhadra.	2.6	23	1	+ 27 50	358 43	+ 31 8
♈ Pegasi ..	P. Bhadra.	2.6	23	2	+ 14 57	352 50	+ 19 26

EPHEMERIS

OF

Planets' Places for 1955

INTRODUCTION

THE places of the Sun, Moon and the Planets given in the following pages are *Sayan* and are true for the true equinox of each day. They are given for 12 o'clock noon Indian Standard Time (I.S.T.) which is $5\frac{1}{2}$ hours in advance of Greenwich Mean Time but, for convenience, the *Sidereal Time* is given for the *Mean Noon, Ujjain Local Time*.

Nirayana places are obtained by subtracting the *Ayanam-shas* from the *Sayan* places.

It should be noted that the *Tithis* and *Aspects* are the same both in the *Sayan* and the *Nirayana* systems.

EXPLANATION OF SYMBOLS

Planets.	Signs.	Aspects.
☉ Sun.	♈ Aries.	♌ Conjunction = 0°
☾ Moon.	♉ Taurus.	♊ Semi-Sextile = 30°
♇ Pluto.	♊ Gemini.	♎ Semi-Quintile = 36°
♆ Neptune.	♋ Cancer.	♏ Semi-Square = 45°
♅ Herschel (Uranus).	♌ Leo.	* Sextile = 60°
♄ Saturn.	♍ Virgo.	♎ Quintile = 72°
♃ Jupiter.	♎ Libra.	☐ Square = 90°
♂ Mars.	♏ Scorpio.	♌ Trine = 120°
♀ Venus.	♐ Sagittarus.	♏ Sesqui-quadrant = 135°
☿ Mercury.	♑ Capricornus.	♊ Bi-quintile = 144°
♁ Earth.	♒ Aquarius.	♈ Quincunx = 150°
♊ Rahu.	♓ Pisces.	♏ Opposition = 180°

2		JANUARY, 1955										S. J. O. UJJAIN	
Date	Day	Sidereal Time		☉		☽			Midnight		ψ		
				Long.	Decl.	Long.	Lat.	Decl.	D				
		H.	M.	S.									
1	S.	18	40	32	10 4 17	23 S 4	2 37	5 N 17	5 N 53	9 33	28 1	1	
2	Su.		44	29	11 5 25	22 59 16	30		12 11 18	23 34		2	
3	M.		48	25	12 6 35		54 0 39	4	47 16 11	7 50		3	
4	Tu.		52	22	13 7 45		48 15 3		5 20 15	22 20		4	
5	W.		56	19	14 8 55		42 29 39	3	5 23 6	7 0		5	
6	Th.	19	0	15	15 10 3		35 14 21	1	54 24 25	21 43		6	
7	F.		4	12	16 11 11		28 29 5	0	35 4	6 24		7	
8	S.		8	8	17 12 18		21 13 42	0 S 46	21 59 20	56		8	
9	Su.		12	5	18 13 26		13 28 6	2	2 18 33	5 12		9	
10	M.		16	1	19 14 34		4 12 13	3	10 15 6	19 8		10	
11	Tu.		19	58	20 15 41	21	55 25 57	4	5 9 2	2 40		11	
12	W.		23	54	21 16 48		46 9 17		44 3 36	15 48		12	
13	Th.		27	51	22 17 55		36 22 14	5	8 15 38	28 34		13	
14	F.		31	48	23 19 10		26 4 49		16 6 45	11 0		14	
15	S.		35	44	24 20 7		16 17 6		9 11 28	23 8		15	
16	Su.		39	41	25 21 13		5 29 8	4	49 15 41	5 6		16	
17	M.		43	37	26 22 19	20	53 11 2	2	17 19 12	16 56		17	
18	Tu.		47	34	27 23 25		41 22 51	3	33 21 56	28 45		18	
19	W.		51	30	28 24 30		29 4 41	2	41 23 43	10 37		19	
20	Th.		55	27	29 25 36		17 16 36	1	42 24 27	22 36		20	
21	F.		59	23	0 26 41		4 28 39	0	37 3	4 45		21	
22	S.	20	3	20	1 27 45	19	51 10 55	0 N 30	22 29 17	8		22	
23	Su.		7	17	2 28 48		37 23 24	1	37 19 45	29 45		23	
24	M.		11	13	3 29 51		23 6 9	2	41 16 9	12 37		24	
25	Tu.		15	10	4 30 55		9 19 9	3	37 11 38	25 45		25	
26	W.		19	6	5 31 56	18	54 2 24	4	23 6 30	9 6		26	
27	Th.		23	3	6 32 57		39 15 52		55 1 3	22 40		27	
28	F.		26	59	7 33 57		23 29 32	5	11 4 N 34	6 25		28	
29	S.		30	56	8 34 55		8 13 21		9 10 1	20 19		29	
30	Su.		34	52	9 35 53	17	51 27 19	4	49 15 0	4 20		30	
31	M.		38	49	10 36 47		35 11 23		11 19 14	18 27		31	
Date	ψ		♈		♉		♊		♋		♌		
	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	
1	1 N 42	9 S 11	0 N 33	21 N 25	2 N 12	15 N 11	0 N 23	21 N 11	0 S 36	4 S 32			
3				26		13			13	34	3	55	
5		12		27		15		24	16	31		19	
7				28		18			19	29	2	43	
9		13		30	13	21			23	27		6	
11				31		23			26	24	1	30	
13		14		32		25			30	22	0	54	
15				33		27		25	33	20		17	
17	43	15		34	14	29			36	18	0 N 19		
19				35		30			39	15		55	
21				36	15	32			42	13	1	31	
23						34		26	45	11	2	7	
25		14		37	16	35			43	9		43	
27				38		37			51	7	3	19	
29				39		39			53	5		54	
31				40		40			56	3	4	30	

EPHEMERIS		JANUARY, 1955										3											
Date	Longitudes										Lunar Aspects												
	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	☉	☽	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	
1	26	19	18	23	26	47	19	59	26	2	14	3	3	π	Δ	π	Δ	♊	♋	♌	♍	♎	♏
2	R	16	28	R	40	20	42	48	15	41	□	π	Δ	π	Δ	♊	♋	♌	♍	♎	♏	♐	♑
3	13	33	32	21	25	27	35	17	19	19	Δ	δ	□	□	□	♌	♍	♎	♏	♐	♑	♒	♓
4	10	38	25	22	8	28	22	18	57	36	Δ	δ	□	□	□	♌	♍	♎	♏	♐	♑	♒	♓
5	7	43	18	29	51	29	11	20	36	46	Δ	π	*	*	*	♌	♍	♎	♏	♐	♑	♒	♓
6	4	48	10	23	34	0	7	0	22	14	π	□	Δ	π	Δ	♌	♍	♎	♏	♐	♑	♒	♓
7	2	53	2	24	17	49	23	53	53	32	δ	Δ	π	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
8	0	58	25	54	25	0	1	41	25	32	δ	Δ	π	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
9	25	58	19	3	46	2	32	27	12	12	□	δ	□	□	♌	♍	♎	♏	♐	♑	♒	♓	
10	56	8	38	26	27	3	25	28	52	52	□	δ	□	□	♌	♍	♎	♏	♐	♑	♒	♓	
11	54	12	30	27	10	4	17	0	31	31	π	Δ	π	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
12	51	16	22	53	5	11	2	11	11	11	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
13	48	20	14	28	36	6	5	3	51	51	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
14	46	25	6	29	19	7	1	5	30	30	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
15	43	30	24	58	0	7	2	56	7	9	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
16	40	34	50	45	8	52	8	4	4	4	□	□	□	□	♌	♍	♎	♏	♐	♑	♒	♓	
17	38	38	42	1	28	9	49	10	26	26	□	□	□	□	♌	♍	♎	♏	♐	♑	♒	♓	
18	35	42	34	2	11	10	46	12	3	3	*	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
19	32	46	26	54	11	44	13	39	39	39	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
20	30	50	18	3	37	12	43	15	13	13	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
21	28	54	10	4	20	13	41	16	46	46	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
22	25	58	2	5	3	14	41	18	17	17	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
23	22	20	2	23	54	46	15	40	19	44	□	δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
24	20	5	46	6	23	16	41	21	9	9	□	δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
25	18	8	38	7	12	17	41	22	29	29	□	δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
26	16	11	30	54	18	42	23	45	45	45	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
27	14	15	22	8	37	19	43	24	56	56	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
28	11	18	15	9	20	20	45	26	0	0	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
29	8	21	7	10	3	21	47	58	*	*	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
30	6	24	0	46	22	49	27	48	48	48	Δ	Δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
31	4	27	22	53	11	29	23	52	28	30	□	δ	Δ	Δ	♌	♍	♎	♏	♐	♑	♒	♓	
Date	♀		♊		Mean		Date	Time		Phenomena													
	Lat.	Decl.	Lat.	Decl.	Ω		H.	M.															
1	3 N 56	15 S 27	1 S 5	24 S 41	5	24	2	1	54	☽ at First Quarter.													
3	59	45	2	4	22	18	4	3	36	☽ at Perihilion													
5	4	16	3	7	23	57	12	6	14	☽ at Perihilion.													
7	2	23	8	26	5	7	22	22	22	☽ at Perigee.													
9	2	43	7	22	48	4	59	8	18	☽ at ☽													
11	1	17	3	5	4	53	13	4	31	Full Moon Decl. 21°N 5'													
13	0	23	0	21	15	46	16	3	..	☽ on Equator.													
15	3	58	43	1	53	20	19	40	16	3	Heli. rising of ♀ in West.												
17	55	18	3	44	19	17	33	17	10	40	☽ at Last Quarter.												
19	52	22	31	18	11	27	18	8	5	5	☽ on Equator.												
21	48	40	16	17	1	21	21	1	1	1	☽ at Apogee.												
23	44	58	0	57	15	48	14	22	1	15	☽ enters =												
25	39	19	5	34	14	34	8	24	6	35	☽ at ☽												
27	33	30	8	13	21	2	27	16	29	29	New Moon Decl. 16°S 58'												
29	28	44	0	N 21	12	12	3	56	28	13	☽ on Equator.												
31	21	57	53	11	10	49	31	10	36	36	☽ at ☽												
											☽ at First Quarter.												

FEBRUARY, 1955										S. J. O. UJJAIN									
Date	Day	Sidereal Time			☉		☽			Midnight			ψ						
		H.	M.	S.	Long.	Decl.	Long.	Lat.	Decl.	☽									
1	Tu.	20	42	45	11 37	42	17 S	18 25	32	3N	18 22	N21	2 38	28 14					
2	W.		46	42	12 38	46		1 9	45	2	13 24	6	16 53	14					
3	Th.		50	39	13 39	29	16	44	24 0	0	59 24	18	1 20	14					
4	F.		54	35	14 40	19		26 8	14	0	58 22	53	15 20	14					
5	S.		58	32	15 41	9		8 22	24	1	33 20	3	19 26	R 13					
6	Su.	21	2	28	16 41	58	15	50	6 25	2	42 16	3	13 22	13					
7	M.		6	25	17 42	44		32 20	14	3	41 11	15	27 3	13					
8	Tu.		10	21	18 43	30		13 3	48	4	25 6	0	10 27	13					
9	W.		14	18	19 44	13	14	54	17 3		54 0	36	23 33	12					
10	Th.		18	14	20 44	56		35 29	58	5	7 4	S 41	6 18	12					
11	F.		22	11	21 45	36		16 12	34		5 9	39	18 45	12					
12	S.		26	8	22 46	17	13	56	24 52	4	48 14	6	0 56	11					
13	Su.		30	4	23 46	56		36 6	57		19 17	55	12 55	11					
14	M.		34	1	24 47	34		16 18	51	3	39 20	57	24 46	10					
15	Tu.		37	57	25 48	12	12	55	0 41	2	50 23	4	6 35	10					
16	W.		41	54	26 48	47		35 12	31	1	53 24	10	18 28	9					
17	Th.		45	50	27 49	21		14 24	26 0	0	52 24	11	0 28	9					
18	F.		49	47	28 49	53	11	53	6 32	0	N 13	23 4	12 41	8					
19	S.		53	43	29 50	26		32 18	54	1	19 20	49	25 12	8					
20	Su.		57	40	0 50	56		11 1	34	2	22 17	30	8 2	7					
21	M.	22	1	37	1 51	26	10	49	14 35	3	19 13	17	21 13	7					
22	Tu.		5	33	2 51	54		27 27	56	4	7 8	20	4 44	6					
23	W.		9	30	3 52	20		6 11	36		42 2	52	18 32	5					
24	Th.		13	26	4 52	45	9	44	25 32	5	1 2N	50	2 35	4					
25	F.		17	23	5 53	6		21 9	40		2 8	27	16 47	3					
26	S.		21	19	6 53	28	8	59	23 54	4	44 13	41	1 2	2					
27	Su.		25	16	7 53	47		37 8	10		9 18	9	15 17	1					
28	M.		29	12	8 54	5		14 22	23	3	18 21	34	29 28	0					

Date	ψ		♈		♉		♊		♋	
	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.
2	1N	44	9S	14	0N	33	21N	41	2N	17
4							15S	41	0N	27
6							42		22	21N
8							18	43		59
10							43	44		0S
12							19	45		1
14										2
16										4
18	45		11				21	46		6
20										2
22										4
24										6
26										7
28										8
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27
										28
										29
										30
										31

Date	☽		☽		☽		☽		☽	
	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.
2	1N 44	9S 14	0 N 33	21N 41	2 N 17	15 S 41	0 N 27	21N 59	0 S 1	5N 5
4						42		22	2	0 N 1
6						43			4	2
8						43			6	4
10		13				45			9	6
12		12							11	8
14						20		28	13	10
16						47			15	11
18	45	11				48	21	46	16	13
20									18	15
22		10				49			19	16
24									21	18
26		9				50	22		22	19
28									23	21

EPHEMERIS										FEBRUARY, 1955										5
Date	Longitudes										Lunar Aspects									
	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
1	25	20	30	22	46	12	11	24	55	29	3	☽	☽	☽	☽	☽	☽	☽	☽	☽
2	24	58	33	R	38	51	25	58	25	25	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
3	R	56	36		31	13	37	27	2	37	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
4		54	39		24	14	20	28	5	38	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
5		51	41		17	15	2	29	10	R 28	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
6		48	43		10	45	0	14	7	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
7		45	46		4	16	28	1	19	28	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
8		42	48	21	57	17	10	2	24	27	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
9		40	50		51	53	3	29	3	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
10		38	52		44	18	35	4	35	26	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
11		36	54		38	19	18		40	25	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
12		34	56		32	20	6	4	43	23	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
13		32	57		27		7	5	52	22	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
14		30	59		21	21	25	8	58	21	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
15		28	21	1	16	22	7	10	5	20	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
16		25	2		10	50	11	12	12	21	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
17		23	3		5	23	32	12	19	18	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
18		21	4		0	24	15	13	25	17	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
19		19	5	20	55	57	14	33	16	38	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
20		17	6		50	25	39	15	40	15	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
21		15	7		46	26	21	16	48	23	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
22		13	8		41	27	4	17	56	14	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
23		11	9		37		46	19	3	38	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
24		9	10		33	28	28	20	11	26	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
25		7			29	29	10	21	20	21	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
26		6			25		52	22	28	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
27		4			22	0 8	34	23	36	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽
28		2			19	1	16	24	45	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽	☽

Date	☿		♂		Mean	Date	Time H. M.	Phenomena.
	Lat.	Decl.	Lat.	Decl.	♂			
2	3 N 15	20 S 8	1 N 27	10 S 19	3 3 43	1 17	12	☿ at Perihelion.
4		8	2	1 9	43	35	23	0 ☿ at Perigee.
6		1		34	23	30	3	12 ☿ at ♂
8	2 53	32	3 3	21		24	4 6	23 ☿ at ♂
10	45	37	25	37		17	6	.. Heli. setting of ☿ in West.
12	37	39	39	10	7	11	7 7	17 Full Moon Decl. 12° N 12'
14	29	40	43	48		4	9 14	44 ☿ on Equator.
16	21	38	38	11	34	2	58	14 5 0 ☿ at Apogee.
18	13	34	25	12	21	52	15 1	11 ☿ at Last Quarter.
20	4	28	6	13	6	45	18 7	12 ☿ at ♂
22	1 55	20	2 43	46		39	19 15	56 ☉ enters ♋
24	47	10	18	14	19	33	19	.. Heli. rising of ☿ in East.
26	38	19	58	1	51	26	22 21	21 New Moon Decl. 6° S 15'
28	29	43	25	15	3	20	24 0	4 ☿ on Equator.
						27	20 0	☿ at Perigee.

[illegible]

Day	Day	Sidereal Time	☉		☽		Midnight		ψ
			Long.	Decl.	Long.	Lat.	Decl.	☽	
1	F.	0 35 22	10 46 1	4 N 16	28 57	2 S 27	17 N 59	5 41 4	27 19
2	S.	39 1 11	45 14	39 12	22 3	24 13	50 19	1 1	R 17
3	Su.	43 15 12	44 24	5 25	37 4	10 9	4 2	9	15
4	M.	47 12 13	43 31	25 8	39	42 3	58 15	6	14
5	Tu.	51 8 14	42 35	48 21	30	58 1 S 12	27 51		13
6	W.	55 3 15	41 38	6 11	4 9	5 0	6 14	10 25	11
7	Th.	59 2 16	40 39	33 16	37 4	47 10	57 22	47	10
8	F.	1 2 58	17 39	56 28	54	21 15	9 4	59	8
9	S.	6 55 18	38 32	7 19	11 1	3 44	18 41	17 1	6
10	Su.	10 51 19	37 26	41 22	59	2 57	21 22	28 55	4
11	M.	14 45 20	36 20	8 3	4 50	2 23	6 10	7 44	2
12	Tu.	18 44 21	35 8	25 16	37	1 3 23	49 22	31	0
13	W.	22 41 22	33 58	47 28	26	0 N 0 23	26 4 22	26	59
14	Th.	26 37 23	32 45	9 9	10 20	1 3 22	0 16	20	58
15	F.	30 34 24	31 29	31 22	24	2 4 19	31 28	32	58
16	S.	34 31 25	30 13	52 4 45	3	1 16	9 11 3		57
17	Su.	38 27 26	28 55	10 13	17 27	5 11	56 13	57	55
18	M.	42 24 27	27 34	34 0 34	4	30 7	3 7 18		53
19	Tu.	46 20 28	26 12	56 14	9	56 1	41 21	8	51
20	W.	50 17 29	24 49	11 16	23 13	5 5	3 N 57	5 25	48
21	Th.	54 10 0 8	23 24	37 12 42	4	55 9	33 20	4	46
22	F.	58 10 1 21	58	57 27 31		25 14	43 5 8	0	45
23	S.	2 6 2 20	28 12	18 12 31	3	37 19	2 20	3	43
24	Su.	6 3 3 18	58	38 27 34	2	34 22	7 5 3		41
25	M.	10 0 4 17	24	57 12 30	1	20 23	37 19	53	39
26	Tu.	13 50 5 15	51 13	17 27 12	0	2 23	27 4 27		37
27	W.	17 53 6 14	14	36 11 36	1 S 15	21 41	18 39		36
28	Th.	21 49 7 12	35	56 25 36	2	25 18	39 2 29		35
29	F.	25 46 8 10	55 14	14 9 17	3	25 14	38 16	0	34
30	S.	29 42 9 9	12	33 22 38	4	13 9	59 29	12	32

Date	☉		☽		☿		♂		♂	
	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.
1	1 N 47	8 S 52	0 N 32	21 N 35	2 N 29	15 S 29	0 N 29	22 N 25	0 N 41	19 N 17
3		51				27		24	42	38
5		50				25		23	43	59
7		49		54	30	23		22	44	20
9		47				21		20	45	38
11		46				19		19		56
13		45				17		18	46	21
15		44			31	15		16	47	31
17		42		53		12		15	48	47
19		41				10		13	49	22
21		40				8		12	50	17
23		39	31	52		5		10	51	31
25		38				3		8		45
27		37		51		1		5	52	57
29		36			14	59		2	53	23

Date	Longitudes						Lunar Aspects											
	☉	☽	☿	♂	♀	♂	☉	☽	☿	♂	♀	♂	♀	♂	♀	♂	♀	♂
1	23 36	20 23	20 15	23 24	2 8	20 52												
2	36 R	20	18 24	5 3	19 22	31	Δ	☉	☽									
3	37	17	21	46 4	30 24	10	☉	☽										
4		14	25 25	27 5	41 25	54	☉	☽										
5		11	28 26	7 6	53 27	34	☉	☽										
6		8	32	48 8	4 29	18												
7		5	36 27	29 9	14 17	3	☉	☽										
8	38	1	40 28	10 10	27 2	50	☉	☽										
9	19	57	44	59 11	38 4	38	☉	☽										
10	39	53	49 29	31 12	50 6	28	☉	☽										
11	39	49	53	0 12	14 1	8	☉	☽										
12	39	45	58	52 15	13 10	13	☉	☽										
13	40	41	3	33 16	24 12	7	☉	☽										
14	40	37	8	2	13 17	36	☉	☽										
15	41	34	13	54 18	48 16	0	☉	☽										
16	42	30	19	3	34 19	59	☉	☽										
17	43	26	24	4	15 21	11	☉	☽										
18	44	23	30	55 22	23 22	1	☉	☽										
19	45	19	36	5	36 23	35	☉	☽										
20	46	15	42	6	16 24	47	☉	☽										
21	47	11	48	56 25	58 28	14	☉	☽										
22	48	7	54	7	37 27	10	☉	☽										
23	49	3	0	8	17 28	22	☉	☽										
24	50	18	7	57 29	34 4	35	☉	☽										
25	51	55	14	9	37 0	46	☉	☽										
26	52	50	21	10	17 2	57	☉	☽										
27	53	46	28	58	3	10	☉	☽										
28	54	42	35	11	38 4	22	☉	☽										
29	55	37	42	12	18 5	34	☉	☽										
30	57	32	50	58	6	46	☉	☽										

Date	☉		☽		Mean ☿	Date	Time H. M.	Phenomena
	Lat.	Decl.	Lat.	Decl.				
1	0 S 37	11 S 18	2 S 24	5 S 49	0 38	5	6	26 J on Equator.
3	43 10	32	23 4	30	32	7	12	9 Full Moon, Decl. 10° S 59
5	49 9	45	20 3	6	26	9	15	32 J on Equator.
7	55 8	57	15 1	39	19	13	12	0 J at ☿
9	0	8	8 0	7	13	14	19	0 J at Apogee.
11	5	7 18	0	1 N 28	7	15	16	28 J at Last Quarter.
13	10	6 27	1	49 3	7	0	19	19 J on Equator.
15	15	5 35	36 4	49 29	54	21	2	29 ☿ enters ☽
17	19	4 42	21 6	34	48	22	18	35 New Moon, D. 15° N 55
19	23	3 49	5 8	20	41	24		J at Perigee.
21	26	2 55	0	46 10	8	35	24	10 J at Aphelion.
23	30	1	27 11	54	28	6	1	44 J at ☿
25	33	1	7	6 13	40	22	26	12 J at ☿
27	35	0	12	0 N 15	15	23	16	27 28 J on Equator.
29	37	0 N 43	37	17	0	9	29	9 J at First Quarter.
						30	16	30 J at Perihelion.

16 AUGUST, 1955. S. J. O. UJJAIN																				
Date	Day	Sidereal Time.			☉		☽			Midnight		Ψ								
		H.	M.	S.	Long.	Decl.	Long.	Lat.	Decl.	☽										
1	M.	8	36	22	8	14	55	18	N 13	9	33	1	N 14	21	S 52	15	35	25	37	
2	Tu.		40	19	9	12	17	58	21	39	2	16	19	28	27	46		38		
3	W.		44	15	10	9	41	42	3	56	3	12	16	10	0	9		39		
4	Th.		48	12	11	7	7	27	16	26		59	12	3	12	46		40		
5	F.		52	8	12	4	34	11	29	10	4	36	7	27	5	36		41		
6	S.		56	5	13	1	52	16	55	12	7	59	2	24	18	40		42		
7	Su.	9	0	1	59	26	38	25	17	5	7	2	N 50	1	17	57		43		
8	M.		3	58	14	56	56	22	8	40	4	59	8	1	15	26		44		
9	Tu.		7	54	15	54	26	5	22	15	33	12	53	29	6		45			
10	W.		11	51	16	51	57	15	47	6	8	1	3	52	17	11	12	8	58	46
11	Th.		15	48	17	49	30	30	19	58	2	57	20	34	27	1		47		
12	F.		19	44	18	47	5	12	4	6	1	49	22	46	11	14		48		
13	S.		23	41	19	44	40	14	54	18	23	0	35	23	31	25	35		49	
14	Su.		27	37	20	42	17	36	2	49	0	S 42	22	43	10	3		50		
15	M.		31	34	21	39	56	17	17	17	1	57	20	24	24	32		51		
16	Tu.		35	30	22	37	37	13	59	1	46	3	4	16	47	8	58		52	
17	W.		39	27	23	35	18	40	16	8		59	12	12	23	15		54		
18	Th.		43	23	24	33	1	21	0	19	4	38	7	1	7	18		55		
19	F.		47	20	25	30	47	1	14	12		59	1	37	21	1		57		
20	S.		51	16	26	28	31	12	41	27	45	5	4	35	45	2	22		58	
21	Su.		55	13	27	26	19	22	10	54	4	51	8	47	17	20		59		
22	M.		59	10	28	24	8	2	23	41		25	13	18	29	56	26	0		
23	Tu.	10	3	6	29	21	58	11	42	6	1	3	46	17	7	12	13		2	
24	W.		7	3	0	19	48	22	18	16	2	58	20	7	24	16		4		
25	Th.		10	59	1	17	40	1	0	13		3	22	12	6	9		6		
26	F.		14	56	2	15	34	10	41	12	5	1	3	23	16	17	57		8	
27	S.		18	52	3	13	28	20	23	51	0	N 0	23	18	29	47		9		
28	Su.		22	49	4	11	24	9	59	5	44	1	3	22	16	11	43		10	
29	M.		26	45	5	9	23	37	17	44	2	4	20	14	23	49		11		
30	Tu.		30	42	6	7	21	16	29	57		59	17	14	6	10		12		
31	W.		34	39	7	5	22	8	55	12	26	3	48	13	26	18	47		14	
Date	☽		☽		☽		☽		☽		☽									
	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.								
1	1 N 42	8 S 19	0 N 31	20 N 57	2 N 15	14 S 5	0 N 34	18 N 9	1 N 9	17 N 55										
3		20		56		6				33										
5		21		54		14		7		17		10								
7				53		8		46		16		47								
9		22		51		13		39		24										
11		23		50		12		35		32		0								
13		24		48		12		24		15		36								
15		25		47		16		16		11										
17		26		45		11		8		14		46								
19		27		44		20		1		20										
21		28		42		10		22		16		54								
23		29		40		24		36		47		28								
25		30		39		9		26		39		1								
27		31		38		2		31		12		34								
29	41	32		37		8		31		24		7								
1		33		36		34		28		11		40								

EPHEMERIS																AUGUST, 1955																17
Date	Longitudes												Lunar Aspects																			
	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	☉	☽	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓						
1	28	38	14	39	10	25	13	20	29	44	5	15	π		*	π	π															
2		42		40		39		59	0	58	5	21		□		*	π	π														
3		46		41		52	14	37	2	12	7	27			δ		δ	δ			δ	δ										
4		49		43	11	5	15	15	3	26	9	32	δ			δ	δ			π												
5		53		44		18		53	4	40	11	36		Δ	π		δ	δ		π							δ					
6		57		46		32	16	32	5	53	13	40	π	□	Δ	Δ	π	π		π												
7	29	1		48		45	17	10	7	7	15	43	□	Δ	Δ	Δ	π	π		□	Δ					π	π					
8		5		49		58		48	8	21	17	45	Δ	Δ		π	Δ	Δ		□	Δ					π	π					
9		9		51	12	11	18	26	9	35	19	46		δ			Δ	Δ		Δ	Δ					Δ	Δ					
10		13		53		24	19	4	10	49	21	45		□			□			□												
11		16		56		37		43	12	3	23	43	□	π		δ		□									□					
12		19		59		50	20	21	13	17	25	40		□	π	*	π		□								□					
13		22	15		1	3		59	14	31	27	35	*	Δ	Δ	π	*	*	*	*	*	*	*	*	*	*	*					
14		25		3		17	21	37	15	46	29	29	Δ	Δ		Δ	Δ	Δ		Δ	Δ					Δ	Δ					
15		28		5		31	22	15	17	0	1	22	Δ	Δ		Δ	Δ	Δ		Δ	Δ					Δ	Δ					
16		31		8		45		54	18	14	3	13		□	δ		δ		δ								δ					
17		34		10		57	23	32	19	28	5	2			*	Δ	δ		δ								δ					
18		38		13	14	10	24	10	20	42	6	51	δ		*	Δ	*		δ								δ					
19		42		16		23		48	21	56	8	37		Δ	Δ	*	Δ	*		δ							δ					
20		46		19		36	25	26	23	11	10	23		Δ	Δ	*	Δ	*		Δ	Δ						Δ					
21		50		22		49	26	5	24	25	12	7	Δ			*	*		Δ	Δ							Δ					
22		53		25	15	2		43	25	39	13	49	*	δ			*	*		Δ	Δ						*					
23		56		28		15	27	21	26	53	15	30		□			*	*		Δ	Δ						*					
24		59		32		28		59	28	8	17	10				δ		□		*							*					
25	0	2		35		41	28	37	29	22	18	48	□	Δ		δ		□		□	□						□					
26		5		38		54	29	16	0	36	20	25		Δ	Δ		Δ															
27		9		42	16	7		54	1	51	22	1		*			Δ									Δ						
28		13		46		20	0	32	3	5	23	36	Δ		π	Δ	Δ	Δ		Δ	Δ					Δ						
29		16		50		33	1	10	4	19	25	9	Δ		*	π	Δ	Δ		Δ	Δ					Δ						
30		20		54		46		48	5	34	26	41		□	δ		*	π		Δ	Δ					Δ						
31		23		58		5	2	48	28	11			π			□	δ			Δ	Δ					Δ						
Date	☽		☽		Mean.		Date	Time.		Phenomena.																						
	Lat.	Decl.	Lat.	Decl.	Δ			H.	M.																							
1	0 N 45	20 N 56	1 N 26	20 N 50	24	11	4	0	57	Heli. setting of ♀ in E.																						
3	49	28	36	19	5	4	6	23	0	Full Moon D. 13° S 53'.																						
5	53	19	57	42	18	57	23	58	11	♂ on Equator.																						
7	56	24	45	17	48	52	12	21	36	♂ at Last Quarter.																						
9	1	0	18	49	46	16	34	45	13	♀ at ♄																						
11	3	11	44	15	15	39	14	19	26	♀ at Perihelion.																						
13	6	17	32	39	13	52	33	14	22	♂ at Perigee.																						
15	9	16	50	33	12	26	26	18	1	New Moon D. 9° N 17'																						
17	11	7	24	10	58	20	18			Heli. setting of ♀ in E.																						
19	14	15	22	14	9	29	14	19	14	♂ on Equator.																						
21	16	14	35	3	7	59	7	24	3	☉ enters ♍																						
23	18	13	47	0	50	6	29	1	25	♂ at First Quarter.																						
25	20	12	57	3	4	59	22	54	25	Heli. rising of ♀ in West.																						
27	21	5	22	3	30	48	26	21	5	♂ at Apogee.																						
29	22	11	12	7	2	2	42	27	12	♂ at ♈																						
31	23	10	19	0 S 9	0	35	35	30	9	0 ♄ at ♄																						

20		OCTOBER, 1955										S. J. O. UJJAIN	
Date	Day	Sidereal Time				☉		☽			Midnight	ψ	
		H.	M.	S.		Long.	Decl.	Long.	Lat.	Decl.	☽		
1	S.	12	36	52	7 ^h 18 ^m 35 ^s	2 S 54	0 ^h 25 ^m 4 ^s	4 N 57	4 N 43	7 ^h 22 ^m 27 ^s	27 ^h 13 ^m		
2	Su.		40	48	8 17 35	3 17	14 23	35 9	54	21 28	15		
3	M.		44	45	9 16 37	41	28 35	3 56	14 39	5 45	17		
4	Tu.		48	41	10 15 42	4 4	12 56	2 18	37	20 7	19		
5	W.		52	38	11 14 49		27 27 19	1 55	21 26	4 30	21		
6	Th.		56	35	12 13 58	50	11 40	0 42	22 53	18 49	23		
7	F.	13	0	31	13 13 9	5 13	25 56	0 S 34	22 49	3 1	25		
8	S.		4	28	14 12 22	38	10 5	1 47	21 17	17 6	28		
9	Su.		8	24	15 11 37	59	24 6	2 53	18 27	1 3	30		
10	M.		12	21	16 10 54	6 22	7 58	3 48	14 36	1 51	32		
11	Tu.		16	17	17 10 12	45	21 41	4 30	10 1	28 29	35		
12	W.		20	14	18 9 34	7 7	5 14	55 5 N	1 11	57	37		
13	Th.		24	10	19 8 38	30	18 37	5 4	0 S 10	25 14	40		
14	F.		28	7	20 8 23	53	1 47	4 57	5 15	8 17	42		
15	S.		32	4	21 7 50	8 15	14 44	34	10 1	21 7	44		
16	Su.		36	0	22 7 20	37	27 26	3 58	14 16	3 42	46		
17	M.		39	57	23 6 51	59	9 54	11	17 49	16 3	48		
18	Tu.		43	53	24 6 24	9 21	22 9	2 16	20 31	28 11	50		
19	W.		47	50	25 6 0	43	4 11	1 16	22 14	10 8	52		
20	Th.		51	46	26 5 37	10 5	16 4	0 13	55 21	58	54		
21	F.		55	43	27 5 17	26	27 51	0 N 51	35 3	45	56		
22	S.		59	39	28 4 58	48	9 38	1 52	21 14	15 33	58		
23	Su.	14	3	36	29 4 12	11 9	21 29	2 49	18 57	27 28	28 1		
24	M.		7	33	0 4 27	30	3 30	3 39	15 49	9 36	4		
25	Tu.		11	29	1 4 14	51	15 45	4 21	11 58	22 0	6		
26	W.		15	26	2 4 4	12 12	28 20	51 7	30 4	46	8		
27	Th.		19	22	3 3 56	32	11 18	5 7	2 S 35	17 57	10		
28	F.		23	19	4 3 50	53	24 42	7 2 N	36 1	34	12		
29	S.		27	15	5 3 44	13 13	8 32	4 50	7 50	15 36	14		
30	Su.		31	12	6 3 40	33	22 46	14	12 47	0 8	16		
31	M.		35	8	7 3 38	53	7 18	3 22	17 8	14 39	18		
Date	ψ		♈		♉		♊		♋				
	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.			
2	1 N 40	8 S 57	0 N 32	20 N 18	2 N 1	15 S 25	0 N 41	14 N 22	1 N 5	3 N 50			
4		58		17		29		16	4	19			
6		59				32		9		2 49			
8	9	1		16		35		1		18			
10		2				39		13 54	3 1	47			
12		4		15		43		42		16			
14		5		14		46		41	2 0	45			
16		7	33	13	0	50	43	35		14			
18		8				54		29	0 S 17				
20		10				58	44	23	1	48			
22		11			16	2		17	1	18			
24		12		12	1 59	5	45	12	0	49			
26		14				8		6	0 59	2 20			
28		15				11		0	17	51			
30		17				14	46	12 54	13 3	22			

EPHEMERIS.												OCTOBER, 1955.												21		
Date	Longitudes.												Lunar Aspects.													
	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	☉	☽	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
1	1	42	18	33	23	12	22	13	15	21	28	38			π	Δ	π	π	π	π	π	π	π	π	π	π
2		44		39		23		50	16	36	R	36		♂	π	Δ	π	π	π	π	π	π	π	π	π	π
3		46		45		34	23	28	17	51		28			♂	□	♂	π	π	π	π	π	π	π	π	π
4		48		51		45	24	7	19	6		12		π	π	□	♂	π	π	π	π	π	π	π	π	π
5		50		57		56		45	20	20	27	48		□	π	*	□	π	π	π	π	π	π	π	π	π
6		52	19	3	24	6	25	23	21	35		16		Δ	□	Δ	π	*	π	π	π	π	π	π	π	π
7		54		10		17	26	2	22	50	26	37		□	Δ	π	π	*	□	π	π	π	π	π	π	π
8		56		16		28		40	24	5	25	50		□	Δ	π	π	*	□	π	π	π	π	π	π	π
9		58		22		38	27	18	25	19	24	55			□	Δ	π	*	□	π	π	π	π	π	π	π
10	2	0		28		49		57	26	34	23	55				♂	π	*	□	π	π	π	π	π	π	π
11		2		35		59	28	35	27	49	22	48		*	*	□	♂	□	*	□	*	□	*	□	*	□
12		3		41	25	9	29	14	29	4	21	39		Δ	*	π	□	♂	□	*	□	*	□	*	□	*
13		4		47		19		52	0	19	21	27		Δ	*	π	□	♂	□	*	□	*	□	*	□	*
14		5		54		29	0	30	1	34	19	14		Δ	*	π	□	♂	□	*	□	*	□	*	□	*
15		6	20	1		39	1	9	2	48	18	4		Δ	*	π	□	♂	□	*	□	*	□	*	□	*
16		7		8		49		47	4	3	17	2		♂	♂	□	*	π	□	*	□	*	□	*	□	*
17		8		15		59	2	26	5	18	15	58			□	π	□	♂	□	*	□	*	□	*	□	*
18		9		21	26	9	3	4	6	33					□	π	□	♂	□	*	□	*	□	*	□	*
19		10		27		18		43	7	48	14	20			□	Δ	π	*	□	*	□	*	□	*	□	*
20		11		34		28	4	21	9	2	13	46		Δ	Δ	□	π	*	□	*	□	*	□	*	□	*
21		12		40		37		59	10	17		23		*	*	π	□	♂	□	*	□	*	□	*	□	*
22		14		47		46	5	38	11	32		11		*	*	π	□	♂	□	*	□	*	□	*	□	*
23		15		54		55	6	17	12	47		11		*	*	π	□	♂	□	*	□	*	□	*	□	*
24		16	21	1	27	4		55	14	2	D	21		□	□	♂	□	♂	□	*	□	*	□	*	□	*
25		16		8		13	7	34	15	17		43		□	□	♂	□	♂	□	*	□	*	□	*	□	*
26		17		15		22	8	12	16	31	14	13		Δ	Δ	π	□	♂	□	*	□	*	□	*	□	*
27		17		22		30		51	17	46		54		Δ	Δ	π	□	♂	□	*	□	*	□	*	□	*
28		18		29		38	9	29	19	1	15	42		□	Δ	π	□	♂	□	*	□	*	□	*	□	*
29		18		36		47	10	8	20	16	16	37		□	Δ	π	□	♂	□	*	□	*	□	*	□	*
30		19		43		55		46	21	31	17	40		□	Δ	π	□	♂	□	*	□	*	□	*	□	*
31		19		50	28	3	11	25	22	45	18	47		♂	□	Δ	π	♂	□	*	□	*	□	*	□	*
Date	♀		♊		Mean.		Date	Time.		Phenomena.																
	Lat.	Decl.	Lat.	Decl.	♈	♉		H.	M.																	
2	1 N 5	5 S 32	3 S 40	14 S 24	20 7	54	1	0	45	Heli. setting of ♀ in W.																
4	1 6	32	35	11	47	5				Full Moon D. 7° N 28'																
6	0 58	7 31	24 13	41	41	5	17	0		Heli. rising of ♀ in East																
8	54	8 30	6 12	52	35	7	1	16		♂ at Perigee.																
10	51	9 28	2 41	11 47	28	8	19	35		♂ at Last Quarter.																
12	47	10 25	9 10	26	22	13	11	14		♂ on Equator.																
14	43	11 21	1 31	8 57	16	16				Heli. rising of ♀ in W.																
16	38	12 16	0 51	7 27	9	16	1	7		New Moon D. 12° S 10'																
18	34	13 10	10 6	5	3	17	9	41		♂ on Equator.																
20	29	14 3	0 N 28	5 0	19	57	19	0	38	♀ at ♈																
22	25	54 1	1 4	17	50	20				Heli. rising of ♀ in East.																
24	20	15 44	27 3	56	44	20	12	0		♂ at Apogee.																
26	15	16 32	46	58	8	37	20	16	53	♂ at ♈																
28	10	17 19	2 0	4 20	31	23	15	2		♀ at Perihelion.																
30	5	18 4	7	58	25	24	4	31		♂ at First Quarter.																
					24	10	24			☉ enters ♏																

22		NOVEMBER, 1955										S. J. O. UJJAIN	
Date	Day	Sidereal Time		☉		☽		Midnight		ψ			
				Long.	Decl.	Long.	Lat.	Decl.	ψ				
1	Tu.	14	39	5	8m 3	37	14 S 12	22 8 3	2N 15	20 N 28	29 8 57	28 20	20
2	W.	43	2	9	3	39	31 6	52 0	59 22	26	14 11	16	22
3	Th.	46	58	10	3	42	50 21	38 0	S 21	50	28 58		24
4	F.	50	55	11	3	47	15 9	6 15	1 39	21	39	13 29	26
5	S.	54	51	12	3	55	28 20	39 2	50 19	3	27 45		28
6	Su.	58	48	13	4	4	46 4	47 3	49 15	22	11 24	44	30
7	M.	15	2	44	4	15	16 4	18 37	4 34	10	54	25 26	33
8	Tu.	6	41	15	4	28	22 2	m 11	5	1	6	0	36
9	W.	10	37	16	4	44	39 15	28	12	0	55	22	39
10	Th.	14	34	17	5	1	56 28	31	7 4	S 6	4 57		41
11	F.	18	31	18	5	20	17 14	11 20	4 46	8	53	27 39	44
12	S.	22	27	19	5	42	31 23	56	12 13	11	0m	9	46
13	Su.	26	24	20	6	5	47 6	m 20	3 26	16	53	12 28	49
14	M.	30	20	21	6	31	18 3	18 33	2 31	19	46	24 36	51
15	Tu.	34	17	22	6	58	18 0	7 36	1 31	21	45	6 7	53
16	W.	38	13	23	7	27	34 12	32	0 26	22	44	18 27	55
17	Th.	42	10	24	7	57	49 24	22	0 N 39		41	0 15	56
18	F.	46	5	25	8	29	19 4	6 5	8 1	42	21	36	58
19	S.	50	3	26	9	2	18 17	55	2 41	19	35	23 49	29 0
20	Su.	54	0	27	9	36	32 29	46	3 44	16	43	5 44	2
21	M.	57	56	28	10	12	46 11	45	4 18	13	8	17 49	4
22	Tu.	16	1	53	10	48	59 23	57	5 1	8	58	0 10	6
23	W.	5	49	0	11	26	20 12	6 28	5 11	4	19	12 51	8
24	Th.	9	46	1	12	5	24 19	20	16 0	N 38	25 56		10
25	F.	13	42	2	12	47	37 2	39	6 5	43	9 28		12
26	S.	17	39	3	13	28	49 16	25	4 37	10	48	23 28	14
27	Su.	21	35	4	14	11	21 0	0 38	3 51	15	18	7 54	16
28	M.	25	32	5	14	54	11 15	15	2 48	19	6	22 42	18
29	Tu.	29	29	6	15	38	22 0	12	3 33	21	43	7 45	20
30	W.	33	25	7	16	24	32 15	19	0 11	22	49	22 54	22

Date	ψ		♈		♉		♊		♋	
	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.
1	1 N 40	9 S 19	0 N 33	20 N 11	1 N 58	16 S 17	0 N 46	12 N 49	0 N 58	3 S 52
3		21				20		47		4 23
5		22				24		39	57	53
7		24				28	48	34		5 23
9	41	26	34		57	32		30	56	53
11		27				36		26		6 23
13		29				40	49	22	55	53
15		30				44	50	18		7 23
17		32				47		15	54	52
19		33		12		50	51	12	53	8 22
21		34				53		9		51
23		35				56	52	6	52	9 19
25		37	13		17	0		3	51	48
27		38				4	53	0		10 16
29		40	14			8	11	58	50	44

EPHEMERIS

NOVEMBER, 1955

23

Date	Longitudes										Lunar Aspects											
	☿	♈	♉	♊	♋	♌	♍	♎	♏	♐	☉	☽	♈	♉	♊	♋	♌	♍	♎	♏	♐	
1	2	20	21	m 57	28	11	12	3	24	m 0	20	0	0	π	☉	☽	♈	♉	♊	♋	♌	♍
2			22	4		1		41	25	15	21	17	π	☉	☽	♈	♉	♊	♋	♌	♍	♎
3				11		27	13	20	26	30	22	38	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
4				18		35		59	27	45	24	2	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
5				25		43	14	38	29	0	25	29	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
6		21		32		50	15	16	0	7	14	26	57	☉	☽	♈	☉	♈	♉	♊	♋	♌
7				39		57		55	1	29	28	27	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
8				46	29		4	16	34	2	44	29	59	☉	☽	♈	☉	♈	♉	♊	♋	♌
9				53		11	17	12	3	59	1	m 31	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
10		23		0		17		51	5	14	3	5	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
11		22		7		24	18	3	6	28	4	39	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
12				14		30	19	8	7	43	6	14	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
13				21		36		47	8	58	7	50	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
14		23		28		43	20	26	10	13	9	25	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
15				35		49	21	5	11	28	11	1	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
16				43		55		43	12	42	12	37	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
17				50	0	m 1	22	22	13	57	14	13	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
18	R	22		57	6	23		1	15	12	15	49	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
19			24	4		11		40	16	27	17	25	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
20			21	12		16	24	18	17	42	19	1	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
21			20	19		21		57	18	5	2	37	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
22			19	26		26	25	36	2	11	22	12	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
23				33		31	26	15	21	26	23	48	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
24			18	40		36		54	22	41	25	23	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
25			17	47		40	27	32	23	55	26	58	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
26		16		54		44	28	11	25	10	28	33	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
27		15	25	1		48		50	26	25	0	8	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
28		14		9		52	29	29	27	40	1	43	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
29		13		16		56	0	8	28	54	3	17	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍
30		11		23		59	m 47	0	5	9	4	52	☉	☽	♈	☉	♈	♉	♊	♋	♌	♍

Date	☿		♈		Mean. ☉	Date	Time. H. M.	Phenomena.					
	Lat.	Decl.	Lat.	Decl.									
1	0° 0'	18° S	46°	2° N	10	5	S 49	19	18	2	8	5	☉ at Perigee.
3		5	19	27		9	6	49		12	3	5	☉ at ☉
5		10	20	6		4	7	56		6	7	3	☉ at Last Quarter.
7		15		42	1	57	9	6	18	59	9	16	☉ on Equator.
9		20	21	17		48	10	19		53	14		Heli. setting of ☉ in E.
11		25		48		38	11	33		47	14	17	New Moon D. 20° S 14'
13		30	22	18		26	12	46		40	16	21	☉ at ☉
15		35		44		13	13	58		34	18	3	☉ at Apogee.
17		40	23	9		0	15	9		28	22	22	☉ at Last Quarter.
19		45		30	0	47	16	18		21	23	7	☉ enters ♈
21		50		48		33	17	22		15	24	8	☉ on Equator.
23		54	24	4		19	18	25		9	26	4	☉ at ☉
25		59		17		6	19	24		2	29	22	Full Moon D. 22° N 12'
27	1	3		27	0	S 8	20	19	17	58	30	15	☉ at ☉
29		7		34		21	21	10		49		17	☉ at Perigee.

Date	☉		☽		Mean.	Date	Time.		Phenomena.
	Lat.	Decl.	Lat.	Decl.			H.	M.	
1	0 S	0	18 S	46	2	12	0	8	☉ at Perigee.
3		5	19	27	3	5	42		☉ at ♈
5		10	20	6	4	7	30		☉ at Last Quarter.
7		15	42	1	57	9	16	23	☉ on Equator.
9		20	21	17	48	10	19	53	☉ at Last Quarter.
11		25	48	38	11	33	47	14	☉ enters ♈
13		30	22	18	26	12	40	16	☉ at ♈
15		35	44	13	13	58	34	18	☉ at Apogee.
17		40	23	9	0	15	28	22	☉ at Last Quarter.
19		45	30	0	47	16	21	23	☉ enters ♈
21		50	48	33	17	22	15	24	☉ on Equator.
23		54	24	4	19	18	9	26	☉ at ♈
25		59	17	6	19	24	2	29	Full Moon D. 22° N 12'
27	1	3	27	0 S	8	20	19	17	☉ at ♈
29		7	34	21	21	10	49	17	☉ at Perigee.

24		DECEMBER, 1955										S. J. O. UJJAIN	
Date	Day	Sidereal Time			☉		☽			Midnight		ψ	
		H.	M.	S.	Long.	Decl.	Long.	Lat.	Decl.	☽			
1	Th.	16	37	22	8 17 10	21 S 42	0 27	1 S 13	22 N 14	7 59	29 24		
2	F.		41	18	9 17 59	51	15 28	2 30 20	3	22 53	26		
3	S.		45	15	10 18 50	22	0 14	3 37 16	34	7 29	27		
4	Su.		49	11	11 19 41		9 14 39	4 28 12	10	21 42	29		
5	M.		53	8	12 20 32		17 28 40	5 1 7	14	5 31	31		
6	Tu.		57	4	13 21 25		25 12 17	17 2 4	18 56		32		
7	W.	17	1	11	22 21		32 25 30	15 3 S 2	1 59		34		
8	Th.		4	58	15 23 16		39 8 24	4 57 7	52 14 43		35		
9	F.		8	54	16 24 14		45 20 59	25 12 17	27 11		37		
10	S.		12	51	17 25 11		51 3 20	3 41 16	5 9 25		38		
11	Su.		16	47	18 25 12		57 15 29	2 48 19	9 11 30		40		
12	M.		20	44	19 27 13	23	2 27 29	1 48 21	21 3 27		42		
13	Tu.		24	40	20 28 14		6 9 23	0 44 22	35 15 38		44		
14	W.		28	37	21 29 17		11 21 12	0 N 22 22	47 27 6		46		
15	Th.		32	33	22 30 40		14 3 0	1 26 21	58 8 54		48		
16	F.		36	30	23 31 25		17 14 47	2 27 20	11 20 42		50		
17	S.		40	27	24 32 28		20 2 37	3 22 17	32 2 34		51		
18	Su.		44	23	25 33 34		22 8 32	4 8 14	8 14 32		52		
19	M.		48	20	26 34 41		24 20 34	44 10 9	26 40		53		
20	Tu.		52	16	27 35 46		26 2 48	5 7 5	42 9 0		54		
21	W.		56	13	28 36 54		27 15 16	17 0 S 56	21 37		56		
22	Th.	18	0	9	29 38 0		27 28 3	11 3 N 59	4 35		57		
23	F.		4	6	0 39 7		27 11 12	4 50 8	53 17 56		59		
24	S.		8	2	1 40 13		26 24 46	12 13 30	1 43	0 m 1			
25	Su.		11	59	2 41 23		25 8 47	3 17 17	33 15 57		2		
26	M.		15	56	3 42 28		24 23 13	2 9 29	40 0 35		3		
27	Tu.		19	52	4 43 35		22 8 11	0 51 22	29 15 34		4		
28	W.		23	49	5 44 40		20 23 9	0 S 33 22	44 0 46		5		
29	Th.		27	45	6 45 52		17 8 24	1 54 21	17 16 2		6		
30	F.		31	42	7 46 59		13 23 38	3 8 18	18 1 11		7		
31	S.		35	38	8 48 7		9 8 41	4 7 14	7 16 5		8		
Date	ψ		♈		♉		♊		♋		♌		
	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.	
1	1 N 41	9 S 41	0 N 34	20 N 15	1 N 57	17 S 12	0 N 54	11 N 56	0 N 49	11 S 12			
3		42		16		16		54		40			
5		44				19		55		48 12		7	
7		45		17		22		51		47		33	
9		46		18		25		56		46 13		0	
11	42	47	35	19		29		49		45		26	
13		48				33		57		44 14		17	
15		49				36		50		43		42	
17		50		21		39		58		42 15		7	
19		51		22		42							
21				23		45		59		41		31	
23				24		49		52		40		55	
25		52		25	58	52	1 0	53		39 16		18	
27		53		26		55		55		38		41	
29		54		27		57		57		37 17		3	
31	43	55		28		59		59		36		25	

EPHEMERIS										DECEMBER, 1955										25	
Date	Longitudes								Lunar Aspects												
	♈	♉	♊	♋	♌	♍	♎	♏	☾	☽	♈	♉	♊	♋	♌	♍	♎	♏			
1	2	9	25	30	1	2	1	26	1	24	6	26	Δ	Δ	Δ	Δ	Δ	Δ	Δ		
2	R	7	36	5	2	5	2	5	2	38	8	1	Δ	Δ	Δ	Δ	Δ	Δ	Δ		
3		5	43	8		43	3	53	9	35			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
4		3	50	11	3	22	5	8	11	9			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
5		1	57	14	4	1	6	22	12	43			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
6	1	5	26	5		16		40	7	37	14	18	Δ	Δ	Δ	Δ	Δ	Δ	Δ		
7		57	12	18	5	19	8	52	15	52			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
8		56	19	20		58	10	6	17	26			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
9		55	26	22	6	37	11	21	19	0			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
10		54	33	24	7	16	12	36	20	35			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
11		52	40	26		55	13	50	22	9			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
12		50	47	27	8	34	15	5	23	43			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
13		48	54	28	9	13	16	19	25	18			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
14		47	27	29		52	17	34	26	52			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
15		45	7	29	10	31	18	49	28	27			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
16		43	14	29	11	10	20	3	0	2			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
17		41	21	30		49	21	18	1	37			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
18		40	27	30	12	28	22	32	3	12			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
19		38	34	30	13	7	23	47	4	47			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
20		36	41	R 29		46	25	1	6	22			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
21		34	47	29	14	25	23	16	7	57			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
22		32	53	28	15	5	27	30	9	32			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
23		30	59	27		44	28	45	11	8			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
24		28	28	26	16	2	29	59	12	43			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
25		26	12	25	17	2	1	13	14	19			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
26		24	18	24		41	2	28	15	54			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
27		21	24	23	18	20	3	42	17	29			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
28		18	30	22		59	4	56	19	4			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
29		16	37	21	19	39	6	10	20	38			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
30		14	43	20	20	18	7	25	22	12			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
31		12	49	19		57	8	39	23	46			Δ	Δ	Δ	Δ	Δ	Δ	Δ		
Date	☽		☽		Mean		Date	Time	Phenomena												
	Lat.	Decl.	Lat.	Decl.	Lat.	Decl.		H. M.													
1	1 S	12 24 S	38	0 S	34 21 S	57 17	2	...	Heli. rising of ♈ in E.												
3		15 39	47 22	40	37	4 14	3	...	☽ at Aphelion.												
5		19 37	59 23	18	30	6 14	5	...	☽ at Last Quarter.												
7		23 32	1 10	52	24	6 14	43	...	☽ at Aphelion.												
9		26 23	21 24	20	18	6 21	44	...	☽ on Equator.												
11		29 12	31 44		11	14 4	0	...	☽ at ♈												
13		32 23	58 40	25	2	5 14	12	38	New Moon. D. 22° S 46'												
15		35 41	49 15	16	59	15 12	0	...	☽ at Apogee.												
17		37 22	56 22		52	21 16	33	...	☽ on Equator.												
19		39 22	59 2	23	46	22 15	8	...	☽ at First Quarter.												
21		41 34	7 19		40	22 19	39	...	☽ enters ♈												
23		43 6	10 8		33	24 2	...	...	Heli. rising of ♈ in E.												
25		44 21	12 24	51	27	28 2	34	...	☽ at ♈												
27		45 2	11 29		20	29 9	15	...	Full Moon. D. 21° N 27'												
29		46 20	26 9	23	59	14															
31		19 49	5 25		8																

26		SUNRISE IN 1955													
Months and Dates.		Latitudes.													
		+5°	+8°	+11°	+14°	+17°	+20°	+23°	+26°	+29°	+32°	+35°			
Jan.	2 6	8 6	13 6	19 6	24 6	30 6	35 6	41 6	48 6	54 7	1 7	8			
	9	11	16	21	26	32	37	43	49	55	2	9			
	16	13	18	23	28	33	38	43	49	55	1	8			
	23	15	20	24	29	33	38	43	48	54	0	6			
Feb.	30	16	21	25	29	33	37	42	47	53 6	58	2			
	6	16	20	24	28	32	35	40	44	48	53 6	57			
	13	16	20	23	26	28	32	35	39	43	47	51			
	20	15	18	21	24	26	28	31	34	37	40	44			
Mar.	27	13	15	17	19	22	24	26	28	30	32	35			
	6	10	12	14	16	17	18	19	21	23	25	26			
	13	8	9	10	10	11	12	13	14	15	16	16			
	20	5	5	5	5	5	5	5	5	5	5	5			
Apr.	27	1	0	0	5	5 9	5 5	5 5	5 5	5 5	5 5	5 5			
	3 5	58 5	58 5	57	55	53	52	51	50	48	47	45			
	10	55	53	51	50	48	47	45	43	40	38	36			
	17	52	50	48	45	43	41	38	36	32	29	26			
May	24	50	48	45	41	39	36	32	29	24	21	18			
	1	49	45	42	38	34	31	27	24	19	15	10			
	8	47	43	39	34	31	27	23	19	14	9	3			
	15	46	42	38	32	28	24	19	15	9	3	4 57			
June	22	45	41	37	32	27	22	17	12	6	0	53			
	29	45	41	36	31	26	21	16	10	3	4	56 49			
	5	46	40	35	30	25	20	14	8	1	54	47			
	12	47	41	35	30	25	20	14	7	0	53	45			
July	19	48	42	36	31	25	20	15	8	1	53	45			
	26	49	43	37	32	27	22	16	9	2	55	47			
	3	51	45	39	34	29	24	18	11	4	57	49			
	10	52	47	41	36	31	26	20	14	7	5	0 52			
Aug.	17	54	49	44	39	34	29	22	16	10	4	57			
	24	55	51	46	41	36	32	26	20	14	8	5 3			
	31	56	53	49	44	39	35	31	26	21	14	8			
	7	56	52	48	44	40	37	33	28	23	18	13			
Sep.	14	57	52	48	45	41	39	36	32	27	22	17			
	21	56	52	49	46	43	40	37	34	31	27	22			
	28	55	52	50	48	45	43	40	37	34	31	28			
	4	54	51	50	48	46	44	42	40	38	36	33			
Oct.	11	52	51	50	49	47	46	45	44	42	40	38			
	18	51	50	50	49	48	47	46	45	44	43	43			
	25	49	49	49	49	49	49	49	49	50	50	50			
	2	48	49	49	49	50	50	51	51	52	53	55			
Nov.	9	47	48	49	50	51	52	53	54	56	58 6	0 6			
	16	45	47	48	50	52	54	56	58 6	0 6	2	6			
	23	45	46	48	51	54	57 6	0 6	3	6	8	12			
	30	45	47	51	54	57 6	0	3	6	9	13	19			
Dec.	6	46	49	53	57 6	0	3	7	11	15	19	25			
	13	47	51	55	59	3	8	11	15	21	26	32			
	20	49	53	58 6	2	6	12	16	22	28	33	39			
	27	51	55 6	0	5	10	16	21	27	33	39	46			
Dec.	4	54	58	3	8	14	19	25	31	37	45	52			
	11	58 6	3	9	15	19	25	31	37	43	49	58			
	18 6	1	6	12	17	23	29	35	41	48	55	7 2			
	25	5	10	15	21	26	32	38	44	51	58	6			

SUNSET IN 1955														27
Months and Dates	Latitudes													
	+5°	+8°	+11°	+14°	+17°	+20°	+23°	+26°	+29°	+32°	+35°			
Jan. 2	17 59	17 54	17 49	17 43	17 38	17 32	17 26	17 19	17 13	17 6	16 56			
9	18 2	18 56	18 51	18 46	18 41	18 36	18 30	18 25	18 18	18 12	17 2			
16	6 18	1 56	51	51	45	42	36	29	23	18	19			
23	9	4	59	54	49	46	41	36	30	24	19			
30	11	7 18	2	57	53	51	46	42	37	32	26			
Feb. 6	13	9	5 18	1	57	55	50	45	42	38	33			
13	13	10	7	3 18	0	58	55	52	48	44	40			
20	13	11	9	6	3 18	1	59	56	53	50	47			
27	13	12	10	8	6	4 18	2 18	0	58	56	53			
Mar. 6	13	13	12	10	8	7	4	2 18	2 18	0 18	0			
13	12	12	11	10	9	8	7	6	5	4	5			
20	11	11	11	11	11	11	10	10	10	10	11			
27	10	10	11	11	11	11	13	15	15	16	17			
Apr. 3	9	10	11	12	14	15	17	18	20	21	22			
10	8	9	11	13	15	17	19	21	23	26	28			
17	7	9	11	14	16	19	22	24	27	31	33			
24	7	9	12	15	18	21	24	28	31	36	39			
May 1	6	9	12	16	19	23	27	31	36	41	45			
8	6	10	13	18	21	26	31	35	40	43	50			
15	7	10	15	20	24	29	34	39	44	48	56			
22	7	11	16	21	26	31	36	42	48	54	19 1			
29	8	13	18	24	29	34	40	46	54	59	6			
June 5	10	15	20	26	31	37	42	49	56	19 2	10			
12	11	17	22	28	34	39	45	52	59	6	14			
19	13	19	24	30	36	42	48	55	19 2	9	16			
26	15	21	26	32	37	42	48	56	3	10	18			
July 3	16	22	27	32	38	43	50	57	4	11	18			
10	17	23	28	33	38	43	49	56	3	10	17			
17	17	23	28	33	38	42	48	54	0	6	14			
24	17	22	27	32	37	41	46	52	18 58	4	10			
31	16	21	25	29	33	37	43	48	54	0	4			
Aug. 7	15	18	22	26	30	34	39	44	49	18 51	18 58			
14	13	16	19	23	27	30	33	37	41	46	50			
21	10	12	15	18	21	25	28	30	34	38	42			
28	7	10	12	14	18	19	23	26	29	32	33			
Sep. 4	5	8	10	11	12	13	15	17	19	21	24			
11	2	3	4	6	7	7	8	9	11	12	14			
18	17 58	17 58	17 59	17 59	17 59	0	0	1	2	2	4			
25	55	55	54	54	54	17 54	17 54	17 54	17 54	17 53	17 53			
Oct. 2	52	52	51	51	50	50	49	49	48	47	45			
9	49	48	47	46	45	42	41	40	38	36	34			
16	46	45	43	41	38	36	34	32	30	28	29			
23	44	42	40	37	34	31	29	27	24	21	16			
30	43	40	37	33	30	27	24	21	17	14	9			
Nov. 6	41	40	36	32	28	24	20	16	12	8	2			
13	41	40	35	30	26	21	17	12	7	2	16 56			
20	42	39	35	29	24	20	16	11	5	16 59	52			
27	43	40	35	30	25	19	13	7	1	55	49			
Dec. 4	45	43	37	32	27	20	14	8	2	55	48			
11	47	44	39	34	28	21	16	9	2	55	48			
18	51	48	43	37	31	24	18	12	5	58	51			
25	55	51	46	40	34	28	22	15	8	17 1	54			

28 Geocentric position of Pluto and Mean Longitudes of the Sun and the Moon in 1955.

Month and Date.	Pluto.			Sun.			Moon.		
	Long.	Lat.	Decl.	Mean Long.	Mean Long.	Hor. Par.	Semi-Dia.		
Jan.	1 26 31	10N 25	22N 26	280 8 25	8 3 5	58.3	15.9		
	11 R 21	27	33	289 59 48	139 43 56	58.5	15.9		
	21 8	30	39	299 51 12	271 34 46	54.9	15.0		
	31 25 55	32	46	309 42 35	43 20 36	59.1	16.1		
Feb.	10 40	33	52	319 33 58	175 6 27	56.7	15.4		
	20 25	34	58	329 25 22	306 52 17	56.7	15.4		
March	2 11		23	3 339 16 45	78 38 7	59.2	16.1		
	12 24	57	8	349 8 8	210 23 57	55.1	15.0		
	22 45	33	11	358 59 31	342 9 48	57.4	15.6		
April	1 34	31	13	8 50 55	113 55 38	58.6	15.9		
	11 26	30	15	18 42 18	245 41 28	54.2	14.8		
	21 20	29	16	28 33 41	17 27 18	59.3	16.2		
May	1 18	26	14	38 25 4	149 13 9	57.2	15.6		
	11 17	23	12	48 16 28	280 59 0	54.1	14.7		
	21 D 20	21	9	58 7 51	52 44 49	60.8	16.6		
	31 26	19	5	67 59 14	184 30 39	55.8	15.2		
June	10 34	17	0	77 50 38	316 16 30	54.8	14.9		
	20 45	15 22	55	87 42 1	88 2 20	61.3	16.7		
	30 58	13	48	97 33 24	219 48 10	54.6	14.9		
July	10 25	13	42	107 24 48	351 34 0	56.1	15.3		
	20 30	11	35	117 16 11	123 19 51	60.5	16.5		
	30 48		28	127 7 34	255 5 41	54.2	14.8		
August	9 26	6	22	136 58 57	26 51 32	57.8	15.7		
	19 26		16	146 50 20	158 37 22	58.8	16.0		
	29 45	12	10	156 41 44	290 23 1	51.5	14.9		
Sep.	8 27	4	4	166 33 7	62 9 3	58.9	16.0		
	18 23	15 21	59	176 24 31	193 54 53	56.8	15.5		
	28 39	18	56	186 15 54	325 40 43	55.5	15.1		
Oct.	8 55	20	53	196 7 17	97 26 33	59.5	16.2		
	18 28	8	49	205 58 40	229 12 23	55.1	15.0		
	28 18	26	50	215 50 4	0 58 14	57.0	15.5		
Nov.	7 28	30	51	225 41 27	132 44 4	58.6	15.9		
	17 33	34	52	235 32 50	264 29 54	54.2	14.8		
	27 36	38	54	245 24 14	36 15 45	58.8	16.0		
Dec.	7 35	42	58	255 15 37	168 1 35	57.6	5.7		
	17 R 32	45 22	3	265 7 0	299 47 25	53.9	14.7		
	27 26	49	9	274 58 24	71 33 15	60.3	16.4		
	31 23	50	11	278 54 57	124 15 36	61.7	16.8		

Ending Moments of Tithis for each date in 1955
(calculated in I. S. T.).

29

Date.	January.		February.		March.		April.		May.		June.	
	Ti.	Time.	Ti.	Time.	Ti.	Time.	Ti.	Time.	Ti.	Time.	Ti.	Time.
1	7	H. M. 14 52	9	H. M. 19 27	7	H. M. 7 12	9	H. M. 11 39	10	H. M. 20 58	11	H. M. 10 24
2	8	13 4	10	17 15	8	5 15	10	10 49	11	21 30	12	12 22
3	9	11 2	11	15 0	9	3 27	11	10 16	12	22 29	13	14 37
4	10	8 34	12	12 47	10	1 48	12	10 10	13	23 54	14	17 7
5	11	5 49	13	10 42	11	0 20	13	10 25	14	..	15	19 38
6	12	2 54	14	8 50	12	23 7	14	11 4	14	1 39	16	22 10
7	13	23 56	15	7 17	14	21 30	15	12 9	15	3 46	17	..
8	14	21 1	16	6 8	15	21 15	16	13 38	16	6 8	17	0 30
9	15	18 17	17	5 30	16	21 29	17	15 34	17	8 39	18	2 38
10	16	15 53	18	5 31	17	22 15	18	17 49	18	11 16	19	4 23
11	17	13 57	19	6 12	18	23 33	19	20 22	19	13 45	20	5 39
12	18	12 37	20	7 32	19	..	20	23 0	20	15 57	21	6 19
13	19	11 58	21	9 28	19	1 23	21	..	21	17 44	22	6 18
14	20	12 8	22	11 53	20	3 42	21	1 29	22	18 50	23	5 36
15	21	13 4	23	14 29	21	6 14	22	3 36	23	19 13	24	4 13
16	22	14 41	24	17 3	22	8 51	23	5 8	24	18 48	25	2 9
17	23	16 53	25	19 19	23	11 16	24	5 55	25	17 34	26	23 31
18	24	19 25	26	21 5	24	13 12	25	5 52	26	15 34	27	20 26
19	25	22 3	27	22 10	25	14 25	26	4 56	27	12 57	28	17 2
20	26	0 37	28	22 33	26	14 52	27	3 12	28	9 45	30	9 42
21	27	2 52	29	22 15	27	14 29	28	0 47	29	6 13	1	6 10
22	28	4 38	30	21 21	28	13 23	29	21 52	30	2 29	2	2 53
23	29	5 54	1	19 56	29	11 34	1	15 6	2	19 7	3	0 2
24	30	6 35	2	18 7	30	9 11	2	11 35	3	15 48	4	21 43
25	1	6 44	3	16 1	1	6 27	3	8 11	4	12 51	5	19 12
26	2	6 23	4	13 47	2	3 33	4	5 35	5	10 32	6	9 3
27	3	5 36	5	11 31	3	1 23	5	2 25	6	8 50	7	19 43
28	4	4 29	6	9 18	4	21 43	6	0 14	7	7 50	8	21 4
29	5	3 4			5	19 1	7	22 37	8	7 32	9	22 59
30	6	1 24			6	16 38	8	21 30	9	7 53	10	..
31	7	23 33			7	14 36	9	20 57				
	8	21 34			8	12 55			10	8 54		

Binding Moments of Tithis for each date in 1955 (calculated in I. S. T.)—(concl'd.)

Date:	July.			August.			September.			October.			November.			December.		
	Ti.	Time.		Ti.	Time.		Ti.	Time.		Ti.	Time.		Ti.	Time.		Ti.	Time.	
1	11	H. M.	1 17	13	H. M.	22 7	14	H. M.	13 41	14	H. M.	2 21	16	H. M.	8 32	17	H. M.	15 9
2	12	3	47	14	23	45	15	13	27	15	0	45	17	5	24	18	11	4
3	13	6	19	15	..	..	16	12	45	17	20	26	18	2	18	19	8	39
4	14	8	45	15	0	57	17	11	37	18	17	58	20	20	38	20	6	4
5	15	10	59	16	1	38	18	10	8	19	15	28	21	18	15	21	4	2
6	16	12	53	17	1	50	19	8	25	20	13	1	22	16	16	22	2	37
7	17	14	22	18	1	35	20	6	32	21	10	42	23	14	46	23	1	54
8	18	15	25	19	0	57	21	4	33	22	8	34	24	13	44	24	1	52
9	19	16	0	20	23	56	22	2	32	23	6	39	25	13	14	25	2	29
10	20	16	4	22	20	58	23	0	28	24	4	57	26	13	9	26	3	42
11	21	15	37	23	19	2	25	20	16	25	3	29	27	13	33	27	5	25
12	22	14	40	24	16	50	26	18	14	26	2	19	28	14	27	28	7	34
13	23	13	12	25	14	26	27	16	15	27	1	25	29	15	47	29	9	59
14	24	11	12	26	11	46	28	14	28	28	0	52	30	17	34	30	12	38
15	25	8	46	27	9	8	29	12	57	30	..	..	1	19	43	1	15	23
16	26	5	57	28	6	26	30	11	49	30	1	7	2	22	10	2	18	4
17	27	2	52	29	3	52	1	11	11	1	1	59	3	..	..	3	20	38
18	28	23	36	30	1	32	2	11	10	2	3	22	3	0	51	4	22	58
19	30	17	8	2	22	8	3	11	46	3	5	18	4	3	36	5	..	..
20	1	14	9	3	21	29	4	13	5	4	7	40	5	6	14	5	0	52
21	2	11	33	4	21	12	5	14	56	5	10	18	6	8	31	6	2	15
22	3	9	33	5	21	52	6	17	19	6	13	0	7	10	21	7	2	59
23	4	8	13	6	23	16	7	19	53	7	15	27	8	11	25	8	3	0
24	5	7	37	7	..	..	8	22	25	8	17	29	9	11	44	9	2	15
25	6	7	49	7	1	15	9	..	..	9	18	52	10	11	9	10	0	44
26	7	8	47	8	3	39	9	0	49	10	19	29	11	9	45	11	22	33
27	8	10	26	9	6	11	10	2	25	11	19	17	12	7	38	12	18	56
28	9	12	35	10	8	36	11	3	29	12	18	17	13	4	56	13	16	34
29	10	15	6	11	10	44	12	3	49	13	16	36	14	1	47	14	13	1
30	11	17	38	12	12	21	13	3	24	14	14	18	15	22	19	15	9	15
31	12	20	3	13	13	19	..	..	..	15	11	35	..	..	..	16	5	30

Time when the Moon enters the Zodiacal signs in 1955. 31

January.			February.			March.			April.			May.			June.		
Sign.	Date.	Time.	Sign.	Date.	Time.	Sign.	Date.	Time.	Sign.	Date.	Time.	Sign.	Date.	Time.	Sign.	Date.	Time.
		H. M.			H. M.			H. M.			H. M.			H. M.			H. M.
♈	1	7 23	♉	1	19 32	♊	1	0 55	♋	1	13 53	♌	1	1 32	♍	2	2 26
♈	3	10 54	♉	3	22 7	♊	3	4 12	♋	3	20 4	♌	3	9 56	♍	4	14 55
♈	5	12 34	♉	5	8 1	♊	5	8 20	♋	5	4 8	♌	5	20 35	♍	7	3 50
♈	7	13 30	♉	7	13 40	♊	7	13 40	♋	7	13 40	♌	7	8 5	♍	9	15 58
♈	9	15 14	♉	9	15 14	♊	9	20 53	♋	9	20 53	♌	9	21 48	♍	12	1 58
♈	11	19 17	♉	11	22 12	♊	11	22 12	♋	11	22 12	♌	11	9 59	♍	14	8 52
♈	14	2 49	♉	14	15 10	♊	14	18 44	♋	14	18 44	♌	14	15 4	♍	16	12 20
♈	16	13 45	♉	16	17 23	♊	16	17 23	♋	16	17 23	♌	16	1 38	♍	18	13 7
♈	19	2 30	♉	19	20 9	♊	19	18 13	♋	19	18 13	♌	19	20 14	♍	20	12 46
♈	21	14 38	♉	21	22 15	♊	21	22 15	♋	21	22 15	♌	21	22 27	♍	22	13 7
♈	24	0 25	♉	24	19 15	♊	24	4 36	♋	24	4 36	♌	24	2 6	♍	24	15 59
♈	26	7 39	♉	26	22 16	♊	26	6 2	♋	26	6 2	♌	26	3 28	♍	26	22 31
♈	28	20 6	♉	28	26 16	♊	28	7 13	♋	28	7 13	♌	28	7 50	♍	29	8 37
♈	30	16 35	♉	30	9 37	♊	30	9 37	♋	30	9 37	♌	30	15 40	♍	30	15 40
July.			August.			September.			October.			November.			December.		
♈	1	21 5	♉	3	4 19	♊	1	20 49	♋	1	19 10	♌	2	0 53	♍	1	11 17
♈	4	9 59	♉	5	13 33	♊	4	2 52	♋	4	2 52	♌	4	1 44	♍	3	11 38
♈	6	21 47	♉	7	20 27	♊	6	7 6	♋	6	7 6	♌	6	3 53	♍	5	14 21
♈	9	7 38	♉	10	1 31	♊	9	10 28	♋	9	10 28	♌	8	8 8	♍	7	20 22
♈	11	15 1	♉	12	5 2	♊	10	13 32	♋	10	13 32	♌	10	14 47	♍	10	5 31
♈	13	19 47	♉	14	7 19	♊	12	16 33	♋	12	16 33	♌	12	23 44	♍	12	17 5
♈	15	22 11	♉	16	9 4	♊	14	20 5	♋	14	20 5	♌	15	10 48	♍	15	5 54
♈	17	23 0	♉	18	11 28	♊	17	1 9	♋	17	1 9	♌	17	23 30	♍	17	18 49
♈	19	23 36	♉	20	16 6	♊	19	8 51	♋	19	8 51	♌	19	3 39	♍	20	6 31
♈	22	1 42	♉	23	0 12	♊	21	19 43	♋	21	19 43	♌	21	16 23	♍	22	14 57
♈	24	6 50	♉	25	11 34	♊	24	8 31	♋	24	8 31	♌	24	8 0	♍	25	7 13
♈	26	15 51	♉	28	0 25	♊	26	20 34	♋	26	20 34	♌	26	15 5	♍	27	10 56
♈	29	3 55	♉	30	12 6	♊	29	5 38	♋	29	5 38	♌	29	11 41	♍	28	22 47
♈	31	16 48	♉	..	..	♊	..	..	♋	30	23 56	♌	30	23 56	♍	30	22 9

Date.	Aspect	Time.	Distance.	Date.	Aspect	Time.	Distance.	Date.	Aspect	Time.	Distance.
January.				March.				May.			
3	D	H. M. °		4	D	15 1 2	1	1	H. M. °		
4	D	7 35 6	6	5	D	21 3 2	21	5	7 59 6	5	48
5	D	17 55 5	43	6	D	8 57 2	9	7	13 26 3	39	
7	D	11 11 6	57	8	D	16 28 3	19	8	3 46 3	28	
8	D	12 0 0	9	9	D	21 15 4	27	8	15 55 0	1	
9	D	16 53 1	41	10	D	2 34 3	8	9	12 0 2	25	
11	D	18 17 1	13	11	D	0 36 4	26	11	8 34 0	9	
12	D	18 35 1	33	12	D	22 45 2	12	12	22 47 3	1	
13	D	8 11 2	17	13	D	18 44 6	11	13	23 10 3	2	
14	D	8 27 2	27	14	D	11 24 6	5	14	13 58 0	3	
15	D	10 18 4	3	15	D	9 10 4	34	15	20 15 5	47	
16	D	0 53 3	39	16	D	1 54 5	44	16	3 18 5	34	
17	D	1 13 0	24	17	D	14 51 2	27	17	5 50 5	26	
18	D	10 8 6	6	18	D	15 45 5	23	18	2 29 2	5	
19	D	19 14 0	33	19	D	8 44 2	59	19	16 7 1	54	
20	D	5 34 5	43	20	D	20 39 2	21	20	23 42 1	24	
21	D	3 26 5	43	21	D			21	18 47 3	15	
22	D	12 56 2	4	22	D			22			
23	D	15 42 2	24	23	D			23			
24	D	6 35 2	28	24	D			24			
25	D	18 40 4	12	25	D			25			
26	D	5 57 4	49	26	D			26			
27	D	13 34 6	3	27	D			27			
February.				April.				June.			
1	D	3 26 5	35	1	D	2 36 2	39	1	D	5 56 3	49
3	D	17 32 3	45	3	D	5 59 9	46	3	D	4 50 0	58
5	D	11 48 1	59	5	D	1 20 1	18	5	D	10 46 5	36
7	D	16 11 2	21	7	D	12 0 4	26	7	D	14 22 4	30
8	D	7 17 3	24	8	D	8 33 5	45	8	D	19 38 0	59
12	D	2 4 1	12	12	D	5 49 5	20	12	D	0 52 0	12
13	D	1 56 3	59	13	D	2 2 1	31	13	D	20 15 2	16
14	D	15 11 3	43	14	D	9 38 2	31	14	D	7 8 3	24
15	D	18 35 5	57	15	D	14 30 2	43	15	D	14 50 3	24
16	D	16 21 5	35	16	D	21 27 1	35	16	D	4 49 5	51
17	D	2 43 1	9	17	D	5 36 1	2	17	D	12 0 3	32
18	D	15 48 2	0	18	D	10 30 0	51	18	D	13 26 5	36
19	D	22 14 2	24	19	D	17 9 4	24	19	D	23 32 2	32
20	D	13 23 0	27	20	D	18 35 3	51	20	D	0 45 4	17
21	D	21 21 4	7	21	D	9 53 0	26	21	D	9 47 0	1
22	D	22 36 1	54	22	D	22 22 5	17	22	D	16 15 3	55
23	D	19 14 2	13	23	D	7 9 3	35	23	D	6 53 3	11
24	D	18 58 5	50	24	D	6 47 4	4	24	D	23 30 5	51
25	D	22 34 3	48	25	D	9 5 3	34	25	D	3 31 3	50
26	D	21 28 2	2	26	D			26	D	14 13 5	35
27	D	9 57 5	31	27	D			27	D		
28	D			28	D			28	D		

Date.	Aspect	Time.	Distance.	Date.	Aspect	Time.	Distance.	Date.	Aspect	Time.	Distance.
July.				September.				November.			
3	D	H. M. °		1	D	12 0 1	18	1	D	15 27 1	56
5	D	23 27 0	24	2	D	3 8 5	28	6	D	4 28 3	40
6	D	10 59 1	25	3	D	13 27 4	31	7	D	13 37 0	16
7	D	8 26 2	54	4	D	14 1 5	49	8	D	6 26 5	24
13	D	16 5 3	12	5	D	9 40 3	53	12	D	2 22 4	56
14	D	3 32 0	35	6	D	0 53 5	23	13	D	21 24 5	9
18	D	7 28 3	46	7	D	11 18 4	52	14	D	15 23 4	26
19	D	12 52 6	0	8	D	18 14 3	41	16	D	17 34 2	8
20	D	20 23 5	25	9	D	2 29 4	43	17	D	21 53 3	52
21	D	9 16 0	5	10	D	6 44 3	29	18	D	12 23 0	13
25	D	19 55 1	56	11	D	11 49 1	16	19	D	4 0 1	57
26	D	8 2 4	19	12	D	19 53 1	0	20	D	17 10 4	15
27	D	20 7 3	19	13	D	2 45 0	59	21	D	0 31 5	35
30	D	12 20 3	49	14	D	16 6 1	32	22	D	8 49 4	27
31	D	18 13 0	30	15	D	23 34 3	50	23	D	9 41 5	13
August.				16	D	5 2 4	45	24	D	4 52 0	47
3	D	H. M. °		17	D	19 53 1	0	25	D	17 28 0	43
4	D	16 34 4	20	18	D	2 45 0	59	26	D	4 1 3	44
5	D	23 27 0	24	19	D	16 6 1	32	27	D	8 49 4	27
6	D	10 59 1	25	20	D	23 34 3	50	28	D	9 41 5	13
7	D	8 26 2	54	21	D	5 2 4	45	29	D	4 52 0	47
13	D	16 5 3	12	22	D	19 53 1	0		D	17 28 0	43
14	D	3 32 0	35	23	D	2 45 0	59		D	4 1 3	44
18	D	7 28 3	46	24	D	16 6 1	32		D	8 49 4	27
19	D	12 52 6	0	25	D	23 34 3	50		D	9 41 5	13
20	D	20 23 5	25	26	D	5 2 4	45		D	4 52 0	47
21	D	9 16 0	5	27	D	19 53 1	0		D	17 28 0	43
25	D	19 55 1	56	28	D	2 45 0	59		D	4 1 3	44
26	D	8 2 4	19	29	D	16 6 1	32		D	8 49 4	27
27	D	20 7 3	19	30	D	23 34 3	50		D	9 41 5	13
30	D	12 20 3	49		D	5 2 4	45		D	4 52 0	47
31	D	18 13 0	30		D	19 53 1	0		D	17 28 0	43
October.				December.							
3	D	H. M. °		2	D	0 45 4	22	1	D	13 39 2	33
4	D	8 14 3	49	3	D	7 53 3	34	3	D	15 4 4	16
5	D	20 6 5	1	4	D	9 48 5	19	4	D	20 0 0	53
6	D	0 57 3	37	5	D	11 48 0	16	10	D	4 48 5	11
7	D	1 33 3	49	6	D	21 57 4	17	12	D	20 13 3	51
8	D	9 36 4	55	7	D	7 4 4	45	14	D	10 35 3	42
9	D	10 55 0	29	8	D	7 32 3	32	15	D	12 38 0	25
11	D	8 7 1	8	9	D	7 20 0	48	16	D	1 19 2	52
12	D	22 23 1	23	10	D	17 55 5	3	18	D	0 3 2	31
13	D	5 32 3	32	11	D	2 10 0	58	19	D	22 11 4	16
14	D	7 5 3	9	12	D	9 32 3	57	20	D	21 0 5	10
15	D	17 55 5	3	13	D	17 49 3	24	21	D	2 22 3	0
16	D	1 39 4	1	14	D	7 3 53	26	22	D	9 15 1	50
17	D	7 20 0	48	15	D	12 38 5	14	23	D	0 5 4	17
18	D	17 55 5	3	16	D	2 9 3	53	24	D	11 56 5	41
19	D	1 39 4	1	17	D	9 30 10	30	25	D		
22	D	0 56 5	46	18	D	8 27 4	13	26	D		
	D	16 29 5	32	19	D	9 6 1	34	27	D		
	D			20	D	9 32 4	4	28	D		
	D			21	D			29	D		
	D			22	D			30	D		
	D			23	D			31	D		
	D			24	D				D		
	D			25	D				D		
	D			26	D				D		
	D			27	D				D		
	D			28	D				D		
	D			29	D				D		
	D			30	D				D		
	D			31	D				D		

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
January.											
1	☿ ♀ ☽	20 20	15	♂ ♀ ♃	17 20	5	♂ ♀ ♃	6 16	18	♂ ♀ ♃	0 37
2	☿ ♀ ☽	8 23	17	♂ ♀ ♃	19 44	6	♂ ♀ ♃	7 7	19	♂ ♀ ♃	12 50
4	☿ ♀ ☽	7 6	18	♂ ♀ ♃	15 17	7	♂ ♀ ♃	1 9	20	♂ ♀ ♃	6 9
5	☿ ♀ ☽	16 0	20	♂ ♀ ♃	16 0	9	♂ ♀ ♃	16 0	24	♂ ♀ ♃	22 22
7	☿ ♀ ☽	22 17	21	♂ ♀ ♃	19 14	10	♂ ♀ ♃	18 6	25	♂ ♀ ♃	10 53
8	☿ ♀ ☽	16 53	23	♂ ♀ ♃	22 36	11	♂ ♀ ♃	19 33	28	♂ ♀ ♃	14 11
9	☿ ♀ ☽	18 35	24	♂ ♀ ♃	19 14	14	♂ ♀ ♃	14 57	June.		
10	☿ ♀ ☽	19 28	25	♂ ♀ ♃	3 3	16	♂ ♀ ♃	2 43			
12	☿ ♀ ☽	21 29	27	♂ ♀ ♃	21 28	17	♂ ♀ ♃	16 44			
16	☿ ♀ ☽	1 13	28	♂ ♀ ♃	15 6	18	♂ ♀ ♃	21 27	May.		
17	☿ ♀ ☽	9 25	March.			19	♂ ♀ ♃	22 21			
18	☿ ♀ ☽	7 7				20	♂ ♀ ♃	8 16			
21	☿ ♀ ☽	0 25				21	♂ ♀ ♃	6 20			
22	☿ ♀ ☽	17 16	3	☿ ♀ ☽	7 12	22	♂ ♀ ♃	11 10	1	♂ ♀ ♃	0 38
23	☿ ♀ ☽	0 58	4	☿ ♀ ☽	12 24	23	♂ ♀ ♃	9 53	3	♂ ♀ ♃	7 22
25	☿ ♀ ☽	7 43	10	☿ ♀ ☽	2 4	24	♂ ♀ ♃	7 42	4	♂ ♀ ♃	22 0
26	☿ ♀ ☽	18 27	11	☿ ♀ ☽	7 32	27	♂ ♀ ♃	11 10	5	♂ ♀ ♃	17 17
31	☿ ♀ ☽	2 51	12	☿ ♀ ☽	15 33	28	♂ ♀ ♃	15 15	6	♂ ♀ ♃	5 20
February.											
1	☿ ♀ ☽	14 41	14	☿ ♀ ☽	8 17	10	♂ ♀ ♃	15 26	13	♂ ♀ ♃	1 20
3	☿ ♀ ☽	9 11	15	☿ ♀ ☽	6 58	11	♂ ♀ ♃	8 34	14	♂ ♀ ♃	11 31
4	☿ ♀ ☽	15 16	16	☿ ♀ ☽	14 28	12	♂ ♀ ♃	2 24	15	♂ ♀ ♃	10 21
5	☿ ♀ ☽	20 19	17	☿ ♀ ☽	12 40	13	♂ ♀ ♃	3 49	16	♂ ♀ ♃	9 9
8	☿ ♀ ☽	0 53	18	☿ ♀ ☽	17 20	14	♂ ♀ ♃	6 38	17	♂ ♀ ♃	12 39
10	☿ ♀ ☽	14 54	19	☿ ♀ ☽	2 40	15	♂ ♀ ♃	14 37	18	♂ ♀ ♃	13 16
11	☿ ♀ ☽	9 8	20	☿ ♀ ☽	12 33	16	♂ ♀ ♃	4 27	19	♂ ♀ ♃	13 18
12	☿ ♀ ☽	21 36	21	☿ ♀ ☽	17 20	17	♂ ♀ ♃	8 9	20	♂ ♀ ♃	12 32
13	☿ ♀ ☽	10 33	22	☿ ♀ ☽	8 17	18	♂ ♀ ♃	1 20	21	♂ ♀ ♃	11 39
14	☿ ♀ ☽	20 24	23	☿ ♀ ☽	6 58	19	♂ ♀ ♃	6 38	22	♂ ♀ ♃	10 43
15	☿ ♀ ☽	5 9	24	☿ ♀ ☽	14 28	20	♂ ♀ ♃	14 37	23	♂ ♀ ♃	9 52
16	☿ ♀ ☽	10 0	25	☿ ♀ ☽	12 40	21	♂ ♀ ♃	2 24	24	♂ ♀ ♃	8 4
17	☿ ♀ ☽	11 1	26	☿ ♀ ☽	17 20	22	♂ ♀ ♃	3 49	25	♂ ♀ ♃	7 26
18	☿ ♀ ☽	11 1	27	☿ ♀ ☽	8 17	23	♂ ♀ ♃	6 38	26	♂ ♀ ♃	6 35
19	☿ ♀ ☽	11 1	28	☿ ♀ ☽	6 58	24	♂ ♀ ♃	14 37	27	♂ ♀ ♃	5 47
20	☿ ♀ ☽	11 1	29	☿ ♀ ☽	14 28	25	♂ ♀ ♃	2 24	28	♂ ♀ ♃	4 3
21	☿ ♀ ☽	11 1	30	☿ ♀ ☽	12 40	26	♂ ♀ ♃	6 38	29	♂ ♀ ♃	3 26
22	☿ ♀ ☽	11 1	31	☿ ♀ ☽	8 17	27	♂ ♀ ♃	14 37	30	♂ ♀ ♃	2 39
23	☿ ♀ ☽	11 1		☿ ♀ ☽	6 58	28	♂ ♀ ♃	2 24			
24	☿ ♀ ☽	11 1		☿ ♀ ☽	14 28	29	♂ ♀ ♃	6 38			
25	☿ ♀ ☽	11 1		☿ ♀ ☽	12 40	30	♂ ♀ ♃	14 37			
26	☿ ♀ ☽	11 1		☿ ♀ ☽	8 17						
27	☿ ♀ ☽	11 1		☿ ♀ ☽	6 58						
28	☿ ♀ ☽	11 1		☿ ♀ ☽	14 28						
29	☿ ♀ ☽	11 1		☿ ♀ ☽	12 40						
30	☿ ♀ ☽	11 1		☿ ♀ ☽	8 17						
31	☿ ♀ ☽	11 1		☿ ♀ ☽	6 58						

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
September.											
9	☿ ♀ ☽	17 48	20	♂ ♀ ♃	22 34	1	☿ ♀ ☽	12 0	11	☿ ♀ ☽	12 0
11	☿ ♀ ☽	15 52	22	♂ ♀ ♃	18 45	2	☿ ♀ ☽	1 9	13	☿ ♀ ☽	1 9
13	☿ ♀ ☽	13 31	23	♂ ♀ ♃	20 52	3	☿ ♀ ☽	11 43	15	☿ ♀ ☽	11 43
15	☿ ♀ ☽	10 40	26	♂ ♀ ♃	17 12	4	☿ ♀ ☽	3 47	17	☿ ♀ ☽	3 47
19	☿ ♀ ☽	22 26	30	♂ ♀ ♃	16 18	5	☿ ♀ ☽	21 52	20	♂ ♀ ♃	21 52
20	☿ ♀ ☽	2 3	November.			6	☿ ♀ ☽	20 22	21	♂ ♀ ♃	20 22
21	☿ ♀ ☽	18 13				7	☿ ♀ ☽	17 0	22	♂ ♀ ♃	17 0
23	☿ ♀ ☽	3 56				8	☿ ♀ ☽	7 33	23	♂ ♀ ♃	7 33
25	☿ ♀ ☽	12 55	9	☿ ♀ ☽	12 26	9	☿ ♀ ☽	12 26	24	♂ ♀ ♃	12 26
28	☿ ♀ ☽	19 28	10	☿ ♀ ☽	8 53	10	☿ ♀ ☽	9 17	25	☿ ♀ ☽	8 53
29	☿ ♀ ☽	3 8	13	☿ ♀ ☽	8 21	13	☿ ♀ ☽	8 21	26	☿ ♀ ☽	8 21
30	☿ ♀ ☽	5 27	14	☿ ♀ ☽	17 48	14	☿ ♀ ☽	17 48	27	☿ ♀ ☽	17 48
31	☿ ♀ ☽	13 22	16	☿ ♀ ☽	12 20	16	☿ ♀ ☽	12 20	28	☿ ♀ ☽	12 20
August.											
3	☿ ♀ ☽	14 40	18	☿ ♀ ☽	3 0	18	☿ ♀ ☽	3 0	29	☿ ♀ ☽	3 0
4	☿ ♀ ☽	10 55	19	☿ ♀ ☽	5 20	19	☿ ♀ ☽	5 20	30	☿ ♀ ☽	5 20
5	☿ ♀ ☽	8 7	20	☿ ♀ ☽	13 41	20	☿ ♀ ☽	13 41			
7	☿ ♀ ☽	1 5	21	☿ ♀ ☽	17 37	21	☿ ♀ ☽	17 37			
8	☿ ♀ ☽	8 38	22	☿ ♀ ☽	18 0	22	☿ ♀ ☽	18 0			
12	☿ ♀ ☽	12 52	23	☿ ♀ ☽	13 41	23	☿ ♀ ☽	13 41			
13	☿ ♀ ☽	13 41	24	☿ ♀ ☽	17 37	24	☿ ♀ ☽	17 37			
14	☿ ♀ ☽	21 52	25	☿ ♀ ☽	18 0	25	☿ ♀ ☽	18 0			
17	☿ ♀ ☽	7 12	26	☿ ♀ ☽	5 2	26	☿ ♀ ☽	5 2			
19	☿ ♀ ☽	22 52	27	☿ ♀ ☽	5 40	27	☿ ♀ ☽	5 40			
20	☿ ♀ ☽	20 9	October.								
21	☿ ♀ ☽	8 13									
22	☿ ♀ ☽	19 0									
23	☿ ♀ ☽	3 40	2	☿ ♀ ☽	14 30	2	☿ ♀ ☽	14 30			
24	☿ ♀ ☽	11 30	3	☿ ♀ ☽	17 9	3	☿ ♀ ☽	17 9			
26	☿ ♀ ☽	21 36	4	☿ ♀ ☽	6 47	4	☿ ♀ ☽	6 47			
27	☿ ♀ ☽	1 31	5	☿ ♀ ☽	7 4	5	☿ ♀ ☽	7 4			
30	☿ ♀ ☽	4 21	6	☿ ♀ ☽	21 53	6	☿ ♀ ☽	21 53			
December.											
1	☿ ♀ ☽	4 40	11	☿ ♀ ☽	7 20	11	☿ ♀ ☽	7 20	21	☿ ♀ ☽	7 20
2	☿ ♀ ☽	13 22	12	☿ ♀ ☽	18 29	12	☿ ♀ ☽	18 29	22	☿ ♀ ☽	18 29
4	☿ ♀ ☽	13 12	14	☿ ♀ ☽	0 0	14	☿ ♀ ☽	0 0	23	☿ ♀ ☽	0 0
6	☿ ♀ ☽	15 39	17	☿ ♀ ☽	0 38	17	☿ ♀ ☽	0 38	24	☿ ♀ ☽	0 38

36 Heliacal Risings and Settings of the Planets in 1955

(For the latitude 23°11' N)

Mercury

Rises.

16th January, in West.
19th February, in East.
4th May, in West.
27th June, in East.
25th August, in West.
20th October, in East.
24th December, in West.

Sets.

6th February, in West.
30th March, in East.
7th June, in West.
26th July, in East.
1st October, in West.
14th November, in East.

Venus

16th October, in West.

1st August, in East.

Jupiter

18th August, in East.

18th July, in West.

Mars

5th October, in East.

25th June in West.

Saturn

2nd December, in East.

29th October, in West.

Moonrise

25th January.
24th February.
25th March.
23rd April.
23rd May.
21st June.
20th July.
19th August.
17th September.
17th October.
16th November.
15th December.

37

Elements of the Planetary orbits for 12 O'clock noon (I. S. T.) on 1st January 1955

Planet.	Mean Long.	Mean Daily Motion.	Per. of Revolution (Sid.)	Long. of Asc. Node.	Long. of Perihelion or Perigee.	Eccentricity.	Mean Distance from Sun.	Inclination of the Orbit.
Mercury	309 0 11	4 5 32	87.9693	48 27 52	76 45 18	0.205625	0.3870984	7 0 14
Venus	128 22 1	1 36 8	224 701	76 16 29	130 56 16	0.006789	0.7233302	3 23 29
Earth	100 8 25	0 59 8	365.256	..	282 9 59	0.016729	1.0000000	..
Mars	21 40 51	0 31 26	(86.980	49 12 37	335 13 50	0.093356	1.523678	1 51 0
Jupiter	108 1 2	0 4 59	4332.59	99 59 57	13 36 23	0.048417	5.202561	1 18 21
Saturn	219 29 44	0 2 0	10759.2	113 16 14	92 10 31	0.055720	9.554747	2 29 26
Uranus	120 37 21	0 0 42	30688.5	73 35 5	172 21 54	0.046331	19.21824	0 46 22
Neptune	205 23 43	0 0 21.5	60181.3	131 17 9	47 30 39	0.00900	30.10957	1 46 28
Moon	8 3 5	13 10 35	27.3216	275 24 17	52 17 51	0.05490	..	5 8 13

Daily Motion of Moon's Node -0 3 10.62
.. .. Perigee +0 6 41.05.

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
January.											
		H. M.			H. M.			H. M.			H. M.
1	♈	0 56	10	♈	8 11	19	♈	8 9	29	♈	3 4
	♈	1 15		♈	8 27		♈	21 23		♈	5 57
	♈	1 49		♈	9 7		♈	23 45		♈	9 16
	♈	3 53		♈	10 18	20	♈	3 28		♈	9 25
	♈	13 20		♈	12 3		♈	5 11	30	♈	0 4
	♈	1 54		♈	20 2		♈	7 14		♈	3 39
	♈	3 22		♈	10 38		♈	8 47		♈	4 39
	♈	3 24		♈	0 9		♈	18 28		♈	8 12
	♈	10 24		♈	1 16	21	♈	3 10		♈	11 19
	♈	15 21		♈	11 13		♈	5 41		♈	12 52
	♈	19 30		♈	11 55		♈	7 0		♈	13 34
	♈	4 30		♈	12 41		♈	11 8	31	♈	7 22
	♈	4 56		♈	14 19		♈	15 30		♈	10 36
	♈	5 5		♈	15 58		♈	18 57		♈	12 10
	♈	6 30		♈	17 56		♈	23 49	February.		
	♈	7 35		♈	3 51		♈	0 18	1	♈	3 26
	♈	22 7		♈	6 9		♈	12 21		♈	7 21
	♈	8 34		♈	13 59		♈	19 52		♈	10 52
	♈	17 55		♈	14 54		♈	4 1		♈	11 8
	♈	19 14		♈	19 12		♈	5 29		♈	12 34
	♈	0 15		♈	22 7		♈	12 56		♈	14 56
	♈	6 6		♈	22 34		♈	15 42		♈	16 34
	♈	6 45		♈	12 9		♈	17 1		♈	18 6
	♈	6 32		♈	17 40		♈	2 6		♈	8 27
	♈	9 27		♈	18 47		♈	6 35		♈	12 22
	♈	7 7		♈	19 45		♈	12 39		♈	17 15
	♈	11 11		♈	23 20		♈	9 4		♈	17 35
	♈	22 56		♈	0 53		♈	13 47		♈	17 52
	♈	6 39		♈	11 14		♈	17 50		♈	6 15
	♈	6 51		♈	13 33		♈	40		♈	9 31
	♈	9 57		♈	16 37		♈	18 2		♈	13 34
	♈	15 13		♈	16 49		♈	20 4		♈	15 4
	♈	19 18		♈	21 1		♈	23 7		♈	17 32
	♈	2 28		♈	3 31		♈	1 40		♈	19 28
	♈	3 47		♈	3 45		♈	4 27		♈	20 27
	♈	7 4		♈	6 12		♈	18 3		♈	21 29
	♈	7 5		♈	10 8		♈	22 21		♈	7 38
	♈	7 40		♈	15 2		♈	22 46		♈	16 21
	♈	10 25		♈	9 20		♈	19 19		♈	22 43
	♈	15 1		♈	10 36		♈	19 44		♈	22 52
	♈	19 56		♈	23 45		♈	22 47		♈	9 5
	♈	8 14		♈	5 34		♈	1 3		♈	16 11
	♈	17 15		♈	15 27		♈	4 23		♈	17 45
	♈	18 17		♈	17 31		♈	5 17		♈	21 58
	♈	20 50		♈	18 45		♈	7 28		♈	23 48
	♈	7 51		♈	22 4		♈	9 43		♈	0 32
	♈			♈	22 53		♈	22 3		♈	11 44

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
March.											
		H. M.			H. M.			H. M.			H. M.
7	♈	4 38	17	♈	0 42	27	♈	9 22	7	♈	21 49
	♈	5 6		♈	5 11		♈	12 20		♈	2 43
	♈	7 17		♈	5 18		♈	14 20		♈	3 48
	♈	8 47		♈	10 4		♈	14 21		♈	9 51
	♈	12 57		♈	11 54		♈	18 58		♈	19 24
	♈	19 58		♈	14 3		♈	19 55		♈	22 45
	♈	21 44		♈	19 20		♈	22 34		♈	1 37
	♈	2 4		♈	19 22		♈	22 34		♈	5 46
	♈	2 7		♈	4 26		♈	22 57		♈	13 5
	♈	8 57		♈	11 4		♈	8 31		♈	21 15
	♈	9 19		♈	19 35		♈	9 57		♈	1 30
	♈	17 40		♈	2 43		♈	14 47		♈	2 11
	♈	22 40		♈	3 25		♈	16 22		♈	2 36
	♈	13 38		♈	7 52		♈	16 53		♈	4 18
	♈	17 25		♈	15 48		♈	21 31		♈	6 39
	♈	19 3		♈	16 9		♈			♈	9 21
	♈	20 50		♈	22 14		♈			♈	11 29
	♈	2 7		♈	0 8		♈			♈	16 50
	♈	5 0		♈	0 22		♈			♈	8 23
	♈	5 19		♈	5 28		♈			♈	8 55
	♈	8 43		♈	10 39		♈			♈	12 28
	♈	21 22		♈	13 23		♈			♈	15 47
	♈	22 18		♈	16 21		♈			♈	8 3
	♈	23 59		♈	23 3		♈			♈	10 47
	♈	7 33		♈	23 46		♈			♈	13 8
	♈	8 20		♈	5 20		♈			♈	16 10
	♈	1 56		♈	7 23		♈			♈	18 29
	♈	4 18		♈	10 21		♈			♈	20 45
	♈	7 32		♈	12 18		♈			♈	2 19
	♈	10 18		♈	21 21		♈			♈	18 53
	♈	11 25		♈	21 34		♈			♈	0 54
	♈	13 27		♈	1 33		♈			♈	2 34
	♈	18 27		♈	7 46		♈			♈	22 17
	♈	18 35		♈	14 7		♈			♈	0 36
	♈	14 11		♈	14 33		♈			♈	3 42
	♈	16 21		♈	17 9		♈			♈	6 5
	♈	17 4		♈	17 58		♈			♈	8 26
	♈	17 32		♈	3 27		♈			♈	9 26
	♈	22 27		♈	4 28		♈			♈	14 10
	♈	23 26		♈	9 38		♈			♈	4 39
	♈	1 11		♈	11 39		♈			♈	12 29
	♈	1 35		♈	16 18		♈			♈	18 55
	♈	6 54		♈	17 15		♈			♈	20 7
	♈	23 16		♈	4 21		♈			♈	20 34
	♈	5 44		♈	5 55		♈			♈	13 19
	♈	9 3		♈	13 5		♈			♈	11 5
	♈	11 53		♈	18 35		♈			♈	18 50
	♈	13 17		♈	6 9		♈			♈	21 9
	♈			♈	7 21		♈			♈	22 5

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
		H. M.			H. M.			H. M.			H. M.
17	☾ ♋	2 49	27	☾ ♋	14 5	☾ ♋	11 56	15	☾ ♋	2 31	
	☾ ♋	3 9		☾ ♋	2 21	☾ ♋	18 41		☾ ♋	4 4	3
	☾ ♋	5 20		☾ ♋	14 50	☾ ♋	22 17		☾ ♋	6 23	
	☾ ♋	5 36		☾ ♋	14 51	☾ ♋	5 59		☾ ♋	9 38	
18	☾ ♋	19 20		☾ ♋	15 45	☾ ♋	9 33		☾ ♋	13 55	
	☾ ♋	3 3		☾ ♋	16 25	☾ ♋	10 4		☾ ♋	14 30	
	☾ ♋	10 51		☾ ♋	20 42	☾ ♋	16 1		☾ ♋	16 28	
	☾ ♋	14 34		☾ ♋	22 25	☾ ♋	17 41		☾ ♋	20 49	
	☾ ♋	14 45		☾ ♋	2 7	☾ ♋	21 16		☾ ♋	9 34	
	☾ ♋	22 45		☾ ♋	2 58	☾ ♋	22 50		☾ ♋	11 4	
19	☾ ♋	0 46		☾ ♋	15 39	☾ ♋	1 20		☾ ♋	15 37	
	☾ ♋	6 9		☾ ♋	19 1	☾ ♋	13 53		☾ ♋	17 29	
	☾ ♋	8 19		☾ ♋	23 12	☾ ♋	20 20		☾ ♋	19 17	
	☾ ♋	13 42		☾ ♋	3 53	☾ ♋	22 16		☾ ♋	19 31	
	☾ ♋	14 25		☾ ♋	9 47	☾ ♋	12 9		☾ ♋	23 27	
20	☾ ♋	22 42		☾ ♋	17 32	☾ ♋	18 44		☾ ♋	0 39	
	☾ ♋	20 47		☾ ♋	18 33	☾ ♋	19 50		☾ ♋	5 13	
21	☾ ♋	7 8		☾ ♋	19 17	☾ ♋	1 42		☾ ♋	20 5	
	☾ ♋	8 7		☾ ♋	22 45	☾ ♋	3 20		☾ ♋	22 34	
	☾ ♋	10 25		☾ ♋	0 30	☾ ♋	4 32		☾ ♋	1 25	
	☾ ♋	13 57		☾ ♋	5 10	☾ ♋	8 33		☾ ♋	2 27	
	☾ ♋	18 44		☾ ♋	8 56	☾ ♋	10 29		☾ ♋	7 53	
	☾ ♋	20 51		☾ ♋	22 14	☾ ♋	21 9		☾ ♋	10 38	
22	☾ ♋	1 57		☾ ♋	19 3	☾ ♋	13 23		☾ ♋	20 46	
	☾ ♋	9 52		☾ ♋	1 15	☾ ♋	4 39		☾ ♋	0 48	
	☾ ♋	11 24		☾ ♋	2 10	☾ ♋	5 49		☾ ♋	4 24	
	☾ ♋	16 21		☾ ♋	13 15	☾ ♋	7 37		☾ ♋	5 22	
	☾ ♋	23 2		☾ ♋	19 14	☾ ♋	8 25		☾ ♋	7 50	
23	☾ ♋	6 49		☾ ♋	20 39	☾ ♋	13 21		☾ ♋	9 1	
	☾ ♋	11 43		☾ ♋		☾ ♋	14 56		☾ ♋	14 8	
	☾ ♋	13 7		☾ ♋		☾ ♋	20 15		☾ ♋	21 57	
	☾ ♋	14 32		☾ ♋		☾ ♋	2 2		☾ ♋	1 59	
	☾ ♋	17 57		☾ ♋		☾ ♋	10 18		☾ ♋	6 25	
24	☾ ♋	19 46		☾ ♋		☾ ♋	14 9		☾ ♋	2 50	
	☾ ♋	0 26		☾ ♋		☾ ♋	19 46		☾ ♋	3 41	
	☾ ♋	9 10		☾ ♋		☾ ♋	20 29		☾ ♋	5 58	
	☾ ♋	9 32		☾ ♋		☾ ♋	2 37		☾ ♋	6 51	
	☾ ♋	9 50		☾ ♋		☾ ♋	8 50		☾ ♋	10 45	
	☾ ♋	19 44		☾ ♋		☾ ♋	18 20		☾ ♋	11 23	
25	☾ ♋	20 44		☾ ♋		☾ ♋	20 54		☾ ♋	17 9	
	☾ ♋	11 22		☾ ♋		☾ ♋	23 0		☾ ♋	18 35	
	☾ ♋	13 40		☾ ♋		☾ ♋	2 18		☾ ♋	22 27	
	☾ ♋	14 48		☾ ♋		☾ ♋	3 50		☾ ♋	4 55	
	☾ ♋	19 38		☾ ♋		☾ ♋	9 0		☾ ♋	13 28	
	☾ ♋	20 41		☾ ♋		☾ ♋	18 31		☾ ♋	22 22	
	☾ ♋	21 22		☾ ♋		☾ ♋	0 32		☾ ♋	3 14	
26	☾ ♋	23 6		☾ ♋		☾ ♋	14 9		☾ ♋	6 2	
	☾ ♋	1 54		☾ ♋		☾ ♋	20 48		☾ ♋		

April.

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
		H. M.			H. M.			H. M.			H. M.
25	☾ ♋	6 51		☾ ♋	10 35		☾ ♋	20 56		☾ ♋	19 48
	☾ ♋	15 30		☾ ♋	21 53		☾ ♋	22 33		☾ ♋	20 0
	☾ ♋	21 10		☾ ♋	3 28		☾ ♋	4 21		☾ ♋	4 23
	☾ ♋	5 52		☾ ♋	10 8		☾ ♋	16 19		☾ ♋	5 6
	☾ ♋	7 9		☾ ♋	22 25		☾ ♋	3 57		☾ ♋	9 1
	☾ ♋	23 51		☾ ♋	4 1		☾ ♋	5 23		☾ ♋	16 7
26	☾ ♋	4 39		☾ ♋	5 33		☾ ♋	7 59		☾ ♋	17 2
	☾ ♋	6 33		☾ ♋	16 28		☾ ♋	11 7		☾ ♋	17 40
	☾ ♋	7 18		☾ ♋	21 22		☾ ♋	16 28		☾ ♋	20 7
	☾ ♋	11 3		☾ ♋	21 38		☾ ♋	7 38		☾ ♋	23 42
	☾ ♋	22 29		☾ ♋	8 55		☾ ♋	9 17		☾ ♋	4 59
27	☾ ♋	23 0		☾ ♋	9 17		☾ ♋	13 26		☾ ♋	5 25
	☾ ♋	8 12		☾ ♋	16 27		☾ ♋	23 49		☾ ♋	11 9
	☾ ♋	10 51		☾ ♋	2 44		☾ ♋	1 55		☾ ♋	17 15
	☾ ♋	10 54		☾ ♋	3 46		☾ ♋	3 46		☾ ♋	15 19
	☾ ♋	0 14		☾ ♋	7 34		☾ ♋	7 34		☾ ♋	7 34
	☾ ♋	2 33		☾ ♋	8 36		☾ ♋	8 36		☾ ♋	17 0
	☾ ♋	6 47		☾ ♋	20 18		☾ ♋	21 6		☾ ♋	18 47
	☾ ♋	9 5		☾ ♋	21 18		☾ ♋	21 18		☾ ♋	19 51
	☾ ♋	9 48		☾ ♋	1 24		☾ ♋	1 24		☾ ♋	20 37
	☾ ♋	13 43		☾ ♋	11 35		☾ ♋	15 55		☾ ♋	21 47
28	☾ ♋	13 54		☾ ♋	15 55		☾ ♋	3 4		☾ ♋	3 20
	☾ ♋	17 43		☾ ♋	3 35		☾ ♋	7 46		☾ ♋	10 32
	☾ ♋	0 47		☾ ♋	4 40		☾ ♋	21 4		☾ ♋	17 47
	☾ ♋	4 40		☾ ♋	10 17		☾ ♋	21 33		☾ ♋	22 41
	☾ ♋	12 22		☾ ♋	21 57		☾ ♋	21 57		☾ ♋	2 6
	☾ ♋	14 25		☾ ♋	0 1		☾ ♋	0 1		☾ ♋	6 20
	☾ ♋	15 6		☾ ♋	9 58		☾ ♋	9 58		☾ ♋	7 58
29	☾ ♋	19 9		☾ ♋	10 12		☾ ♋	10 12		☾ ♋	21 49
	☾ ♋			☾ ♋	10 12		☾ ♋	10 12		☾ ♋	22 48
	☾ ♋			☾ ♋	14 13		☾ ♋	14 13		☾ ♋	22 51
	☾ ♋			☾ ♋	3 20		☾ ♋	3 20		☾ ♋	0 28
	☾ ♋			☾ ♋	7 8		☾ ♋	7 8		☾ ♋	2 16
	☾ ♋			☾ ♋	15 11		☾ ♋	15 11		☾ ♋	10 21
	☾ ♋			☾ ♋	16 35		☾ ♋	16 35		☾ ♋	19 37
	☾ ♋			☾ ♋	9 24		☾ ♋	9 24		☾ ♋	2 8
	☾ ♋			☾ ♋	15 58		☾ ♋	15 58		☾ ♋	3 46
	☾ ♋			☾ ♋	16 12		☾ ♋	16 12		☾ ♋	4 36
	☾ ♋			☾ ♋	17 0		☾ ♋	17 0		☾ ♋	6 10
	☾ ♋			☾ ♋	22 37		☾ ♋	22 37		☾ ♋	14 0
30	☾ ♋	18 56		☾ ♋	22 47		☾ ♋	22 47		☾ ♋	5 3

May.

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
June.					H. M.			H. M.			H. M.
1	ψ	5 56		♂	17 47		♂	9 43		♂	19 6
	♂	15 21		♂	17 56		♂	13 1		♂	22 59
	♂	16 50		♂	20 2		♂	15 6		♂	14 13
	♂	16 52		♂	22 9		♂	3 24			
	♂	22 14	12	♂	21 31	21	♂	12 55			
	♂	23 25		♂	21 43		♂	16 15			
2	♂	6 7	13	♂	21 57		♂	23 21			
3	♂	10 46		♂	6 47	22	♂	4 37			
	♂	14 22		♂	18 2		♂	5 41			
	♂	19 50	14	♂	23 17		♂	5 45			
	♂	22 32		♂	0 56		♂	6 57			
4	♂	3 42		♂	1 11		♂	13 20			
	♂	5 21		♂	1 18		♂	16 15			
	♂	6 16		♂	9 15		♂	21 43			
	♂	11 34	15	♂	9 41	23	♂	8 53			
5	♂	11 56		♂	10 43		♂	14 10			
	♂	12 41		♂	1 44		♂	16 15			
	♂	18 31	16	♂	7 37		♂	20 16			
	♂	18 50		♂	7 43	24	♂	0 7			
	♂	19 38		♂	9 7		♂	7 59			
	♂	23 20	17	♂	2 9		♂	9 34			
6	♂	10 13		♂	3 10		♂	20 5			
	♂	16 44		♂	3 22		♂	20 36			
	♂	18 33		♂	4 49		♂	10 23			
	♂	19 7	18	♂	5 24	25	♂	12 11			
7	♂	0 52		♂	18 37		♂	12 11			
	♂	1 26		♂	3 7		♂	18 24			
	♂	5 35	17	♂	4 47		♂	18 40			
	♂	20 2		♂	12 7		♂	4 30			
	♂	20 25		♂	13 26		♂	12 50			
	♂	23 6	18	♂	2 36		♂	13 49			
8	♂	11 40		♂	4 36		♂	15 53			
	♂	13 38		♂	5 53		♂	22 20			
	♂	5 11		♂	6 41		♂	23 26			
	♂	5 29		♂	7 4		♂	23 20			
	♂	7 8	19	♂	13 21	27	♂	3 46			
	♂	7 21		♂	14 48		♂	7 17			
	♂	11 42		♂	23 32		♂	17 22			
	♂	14 50	20	♂	5 47		♂	2 54			
	♂	22 0		♂	6 41		♂	8 55			
	♂	22 31		♂	13 16		♂	13 11			
	♂	16 14		♂	14 16		♂	16 10			
	♂	22 53		♂	14 57		♂	22 37			
	♂	5 39		♂	0 45		♂	23 30			
	♂	15 45		♂	4 25	29	♂	1 58			
	♂	17 41		♂	5 35		♂	15 12			
	♂			♂	6 35		♂	17 53			

July.

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
		H. M.			H. M.			H. M.			H. M.
9	♂	23 3		♂	15 40		♂	11 54		♂	20 27
	♂	2 24		♂	19 23		♂	20 45		♂	5 38
	♂	4 40		♂	22 11		♂	18 2		♂	12 47
	♂	9 55	18	♂	5 49	28	♂	18 52	7	♂	13 24
	♂	10 23		♂	9 16		♂	18 58		♂	14 40
	♂	17 52		♂	10 50		♂	19 21		♂	18 44
10	♂	3 26		♂	15 53	29	♂	0 46		♂	19 9
	♂	6 38		♂	19 55		♂	15 6		♂	20 6
	♂	10 14		♂	22 25	30	♂	23 59		♂	23 29
	♂	10 53		♂	16 17		♂	0 27		♂	0 57
	♂	16 4	19	♂	16 32		♂	4 1	8	♂	11 23
	♂	22 6		♂	17 8		♂	4 3		♂	16 16
11	♂	6 23		♂	20 7		♂	7 2		♂	17 55
	♂	6 51		♂	8 45		♂	7 46		♂	22 54
	♂	9 59	20	♂	12 20		♂	9 35		♂	23 56
	♂	10 16		♂	16 19	31	♂	0 15	9	♂	4 56
	♂	14 12		♂	3 32		♂	7 0		♂	6 51
	♂	15 2		♂	1 31		♂	8 22		♂	18 7
	♂	23 9	21	♂	18 4		♂	12 10		♂	18 44
12	♂	1 40		♂	18 5		♂	13 55	10	♂	0 5
	♂	9 24		♂	20 52		♂	13 59		♂	21 4
	♂	16 54		♂	22 16		♂	16 4		♂	23 9
13	♂	2 1		♂	22 33		♂	21 26	11	♂	3 19
	♂	11 46		♂	13 42	August.					
	♂	12 52		♂	15 55	1	♂	9 10		♂	11 33
	♂	15 30		♂	19 57		♂	13 45		♂	19 23
	♂	19 46		♂	22 18		♂	14 37		♂	21 53
	♂	22 18		♂	0 24		♂	19 56		♂	22 33
14	♂	6 47		♂	2 48		♂	22 10	12	♂	3 51
	♂	8 34		♂	2 57		♂	19 48		♂	23 16
	♂	20 23		♂	10 7		♂	22 48	13	♂	2 54
	♂	23 43		♂	17 39		♂	22 20		♂	4 53
	♂	8 46		♂	19 2		♂	1 51		♂	5 14
	♂	12 7		♂	22 44		♂	8 14		♂	6 20
	♂	14 35		♂	22 52		♂	20 6		♂	14 26
	♂	18 17	24	♂	3 28		♂	0 57		♂	16 31
	♂	18 48		♂	5 58		♂	1 3	14	♂	0 22
	♂	2 55		♂	7 37		♂	3 42		♂	1 5
	♂	3 10		♂	22 40		♂	9 36		♂	4 20
	♂	9 31		♂	23 9		♂	5 26		♂	5 37
	♂	11 14	25	♂	2 41		♂	6 1		♂	6 20
	♂	15 0		♂	9 58		♂	11 28		♂	7 23
	♂	15 26		♂	19 36		♂	23 15		♂	8 16
	♂	18 59		♂	23 49		♂	9 22		♂	17 7
	♂	21 53		♂	7 14		♂	10 59		♂	18 36
	♂	4 30		♂	7 27		♂	13 48		♂	2 3
	♂	10 16		♂	12 30		♂	15 19		♂	5 39
	♂	13 16		♂	21 34		♂	15 21		♂	8 20
	♂	15 30	27	♂	10 13		♂	16 51		♂	10 15

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
		H. M.			H. M.			H. M.			H. M.
16	☉ ☽	11 29	20	☉ ☽	14 24	22	☉ ☽	15 06	24	☉ ☽	16 46
	☉ ☽	19 47		☉ ☽	18 12		☉ ☽	22 52		☉ ☽	23 46
	☉ ☽	20 37		☉ ☽	19 46		☉ ☽	0 38		☉ ☽	7 27
	☉ ☽	2 12		☉ ☽	19 59		☉ ☽	10 24		☉ ☽	14 59
	☉ ☽	8 16		☉ ☽	7 41		☉ ☽	0 53		☉ ☽	1 51
	☉ ☽	12 52		☉ ☽	16 39		☉ ☽	2 51		☉ ☽	5 12
	☉ ☽	8 18		☉ ☽	17 46		☉ ☽	8 16		☉ ☽	18 10
	☉ ☽	10 23		☉ ☽	0 48		☉ ☽	19 24		☉ ☽	6 32
	☉ ☽	18 11		☉ ☽	0 54		☉ ☽	11 18		☉ ☽	11 46
	☉ ☽	1 6		☉ ☽	1 55		☉ ☽	14 50		☉ ☽	4 25
	☉ ☽	4 33		☉ ☽	2 57		☉ ☽	5 26		☉ ☽	11 48
	☉ ☽	5 21		☉ ☽	6 2		☉ ☽	23 50		☉ ☽	6 3
	☉ ☽	10 50		☉ ☽	8 36		☉ ☽	9 52		☉ ☽	13 27
	☉ ☽	0 56		☉ ☽	8 11		☉ ☽	14 46		☉ ☽	17 43
	☉ ☽	6 22		☉ ☽	8 42		☉ ☽	7 37		☉ ☽	8 39
	☉ ☽	12 20		☉ ☽	9 35		☉ ☽	15 2		☉ ☽	16 23
	☉ ☽	12 53		☉ ☽	15 28		☉ ☽	20 37		☉ ☽	22 38
	☉ ☽	13 54		☉ ☽	17 9		☉ ☽	23 38		☉ ☽	2 52
	☉ ☽	3 5		☉ ☽	4 37		☉ ☽	16 23		☉ ☽	20 37
	☉ ☽	7 42		☉ ☽	4 40		☉ ☽	15 15		☉ ☽	10 51
	☉ ☽	8 50		☉ ☽	5 44		☉ ☽	22 38		☉ ☽	7 58
	☉ ☽	9 17		☉ ☽	12 44		☉ ☽	22 38		☉ ☽	10 43
	☉ ☽	9 35		☉ ☽	15 45		☉ ☽	11 1		☉ ☽	10 43
	☉ ☽	13 35		☉ ☽	23 59		☉ ☽	22 38		☉ ☽	14 13
	☉ ☽	15 42		☉ ☽	0 52		☉ ☽	15 1		☉ ☽	20 16
	☉ ☽	16 41		☉ ☽	13 36		☉ ☽	20 16		☉ ☽	22 38
	☉ ☽	12 21		☉ ☽	18 40		☉ ☽	22 38		☉ ☽	2 52
	☉ ☽	13 8		☉ ☽	20 35		☉ ☽	22 38		☉ ☽	20 37
	☉ ☽	14 38		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	15 7		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	19 29		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	20 25		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	16 13		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	16 29		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	17 31		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	18 10		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	21 52		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	23 28		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	0 2		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	6 22		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	6 34		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	9 29		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	3 42		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	4 47		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	8 37		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	10 6		☉ ☽			☉ ☽	22 38		☉ ☽	22 38
	☉ ☽	11 38		☉ ☽			☉ ☽	22 38		☉ ☽	22 38

September.

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
		H. M.			H. M.			H. M.			H. M.
24	☉ ☽	7 36	24	☉ ☽	9 13	24	☉ ☽	23 11	24	☉ ☽	20 53
	☉ ☽	11 40		☉ ☽	19 16		☉ ☽	23 58		☉ ☽	3 22
	☉ ☽	15 39		☉ ☽	2 57		☉ ☽	0 50		☉ ☽	3 24
	☉ ☽	2 19		☉ ☽	3 25		☉ ☽	6 21		☉ ☽	16 18
	☉ ☽	3 34		☉ ☽	9 48		☉ ☽	8 3		☉ ☽	16 23
	☉ ☽	9 11		☉ ☽	10 31		☉ ☽	14 20		☉ ☽	19 11
	☉ ☽	11 29		☉ ☽	11 48		☉ ☽	1 17		☉ ☽	19 14
	☉ ☽	14 20		☉ ☽	17 20		☉ ☽	13 13		☉ ☽	10 48
	☉ ☽	22 9		☉ ☽	5 19		☉ ☽	13 3		☉ ☽	22 59
	☉ ☽	22 36		☉ ☽	7 13		☉ ☽	14 9		☉ ☽	1 6
	☉ ☽	10 1		☉ ☽	21 57		☉ ☽	15 3		☉ ☽	1 28
	☉ ☽	20 48		☉ ☽	23 16		☉ ☽	22 22		☉ ☽	4 31
	☉ ☽	22 4		☉ ☽	6 17		☉ ☽	4 32		☉ ☽	9 32
	☉ ☽	5 12		☉ ☽	7 31		☉ ☽	5 1		☉ ☽	19 4
	☉ ☽	14 47		☉ ☽	10 5		☉ ☽	9 32		☉ ☽	7 54
	☉ ☽	15 11		☉ ☽	12 3		☉ ☽	11 34		☉ ☽	10 59
	☉ ☽	15 55		☉ ☽	12 47		☉ ☽	12 33		☉ ☽	22 22
	☉ ☽	23 34		☉ ☽	12 52		☉ ☽	17 50		☉ ☽	1 41
	☉ ☽	2 25		☉ ☽	19 34		☉ ☽	4 20		☉ ☽	10 8
	☉ ☽	5 16		☉ ☽	2 41		☉ ☽	8 56		☉ ☽	11 37
	☉ ☽	17 13		☉ ☽	12 58		☉ ☽	17 49		☉ ☽	11 52
	☉ ☽	7 42		☉ ☽	13 1		☉ ☽	22 5		☉ ☽	19 19
	☉ ☽	9 41		☉ ☽	13 13		☉ ☽	1 7		☉ ☽	19 29
	☉ ☽	11 36		☉ ☽	20 46		☉ ☽	8 54		☉ ☽	5 9
	☉ ☽	16 4		☉ ☽	0 31		☉ ☽	12 38		☉ ☽	7 14
	☉ ☽	0 18		☉ ☽	6 17		☉ ☽	13 17		☉ ☽	15 21
	☉ ☽	0 35		☉ ☽	9 11		☉ ☽	20 50		☉ ☽	22 44
	☉ ☽	1 18		☉ ☽	12 10		☉ ☽	21 2		☉ ☽	0 47
	☉ ☽	2 20		☉ ☽	13 6		☉ ☽	2 9		☉ ☽	1 6
	☉ ☽	8 39		☉ ☽	14 32		☉ ☽	23 4		☉ ☽	6 11
	☉ ☽	15 44		☉ ☽	22 9		☉ ☽	3 34		☉ ☽	17 9
	☉ ☽	3 44		☉ ☽	15 20		☉ ☽	8 27		☉ ☽	18 5
	☉ ☽	6 7		☉ ☽	2 4		☉ ☽	16 14		☉ ☽	18 15
	☉ ☽	6 44		☉ ☽	10 54		☉ ☽	20 5		☉ ☽	1 11
	☉ ☽	11 51		☉ ☽	16 51		☉ ☽	23 22		☉ ☽	5 31
	☉ ☽	15 0		☉ ☽	19 35		☉ ☽	24 57		☉ ☽	5 46
	☉ ☽	20 51		☉ ☽	3 50		☉ ☽	2 53		☉ ☽	8 37
	☉ ☽	23 0		☉ ☽	12 57		☉ ☽	7 58		☉ ☽	14 49
	☉ ☽			☉ ☽	13 31		☉ ☽	11 1		☉ ☽	19 14
	☉ ☽			☉ ☽	14 19		☉ ☽	20 9		☉ ☽	20 4
	☉ ☽			☉ ☽	17 49		☉ ☽	1 35		☉ ☽	2 13
	☉ ☽			☉ ☽	17 54		☉ ☽	7 34		☉ ☽	2 43
	☉ ☽			☉ ☽	18 39		☉ ☽	14 17		☉ ☽	9 41
	☉ ☽			☉ ☽	1 39		☉ ☽	21 14		☉ ☽	20 35
	☉ ☽			☉ ☽	21 8		☉ ☽	14 14		☉ ☽	21 6
	☉ ☽			☉ ☽	8 15		☉ ☽	9 27		☉ ☽	3 46
	☉ ☽			☉ ☽	12 11		☉ ☽	10 18		☉ ☽	11 35
	☉ ☽			☉ ☽	17 55		☉ ☽	12 10		☉ ☽	19 0
	☉ ☽			☉ ☽	22 28		☉ ☽	12 41		☉ ☽	

October.

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
November.					H. M.			H. M.			H. M.
1	♂ ♀	8 22	10	♂ ♀	14 12	20	♂ ♀	10 49	30	♂ ♀	11 53
	♂ ♀	11 50		♂ ♀	15 21		♂ ♀	0 16		♂ ♀	13 10
	♂ ♀	15 27		♂ ♀	15 28		♂ ♀	0 36		♂ ♀	15 12
	♂ ♀	20 28		♂ ♀	1 46		♂ ♀	6 14		♂ ♀	17 28
	♂ ♀	22 2		♂ ♀	12 19		♂ ♀	9 34		♂ ♀	22 19
	♂ ♀	22 12		♂ ♀	13 27		♂ ♀	10 31		♂ ♀	10 29
	♂ ♀	22 13		♂ ♀	11 56		♂ ♀	13 1		♂ ♀	12 46
	♂ ♀	4 40		♂ ♀	19 11		♂ ♀	17 10		♂ ♀	14 57
	♂ ♀	10 58		♂ ♀	19 15		♂ ♀	18 33			
	♂ ♀	15 50		♂ ♀	21 45		♂ ♀	8 3			
	♂ ♀	21 37		♂ ♀	1 55		♂ ♀	12 56			
	♂ ♀	22 35		♂ ♀	5 55		♂ ♀	15 20			
	♂ ♀	5 1		♂ ♀	16 8		♂ ♀	20 53			
	♂ ♀	12 54		♂ ♀	17 53		♂ ♀	21 54			
	♂ ♀	18 3		♂ ♀	1 59		♂ ♀	22 54			
	♂ ♀	20 44		♂ ♀	2 21		♂ ♀	0 31			
	♂ ♀	23 5		♂ ♀	9 26		♂ ♀	3 45			
	♂ ♀	23 6		♂ ♀	10 39		♂ ♀	4 3			
	♂ ♀	23 18		♂ ♀	20 52		♂ ♀	2 20			
	♂ ♀	23 34		♂ ♀	22 52		♂ ♀	8 13			
	♂ ♀	23 58		♂ ♀	4 19		♂ ♀	18 39			
	♂ ♀	0 20		♂ ♀	15 23		♂ ♀	21 42			
	♂ ♀	1 30		♂ ♀	17 40		♂ ♀	0 23			
	♂ ♀	15 1		♂ ♀	15 58		♂ ♀	2 15			
	♂ ♀	21 9		♂ ♀	17 34		♂ ♀	4 42			
	♂ ♀	1 18		♂ ♀	21 53		♂ ♀	5 49			
	♂ ♀	3 32		♂ ♀	7 53		♂ ♀	8 25			
	♂ ♀	4 28		♂ ♀	10 26		♂ ♀	11 9			
	♂ ♀	5 12		♂ ♀	15 35		♂ ♀	0 21			
	♂ ♀	7 39		♂ ♀	23 39		♂ ♀	6 21			
	♂ ♀	10 51		♂ ♀	12 12		♂ ♀	7 5			
	♂ ♀	12 18		♂ ♀	12 23		♂ ♀	10 48			
	♂ ♀	13 6		♂ ♀	14 49		♂ ♀	15 16			
	♂ ♀	8 42		♂ ♀	21 50		♂ ♀	2 26			
	♂ ♀	13 14		♂ ♀	7 42		♂ ♀	4 12			
	♂ ♀			♂ ♀	10 54		♂ ♀	8 34			
	♂ ♀			♂ ♀	11 29		♂ ♀	8 49			
	♂ ♀			♂ ♀	21 22		♂ ♀	9 41			
	♂ ♀			♂ ♀	13 27		♂ ♀	11 3			
	♂ ♀			♂ ♀	23 37		♂ ♀	12 15			
	♂ ♀			♂ ♀	0 37		♂ ♀	14 39			
	♂ ♀			♂ ♀	4 20		♂ ♀	18 21			
	♂ ♀			♂ ♀	6 12		♂ ♀	7 21			
	♂ ♀			♂ ♀	20 55		♂ ♀	4 1			
	♂ ♀			♂ ♀	3 8		♂ ♀	9 26			
	♂ ♀			♂ ♀	6 24		♂ ♀	9 44			
	♂ ♀			♂ ♀	8 39		♂ ♀	10 36			

December.

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
		H. M.			H. H.			H. H.			H. H.
1	♂ ♀	13 19	15	♂ ♀	12 38	22	♂ ♀	11 21	28	♂ ♀	1 9
	♂ ♀	17 44		♂ ♀	19 54		♂ ♀	14 26		♂ ♀	4 45
	♂ ♀	19 35		♂ ♀	23 55		♂ ♀	10 51		♂ ♀	5 5
	♂ ♀	22 49		♂ ♀	1 19		♂ ♀	11 41		♂ ♀	6 26
	♂ ♀	23 59		♂ ♀	2 57		♂ ♀	12 47		♂ ♀	20 19
	♂ ♀	7 14		♂ ♀	5 28		♂ ♀	15 8		♂ ♀	20 29
	♂ ♀	15 36		♂ ♀	8 55		♂ ♀	15 28		♂ ♀	22 55
	♂ ♀	17 37		♂ ♀	9 28		♂ ♀	18 14		♂ ♀	0 48
	♂ ♀	21 51		♂ ♀	0 3		♂ ♀	18 21		♂ ♀	0 55
	♂ ♀	2 30		♂ ♀	4 12		♂ ♀	11 52		♂ ♀	5 22
	♂ ♀	3 10		♂ ♀	6 45		♂ ♀	5 11		♂ ♀	8 11
	♂ ♀	7 41		♂ ♀	9 29		♂ ♀	16 3		♂ ♀	9 15
	♂ ♀	22 42		♂ ♀	15 27		♂ ♀	20 26		♂ ♀	19 54
	♂ ♀	2 46		♂ ♀	23 37		♂ ♀	21 17		♂ ♀	20 17
	♂ ♀	4 48		♂ ♀	7 23		♂ ♀	17 45		♂ ♀	6 31
	♂ ♀	8 14		♂ ♀	13 29		♂ ♀	13 18		♂ ♀	0 31
	♂ ♀	9 13		♂ ♀	15 52		♂ ♀	21 0		♂ ♀	9 29
	♂ ♀	10 3		♂ ♀	18 31		♂ ♀	21 48		♂ ♀	19 36
	♂ ♀	17 6		♂ ♀	21 50		♂ ♀	23 24		♂ ♀	20 10
	♂ ♀	20 13		♂ ♀	22 11		♂ ♀	23 27		♂ ♀	22 22
	♂ ♀	8 22		♂ ♀	16 26		♂ ♀	0 44		♂ ♀	0 5
	♂ ♀	18 27		♂ ♀	20 18		♂ ♀	22 20		♂ ♀	0 16
	♂ ♀	3 20		♂ ♀	10 12		♂ ♀	2 22		♂ ♀	11 56
	♂ ♀	10 35		♂ ♀	19 3		♂ ♀	3 55		♂ ♀	12 12
	♂ ♀	14 9		♂ ♀	1 52		♂ ♀	20 7			
	♂ ♀	16 29		♂ ♀	3 34		♂ ♀	20 27			
	♂ ♀	17 51		♂ ♀	6 18		♂ ♀	22 15			
	♂ ♀	20 1		♂ ♀	9 25		♂ ♀	1 12			
	♂ ♀	20 45		♂ ♀	9 39		♂ ♀	1 14			
	♂ ♀	11 39		♂ ♀	11 7		♂ ♀	1 51			
	♂ ♀	22 53		♂ ♀	19 52		♂ ♀	4 19			
	♂ ♀	3 2		♂ ♀	3 27		♂ ♀	6 14			
	♂ ♀	3 45		♂ ♀	10 24		♂ ♀	23 10			

[illegible]

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
		H. M.			H. M.			H. M.			H. M.
5	☉	16 40	6	☉	13 3	4	☉	9 53			
6	☉	1 43	7	☉	2 24		☉	12 0	2	☉	22 20
	☉	15 45		☉	11 56		☉	12 59		☉	0 37
	☉	18 58		☉	17 5		☉	15 18		☉	21 59
8	☉	1 57	8	☉	10 17	5	☉	1 8	3	☉	23 52
	☉	3 6		☉	1 32		☉	12 27	4	☉	0 41
	☉	16 30		☉	0 31	6	☉	2 11	5	☉	7 18
9	☉	22 14	9	☉	4 0		☉	2 51		☉	18 0
	☉	14 11	10	☉	11 40	7	☉	18 27	7	☉	13 12
10	☉	17 50	11	☉	19 34	9	☉	1 34	8	☉	13 44
11	☉	3 36		☉	0 0	12	☉	6 0	9	☉	19 14
	☉	12 0	13	☉	1 20		☉	7 11		☉	20 53
	☉	17 54	15	☉	0 44		☉	14 11	10	☉	4 42
	☉	23 18	16	☉	4 55		☉	18 51		☉	6 51
13	☉	3 46		☉	10 30	13	☉	11 20		☉	5 45
14	☉	3 83	17	☉	12 16		☉	20 0		☉	14 54
15	☉	12 47		☉	17 0	14	☉	18 26		☉	20 32
	☉	14 41		☉	26 3	15	☉	6 43	11	☉	14 38
16	☉	12 0	18	☉	4 9		☉	9 38	13	☉	5 38
18	☉	17 11		☉	22 30		☉	14 24		☉	16 41
	☉	22 3		☉	23 3		☉	16 36	14	☉	19 9
19	☉	22 17	19	☉	8 10	16	☉	3 34	15	☉	8 2
21	☉	5 56		☉	11 40		☉	10 41		☉	10 48
	☉	18 3		☉	19 30	17	☉	3 22	16	☉	9 11
	☉	20 44		☉	1 56	18	☉	8 7		☉	13 42
22	☉	13 33	20	☉	14 36		☉	11 23		☉	21 51
23	☉	21 34	21	☉	12 0		☉	19 54	17	☉	1 0
4	☉	23 29		☉	16 42		☉	22 51		☉	3 45
5	☉	2 37		☉	3 3	20	☉	19 57		☉	18 42
	☉	20 57	22	☉	5 51		☉	13 58	18	☉	5 16
26	☉	18 42		☉	6 0	21	☉	21 56	19	☉	12 0
27	☉	2 46	23	☉	10 16	25	☉	0 5	21	☉	8 41
28	☉	3 16		☉	15 5	26	☉	7 4	22	☉	10 30
29	☉	17 46	27	☉	23 18		☉	12 9		☉	0 29
30	☉	6 9	28	☉	7 21		☉	15 25		☉	5 44
31	☉	9 13	29	☉	7 22		☉	20 5		☉	14 17
			30	☉	13 43					☉	17 2
				☉	17 2					☉	18 47
				☉	17					☉	9 56
										☉	18 20
										☉	4 0
										☉	12 23
										☉	13 11
										☉	7 23
										☉	17 39
										☉	4 54
										☉	20
June.			July.			August.					
1	☉	19 1	1	☉	8 36	1	☉	20 44	23	☉	54 23
2	☉	9 31		☉	22 50		☉	21 10	24	☉	9 56
3	☉	22 50		☉	4 36				25	☉	12 0
4	☉	5 2	2	☉	4 50				26	☉	14 0
	☉	10 39							27	☉	16 3
5	☉	4 20							28	☉	18 4
									29	☉	20 5
									30	☉	22 6
									31	☉	24 7
											26 8
											28 10
											30 12
											32 14
											34 16
											36 18
											38 20
											40 22
											42 24
											44 26
											46 28
											48 30
											50 32
											52 34
											54 36
											56 38
											58 40
											60 42
											62 44
											64 46
											66 48
											68 50
											70 52
											72 54
											74 56
											76 58
											78 60
											80 62
											82 64
											84 66
											86 68
											88 70
											90 72
											92 74
											94 76
											96 78
											98 80
											100 82

Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.	Date.	Aspect	Time.
September.			October.								
		H. M.			H. M.			H. M.			H. M.
1	♂ ♀	9 25	1	♂ ♀	13 37						
2	♂ ♀	10 55	2	♂ ♀	7 36						
3	♂ ♀	13 50	3	♂ ♀	4 0						
4	♂ ♀	2 4	4	♂ ♀	8 19						
5	♂ ♀	4 32	5	♂ ♀	10 16						
6	♂ ♀	13 19	6	♂ ♀	20 20						
7	♂ ♀	4 33	7	♂ ♀	16 53						
8	♂ ♀	4 43	8	♂ ♀	2 12						
9	♂ ♀	16 0	9	♂ ♀	19 43						
10	♂ ♀	20 17	10	♂ ♀	2 36						
11	♂ ♀	21 46	11	♂ ♀	20 37						
12	♂ ♀	7 4	12	♂ ♀	15 12						
13	♂ ♀	11 28	13	♂ ♀	5 31						
14	♂ ♀	15 5	14	♂ ♀	5 42						
15	♂ ♀	12 48	15	♂ ♀	5 16						
16	♂ ♀	20 50	16	♂ ♀	5 22						
17	♂ ♀	22 23	17	♂ ♀	2 38						
18	♂ ♀	16 5	18	♂ ♀	2 38						
19	♂ ♀	1 19	19	♂ ♀	4 34						
20	♂ ♀	4 0	20	♂ ♀	15 49						
21	♂ ♀	5 17	21	♂ ♀	7 38						
22	♂ ♀	7 28	22	♂ ♀	2 22						
23	♂ ♀	12 46	23	♂ ♀	4 6						
24	♂ ♀	13 19	24	♂ ♀	7 22						
25	♂ ♀	13 19	25	♂ ♀	21 40						
26	♂ ♀	18 28	26	♂ ♀	23 22						
27	♂ ♀	18 33	27	♂ ♀	8 6						
28	♂ ♀	9 57	28	♂ ♀	22 42						
29	♂ ♀	13 12	29	♂ ♀	21 49						
30	♂ ♀	15 41	30	♂ ♀	9 20						
	♂ ♀	17 21		♂ ♀	2 15						
	♂ ♀	21 37		♂ ♀	9 59						
	♂ ♀	5 14		♂ ♀	12 29						
	♂ ♀	8 21		♂ ♀	4 31						
	♂ ♀	2 0		♂ ♀	9 55						
	♂ ♀	2 24		♂ ♀	12 35						
	♂ ♀	22 17		♂ ♀	0 4						
	♂ ♀	15 33		♂ ♀	4 36						
	♂ ♀	19 36		♂ ♀	12 0						
	♂ ♀	15 59		♂ ♀	13 1						
	♂ ♀	8 14		♂ ♀	19 18						
	♂ ♀	12 17		♂ ♀	20 28						
	♂ ♀	16 27		♂ ♀	18 58						
	♂ ♀	20 14		♂ ♀	12 38						
	♂ ♀	17 42		♂ ♀	16 35						
	♂ ♀	19 20		♂ ♀							
	♂ ♀	3 44		♂ ♀							

Daily Motion of Planets in 1955.

51

Date.	JANUARY.	FEBRUARY.	MARCH.
1	♂ ♀ 13 53	♂ ♀ 14 13	♂ ♀ 43 43
2	♂ ♀ 14 9	♂ ♀ 15 15	♂ ♀ 43 43
3	♂ ♀ 16 24	♂ ♀ 16 14	♂ ♀ 61 61
4	♂ ♀ 16 46	♂ ♀ 17 14	♂ ♀ 61 61
5	♂ ♀ 17 42	♂ ♀ 18 14	♂ ♀ 61 61
6	♂ ♀ 18 38	♂ ♀ 19 14	♂ ♀ 61 61
7	♂ ♀ 19 34	♂ ♀ 20 14	♂ ♀ 61 61
8	♂ ♀ 20 30	♂ ♀ 21 14	♂ ♀ 61 61
9	♂ ♀ 21 26	♂ ♀ 22 14	♂ ♀ 61 61
10	♂ ♀ 22 22	♂ ♀ 23 14	♂ ♀ 61 61
11	♂ ♀ 23 18	♂ ♀ 24 14	♂ ♀ 61 61
12	♂ ♀ 24 14	♂ ♀ 25 14	♂ ♀ 61 61
13	♂ ♀ 25 10	♂ ♀ 26 14	♂ ♀ 61 61
14	♂ ♀ 26 6	♂ ♀ 27 14	♂ ♀ 61 61
15	♂ ♀ 27 2	♂ ♀ 28 14	♂ ♀ 61 61
16	♂ ♀ 28 18	♂ ♀ 29 14	♂ ♀ 61 61
17	♂ ♀ 29 14	♂ ♀ 30 14	♂ ♀ 61 61
18	♂ ♀ 30 10	♂ ♀ 31 14	♂ ♀ 61 61
19	♂ ♀ 31 6	♂ ♀ 1 14	♂ ♀ 61 61
20	♂ ♀ 32 2	♂ ♀ 2 14	♂ ♀ 61 61
21	♂ ♀ 33 18	♂ ♀ 3 14	♂ ♀ 61 61
22	♂ ♀ 34 14	♂ ♀ 4 14	♂ ♀ 61 61
23	♂ ♀ 35 10	♂ ♀ 5 14	♂ ♀ 61 61
24	♂ ♀ 36 6	♂ ♀ 6 14	♂ ♀ 61 61
25	♂ ♀ 37 2	♂ ♀ 7 14	♂ ♀ 61 61
26	♂ ♀ 38 18	♂ ♀ 8 14	♂ ♀ 61 61
27	♂ ♀ 39 14	♂ ♀ 9 14	♂ ♀ 61 61
28	♂ ♀ 40 10	♂ ♀ 10 14	♂ ♀ 61 61
29	♂ ♀ 41 6	♂ ♀ 11 14	♂ ♀ 61 61
30	♂ ♀ 42 2	♂ ♀ 12 14	♂ ♀ 61 61
31	♂ ♀ 43 18	♂ ♀ 13 14	♂ ♀ 61 61

Daily Motion of Planets in 1955.--(contd.)

Date.	APRIL.				MAY.				JUNE.												
	D.	h.	m.	s.	D.	h.	m.	s.	D.	h.	m.	s.									
1	13	25	1	39	71	59	41	12	48	2	4	72	59	40	12	3	0	10	73	58	39
2	2	15	39	71	59	41	35	72	58	40	2	72	58	40	11	56	6	73	57	40	
3	3	2	42	71	59	41	22	72	58	40	1	72	58	40	50	1	73	58	39		
4	4	12	51	42	71	59	41	14	72	58	5	72	58	40	49	4	72	57	39		
5	5	39	44	71	59	40	4	72	58	39	15	72	58	40	48	8	73	57	39		
6	6	28	45	71	59	41	11	57	72	58	53	72	58	40	51	13	73	57	39		
7	7	17	47	71	59	41	52	50	72	58	40	72	58	40	55	16	73	57	39		
8	8	7	48	71	59	41	49	47	72	58	40	72	58	40	12	20	73	57	39		
9	9	11	58	71	59	41	47	43	72	58	40	72	58	40	12	23	73	57	39		
10	10	51	52	71	59	41	50	40	72	58	39	25	73	57	26	26	73	57	39		
11	11	47	53	72	59	40	56	37	72	58	40	72	58	40	43	29	73	58	39		
12	12	49	54	72	59	40	12	5	72	58	40	72	58	40	13	2	31	73	57	38	
13	13	54	55	72	59	40	21	30	72	58	39	24	73	57	24	33	73	58	39		
14	14	12	4	58	72	58	41	40	73	58	40	49	73	57	49	14	34	73	57	39	
15	15	21	59	72	59	41	13	3	72	58	39	14	73	57	14	34	34	73	57	39	
16	16	42	2	0	72	59	41	30	72	58	40	36	73	58	36	36	36	73	58	39	
17	17	13	7	2	72	59	40	58	72	57	39	54	73	58	15	6	32	73	57	39	
18	18	35	3	3	72	58	41	14	25	10	73	58	40	15	6	32	73	57	38		
19	19	14	4	4	72	59	40	49	72	58	39	7	73	58	7	30	73	57	38		
20	20	29	6	6	72	58	41	15	4	3	75	53	40	2	28	28	73	57	39		
21	21	49	6	6	72	59	40	12	12	0	59	73	53	39	14	47	25	73	57	39	
22	22	15	0	6	72	58	40	10	10	55	55	53	40	25	21	21	72	57	39		
23	23	3	9	9	72	59	40	14	57	50	72	58	39	0	18	18	73	57	38		
24	24	56	9	9	72	58	40	39	47	72	58	39	40	13	33	14	73	58	39		
25	25	42	9	9	72	59	41	15	42	73	58	40	7	10	73	10	73	57	39		
26	26	24	8	8	72	58	40	13	51	37	73	58	39	12	45	6	73	57	38		
27	27	0	8	8	72	59	40	25	33	33	73	57	39	24	9	0D	73	57	39		
28	28	13	41	7	72	58	40	3	29	73	58	40	3	9	11	58	3	73	57	39	
29	29	21	7	7	72	58	40	12	43	24	73	57	39	11	58	9	73	58	38		
30	30	4	4	4	72	58	40	26	19	15	73	58	39	51	14	14	73	57	39		
31	31							13	13	15	73	57	39								

Daily Motion of Planets in 1955.—(contd.)

Date	JULY.				AUGUST.				SEPTEMBER.												
	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
1	11	48	0	18	73	57	38	12	6	2	6	74	57	39	13	4	1	27	74	58	38
2	1	48	24	48	73	57	39	17	6	6	6	74	58	38	20	27	74	58	38		
3	3	52	28	73	57	39	30	30	5	5	5	74	57	38	34	25	75	59	38		
4	4	57	33	73	58	38	44	4	4	4	4	74	58	38	46	23	74	58	38		
5	5	12	38	73	57	39	57	57	3	3	3	74	57	39	54	22	74	58	38		
6	6	14	43	73	57	38	13	10	3	3	3	74	57	38	14	0	21	75	58	38	
7	7	25	47	73	57	39	23	3	2	2	2	74	58	38	4	19	75	58	38		
8	8	38	53	73	57	38	35	3	1	1	1	74	57	38	5	18	75	59	38		
9	9	53	57	74	58	39	46	39	59	1	59	74	58	38	7	16	75	58	38		
10	13	18	1	73	57	39	57	14	8	58	58	74	58	39	8	15	75	58	38		
11	1	25	6	74	57	38	17	17	55	57	57	74	57	38	6	13	74	58	38		
12	12	43	11	73	57	38	26	26	54	54	54	74	58	38	4	10	75	58	38		
13	14	2	15	73	57	38	28	28	53	53	53	74	58	38	48	7	74	59	38		
14	15	35	19	74	57	38	29	29	51	51	51	74	58	39	34	5	75	58	39		
15	16	47	28	73	57	39	22	22	49	49	49	74	57	38	18	3	74	59	38		
16	17	53	32	74	57	38	11	11	4	4	4	74	58	38	12	59	0	58	38		
17	18	50	35	74	58	38	13	53	46	46	46	74	58	38	40	40	52	58	38		
18	19	41	40	73	57	39	33	33	46	46	46	74	57	39	22	55	74	59	38		
19	20	24	43	74	57	38	12	47	42	42	42	74	58	38	8	52	75	58	38		
20	21	3	47	73	58	38	26	26	41	41	41	74	58	38	50	45	74	59	38		
21	22	13	50	74	57	39	9	9	37	37	37	74	58	38	48	41	75	59	38		
22	23	11	53	73	57	38	11	57	38	38	38	74	58	38	52	38	75	58	38		
23	24	12	55	74	57	38	50	50	36	36	36	74	58	39	12	2	75	59	38		
24	25	26	58	74	58	39	48	48	35	35	35	74	57	38	17	28	75	59	38		
25	26	9	1	74	57	38	53	53	33	33	33	74	58	38	35	24	75	59	38		
26	27	11	2	73	57	38	12	0	33	33	33	74	58	38	57	17	75	59	38		
27	28	50	3	74	57	38	13	13	32	32	32	74	58	38	13	19	75	59	38		
28	29	48	4	74	57	38	29	29	30	30	30	74	58	38	40	6	75	59	38		
29	30	50	5	73	58	38	46	46	29	29	29	74	58	39	..	..	..	..	..	..	
30	31	56	6	74	57	38	..	..	..	..	..	..	..	..	..	..	..	..	..	..	

Date.	OCTOBER.					NOVEMBER.					DECEMBER.					
	h	m	s	°	'	h	m	s	°	'	h	m	s	°	'	
1	13	58	0	2	75	59	38	14	49	1	17	75	60	38	15	1
2	14	12	8	75	59	39	39	46	21	21	75	60	39	39	14	46
3	3	21	16	75	59	39	39	37	24	24	75	60	39	39	25	34
4	5	23	24	74	59	38	24	24	27	27	75	60	39	39	1	34
5	5	21	32	75	59	38	8	8	28	28	71	60	38	38	13	37
6	16	16	39	75	59	39	13	50	30	30	75	60	39	39	13	34
7	9	9	47	75	59	38	34	32	32	32	75	60	39	39	12	51
8	1	55	74	75	59	38	17	32	32	32	75	61	39	39	35	34
9	13	52	1	0	75	59	39	3	34	34	75	60	39	39	21	35
10	43	33	7	75	59	38	12	49	34	34	74	60	39	39	9	34
11	33	9	75	59	38	35	35	35	35	35	75	61	39	39	0	34
12	23	12	75	59	38	38	24	34	34	34	75	60	39	39	11	54
13	10	13	75	59	38	38	13	35	35	35	75	61	39	39	48	34
14	12	57	10	74	60	39	3	36	36	36	75	60	39	39	47	35
15	42	7	75	59	38	38	11	56	36	36	75	60	38	38	50	35
16	28	0	75	60	39	50	36	36	36	36	75	60	39	39	55	35
17	15	53	34	74	60	39	47	36	36	36	75	61	39	39	12	2
18	2	44	75	59	38	39	51	36	36	36	75	61	39	39	14	35
19	11	53	23	75	59	38	59	36	36	36	74	60	39	39	28	35
20	47	23	75	59	38	39	12	12	35	35	75	60	39	39	47	35
21	47	12	75	59	38	39	31	35	35	35	75	61	39	39	13	35
22	51	0	75	59	38	38	52	35	35	35	75	60	39	39	9	36
23	12	1	0D10	75	60	39	13	19	35	35	75	61	39	39	14	34
24	15	22	75	60	39	38	46	35	35	35	75	60	39	39	26	35
25	35	30	74	60	39	38	14	13	35	35	75	61	39	39	50	35
26	58	41	75	60	39	38	37	35	35	35	75	61	39	39	6	35
27	13	24	48	75	60	39	57	35	35	35	75	60	39	39	15	34
28	50	55	75	60	39	38	15	7	35	35	75	61	39	39	34	74
29	14	1	75	60	39	38	8	34	34	34	75	61	39	39	14	34
30	32	13	74	60	39	38	..	..	..	..	74	60	39	39	3	34
31	45	13	75	60	39	38	..	..	..	..	74	61	39	39	42	34

Table of Ascendants for Latitudes 7° to 20°.—(contd.)

Sid. Time.	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°
H. M.														
0	0 92	48 93	12 93	34 94	0 94	25 94	50 95	15 95	40 96	5 96	30 96	55 97	22 97	47 98
15	96	13 96	37 97	1 97	25 97	50 98	14 98	39 99	3 99	28 99	53 100	18 100	44 101	10 101
30	99	39 100	3 100	27 100	50 101	14 101	38 102	2 102	27 102	51 103	15 103	40 104	5 104	31 104
45	102	3 103	28 103	52 104	15 104	39 105	3 105	27 105	50 106	15 106	38 107	3 107	27 107	52 108
1	0 106	31 106	54 107	16 107	40 108	3 108	26 108	49 109	13 109	36 110	0 110	23 110	47 111	11 111
15	109	58 110	20 110	42 111	5 111	28 111	5 112	13 112	36 112	59 113	21 113	45 114	8 114	31 114
30	113	24 113	47 114	9 114	31 114	53 115	15 115	37 115	59 116	21 116	43 117	6 117	28 117	51 118
45	116	54 117	14 117	36 117	58 118	19 118	40 119	2 119	33 119	45 120	6 120	27 120	49 121	11 121
2	0 120	23 120	44 121	4 121	25 121	45 122	7 122	27 122	47 123	9 123	29 123	50 124	11 124	31 124
15	123	53 124	14 124	34 124	55 125	14 125	34 125	53 126	13 126	33 126	53 127	13 127	33 127	53 128
30	127	26 127	45 128	4 128	24 128	42 129	1 129	24 129	39 129	58 130	17 130	37 130	56 131	15 131
45	131	1 131	18 131	37 131	56 132	13 132	31 132	49 133	7 133	25 133	43 134	1 134	20 134	38 134
3	0 134	37 134	54 135	12 135	29 135	45 136	2 136	19 136	36 136	53 137	10 137	26 137	43 138	0 138
15	138	14 138	31 138	47 139	4 139	19 139	35 139	51 140	6 140	22 140	38 140	54 141	10 141	25 141
30	141	53 142	10 142	25 142	40 142	55 143	10 143	25 143	39 143	54 144	8 144	23 144	37 144	52 145
45	145	36 145	50 146	4 146	19 146	31 146	45 146	59 147	12 147	27 147	39 147	52 148	5 148	19 148
4	0 149	20 149	33 149	45 149	59 150	10 150	22 150	35 150	47 150	59 151	11 151	23 151	35 151	46 151
15	153	6 153	17 153	29 153	40 153	50 154	0 154	11 154	22 154	33 154	43 154	55 155	5 155	15 155
30	156	54 157	3 157	12 157	22 157	32 157	41 157	51 158	0 158	9 158	19 158	29 158	37 158	46 158
45	160	41 160	51 161	12 161	18 161	27 161	35 161	42 161	50 161	58 162	5 162	13 162	20 162	28 162
5	0 164	33 164	39 164	45 164	51 164	58 165	4 165	11 165	17 165	23 165	30 165	33 165	42 165	49 165
15	168	22 168	28 168	33 168	38 168	43 168	47 168	52 168	57 169	2 169	7 169	11 169	16 169	20 169
30	172	16 172	19 172	24 172	28 172	31 172	35 172	37 172	40 172	44 172	47 172	51 172	54 172	57 172
45	176	6 176	9 176	11 176	12 176	14 176	15 176	18 176	19 176	20 176	22 176	23 176	24 176	27 176
6	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180

Table of Ascendants for Latitudes 7° to 20°—(contd.)

Sid. Time.	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°
H. M.	°	°	°	°	°	°	°	°	°	°	°	°	°	°
6	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180	0 180
15	183 53 183	51 183	49 183	48 183	46 183	45 183	45 183	42 183	41 183	40 1 3	38 183	37 183	36 183	33 183
30	187 45 187	41 187	39 187	36 187	32 187	29 187	25 187	23 187	20 187	16 187	13 187	13 187	9 187	6 187
45	191 36 191	32 191	27 191	22 191	17 191	13 191	8 191	3 190	58 190	53 190	49 190	44 190	40 190	35 190
7	0 195	27 195	22 195	15 195	9 195	2 194	56 194	49 194	43 194	37 194	30 194	24 194	18 194	11 194
15	199 19 199	16 199	2 198	52 198	46 198	37 198	25 198	18 198	14 198	6 198	0 197	51 197	44 197	32 197
30	203 7 202	57 202	48 202	38 202	28 202	19 202	9 202	0 201	51 201	41 201	32 201	23 201	14 201	5 201
45	206 55 206	43 206	31 206	20 206	10 205	59 205	49 205	38 205	27 205	17 205	5 204	55 204	45 204	34 204
8	0 210	40 210	27 210	15 210	1 209	50 209	38 209	25 209	13 209	1 208	49 208	37 208	25 208	14 208
15	214 24 214	10 213	56 213	41 213	29 213	15 213	1 212	48 212	33 212	21 212	8 211	55 211	41 211	28 211
30	218 4 217	50 217	35 217	20 217	5 216	50 216	35 216	21 216	6 215	52 215	37 215	23 215	8 214	54 214
45	221 46 221	30 221	13 220	56 220	41 220	25 220	9 219	54 219	38 219	22 219	6 218	50 218	35 218	19 218
9	0 225	22 225	6 224	49 224	31 224	15 223	58 223	41 223	24 223	7 222	50 222	34 222	17 222	0 221
15	229 0 228	42 228	23 228	4 227	47 227	29 227	11 226	53 226	35 226	17 225	59 225	40 225	22 225	4 225
30	232 34 232	15 231	56 231	36 231	20 230	59 230	56 230	21 230	2 229	43 229	23 229	4 228	45 228	26 228
45	236 6 235	46 235	26 235	5 234	46 234	26 234	7 233	47 233	27 233	7 232	47 232	27 232	7 231	47 231
10	0 239	37 239	17 238	56 238	35 238	15 237	53 237	33 237	13 236	51 236	31 236	10 235	49 235	29 235
15	243 6 243	7 242	46 242	24 242	2 241	41 241	20 240	58 240	37 240	15 239	54 239	33 239	11 238	49 238
30	246 36 246	13 245	51 245	29 245	7 244	45 244	23 244	1 243	39 243	17 242	54 242	32 242	9 241	46 241
45	250 2 249	40 249	18 248	55 248	32 248	9 247	47 247	25 247	1 246	39 246	15 245	52 245	29 245	6 245
11	0 253	29 253	7 252	44 252	20 251	57 251	34 251	11 250	47 250	24 250	0 249	37 249	13 248	49 248
15	256 56 256	32 256	8 255	45 255	21 254	57 254	33 254	10 253	45 253	22 252	57 252	33 252	8 251	43 251
30	260 21 259	57 259	10 258	24 258	22 257	58 257	35 257	9 256	45 256	22 255	50 255	25 255	55 255	29 255
45	263 47 263	23 262	59 262	35 262	10 261	46 261	21 260	57 260	32 260	7 259	42 259	16 258	50 258	24 258
12	0 267	13 266	48 266	23 266	0 265	35 265	10 264	45 264	20 263	55 263	30 263	4 262	38 262	13 261

Table of Ascendants for Latitudes 7° to 20°—(contd.)

Sid. Time.	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°
H. M.	°	°	°	°	°	°	°	°	°	°	°	°	°	°
12	0 267	13 266	48 266	23 266	0 265	35 265	10 264	45 264	20 263	55 263	30 263	4 262	38 262	13 261
15	270 38 270	14 269	49 269	25 269	0 268	35 268	10 267	44 267	19 266	53 266	27 266	1 265	34 265	4 265
30	274 4 273	4 272	17 272	17 272	51 272	22 271	36 271	11 270	47 270	21 269	55 269	27 269	0 268	34 268
45	277 34 277	9 276	4 275	20 275	55 275	30 275	4 274	39 274	13 273	47 273	21 272	54 272	27 271	59 271
13	0 281	3 280	38 280	14 279	50 279	25 279	0 278	35 278	9 277	43 277	17 276	51 276	24 275	29 275
15	284 34 284	10 283	45 283	21 282	56 282	31 282	6 281	41 281	15 280	48 280	22 279	55 279	28 279	6 279
30	288 8 287	44 287	19 286	55 286	30 286	6 285	41 285	15 284	50 284	24 283	58 283	30 283	3 282	36 282
45	291 41 291	19 290	55 290	32 290	7 289	43 289	18 288	53 288	27 288	0 287	35 287	8 286	41 286	15 286
14	0 295	19 294	56 294	33 294	11 293	46 293	22 292	58 292	34 292	8 291	42 291	17 290	50 290	23 289
15	299 0 298	38 298	15 297	52 297	28 297	5 296	41 296	16 295	52 295	27 295	20 294	35 294	25 293	32 293
30	302 43 302	21 301	59 301	37 301	14 300	51 300	28 300	4 299	40 299	15 298	50 298	25 297	59 297	37 297
45	306 29 306	8 305	46 305	27 305	3 304	41 304	18 303	55 303	32 303	8 302	44 302	19 301	54 301	28 301
15	310 17 309	59 309	38 309	17 308	56 308	35 308	13 307	51 307	28 307	5 306	41 306	17 305	58 305	27 305
30	314 11 313	52 313	32 312	12 312	52 312	32 312	12 311	51 311	30 311	6 310	45 310	27 309	58 309	34 309
45	318 7 317	50 317	32 317	12 316	55 316	34 316	15 315	55 315	35 315	14 314	53 314	31 314	9 313	46 313
16	0 322	11 325	55 325	39 325	24 325	7 324	51 324	34 324	17 324	0 323	42 323	23 323	5 322	45 322
15	326 14 326	43 326	20 325	48 325	33 325	20 325	5 324	49 324	34 324	18 324	2 323	46 323	29 322	10 322
30	330 41 330	21 329	50 329	32 329	18 329	58 329	41 329	23 329	56 329	33 329	2 328	43 328	31 328	25 328
45	334 25 334	11 334	40 334	25 334	10 333	47 333	22 333	56 333	33 333	18 332	2 332	43 332	31 331	28 331
17	0 338	37 338	25 338	15 338	5 337	54 337	42 337	31 337	19 337	8 336	56 336	43 336	30 336	17 336
15	342 37 342	41 342	33 342	25 342	15 342	6 341	58 341	48 341	38 341	28 341	17 341	7 340	56 340	45 340
30	346 58 346	52 346	47 346	39 346	33 346	25 346	18 346	11 346	3 345	55 345	47 345	39 345	31 345	31 345
45	351 22 351	18 351	15 351	11 351	6 351	1 350	56 350	51 350	46 350	41 350	36 350	30 350	25 350	20 350
18	0 355	42 355	40 355	38 355	34 355	31 355	29 355	26 355	23 355	20 355	17 355	15 355	13 355	9 355

Sid. Time.	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°
H. M.	°	°	°	°	°	°	°	°	°	°	°	°	°	°
18 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
15 15	4 19	4 20	4 23	4 26	4 27	4 29	4 31	4 34	4 37	4 40	4 43	4 45	4 47	4 50
30 30	8 37	8 42	8 46	8 49	8 54	8 59	9 4	9 9	9 14	9 19	9 24	9 30	9 35	9 40
45 45	12 56	13 2	13 8	13 13	13 21	13 27	13 35	13 42	13 49	13 57	14 5	14 13	14 21	14 29
19 0	17 14	17 9	17 17	17 35	17 45	17 54	18 2	18 12	18 22	18 32	18 43	18 53	19 4	19 15
15 15	21 27	21 18	21 45	21 55	22 6	22 18	22 29	22 41	22 52	23 4	23 17	23 30	23 43	23 58
30 30	25 35	25 48	26 0	26 13	26 25	26 38	26 51	27 4	27 19	27 23	27 47	28 2	28 18	28 32
45 45	29 56	29 5	30 12	30 27	30 40	30 55	31 11	31 26	31 42	32 31	32 58	33 36	33 50	34 8
20 0	33 51	34 5	34 21	34 36	34 53	35 9	35 26	35 44	36 0	36 36	37 37	38 31	39 32	40 38
15 15	37 54	38 10	38 27	38 52	39 2	39 19	39 37	39 57	40 15	40 46	41 55	42 49	43 41	44 51
30 30	41 53	42 9	42 28	42 48	43 5	43 26	44 45	45 5	46 25	47 46	48 54	49 53	50 48	51 58
45 45	47 48	46 2	46 28	46 48	47 8	47 28	47 48	48 9	48 30	49 54	50 53	51 53	52 54	53 58
21 0	49 42	50 2	50 22	50 43	51 4	51 25	51 47	52 9	52 38	53 58	54 59	55 53	56 53	57 58
15 15	53 30	53 52	54 14	54 33	54 57	55 19	55 42	56 5	56 28	57 52	58 61	59 61	60 62	61 62
30 30	57 17	57 39	58 1	58 23	58 46	59 9	59 32	59 56	60 20	61 43	62 64	63 65	64 65	65 66
45 45	61 0	61 22	62 45	62 58	63 14	63 32	63 59	64 44	65 28	66 52	68 18	69 25	70 37	71 43
22 0	64 41	65 4	65 27	65 49	66 14	66 38	67 2	67 26	67 52	68 64	69 72	70 72	71 73	72 74
15 15	68 19	68 41	69 5	69 28	69 53	70 17	70 42	71 45	72 75	73 75	74 75	75 76	76 77	77 78
30 30	71 53	72 17	72 41	73 5	73 30	73 54	74 74	75 78	76 78	77 78	78 78	79 78	80 78	81 78
45 45	75 27	75 50	76 15	76 39	77 4	77 29	78 54	79 81	80 81	81 82	82 83	83 83	84 83	85 83
23 0	78 58	79 21	79 46	80 10	80 35	81 0	81 25	81 51	82 17	83 17	84 17	85 17	86 17	87 17
15 15	82 28	82 51	83 16	83 40	84 5	84 30	85 56	86 85	87 85	88 85	89 85	90 85	91 85	92 85
30 30	85 45	86 11	86 43	87 9	87 33	88 58	89 88	90 88	91 89	92 89	93 89	94 89	95 89	96 89
45 45	89 21	89 46	90 11	90 35	91 0	91 25	91 50	92 16	92 41	93 7	93 33	94 33	95 33	96 33
24 0	92 48	93 12	93 34	94 9	94 25	94 50	95 15	95 40	96 5	96 30	96 56	97 22	97 47	98 98

Sid. Time.	21°	22°	23°	24°	25°	26°	27°	28°	29°	30°	31°	32°	33°	34°
H. M.														
0	0 98	41 99	8 99	35 100	3 100	31 100	59 101	27 101	56 102	34 102	57 103	26 103	57 104	29 105
15	102	2 102	28 102	55 103	22 103	49 104	17 104	45 105	18 105	43 106	12 106	41 107	11 107	42 108
30	105	22 105	48 106	14 106	40 107	7 107	33 108	2 108	29 108	58 109	26 109	54 110	24 110	53 111
45	108	42 109	7 109	32 109	57 110	23 110	49 111	16 111	43 112	11 112	38 113	6 113	34 114	2 114
1	0 112	0 112	24 112	49 113	14 113	39 114	5 114	31 114	56 115	22 115	49 116	16 116	43 117	10 117
15	115	18 115	42 116	16 116	30 116	54 117	19 117	44 118	9 118	34 119	0 119	25 119	50 120	18 120
30	118	39 119	0 119	23 119	46 120	10 120	33 120	57 121	21 121	46 122	11 122	35 123	0 123	25 123
45	121	54 122	17 122	38 123	2 123	24 123	47 124	9 124	32 124	56 125	21 125	44 126	8 126	32 126
2	0 125	14 125	35 125	57 126	18 126	39 127	1 127	23 127	45 128	8 128	31 128	54 129	17 129	37 130
15	128	31 128	53 129	14 129	34 129	54 130	15 130	36 130	57 131	19 131	40 132	2 132	24 132	45 133
30	131	54 132	13 132	35 132	5 133	10 133	30 133	50 134	9 134	29 134	50 135	11 135	30 135	51 136
45	135	15 135	32 135	50 136	7 136	26 136	44 137	3 137	22 137	41 138	1 138	18 138	37 138	57 139
3	0 138	34 138	52 139	9 139	26 139	43 140	0 140	17 140	34 140	51 141	11 141	28 141	45 142	3 142
15	141	57 142	13 142	29 142	45 143	1 143	17 143	33 143	49 144	5 144	23 144	39 144	55 145	12 145
30	145	20 145	35 145	50 146	5 146	19 146	33 146	48 147	3 147	18 147	33 147	49 148	1 148	19 148
45	148	45 148	59 149	12 149	26 149	38 149	51 150	5 150	19 150	33 150	46 150	59 151	13 151	28 151
4	0 152	10 152	22 152	32 152	46 152	58 153	10 153	22 153	35 153	47 153	59 154	11 154	24 154	36 154
15	155	36 155	47 155	58 156	8 156	19 156	30 156	40 156	51 157	2 157	13 157	23 157	34 157	45 157
30	159	4 159	13 159	22 159	31 159	40 159	50 159	59 160	8 160	18 160	27 160	36 160	46 160	56 160
45	162	35 162	44 162	50 162	26 163	3 163	10 163	18 163	25 163	33 163	41 163	49 163	57 164	6 164
5	0 166	2 166	8 166	14 166	20 166	26 166	32 166	38 166	44 166	50 166	57 167	3 167	9 167	16 167
15	169	30 169	35 169	40 169	44 169	48 169	53 169	58 170	2 170	7 170	13 170	17 170	22 170	26 170
30	173	0 173	3 173	6 173	9 173	12 173	15 173	19 173	21 173	24 173	28 173	31 173	34 173	37 173
45	176	29 176	32 176	33 176	34 176	36 176	38 176	40 176	41 176	43 176	44 176	45 176	47 176	50 176

Table of Ascendants for Latitudes 21° to 34°.—(contd.)

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Sid. Time.	21°	22°	23°	24°	25°	26°	27°	28°	29°	30°	31°	32°	33°	34°
H. M.	°	'	°	'	°	'	°	'	°	'	°	'	°	'
18 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
15 4	53 4	56 5	5 1	5 4	5 7	5 10	5 14	5 18	5 22	5 27	5 31	5 36	5 41	5 46
30 9	46 9	53 9	59 10	6 10	6 13	6 17	6 21	6 25	6 29	6 33	6 37	6 41	6 45	6 49
45 14	38 14	47 14	57 15	6 15	6 18	6 22	6 26	6 30	6 34	6 38	6 42	6 46	6 50	6 54
19 0	19 26	19 38	19 51	20 4	20 17	20 30	20 44	21 0	21 16	21 31	21 48	22 6	22 25	22 44
15 24	11 24	25 24	41 24	57 25	12 25	29 25	46 26	5 26	24 26	43 27	3 27	24 27	47 28	8 28
30 28	51 29	7 29	25 29	44 30	3 30	22 30	42 31	3 31	25 31	48 32	10 32	35 33	1 33	28 33
45 33	27 33	45 34	4 34	25 34	34 35	8 35	30 35	54 36	18 36	44 37	7 37	37 38	5 38	35 38
0 15	42 19	42 42	43 4	43 29	43 54	44 20	44 46	45 13	45 42	46 12	46 41	47 12	47 45	48 18
30 46	38 47	1 47	26 47	52 48	18 48	45 49	13 49	42 50	12 50	43 51	15 51	47 52	22 52	55 55
45 50	51 51	16 51	42 52	9 52	36 53	5 53	34 54	4 54	36 55	8 55	40 56	14 56	50 57	26 57
21 0	54 58	55 24	55 52	56 19	56 47	57 17	57 50	58 18	58 50	59 24	59 57	60 32	61 8	61 45
15 58	58 59	26 59	53 60	22 60	51 61	21 61	50 62	22 62	55 63	29 64	3 64	38 65	15 65	53 65
30 62	55 63	22 63	51 64	20 64	48 65	19 65	49 66	22 66	55 67	30 68	3 68	40 69	17 69	54 69
45 66	46 67	14 67	43 68	12 68	42 69	14 69	44 70	17 70	50 71	25 71	59 72	35 73	11 73	47 73
22 0	70 32	71 1	71 30	72 5	72 29	73 1	73 31	74 5	74 38	75 12	75 46	76 24	76 59	77 35
15 74	14 74	43 75	72 75	42 76	11 76	43 77	13 77	47 78	20 78	55 79	28 80	3 80	40 81	16 81
30 77	53 78	22 78	51 79	21 79	50 80	22 80	52 81	25 81	54 82	32 83	6 83	41 84	17 84	52 84
45 81	28 81	57 82	25 82	55 83	24 83	56 84	26 84	58 85	31 86	5 86	38 87	12 87	48 88	24 88
23 0	84 59	85 27	85 56	86 26	86 54	87 26	87 56	88 27	89 0	89 33	90 6	90 39	91 14	91 49
15 88	28 88	56 89	25 89	54 90	22 90	53 91	23 91	54 92	26 92	59 93	31 94	4 94	38 95	11 95
30 91	54 92	22 92	52 93	19 93	48 94	18 94	48 95	18 95	49 96	4 96	52 97	24 97	58 98	31 98
45 95	19 95	46 96	15 96	42 97	11 97	40 98	8 98	38 99	9 99	41 100	11 100	42 101	15 101	48 101
24 0	98 41	99 8	99 35	100 3	100 31	100 59	101 27	101 56	102 26	102 57	103 26	103 57	104 29	105 8

LOGARITHMIC TABLE.—(contd.)

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Hours or Degrees.

Min.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
0	3.1584	1.3802	1.0792	.9031	.7781	.6812	.6021	.5351	.4771	.4260	.3802	.3388	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
1	3.1584	1.3730	1.0756	.9007	.7763	.6798	.6009	.5341	.4762	.4252	.3797	.3382	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
2	2.8573	1.3660	1.0720	.8983	.7745	.6784	.5997	.5330	.4753	.4244	.3788	.3375	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
3	2.6812	1.3590	1.0685	.8959	.7728	.6769	.5982	.5315	.4744	.4236	.3780	.3368	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
4	2.5563	1.3522	1.0649	.8935	.7710	.6755	.5973	.5310	.4735	.4228	.3773	.3362	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
5	2.4594	1.3454	1.0614	.8912	.7692	.6741	.5961	.5300	.4726	.4220	.3766	.3355	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
6	2.3802	1.3388	1.0580	.8888	.7674	.6726	.5949	.5289	.4717	.4212	.3759	.3349	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
7	2.3133	1.3323	1.0546	.8865	.7657	.6712	.5937	.5279	.4708	.4204	.3752	.3342	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
8	2.2553	1.3258	1.0511	.8842	.7639	.6698	.5925	.5269	.4699	.4196	.3745	.3336	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
9	2.2041	1.3195	1.0478	.8819	.7622	.6684	.5913	.5259	.4690	.4188	.3737	.3329	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
10	2.1584	1.3133	1.0444	.8796	.7604	.6670	.5902	.5249	.4682	.4180	.3730	.3323	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
11	2.1170	1.3071	1.0411	.8773	.7587	.6656	.5890	.5239	.4673	.4172	.3723	.3316	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
12	2.0792	1.3010	1.0378	.8751	.7570	.6642	.5878	.5229	.4664	.4164	.3716	.3310	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
13	2.0444	1.2950	1.0345	.8728	.7552	.6628	.5866	.5219	.4655	.4156	.3709	.3303	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
14	2.0122	1.2891	1.0313	.8706	.7535	.6614	.5855	.5209	.4646	.4148	.3702	.3297	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
15	1.9823	1.2833	1.0280	.8683	.7518	.6600	.5843	.5199	.4638	.4141	.3695	.3291	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
16	1.9542	1.2775	1.0248	.8661	.7501	.6587	.5832	.5189	.4629	.4133	.3688	.3284	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
17	1.9279	1.2719	1.0216	.8639	.7484	.6573	.5820	.5179	.4617	.4125	.3681	.3278	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
18	1.9031	1.2663	1.0185	.8617	.7467	.6559	.5809	.5169	.4611	.4117	.3674	.3271	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
19	1.8796	1.2607	1.0153	.8595	.7451	.6546	.5797	.5159	.4603	.4109	.3667	.3265	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
20	1.8573	1.2553	1.0122	.8573	.7434	.6532	.5786	.5149	.4594	.4102	.3660	.3258	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
21	1.8361	1.2499	1.0091	.8552	.7417	.6519	.5774	.5139	.4585	.4094	.3653	.3252	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
22	1.8159	1.2445	1.0061	.8530	.7401	.6505	.5761	.5129	.4577	.4086	.3646	.3246	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
23	1.7966	1.2393	1.0030	.8509	.7384	.6492	.5752	.5120	.4568	.4079	.3639	.3239	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
24	1.7781	1.2341	1.0000	.8487	.7368	.6478	.5740	.5110	.4559	.4071	.3632	.3233	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
25	1.7604	1.2289	.9970	.8466	.7351	.6465	.5729	.5100	.4551	.4063	.3625	.3225	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
26	1.7434	1.2239	.9940	.8445	.7335	.6451	.5718	.5090	.4542	.4055	.3618	.3220	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.0000
27	1.7270	1.2188	.9910	.8424	.7318	.6438	.5706	.5081	.4534	.4048	.3611	.3214	.3000	.2644	.2316	.2012	.1730	.1468	.1224	.1000	.0794	.0604	.0430	.0270	.0124	.0000	.0000	.0000	.0000	.00

LOGARITHMIC TABLE—(contd.)

Hours or Degrees.

Min.	0	1	2	3	4	5	6	7	8	9	10	11	Min.
30	1.6812	1.2041	.9823	.8361	.7270	.6398	.5673	.5051	.4508	.4025	.3590	.3195	30
31	1.6670	1.1993	.9794	.8341	.7254	.6385	.5662	.5042	.4499	.4017	.3583	.3189	31
32	1.6532	1.1946	.9765	.8327	.7238	.6372	.5651	.5032	.4491	.4010	.3576	.3183	32
33	1.6398	1.1899	.9737	.8300	.7222	.6360	.5640	.5023	.4482	.4002	.3570	.3176	33
34	1.6269	1.1852	.9708	.8259	.7200	.6346	.5629	.5013	.4474	.3994	.3563	.3170	34
35	1.6143	1.1806	.9680	.8259	.7190	.6333	.5618	.5003	.4466	.3987	.3556	.3164	35
36	1.6021	1.1761	.9652	.8239	.7174	.6320	.5607	.4994	.4457	.3979	.3549	.3157	36
37	1.5902	1.1716	.9625	.8219	.7159	.6307	.5596	.4984	.4449	.3972	.3542	.3151	37
38	1.5786	1.1671	.9597	.8199	.7143	.6294	.5585	.4975	.4440	.3964	.3535	.3145	38
39	1.5673	1.1627	.9570	.8179	.7128	.6282	.5573	.4965	.4432	.3957	.3529	.3139	39
40	1.5563	1.1584	.9542	.8159	.7112	.6269	.5563	.4956	.4424	.3949	.3522	.3133	40
41	1.5456	1.1540	.9515	.8140	.7097	.6256	.5552	.4947	.4415	.3942	.3515	.3126	41
42	1.5351	1.1498	.9488	.8120	.7081	.6243	.5541	.4937	.4407	.3934	.3508	.3120	42
43	1.5249	1.1455	.9462	.8101	.7066	.6231	.5531	.4928	.4399	.3927	.3501	.3114	43
44	1.5149	1.1413	.9435	.8081	.7050	.6218	.5520	.4918	.4390	.3919	.3495	.3108	44
45	1.5051	1.1372	.9409	.8062	.7035	.6205	.5509	.4909	.4382	.3912	.3488	.3102	45
46	1.4956	1.1331	.9383	.8042	.7020	.6193	.5498	.4900	.4374	.3905	.3481	.3096	46
47	1.4863	1.1290	.9356	.8023	.7005	.6180	.5488	.4890	.4365	.3897	.3475	.3089	47
48	1.4771	1.1249	.9330	.8004	.6990	.6168	.5477	.4881	.4357	.3890	.3468	.3083	48
49	1.4682	1.1209	.9305	.7985	.6975	.6155	.5466	.4872	.4349	.3882	.3461	.3077	49
50	1.4594	1.1170	.9279	.7966	.6960	.6143	.5456	.4863	.4341	.3875	.3454	.3071	50
51	1.4508	1.1130	.9254	.7947	.6945	.6131	.5445	.4853	.4333	.3868	.3448	.3065	51
52	1.4424	1.1091	.9228	.7929	.6930	.6118	.5435	.4844	.4324	.3860	.3441	.3059	52
53	1.4341	1.1053	.9203	.7910	.6915	.6101	.5424	.4835	.4316	.3853	.3434	.3053	53
54	1.4260	1.1015	.9178	.7891	.6900	.6094	.5414	.4826	.4308	.3846	.3428	.3047	54
55	1.4180	1.0977	.9153	.7873	.6885	.6081	.5403	.4817	.4300	.3838	.3421	.3041	55
56	1.4102	1.0939	.9128	.7854	.6871	.6069	.5393	.4808	.4292	.3831	.3415	.3034	56
57	1.4025	1.0902	.9104	.7836	.6856	.6057	.5382	.4798	.4284	.3824	.3408	.3028	57
58	1.3949	1.0865	.9079	.7818	.6841	.6045	.5372	.4789	.4276	.3817	.3401	.3022	58
59	1.3875	1.0828	.9055	.7800	.6827	.6033	.5361	.4780	.4268	.3809	.3395	.3016	59

LOGARITHMIC TABLE—(contd.)

Hours or Degrees.

Min.	12	13	14	15	16	17	18	19	20	21	22	23	Min.
0	.3010	.2663	.2341	.2041	.1761	.1498	.1249	.1015	.0792	.0580	.0378	.0185	0
1	.3004	.2657	.2336	.2036	.1756	.1493	.1245	.1011	.0788	.0576	.0375	.0182	1
2	.2998	.2652	.2330	.2032	.1752	.1489	.1241	.1007	.0785	.0573	.0371	.0179	2
3	.2992	.2646	.2325	.2027	.1747	.1485	.1237	.1003	.0781	.0570	.0368	.0175	3
4	.2986	.2640	.2320	.2022	.1743	.1481	.1233	.0999	.0778	.0566	.0368	.0172	4
5	.2980	.2635	.2315	.2017	.1738	.1476	.1229	.0996	.0774	.0563	.0361	.0169	5
6	.2974	.2629	.2310	.2012	.1734	.1472	.1225	.0992	.0770	.0559	.0358	.0166	6
7	.2968	.2624	.2305	.2008	.1729	.1468	.1221	.0988	.0766	.0556	.0355	.0163	7
8	.2962	.2618	.2300	.2003	.1725	.1464	.1217	.0984	.0763	.0552	.0352	.0160	8
9	.2956	.2613	.2295	.1998	.1720	.1459	.1213	.0980	.0759	.0549	.0348	.0157	9
10	.2950	.2607	.2289	.1993	.1716	.1455	.1209	.0977	.0756	.0546	.0345	.0154	10
11	.2944	.2602	.2284	.1988	.1711	.1451	.1205	.0973	.0752	.0542	.0342	.0150	11
12	.2938	.2596	.2279	.1984	.1707	.1447	.1201	.0969	.0749	.0539	.0339	.0147	12
13	.2933	.2591	.2274	.1979	.1702	.1443	.1197	.0965	.0745	.0535	.0335	.0144	13
14	.2927	.2585	.2269	.1974	.1698	.1438	.1193	.0962	.0741	.0532	.0332	.0141	14
15	.2921	.2580	.2264	.1969	.1694	.1434	.1190	.0958	.0738	.0529	.0329	.0138	15
16	.2915	.2574	.2259	.1965	.1689	.1430	.1186	.0954	.0734	.0525	.0326	.0135	16
17	.2909	.2569	.2253	.1960	.1685	.1426	.1182	.0950	.0731	.0522	.0322	.0132	17
18	.2903	.2564	.2249	.1955	.1680	.1422	.1178	.0947	.0727	.0518	.0319	.0129	18
19	.2897	.2558	.2244	.1950	.1676	.1417	.1174	.0943	.0724	.0515	.0316	.0125	19
20	.2891	.2553	.2239	.1946	.1671	.1413	.1170	.0939	.0720	.0512	.0313	.0122	20
21	.2885	.2547	.2234	.1941	.1667	.1409	.1166	.0935	.0716	.0508	.0309	.0119	21
22	.2880	.2542	.2229	.1936	.1662	.1405	.1162	.0932	.0713	.0505	.0306	.0116	22
23	.2874	.2536	.2223	.1932	.1658	.1401	.1158	.0928	.0709	.0501	.0303	.0113	23
24	.2868	.2531	.2218	.1927	.1654	.1397	.1154	.0924	.0706	.0498	.0300	.0110	24
25	.2862	.2526	.2213	.1922	.1649	.1392	.1150	.0920	.0702	.0495	.0296	.0107	25
26	.2856	.2520	.2208	.1917	.1645	.1388	.1146	.0917	.0699	.0491	.0293	.0104	26
27	.2850	.2515	.2203	.1913	.1640	.1384	.1142	.0913	.0695	.0488	.0290	.0101	27
28	.2845	.2509	.2198	.1908	.1636	.1380	.1138	.0909	.0692	.0484	.0287	.0098	28
29	.2839	.2504	.2193	.1903	.1632	.1376	.1134	.0906	.0688	.0481	.0284	.0095	29

Hours or Degrees.

Min.	12	13	14	15	16	17	18	19	20	21	22	23	Min.
30	.2833	.2499	.2188	.1899	.1627	.1372	.1130	.0902	.0685	.0478	.0280	.0091	30
31	.2827	.2493	.2183	.1894	.1623	.1368	.1127	.0898	.0681	.0474	.0277	.0088	31
32	.2821	.2488	.2178	.1889	.1618	.1363	.1123	.0894	.0678	.0471	.0274	.0085	32
33	.2816	.2483	.2173	.1885	.1614	.1359	.1119	.0891	.0674	.0468	.0271	.0082	33
34	.2810	.2477	.2168	.1880	.1610	.1355	.1115	.0887	.0670	.0464	.0267	.0079	34
35	.2804	.2472	.2164	.1875	.1605	.1351	.1111	.0883	.0667	.0461	.0264	.0076	35
36	.2798	.2467	.2159	.1871	.1601	.1357	.1107	.0880	.0663	.0458	.0261	.0073	36
37	.2793	.2461	.2154	.1866	.1597	.1343	.1103	.0876	.0660	.0454	.0258	.0070	37
38	.2787	.2456	.2149	.1862	.1592	.1339	.1099	.0872	.0656	.0451	.0255	.0067	38
39	.2781	.2451	.2144	.1857	.1588	.1335	.1095	.0869	.0652	.0448	.0251	.0064	39
40	.2775	.2445	.2139	.1852	.1584	.1331	.1091	.0865	.0649	.0444	.0248	.0061	40
41	.2770	.2440	.2134	.1848	.1579	.1326	.1088	.0861	.0646	.0441	.0245	.0058	41
42	.2764	.2435	.2129	.1843	.1575	.1322	.1084	.0857	.0642	.0438	.0242	.0055	42
43	.2758	.2430	.2124	.1838	.1571	.1318	.1080	.0854	.0639	.0434	.0239	.0052	43
44	.2753	.2424	.2119	.1834	.1566	.1314	.1076	.0850	.0635	.0431	.0236	.0049	44
45	.2747	.2419	.2114	.1829	.1561	.1310	.1072	.0846	.0632	.0428	.0232	.0046	45
46	.2741	.2414	.2109	.1825	.1558	.1306	.1068	.0843	.0628	.0424	.0229	.0042	46
47	.2736	.2409	.2104	.1820	.1553	.1302	.1064	.0839	.0625	.0421	.0226	.0039	47
48	.2730	.2403	.2099	.1816	.1549	.1298	.1061	.0835	.0622	.0418	.0223	.0036	48
49	.2724	.2398	.2095	.1811	.1545	.1294	.1057	.0832	.0618	.0414	.0220	.0033	49
50	.2719	.2393	.2090	.1806	.1540	.1290	.1053	.0828	.0615	.0411	.0216	.0030	50
51	.2713	.2388	.2085	.1802	.1536	.1286	.1049	.0825	.0611	.0408	.0213	.0027	51
52	.2707	.2382	.2080	.1797	.1532	.1282	.1045	.0821	.0608	.0404	.0210	.0024	52
53	.2702	.2377	.2075	.1793	.1528	.1278	.1041	.0817	.0604	.0401	.0207	.0021	53
54	.2696	.2372	.2070	.1788	.1523	.1274	.1038	.0814	.0601	.0398	.0204	.0018	54
55	.2691	.2367	.2065	.1784	.1519	.1270	.1034	.0810	.0597	.0394	.0201	.0015	55
56	.2685	.2362	.2061	.1779	.1515	.1266	.1030	.0806	.0594	.0391	.0197	.0012	56
57	.2679	.2356	.2056	.1774	.1510	.1261	.1026	.0803	.0590	.0388	.0194	.0009	57
58	.2674	.2351	.2051	.1770	.1506	.1257	.1022	.0799	.0587	.0384	.0191	.0006	58
59	.2668	.2346	.2046	.1765	.1502	.1253	.1018	.0795	.0583	.0381	.0188	.0003	59

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