

The Astrological Society

Campanus House Tables

for

Latitudes 0° - 65°

Contents

Introduction to the Campanus House Tables

Campanus House Tables for Latitudes 0° to 65°

Galactic Conversion Tables (Positions as of Epoch 1950.0)

The Astrological Society

Introduction

The Astrological Society's Campanus Tables of Houses have been computer calculated from original equations, based on the obliquity of the ecliptic in 1950. They are the most up-to-date and accurate tables available for the Campanus system and will give optimally accurate cusps for all nativities within the given latitudes throughout the 20th century.

The avowed purpose of all systems of domification in use in astrology is to place the psychology of the native, as denoted by the planets in the signs, into a worldly context. That is, all house systems purport to identify the relationship between the particular earthly environment, the place of birth and the zodiac at the same moment.

The variations between systems occur because of the different frameworks chosen to delineate that apparently simple relationship. Some systems do not 'localise' the birth at all. 'Equal House' for example, only locates a nativity somewhere on a line spanning half the globe.

The Campanus system is both ancient and conceptually simple. It divides the spatial frame in the most obvious way. In essence the heavens are viewed as an orange, of twelve equal segments, whose poles are the North and South points of the horizon and whose equator is the Prime Vertical, the circle running from due East, through the zenith (that point of the sky directly overhead at the time), to due West. The Campanus system was pre-eminently used by the great astronomers/astrologers of the Renaissance and the first Elizabethan Age and might well have retained its position had it not been for the fact that the Placidian system made calculation and tabulation easier for publishers in the pre-electronic era.

Included in the tables in this volume is the longitude of the Eastern point of the ecliptic (the column headed E). This point, also known as the electrical ascendant, has been found to be of value in the interpretation of directions in the horoscope, and taken together with its opposite point on the ecliptic (the West point or Vertex) and the MC and IC, translates the four cardinal points into the chart.

The Astrological Society has been researching for some time into the various house systems and it became apparent that each system seemed to bring with it a different slant to the interpretation of the horoscope. Viewed under different systems of division, a single horoscope seemed to speak a slightly different dialect each time and each house system pre-disposes toward a particular type of interpretation of the chart. Campanus seems particularly well suited to Natal astrology with a psychological bias, and the Astrological Society wholeheartedly commend the use of this system of house division.

This edition includes one supplements to the main text: conversion tables from ecliptic to galactic plane.

The Astrological Society thanks the Science Research Council, the Royal Observatory and especially Saros for inspiration and data used herein and Annie Rimington, computer virtuoso, for the compilation.

Latitude : 00 N 00

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Latitude : 10 N 00

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05:55	28 51	29 29	28 49	29 29	7 04			11:55	28 38	27 24	20 38	21 26	17 02		
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Latitude : 20 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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12:05	1 22	0 00	26 00	22 00	24 00	29 00	18 04	18:05	1 09	24 00	23 00	1 37	10 00	8 00	0 37
12:10	2 43	1 00	27 00	24 01	25 00	0 00	18 36	18:10	2 18	25 00	24 00	3 14	11 00	10 00	1 15
12:15	4 05	2 00	28 00	25 09	27 00	1 00	19 08	18:15	3 26	26 00	26 00	4 51	13 00	11 00	1 52
12:20	5 27	3 00	29 00	26 17	28 00	3 00	19 40	18:20	4 35	28 00	27 00	6 28	14 00	12 00	2 29
12:25	6 48	5 00	0 00	27 25	29 00	4 00	20 12	18:25	5 44	29 00	29 00	8 05	16 00	13 00	3 06
12:30	8 10	6 00	1 00	28 33	0 00	6 00	20 44	18:30	6 53	0 00	0 00	9 41	17 00	14 00	3 44
12:35	9 31	7 00	3 00	29 42	2 00	7 00	21 17	18:35	8 02	1 00	2 00	11 17	18 00	16 00	4 21
12:40	10 53	8 00	4 00	0 51	3 00	8 00	21 49	18:40	9 11	3 00	3 00	12 54	20 00	17 00	4 58
12:45	12 14	10 00	5 00	2 00	4 00	10 00	22 22	18:45	10 21	4 00	5 00	14 29	21 00	18 00	5 35
12:50	13 35	11 00	6 00	3 09	6 00	11 00	22 55	18:50	11 30	5 00	6 00	16 05	22 00	19 00	6 13
12:55	14 56	12 00	7 00	4 19	7 00	13 00	23 28	18:55	12 39	6 00	8 00	17 40	24 00	20 00	6 50
13:00	16 17	13 00	8 00	5 29	8 00	14 00	24 01	19:00	13 49	8 00	9 00	19 15	25 00	22 00	7 27
13:05	17 38	14 00	9 00	6 39	10 00	16 00	24 35	19:05	14 58	9 00	11 00	20 49	26 00	23 00	8 04
13:10	18 58	16 00	10 00	7 49	11 00	17 00	25 08	19:10	16 08	10 00	12 00	22 23	28 00	24 00	8 41
13:15	20 18	17 00	11 00	9 00	12 00	19 00	25 42	19:15	17 18	12 00	14 00	23 57	29 00	25 00	9 18
13:20	21 38	18 00	13 00	10 12	14 00	20 00	26 16	19:20	18 28	13 00	16 00	25 30	0 00	26 00	9 55
13:25	22 58	19 00	14 00	11 23	15 00	21 00	26 50	19:25	19 38	14 00	17 00	27 02	2 00	27 00	10 32
13:30	24 18	20 00	15 00	12 35	17 00	23 00	27 24	19:30	20 48	16 00	19 00	28 34	3 00	28 00	11 09
13:35	25 37	21 00	16 00	13 47	18 00	24 00	27 58	19:35	21 59	17 00	20 00	0 06	4 00	0 00	11 46
13:40	26 57	23 00	17 00	15 00	19 00	26 00	28 32	19:40	23 10	18 00	22 00	1 37	5 00	1 00	12 23
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13:50	29 34	25 00	19 00	17 27	22 00	29 00	29 41	19:50	25 32	21 00	25 00	4 37	8 00	3 00	13 37
13:55	0 53	26 00	20 00	18 41	24 00	0 00	0 15	19:55	26 43	22 00	26 00	6 06	9 00	4 00	14 13
14:00	2 11	27 00	22 00	19 55	25 00	2 00	0 50	20:00	27 55	24 00	28 00	7 35	10 00	5 00	14 50
14:05	3 29	28 00	23 00	21 10	27 00	3 00	1 25	20:05	29 06	25 00	0 00	9 03	12 00	6 00	15 27
14:10	4 47	0 00	24 00	22 26	28 00	5 00	2 00	20:10	0 18	27 00	1 00	10 30	13 00	8 00	16 03
14:15	6 04	1 00	25 00	23 42	0 00	6 00	2 35	20:15	1 31	28 00	3 00	11 57	14 00	9 00	16 40
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14:55	16 13	10 00	4 00	4 08	12 00	18 00	7 19	20:55	11 17	9 00	15 00	23 10	24 00	18 00	21 30
15:00	17 28	11 00	5 00	5 28	13 00	19 00	7 54	21:00	12 32	11 00	17 00	24 32	25 00	19 00	22 06
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15:15	21 11	14 00	9 00	9 34	18 00	24 00	9 42	21:15	16 18	15 00	21 00	28 32	28 00	22 00	23 53
15:20	22 25	16 00	10 00	10 58	19 00	25 00	10 18	21:20	17 33	16 00	23 00	29 51	29 00	24 00	24 28
15:25	23 38	17 00	11 00	12 21	21 00	26 00	10 55	21:25	18 49	18 00	24 00	1 10	1 00	25 00	25 04
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15:40	27 17	20 00	15 00	16 36	26 00	1 00	12 44	21:40	22 39	22 00	29 00	5 02	4 00	28 00	26 50
15:45	28 29	21 00	16 00	18 03	27 00	2 00	13 20	21:45	23 56	24 00	0 00	6 18	5 00	29 00	27 25
15:50	29 42	22 00	17 00	19 30	29 00	3 00	13 57	21:50	25 13	25 00	2 00	7 34	6 00	0 00	28 00
15:55	0 54	24 00	18 00	20 57	0 00	5 00	14 33	21:55	26 31	27 00	3 00	8 50	7 00	2 00	28 35
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17:45	26 34	19 00	17 00	25 09	4 00	4 00	28 08	23:45	25 55	29 00	3 00	4 51	2 00	28 00	10 52
17:50	27 42	20 00	19 00	26 46	6 00	5 00	28 45	23:50	27 17	0 00	5 00	5 59	3 00	29 00	11 24
17:55	28 51	22 00	20 00	28 23	7 00	6 00	29 23	23:55	28 38	2 00	6 00	7 07	4 00	0 00	11 56
18:00	0 00	23 00	22 00	0 00	9 00	7 00	0 00	24:00	0 00	3 00	7 00	8 14	5 00	1 00	12 27

Latitude : 25 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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00:05	1 22	4	10	11 37	9	4	20 11	06:05	1 09	1	1	1 08	1	1	18 50
00:10	2 43	5	11	12 43	10	5	20 51	06:10	2 18	2	2	2 16	2	2	4 34
00:15	4 05	7	12	13 49	11	6	21 31	06:15	3 26	3	3	3 24	3	3	16 26
00:20	5 27	8	13	14 55	12	8	22 11	06:20	4 35	5	5	4 32	5	5	25 09
00:25	6 48	10	14	16 01	13	9	22 51	06:25	5 44	6	6	5 40	6	6	1 39
00:30	8 10	11	16	17 07	14	10	23 30	06:30	6 53	7	7	6 48	7	7	6 39
00:35	9 31	12	17	18 12	15	11	24 10	06:35	8 02	8	8	7 56	8	8	10 37
00:40	10 53	14	18	19 18	16	13	24 50	06:40	9 11	9	9	9 04	9	9	13 52
00:45	12 14	15	19	20 23	18	14	25 30	06:45	10 21	10	10	10 11	10	10	16 35
00:50	13 35	16	21	21 29	19	15	26 09	06:50	11 30	12	11	11 19	11	11	18 55
00:55	14 56	18	22	22 34	20	16	26 49	06:55	12 39	13	13	12 27	12	13	20 57
01:00	16 17	19	23	23 39	21	17	27 29	07:00	13 49	14	14	13 35	14	14	22 45
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01:15	20 18	23	26	26 54	24	21	29 28	07:15	17 18	17	17	16 57	17	17	27 14
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01:40	26 57	29	2	2 19	0 7	27	2 49	07:40	23 10	23	23	22 34	22	23	2 57
01:45	28 16	1 II	3	3 24	1	29	3 29	07:45	24 21	25	24	23 41	24	24	3 56
01:50	29 34	2	4	4 29	2	0 3	4 09	07:50	25 32	26	25	24 48	25	25	4 53
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02:35	11 11	13	14	14 15	13	11	10 19	08:35	6 22	7	6	4 47	5	5	12 25
02:40	12 27	14	16	15 21	14	12	11 01	08:40	7 35	8	7	5 53	6	6	13 10
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03:50	29 42	0 3	1	0 45	0 3	29	21 35	09:50	25 13	25	23	21 11	21	23	23 08
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04:00	2 05	3	3	2 58	2	2	23 18	10:00	27 49	28	25	23 21	23	26	24 30
04:05	3 17	4	4	4 05	3	3	24 12	10:05	29 07	29	27	24 26	24	27	25 10
04:10	4 28	5	5	5 12	5	4	25 07	10:10	0 26	0 3	28	25 31	26	28	25 51
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Latitude : 35 N 00

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Latitude : 35 N 00

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17:15	19 39	4 25	10 59	8 4	21 55	23:15	17 46	23:15	17 46	16 28	8 58	6 27	27 26	26 20	0 20
17:20	20 49	5 26	13 03	10 6	22 49	23:20	19 07	23:20	19 07	18 29	10 03	7 28	28 27	27 15	0 15
17:25	21 58	6 28	15 08	11 7	23 43	23:25	20 29	23:25	20 29	19 1	11 07	9 29	29 28	28 10	0 10
17:30	23 07	7 29	17 14	13 8	24 37	23:30	21 50	23:30	21 50	21 2	12 11	10 0	0 29	05 29	0 05
17:35	24 16	9 0	19 20	14 9	25 31	23:35	23 12	23:35	23 12	22 4	13 15	11 2	2 0	0 55	0 00
17:40	25 25	10 2	21 27	16 11	26 24	23:40	24 33	23:40	24 33	24 5	14 18	12 3	3 0	0 55	0 55
17:45	26 34	11 3	23 35	18 12	27 18	23:45	25 55	23:45	25 55	25 6	15 21	13 4	4 1	1 50	0 50
17:50	27 42	12 5	25 43	19 13	28 12	23:50	27 17	23:50	27 17	27 8	16 23	14 5	5 2	2 46	0 46
17:55	28 51	13 6	27 52	21 14	29 06	23:55	28 38	23:55	28 38	28 9	17 26	15 6	6 3	3 42	0 42
18:00	0 00	14 8	0 00	22 16	0 00	24:00	0 00	24:00	0 00	0 10	18 28	16 7	7 4	4 38	0 38

Latitude : 42 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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00:05	1 22	1 08	12 00	20 43	18 09	7 07	7 07	06:05	1 09	0 00	0 00	0 59	2 00	2 00	2 38
00:10	2 43	2 13	13 00	21 44	19 11	8 05	8 05	06:10	2 18	1 00	1 00	1 58	3 00	4 00	5 15
00:15	4 05	4 14	14 00	22 44	20 12	9 03	9 03	06:15	3 26	2 00	2 00	2 56	4 00	5 00	7 52
00:20	5 27	5 16	15 00	23 45	21 13	10 02	10 02	06:20	4 35	3 00	3 00	3 55	5 00	6 00	10 28
00:25	6 48	7 17	16 00	24 45	22 14	11 01	11 01	06:25	5 44	4 00	4 00	4 54	6 00	7 00	13 02
00:30	8 10	8 18	17 00	25 44	23 15	12 00	12 00	06:30	6 53	5 00	5 00	5 53	7 00	8 00	15 36
00:35	9 31	10 19	18 00	26 44	24 16	13 00	13 00	06:35	8 02	6 00	6 00	6 51	9 00	9 00	18 07
00:40	10 53	11 21	19 00	27 43	25 18	13 59	13 59	06:40	9 11	8 00	7 00	7 50	10 00	10 00	20 37
00:45	12 14	13 22	20 00	28 43	26 19	15 00	15 00	06:45	10 21	9 00	8 00	8 49	11 00	11 00	23 05
00:50	13 35	14 23	21 00	29 42	27 20	16 00	16 00	06:50	11 30	10 00	9 00	9 48	12 00	12 00	25 30
00:55	14 56	15 24	22 00	0 41	28 21	17 01	17 01	06:55	12 39	11 00	10 00	10 46	13 00	14 00	27 53
01:00	16 17	17 25	23 00	1 40	29 22	18 03	18 03	07:00	13 49	12 00	11 00	11 45	14 00	15 00	0 13
01:05	17 38	18 27	24 00	2 39	0 23	19 05	19 05	07:05	14 58	13 00	12 00	12 44	15 00	16 00	2 31
01:10	18 58	20 28	25 00	3 37	1 25	20 08	20 08	07:10	16 08	14 00	13 00	13 42	16 00	17 00	4 46
01:15	20 18	21 29	26 00	4 36	2 26	21 11	21 11	07:15	17 18	15 00	14 00	14 41	17 00	18 00	6 59
01:20	21 38	22 00	27 00	5 34	3 27	22 14	22 14	07:20	18 28	17 00	15 00	15 39	18 00	19 00	9 09
01:25	22 58	24 1	28 00	6 33	4 28	23 18	23 18	07:25	19 38	18 00	16 00	16 38	19 00	20 00	11 15
01:30	24 18	25 2	29 00	7 31	5 29	24 23	24 23	07:30	20 48	19 00	17 00	17 36	20 00	21 00	13 20
01:35	25 37	26 4	30 00	8 29	6 1	25 29	25 29	07:35	21 59	20 00	18 00	18 35	21 00	22 00	15 21
01:40	26 57	28 5	31 00	9 27	7 2	26 35	26 35	07:40	23 10	21 00	19 00	19 33	22 00	24 00	17 20
01:45	28 16	29 6	32 00	10 26	8 3	27 42	27 42	07:45	24 21	22 00	20 00	20 32	23 00	25 00	19 16
01:50	29 34	0 7	33 00	11 24	10 4	28 49	28 49	07:50	25 32	23 00	21 00	21 30	24 00	26 00	21 09
01:55	0 53	2 8	34 00	12 22	11 5	29 58	29 58	07:55	26 43	25 00	22 00	22 29	25 00	27 00	23 00
02:00	2 11	3 9	35 00	13 20	12 6	1 07	1 07	08:00	27 55	26 00	23 00	23 27	26 00	28 00	24 48
02:05	3 29	4 10	36 00	14 18	13 8	2 17	2 17	08:05	29 06	27 00	24 00	24 25	27 00	29 00	26 34
02:10	4 47	6 11	37 00	15 16	14 9	3 28	3 28	08:10	0 18	28 00	25 00	25 23	28 00	0 00	28 18
02:15	6 04	7 12	38 00	16 14	15 10	4 40	4 40	08:15	1 31	29 00	26 00	26 22	29 00	2 00	29 59
02:20	7 21	8 13	39 00	17 12	16 11	5 53	5 53	08:20	2 43	0 00	27 00	27 20	0 00	3 00	1 38
02:25	8 38	9 14	40 00	18 10	17 12	7 07	7 07	08:25	3 56	1 00	28 00	28 18	1 00	4 00	3 15
02:30	9 55	11 16	41 00	19 08	18 13	8 22	8 22	08:30	5 09	3 00	0 00	29 16	2 00	5 00	4 50
02:35	11 11	12 17	42 00	20 06	19 15	9 38	9 38	08:35	6 22	4 00	1 00	0 14	3 00	6 00	6 23
02:40	12 27	13 18	43 00	21 04	20 16	10 55	10 55	08:40	7 35	5 00	2 00	1 12	4 00	7 00	7 54
02:45	13 42	14 19	44 00	22 01	21 17	12 14	12 14	08:45	8 49	6 00	3 00	2 11	5 00	9 00	9 24
02:50	14 58	15 20	45 00	22 59	22 18	13 34	13 34	08:50	10 03	7 00	4 00	3 09	6 00	10 00	10 51
02:55	16 13	17 21	46 00	23 57	23 19	14 55	14 55	08:55	11 17	8 00	5 00	4 07	7 00	11 00	12 17
03:00	17 28	18 22	47 00	24 55	24 20	16 18	16 18	09:00	12 32	10 00	6 00	5 05	8 00	12 00	13 42
03:05	18 43	19 23	48 00	25 53	25 22	17 43	17 43	09:05	13 47	11 00	7 00	6 03	9 00	13 00	15 05
03:10	19 57	20 24	49 00	26 51	26 23	19 09	19 09	09:10	15 02	12 00	8 00	7 01	10 00	15 00	16 26
03:15	21 11	21 25	50 00	27 49	27 24	20 36	20 36	09:15	16 18	13 00	9 00	7 59	11 00	16 00	17 46
03:20	22 25	23 26	51 00	28 48	28 25	22 06	22 06	09:20	17 33	14 00	10 00	8 56	12 00	17 00	19 05
03:25	23 38	24 27	52 00	29 46	29 26	23 37	23 37	09:25	18 49	15 00	11 00	9 54	13 00	18 00	20 22
03:30	24 51	25 28	53 00	0 44	0 27	25 10	25 10	09:30	20 05	17 00	12 00	10 52	15 00	19 00	21 38
03:35	26 04	26 29	54 00	1 42	1 29	26 45	26 45	09:35	21 22	18 00	13 00	11 50	16 00	21 00	22 53
03:40	27 17	27 00	55 00	2 40	2 0	28 22	28 22	09:40	22 39	19 00	14 00	12 48	17 00	22 00	24 07
03:45	28 29	28 1	56 00	3 38	3 1	0 01	0 01	09:45	23 56	20 00	15 00	13 46	18 00	23 00	25 20
03:50	29 42	0 2	57 00	4 37	4 2	1 42	1 42	09:50	25 13	21 00	16 00	14 44	19 00	24 00	26 32
03:55	0 54	1 3	58 00	5 35	6 3	3 26	3 26	09:55	26 31	22 00	17 00	15 42	20 00	26 00	27 43
04:00	2 05	2 4	59 00	6 33	7 4	5 12	5 12	10:00	27 49	24 00	18 00	16 40	21 00	27 00	28 53
04:05	3 17	3 5	60 00	7 31	8 5	7 00	7 00	10:05	29 07	25 00	19 00	17 38	22 00	28 00	0 02
04:10	4 28	4 6	61 00	8 30	9 7	8 51	8 51	10:10	0 26	26 00	20 00	18 36	23 00	0 00	1 11
04:15	5 39	5 7	62 00	9 28	10 8	10 44	10 44	10:15	1 44	27 00	21 00	19 34	24 00	1 00	2 18
04:20	6 50	6 8	63 00	10 27	11 9	12 40	12 40	10:20	3 03	28 00	22 00	20 33	25 00	2 00	3 25
04:25	8 01	8 9	64 00	11 25	12 10	14 39	14 39	10:25	4 23	0 00	24 00	21 31	26 00	4 00	4 31
04:30	9 12	9 10	65 00	12 24	13 11	16 40	16 40	10:30	5 42	1 00	25 00	22 29	28 00	5 00	5 37
04:35	10 22	10 11	66 00	13 22	14 12	18 45	18 45	10:35	7 02	2 00	26 00	23 27	29 00	6 00	6 42
04:40	11 32	11 12	67 00	14 21	15 13	20 51	20 51	10:40	8 22	3 00	27 00	24 26	0 00	7 00	7 46
04:45	12 42	12 13	68 00	15 19	16 15	23 01	23 01	10:45	9 42	4 00	28 00	25 24	1 00	9 00	8 49
04:50	13 52	13 14	69 00	16 18	17 16	25 14	25 14	10:50	11 02	5 00	29 00	26 23	2 00	10 00	9 52
04:55	15 02	14 15	70 00	17 16	18 17	27 29	27 29	10:55	12 22	7 00	0 00	27 21	3 00	12 00	10 55
05:00	16 11	15 16	71 00	18 15	19 18	29 47	29 47	11:00	13 43	8 00	1 00	28 20	5 00	13 00	11 57
05:05	17 21	17 17	72 00	19 14	20 19	2 07	2 07	11:05	15 04	9 00	2 00	29 19	6 00	15 00	12 59
05:10	18 30	18 18	73 00	20 12	21 20	4 30	4 30	11:10	16 25	10 00	3 00	0 18	7 00	16 00	14 00
05:15	19 39	19 19	74 00	21 11	22 21	6 55	6 55	11:15	17 46	11 00	4 00	1 17	8 00	17 00	15 00
05:20	20 49	20 20	75 00	22 10	23 22	9 23	9 23	11:20	19 07	12 00	5 00	2 17	9 00	19 00	16 01
05:25	21 58	21 22	76 00	23 09	24 24	11 53	11 53	11:25	20 29	14 00	6 00	3 16	11 00	20 00	17 00
05:30	23 07	22 23	77 00	24 07	25 25	14 24	14 24	11:30	21 50	15 00	7 00	4 16	12 00	22 00	18 00
05:35	24 16	23 24	78 00	25 06	26 26	16 58	16 58	11:35	23 12	16 00	8 00	5 15	13 00	23 00	19 59
05:40	25 25	24 25	79 00	26 05	27 27	19 32	19 32	11:40	24 33	17 00	9 00	6 15	14 00	25 00	21 58
05:45	26 34	25 26	80 00	27 04	28 28	22 08	22 08	11:45	25 55	18 00	10 00	7 16	16 00	26 00	23 57
05:50	27 42	26 27	81 00	28 02	29 29	24 45	24 45	11:50	27 17	20 00	11 00	8 16	17 00	28 00	25 55
05:55	28 51	28 28	82 00	29 01	0 0	27 22	27 22	11:55	28 38	21 00	12 00	9 17	18 00	29 00	27 53
06:00	0 00	29 29	83 00	0 00	1 1	0 00	0 00	12:00	0 00	22 00	13 00	10 17	20 00	1 00	23 50

Latitude : 42 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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12:05	1 22	23 14	11 18	21 21	2 24	4 48	18:05	1 09	15 7	2 14	26 18	0 55			
12:10	2 43	24 15	12 20	22 4	25 45	18:10	2 18	16 9	4 28	27 19	1 50				
12:15	4 05	25 16	13 22	24 5	26 42	18:15	3 26	17 10	6 42	29 20	2 46				
12:20	5 27	26 17	14 24	25 7	27 39	18:20	4 35	18 12	8 55	0 11	21 41				
12:25	6 48	28 18	15 26	26 8	28 35	18:25	5 44	20 14	11 07	2 22	4 36				
12:30	8 10	29 19	16 28	28 10	29 32	18:30	6 53	21 15	13 19	3 24	5 31				
12:35	9 31	0 20	17 31	29 12	0 28	18:35	8 02	22 17	15 30	4 25	6 26				
12:40	10 53	1 21	18 35	1 13	1 24	18:40	9 11	23 19	17 40	6 26	7 21				
12:45	12 14	2 22	19 38	2 15	2 20	18:45	10 21	25 20	19 49	7 27	8 16				
12:50	13 35	3 23	20 43	4 16	3 16	18:50	11 30	26 22	21 56	9 28	9 11				
12:55	14 56	5 24	21 47	5 18	4 12	18:55	12 39	27 24	24 02	10 29	10 07				
13:00	16 17	6 25	22 52	7 19	5 07	19:00	13 49	28 25	26 07	11 1	11 02				
13:05	17 38	7 26	23 58	8 21	6 03	19:05	14 58	0 27	28 10	13 2	11 57				
13:10	18 58	8 27	25 04	10 23	6 58	19:10	16 08	1 29	0 12	14 3	12 52				
13:15	20 18	9 28	26 10	11 24	7 53	19:15	17 18	2 1	2 12	15 4	13 47				
13:20	21 38	10 29	27 17	13 26	8 48	19:20	18 28	4 3	4 10	16 5	14 42				
13:25	22 58	11 0	28 25	14 27	9 43	19:25	19 38	5 4	6 07	18 6	15 37				
13:30	24 18	12 1	29 33	16 29	10 38	19:30	20 48	6 6	8 02	19 7	16 32				
13:35	25 37	14 2	0 42	18 1	11 33	19:35	21 59	8 8	9 55	20 9	17 27				
13:40	26 57	15 3	1 52	19 2	12 28	19:40	23 10	9 10	11 46	21 10	18 22				
13:45	28 16	16 5	3 02	21 4	13 23	19:45	24 21	11 12	13 36	23 11	19 17				
13:50	29 34	17 6	4 13	23 6	14 18	19:50	25 32	12 14	15 23	24 12	20 11				
13:55	0 53	18 7	5 25	25 7	15 13	19:55	26 43	13 16	17 09	25 13	21 06				
14:00	2 11	19 8	6 37	26 9	16 07	20:00	27 55	15 18	18 54	26 14	22 01				
14:05	3 29	20 9	7 50	28 10	17 02	20:05	29 06	16 20	20 36	27 15	22 56				
14:10	4 47	21 10	9 04	0 12	17 57	20:10	0 18	18 22	22 17	28 16	23 51				
14:15	6 04	23 11	10 19	2 14	18 51	20:15	1 31	19 24	23 56	0 17	24 45				
14:20	7 21	24 12	11 35	4 15	19 46	20:20	2 43	20 26	25 34	1 19	25 40				
14:25	8 38	25 13	12 52	5 17	20 40	20:25	3 56	22 27	27 10	2 20	26 35				
14:30	9 55	26 14	14 10	7 18	21 35	20:30	5 09	23 29	28 44	3 21	27 30				
14:35	11 11	27 15	15 29	9 20	22 30	20:35	6 22	25 1	0 17	4 22	28 24				
14:40	12 27	28 16	16 49	11 21	23 24	20:40	7 35	26 3	1 48	5 23	29 19				
14:45	13 42	29 17	18 10	13 23	24 19	20:45	8 49	28 5	3 18	6 24	0 14				
14:50	14 58	0 18	19 32	15 24	25 13	20:50	10 03	29 7	4 47	7 25	1 08				
14:55	16 13	1 19	20 55	17 26	26 08	20:55	11 17	1 9	6 14	9 26	2 03				
15:00	17 28	3 20	22 20	19 28	27 03	21:00	12 32	2 11	7 40	10 27	2 57				
15:05	18 43	4 21	23 46	21 29	27 57	21:05	13 47	4 13	9 05	11 29	3 52				
15:10	19 57	5 23	25 13	23 1	28 52	21:10	15 02	6 15	10 28	12 0	4 47				
15:15	21 11	6 24	26 42	25 2	29 46	21:15	16 18	7 17	11 50	13 1	5 41				
15:20	22 25	7 25	28 12	27 4	0 41	21:20	17 33	9 19	13 11	14 2	6 36				
15:25	23 38	8 26	29 43	29 5	1 36	21:25	18 49	10 21	14 31	15 3	7 30				
15:30	24 51	9 27	1 16	1 7	2 30	21:30	20 05	12 23	15 50	16 4	8 25				
15:35	26 04	10 28	2 50	3 8	3 25	21:35	21 22	13 25	17 08	17 5	9 20				
15:40	27 17	11 29	4 26	4 10	4 20	21:40	22 39	15 26	18 25	18 6	10 14				
15:45	28 29	13 0	6 04	6 11	5 15	21:45	23 56	17 28	19 41	19 7	11 09				
15:50	29 42	14 2	7 43	8 12	6 09	21:50	25 13	18 0	20 56	20 9	12 03				
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16:00	2 05	16 4	11 06	12 15	7 59	22:00	27 49	21 4	23 23	22 11	13 53				
16:05	3 17	17 5	12 51	14 17	8 54	22:05	29 07	23 5	24 35	23 12	14 47				
16:10	4 28	18 6	14 37	16 18	9 49	22:10	0 26	25 7	25 47	24 13	15 42				
16:15	5 39	19 7	16 24	18 19	10 43	22:15	1 44	26 9	26 58	26 14	16 37				
16:20	6 50	20 9	18 14	20 21	11 38	22:20	3 03	28 11	28 08	27 15	17 32				
16:25	8 01	21 10	20 05	22 22	12 33	22:25	4 23	29 12	29 18	28 16	18 27				
16:30	9 12	23 11	21 58	24 24	13 28	22:30	5 42	1 14	0 27	29 18	19 22				
16:35	10 22	24 12	23 53	26 25	14 23	22:35	7 02	3 16	1 35	0 19	20 17				
16:40	11 32	25 14	25 50	27 26	15 18	22:40	8 22	4 17	2 43	1 20	21 12				
16:45	12 42	26 15	27 48	29 28	16 13	22:45	9 42	6 19	3 50	2 21	22 07				
16:50	13 52	27 16	29 48	1 29	17 08	22:50	11 02	7 20	4 56	3 22	23 02				
16:55	15 02	28 17	1 50	3 0	18 03	22:55	12 22	9 22	6 02	4 23	23 57				
17:00	16 11	29 19	3 53	5 2	18 58	23:00	13 43	11 23	7 08	5 24	24 53				
17:05	17 21	1 20	5 58	6 3	19 53	23:05	15 04	12 25	8 13	6 25	25 48				
17:10	18 30	2 21	8 04	8 4	20 49	23:10	16 25	14 26	9 17	7 27	26 44				
17:15	19 39	3 23	10 11	10 5	21 44	23:15	17 46	15 28	10 22	8 28	27 40				
17:20	20 49	4 24	12 20	11 7	22 39	23:20	19 07	17 29	11 25	9 29	28 36				
17:25	21 58	5 26	14 30	13 8	23 34	23:25	20 29	19 1	12 29	10 0	29 32				
17:30	23 07	6 27	16 41	15 9	24 29	23:30	21 50	20 2	13 32	11 1	0 28				
17:35	24 16	8 28	18 53	16 10	25 24	23:35	23 12	22 4	14 34	12 2	1 25				
17:40	25 25	9 0	21 05	18 12	26 19	23:40	24 33	23 5	15 36	13 4	2 21				
17:45	26 34	10 1	23 18	20 13	27 14	23:45	25 55	25 6	16 38	14 5	3 18				
17:50	27 42	11 3	25 32	21 14	28 10	23:50	27 17	26 8	17 40	15 6	4 15				
17:55	28 51	12 4	27 46	23 15	29 05	23:55	28 38	28 9	18 42	16 7	5 12				
18:00	0 00	13 6	0 00	24 17	0 00	24:00	0 00	29 10	19 43	17 8	6 10				

Latitude : 44 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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00:05	1 22	0 8	12	22 01	19	10	8 35	06:05	1 09	0 9	29	0 58	3	3	2 28
00:10	2 43	2	13	23 01	20	11	9 35	06:10	2 18	1	0 7	1 55	4	4	4 56
00:15	4 05	3	15	24 00	21	12	10 34	06:15	3 26	2	1	2 53	5	5	7 24
00:20	5 27	5	16	24 59	22	14	11 34	06:20	4 35	3	2	3 50	6	6	9 51
00:25	6 48	6	17	25 58	23	15	12 34	06:25	5 44	4	3	4 48	7	7	12 17
00:30	8 10	8	18	26 57	24	16	13 34	06:30	6 53	5	4	5 46	8	8	14 42
00:35	9 31	9	20	27 55	25	17	14 35	06:35	8 02	6	5	6 43	9	9	17 06
00:40	10 53	11	21	28 54	26	18	15 36	06:40	9 11	7	6	7 41	10	10	19 28
00:45	12 14	12	22	29 52	27	19	16 38	06:45	10 21	8	7	8 38	11	12	21 48
00:50	13 35	14	23	0 50	28	21	17 40	06:50	11 30	9	9	9 36	12	13	24 06
00:55	14 56	15	24	1 48	29	22	18 42	06:55	12 39	11	10	10 33	13	14	26 23
01:00	16 17	16	26	2 46	0 7	23	19 45	07:00	13 49	12	11	11 31	14	15	28 38
01:05	17 38	18	27	3 44	1	24	20 49	07:05	14 58	13	12	12 28	15	16	0 7 50
01:10	18 58	19	28	4 41	2	25	21 53	07:10	16 08	14	13	13 26	16	17	3 00
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Latitude : 44 N 00

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Latitude : 46 N 00

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Latitude : 46 N 00

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Latitude : 48 N 00

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Latitude : 48 N 00

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Latitude : 51 N 00

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17:55	28 51	8 23	27 04	4 20	28 59			23:55	28 38	25 9	25 14	22 11	11 06		
18:00	0 00	9 25	0 00	5 21	0 00			24:00	0 00	26 11	26 10	23 12	12 08		

Latitude : 52 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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00:05	1 22	27 12		27 54	25 13	13 13	47	06:05	1 09	28 28		0 53	4 4	4 2	04
00:10	2 43	29 13		28 48	26 14	14 14	50	06:10	2 18	29 29		1 45	5 5	5 4	07
00:15	4 05	1 08	15	29 42	27 15	15 15	53	06:15	3 26	0 02	0 00	2 38	6 6	6 6	10
00:20	5 27	2 16		0 02	36 28	17 16	57	06:20	4 35	1 1	1 3	3 30	7 7	7 8	13
00:25	6 48	4 17		1 30	29 18	18 18	01	06:25	5 44	2 1	4 23	8 8	9 9	10 10	16
00:30	8 10	5 19		2 24	0 00	19 19	05	06:30	6 53	3 2	5 15	9 9	10 10	12 12	18
00:35	9 31	7 20		3 17	1 20	20 20	10	06:35	8 02	5 3	6 08	10 10	11 11	14 14	19
00:40	10 53	8 21		4 10	2 21	21 21	15	06:40	9 11	6 4	7 00	11 11	12 12	16 16	20
00:45	12 14	10 22		5 04	2 22	22 22	21	06:45	10 21	7 5	7 53	12 12	13 13	18 18	20
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01:00	16 17	14 26		7 42	5 26	25 25	39	07:00	13 49	10 8	10 30	15 15	16 16	24 24	13
01:05	17 38	16 27		8 35	6 27	26 26	46	07:05	14 58	11 9	11 23	16 16	17 17	26 26	09
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01:15	20 18	18 00	0 00	10 20	8 29	29 29	02	07:15	17 18	13 11	13 08	18 18	20 20	29 29	57
01:20	21 38	20 1	11 13	9 0 00	0 00	0 00	11	07:20	18 28	14 12	14 00	19 19	21 21	1 00	49
01:25	22 58	21 2	12 05	10 2	1 20			07:25	19 38	16 13	14 53	20 20	22 22	3 40	
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03:10	19 57	19 24	0 00	1 26	28 25			09:10	15 02	9 3	3 09	10 16	7 16		
03:15	21 11	20 25	1 12	1 27	29 53			09:15	16 18	10 4	4 01	11 18	8 38		
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03:45	28 29	27 1	6 24	7 3	9 08			09:45	23 56	17 10	9 13	17 25	16 33		
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04:10	4 28	3 6	10 46	12 9	17 27			10:10	0 00	26 23	15 13	33 23	2 22	45	
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06:00	0 00	27 27	0 00	3 3	0 00			12:00	0 00	18 6	3 01	19 4	17 16		

Latitude : 52 N 00

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12:10	2 43	20 08	8 00	4 50	22 00	7 00	19 21	18:10	2 18	11 26	6 07	9 00	24 00	2 02	
12:15	4 05	21 09	9 00	5 46	24 00	9 00	20 23	18:15	3 26	12 28	9 09	11 25	25 00	3 03	
12:20	5 27	22 10	10 00	6 41	25 00	11 00	21 25	18:20	4 35	13 00	12 09	12 26	26 00	4 04	
12:25	6 48	24 11	11 00	7 37	27 00	12 00	22 27	18:25	5 44	14 01	15 08	13 28	28 00	5 05	
12:30	8 10	25 12	12 00	8 33	28 00	14 00	23 29	18:30	6 53	16 03	18 04	15 29	29 00	6 06	
12:35	9 31	26 13	13 00	9 29	0 00	16 00	24 30	18:35	8 02	17 04	20 57	16 00	0 00	7 07	
12:40	10 53	27 14	14 00	10 26	1 00	17 00	25 31	18:40	9 11	18 06	23 46	17 01	1 00	8 08	
12:45	12 14	28 15	15 00	11 23	3 00	19 00	26 32	18:45	10 21	19 08	26 33	19 02	2 00	9 09	
12:50	13 35	29 16	16 00	12 21	4 00	21 00	27 33	18:50	11 30	20 09	29 15	20 03	3 00	10 10	
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13:05	17 38	3 19	19 00	15 16	9 00	26 00	0 36	19:05	14 58	24 15	6 59	24 07	13 13		
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13:30	24 18	8 23	20 00	20 17	18 00	4 00	5 37	19:30	20 48	1 24	18 31	0 12	18 17		
13:35	25 37	9 24	21 00	21 19	20 00	6 00	6 37	19:35	21 59	2 26	20 38	1 13	19 18		
13:40	26 57	10 25	22 00	22 22	22 00	7 00	7 38	19:40	23 10	4 28	22 41	2 15	20 18		
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14:05	3 29	16 00	0 00	27 46	2 00	16 00	12 37	20:05	29 06	11 09	2 04	7 20	25 21		
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15:10	19 57	0 13	13 00	13 54	1 00	6 00	25 37	21:10	15 02	0 08	21 28	21 04	8 23		
15:15	21 11	1 14	14 00	15 19	4 00	8 00	26 37	21:15	16 18	2 10	22 45	22 05	9 23		
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15:25	23 38	3 16	18 00	18 14	8 00	11 00	28 37	21:25	18 49	5 15	25 14	24 07	11 23		
15:30	24 51	5 17	19 00	19 45	10 00	12 00	29 38	21:30	20 05	6 17	26 27	25 09	12 23		
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16:00	2 05	11 24	29 00	29 42	24 00	21 00	5 40	22:00	27 49	16 00	3 20	1 15	18 22		
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17:40	25 25	4 18	17 00	17 51	0 00	17 00	25 56	23:40	24 33	19 05	23 19	20 08	8 35		
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17:55	28 51	7 22	26 00	26 56	5 00	21 00	28 59	23:55	28 38	24 09	26 05	23 11	11 41		
18:00	0 00	8 24	0 00	0 00	6 22	0 00	0 00	24:00	0 00	26 11	26 59	24 12	12 44		

Latitude : 53 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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00:10	2 43	29	13	29 37	27	15	15 25	06:10	2 18	29	28	1 44	5	6	4 03
00:15	4 05	0 8	15	0 2 31	27	16	16 29	06:15	3 26	0 2	29	2 36	6	7	6 04
00:20	5 27	2	16	1 24	28	17	17 33	06:20	4 35	1	0 11	3 28	7	8	8 05
00:25	6 48	3	17	2 17	29	18	18 38	06:25	5 44	2	1	4 19	8	9	10 05
00:30	8 10	5	19	3 10	0 11	19	19 42	06:30	6 53	3	2	5 11	9	10	12 05
00:35	9 31	6	20	4 02	1	20	20 47	06:35	8 02	4	3	6 03	10	11	14 04
00:40	10 53	8	21	4 55	2	22	21 53	06:40	9 11	5	4	6 55	11	12	16 03
00:45	12 14	9	22	5 47	3	23	22 59	06:45	10 21	6	5	7 47	12	13	18 01
00:50	13 35	11	24	6 39	4	24	24 05	06:50	11 30	8	6	8 39	13	14	19 58
00:55	14 56	12	25	7 32	5	25	25 11	06:55	12 39	9	7	9 30	14	15	21 54
01:00	16 17	14	26	8 24	6	26	26 18	07:00	13 49	10	8	10 22	15	16	23 49
01:05	17 38	15	27	9 16	7	27	27 26	07:05	14 58	11	9	11 14	16	18	25 43
01:10	18 58	17	28	10 08	8	28	28 34	07:10	16 08	12	10	12 06	17	19	27 36
01:15	20 18	18	0 5	10 59	9	0 5	29 42	07:15	17 18	13	11	12 58	18	20	29 28
01:20	21 38	20	1	11 51	10	1	0 51	07:20	18 28	14	12	13 49	19	21	1 11 19
01:25	22 58	21	2	12 43	11	2	2 01	07:25	19 38	15	13	14 41	20	22	3 08
01:30	24 18	22	3	13 35	12	3	3 11	07:30	20 48	16	14	15 33	21	23	4 56
01:35	25 37	24	4	14 26	13	4	4 21	07:35	21 59	17	15	16 24	22	24	6 43
01:40	26 57	25	5	15 18	14	5	5 32	07:40	23 10	19	16	17 16	23	25	8 29
01:45	28 16	27	6	16 09	15	7	6 44	07:45	24 21	20	16	18 08	24	27	10 13
01:50	29 34	28	7	17 01	16	8	7 57	07:50	25 32	21	17	18 59	25	28	11 56
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02:00	2 11	1 11	9	18 44	18	10	10 24	08:00	27 55	23	19	20 43	26	0 11	15 18
02:05	3 29	2	11	19 35	19	11	11 38	08:05	29 06	24	20	21 34	27	1	16 57
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Latitude : 54 N 00

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Latitude : 54 N 00

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Latitude : 55 N 00

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Latitude : 56 N 00

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Latitude : 56 N 00

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16:20	6 50	13	23	29 45	9	29	8	59		22:20	3 03	20	6	12 34	8	21	24 06
16:25	8 01	15	24	1 00	49	11	0 00	10		22:25	4 23	22	8	13 32	9	23	25 08
16:30	9 12	16	26	3 57	13	2	11	04		22:30	5 42	24	10	14 30	10	24	26 09
16:35	10 22	17	27	6 11	15	3	12	07		22:35	7 02	25	12	15 26	11	25	27 11
16:40	11 32	18	28	8 31	17	4	13	10		22:40	8 22	27	14	16 22	12	26	28 13
16:45	12 42	19	29	10 57	18	5	14	13		22:45	9 42	29	16	17 18	13	27	29 15
16:50	13 52	20	0 00	13 28	20	7	15	16		22:50	11 02	1 00	18	18 13	14	28	0 00
16:55	15 02	21	1	16 07	22	8	16	19		22:55	12 22	2	19	19 08	15	29	1 19
17:00	16 11	22	2	18 52	24	9	17	22		23:00	13 43	4	21	20 03	16	0 00	2 22
17:05	17 21	23	4	21 44	25	11	18	25		23:05	15 04	6	23	20 57	17	1	3 24
17:10	18 30	25	5	24 43	27	12	19	28		23:10	16 25	7	25	21 51	18	3	4 26
17:15	19 39	26	6	27 49	29	13	20	31		23:15	17 46	9	26	22 44	19	4	5 29
17:20	20 49	27	7	1 00	0 00	14	21	34		23:20	19 07	11	28	23 37	20	5	6 32
17:25	21 58	28	8	4 21	2	16	22	37		23:25	20 29	12	0 00	24 30	20	6	7 34
17:30	23 07	29	10	7 47	4	17	23	41		23:30	21 50	14	1	25 22	21	7	8 37
17:35	24 16	0 00	11	11 20	5	18	24	44		23:35	23 12	16	3	26 14	22	8	9 40
17:40	25 25	1	12	14 57	7	19	25	47		23:40	24 33	17	4	27 06	23	9	10 44
17:45	26 34	3	14	18 39	8	20	26	50		23:45	25 55	19	6	27 58	24	10	11 47
17:50	27 42	4	15	22 24	10	22	27	54		23:50	27 17	21	7	28 50	25	12	12 51
17:55	28 51	5	16	26 11	11	23	28	57		23:55	28 38	22	9	29 41	26	13	13 55
18:00	0 00	6	18	0 00	12	24	0 00	00		24:00	0 00	24	10	0 00	32	27	14 59

Latitude : 57 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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00:05	1 22	25 12	2 20	29 15	16 35			06:05	1 09	27 26	0 49	6 5	1 54		
00:10	2 43	27 13	3 09	0 16	17 40			06:10	2 18	28 27	1 38	7 6	3 47		
00:15	4 05	28 14	3 59	1 18	18 45			06:15	3 26	29 28	2 27	7 8	5 41		
00:20	5 27	0 16	4 49	1 19	19 51			06:20	4 35	0 29	3 16	8 9	7 34		
00:25	6 48	2 17	5 38	2 20	20 56			06:25	5 44	1 0 00	4 05	9 10	9 27		
00:30	8 10	3 18	6 27	3 21	22 02			06:30	6 53	2 1	4 54	10 11	11 20		
00:35	9 31	5 20	7 17	4 22	23 09			06:35	8 02	3 2	5 43	11 12	13 12		
00:40	10 53	6 21	8 06	5 23	24 15			06:40	9 11	4 3	6 32	12 13	15 04		
00:45	12 14	8 22	8 55	6 24	25 22			06:45	10 21	5 4	7 21	13 14	16 55		
00:50	13 35	9 23	9 43	7 26	26 30			06:50	11 30	7 5	8 10	14 15	18 46		
00:55	14 56	11 25	10 32	8 27	27 37			06:55	12 39	8 5	8 59	15 16	20 35		
01:00	16 17	12 26	11 21	9 28	28 45			07:00	13 49	9 6	9 48	16 17	22 24		
01:05	17 38	14 27	12 10	10 29	29 54			07:05	14 58	10 7	10 37	17 19	24 13		
01:10	18 58	15 28	12 58	11 0 00	1 00 03			07:10	16 08	11 8	11 26	18 20	26 00		
01:15	20 18	17 29	13 47	12 1	2 12			07:15	17 18	12 9	12 15	19 21	27 46		
01:20	21 38	18 1 00	14 36	13 2	3 22			07:20	18 28	13 10	13 03	20 22	29 32		
01:25	22 58	20 2	15 24	14 3	4 33			07:25	19 38	14 11	13 52	20 23	1 17		
01:30	24 18	21 3	16 13	14 5	5 44			07:30	20 48	15 12	14 41	21 24	3 00		
01:35	25 37	22 4	17 01	15 6	6 55			07:35	21 59	16 13	15 30	22 25	4 43		
01:40	26 57	24 5	17 50	16 7	8 07			07:40	23 10	17 14	16 19	23 26	6 24		
01:45	28 16	25 6	18 38	17 8	9 20			07:45	24 21	19 15	17 07	24 27	8 05		
01:50	29 34	27 7	19 26	18 9	10 33			07:50	25 32	20 16	17 56	25 29	9 44		
01:55	0 53	28 8	20 15	19 10	11 47			07:55	26 43	21 17	18 45	26 0 00	11 23		
02:00	2 11	29 9	21 03	20 11	13 01			08:00	27 55	22 18	19 34	27 1	13 00		
02:05	3 29	1 10	21 51	21 13	14 17			08:05	29 06	23 18	20 22	28 2	14 36		
02:10	4 47	2 11	22 40	22 14	15 32			08:10	0 18	24 19	21 11	29 3	16 12		
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02:20	7 21	5 13	24 16	24 16	18 06			08:20	2 43	26 21	22 48	1 6	19 19		
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02:35	11 11	9 17	26 42	27 19	22 03			08:35	6 22	0 24	25 14	4 9	23 52		
02:40	12 27	10 18	27 30	28 20	23 23			08:40	7 35	1 25	26 02	5 10	25 20		
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03:00	17 28	15 22	0 44	1 25	28 54			09:00	12 32	5 29	29 16	9 15	1 06		
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03:10	19 57	17 23	2 21	3 27	1 45			09:10	15 02	7 1	0 53	10 18	3 53		
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04:00	2 05	29 3	10 26	12 8	17 00			10:00	27 49	19 10	8 57	21 1	16 59		
04:05	3 17	0 4	11 15	13 9	18 37			10:05	29 07	20 11	9 45	22 2	18 13		
04:10	4 28	1 5	12 04	14 10	20 16			10:10	0 26	21 12	10 34	23 3	19 27		
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04:20	6 50	4 7	13 41	16 13	23 36			10:20	3 03	23 14	12 10	25 6	21 53		
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05:55	28 51	25 24	29 11	4 3	28 06			11:55	28 38	15 1	27 40	18 5	13 25		
06:00	0 00	26 25	0 00	5 4	0 00			12:00	0 00	16 2	28 30	20 7	14 29		

Latitude : 57 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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12:05	1 22	17 03	3 00	29 00	21 00	8 00	15 00	18:05	1 09	7 03	17 03	4 06	15 03	26 00	1 04
12:10	2 43	18 06	4 00	0 00	23 00	10 00	16 00	18:10	2 18	8 06	19 06	8 10	17 06	27 00	2 08
12:15	4 05	19 09	5 00	1 00	24 00	11 00	17 00	18:15	3 26	9 09	20 09	12 11	18 09	28 00	3 11
12:20	5 27	20 12	6 00	2 00	25 00	12 00	18 00	18:20	4 35	10 12	22 12	16 08	19 12	29 00	4 15
12:25	6 48	21 15	7 00	3 00	26 00	13 00	19 00	18:25	5 44	11 15	23 15	19 59	21 15	0 00	5 19
12:30	8 10	23 18	8 00	4 00	27 00	14 00	20 00	18:30	6 53	12 18	25 18	23 44	22 18	1 00	6 23
12:35	9 31	24 21	9 00	5 00	28 00	15 00	21 00	18:35	8 02	13 21	26 21	27 21	23 21	3 00	7 26
12:40	10 53	25 24	10 00	6 00	29 00	16 00	22 00	18:40	9 11	14 24	28 24	0 00	24 24	4 00	8 30
12:45	12 14	26 27	11 00	7 00	30 00	17 00	23 00	18:45	10 21	15 27	29 27	4 12	25 27	5 00	9 34
12:50	13 35	27 30	12 00	8 00	1 00	18 00	24 00	18:50	11 30	16 30	1 00	7 25	27 30	6 00	10 37
12:55	14 56	28 33	13 00	9 00	2 00	19 00	25 00	18:55	12 39	17 33	3 00	10 29	28 33	7 00	11 41
13:00	16 17	29 36	14 00	10 00	3 00	20 00	26 00	19:00	13 49	18 36	4 00	13 25	29 36	8 00	12 45
13:05	17 38	30 39	15 00	11 00	4 00	21 00	27 00	19:05	14 58	19 39	6 00	16 14	0 00	9 00	13 48
13:10	18 58	31 42	16 00	12 00	5 00	22 00	28 00	19:10	16 08	20 42	8 00	18 54	1 00	10 14	14 52
13:15	20 18	32 45	17 00	13 00	6 00	23 00	29 00	19:15	17 18	21 45	10 00	21 28	2 00	12 15	15 55
13:20	21 38	33 48	18 00	14 00	7 00	24 00	30 00	19:20	18 28	22 48	12 00	23 54	3 00	13 16	16 58
13:25	22 58	34 51	19 00	15 00	8 00	25 00	1 00	19:25	19 38	23 51	14 00	26 14	4 00	14 18	17 02
13:30	24 18	35 54	20 00	16 00	9 00	26 00	2 00	19:30	20 48	24 54	16 00	28 27	5 00	15 19	18 05
13:35	25 37	36 57	21 00	17 00	10 00	27 00	3 00	19:35	21 59	25 57	17 00	0 00	7 00	16 20	19 08
13:40	26 57	37 60	22 00	18 00	11 00	28 00	4 00	19:40	23 10	26 60	18 00	2 38	8 00	17 21	20 12
13:45	28 16	38 63	23 00	19 00	12 00	29 00	5 00	19:45	24 21	27 63	19 00	4 35	9 00	18 22	21 15
13:50	29 34	39 66	24 00	20 00	13 00	30 00	6 00	19:50	25 32	38 66	20 00	6 28	10 00	19 23	22 18
13:55	0 00	40 69	25 00	21 00	14 00	1 00	7 00	19:55	26 43	41 69	21 00	8 16	11 00	20 24	23 21
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14:05	3 29	42 75	27 00	23 00	16 00	3 00	9 00	20:05	29 06	43 75	23 00	11 42	13 00	22 26	25 27
14:10	4 47	43 78	28 00	24 00	17 00	4 00	10 00	20:10	0 00	44 78	24 00	13 19	14 00	23 27	26 30
14:15	6 04	44 81	29 00	25 00	18 00	5 00	11 00	20:15	1 31	45 81	25 00	14 53	15 00	24 28	27 33
14:20	7 21	45 84	30 00	26 00	19 00	6 00	12 00	20:20	2 43	46 84	26 00	16 24	16 00	25 29	28 36
14:25	8 38	46 87	1 00	27 00	20 00	7 00	13 00	20:25	3 56	47 87	27 00	17 52	17 00	26 30	29 39
14:30	9 55	47 90	2 00	28 00	21 00	8 00	14 00	20:30	5 09	48 90	28 00	19 17	18 00	27 31	30 42
14:35	11 11	48 93	3 00	29 00	22 00	9 00	15 00	20:35	6 22	49 93	29 00	20 40	19 00	28 32	31 45
14:40	12 27	49 96	4 00	30 00	23 00	10 00	16 00	20:40	7 35	50 96	30 00	22 01	20 00	29 33	32 48
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14:50	14 58	51 02	6 00	2 00	25 00	12 00	18 00	20:50	10 03	52 02	32 00	24 37	22 00	31 35	34 54
14:55	16 13	52 05	7 00	3 00	26 00	13 00	19 00	20:55	11 17	53 05	33 00	25 52	23 00	32 36	35 57
15:00	17 28	53 08	8 00	4 00	27 00	14 00	20 00	21:00	12 32	54 08	34 00	27 05	24 00	33 37	36 60
15:05	18 43	54 11	9 00	5 00	28 00	15 00	21 00	21:05	13 47	55 11	35 00	28 17	25 00	34 38	37 63
15:10	19 57	55 14	10 00	6 00	29 00	16 00	22 00	21:10	15 02	56 14	36 00	29 27	26 00	35 39	38 66
15:15	21 11	56 17	11 00	7 00	30 00	17 00	23 00	21:15	16 18	57 17	37 00	0 00	27 00	36 40	39 69
15:20	22 25	57 20	12 00	8 00	1 00	18 00	24 00	21:20	17 33	58 20	38 00	1 43	28 00	37 41	40 72
15:25	23 38	58 23	13 00	9 00	2 00	19 00	25 00	21:25	18 49	59 23	39 00	2 49	29 00	38 42	41 75
15:30	24 51	59 26	14 00	10 00	3 00	20 00	26 00	21:30	20 05	60 26	40 00	3 54	30 00	39 43	42 78
15:35	26 04	60 29	15 00	11 00	4 00	21 00	27 00	21:35	21 22	61 29	41 00	4 58	31 00	40 44	43 81
15:40	27 17	61 32	16 00	12 00	5 00	22 00	28 00	21:40	22 39	62 32	42 00	6 02	32 00	41 45	44 84
15:45	28 29	62 35	17 00	13 00	6 00	23 00	29 00	21:45	23 56	63 35	43 00	7 04	33 00	42 46	45 87
15:50	29 42	63 38	18 00	14 00	7 00	24 00	30 00	21:50	25 13	64 38	44 00	8 05	34 00	43 47	46 90
15:55	0 00	64 41	19 00	15 00	8 00	25 00	1 00	21:55	26 31	65 41	45 00	9 05	35 00	44 48	47 93
16:00	2 05	65 44	20 00	16 00	9 00	26 00	2 00	22:00	27 49	66 44	46 00	10 05	36 00	45 49	48 96
16:05	3 17	66 47	21 00	17 00	10 00	27 00	3 00	22:05	29 07	67 47	47 00	11 04	37 00	46 50	49 99
16:10	4 28	67 50	22 00	18 00	11 00	28 00	4 00	22:10	0 00	68 50	48 00	12 02	38 00	47 51	51 02
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16:20	6 50	69 56	24 00	20 00	13 00	30 00	6 00	22:20	3 03	70 56	50 00	15 56	40 00	49 53	53 08
16:25	8 01	70 59	25 00	21 00	14 00	1 00	7 00	22:25	4 23	71 59	51 00	17 53	41 00	50 54	54 11
16:30	9 12	71 62	26 00	22 00	15 00	2 00	8 00	22:30	5 42	72 62	52 00	19 49	42 00	51 55	55 14
16:35	10 22	72 65	27 00	23 00	16 00	3 00	9 00	22:35	7 02	73 65	53 00	21 44	43 00	52 56	56 17
16:40	11 32	73 68	28 00	24 00	17 00	4 00	10 00	22:40	8 22	74 68	54 00	23 39	44 00	53 57	57 20
16:45	12 42	74 71	29 00	25 00	18 00	5 00	11 00	22:45	9 42	75 71	55 00	25 33	45 00	54 58	58 23
16:50	13 52	75 74	30 00	26 00	19 00	6 00	12 00	22:50	11 02	76 74	56 00	27 27	46 00	55 59	59 26
16:55	15 02	76 77	1 00	27 00	20 00	7 00	13 00	22:55	12 22	77 77	57 00	29 21	47 00	56 60	60 29
17:00	16 11	77 80	2 00	28 00	21 00	8 00	14 00	23:00	13 43	78 80	58 00	31 14	48 00	57 61	61 32
17:05	17 21	78 83	3 00	29 00	22 00	9 00	15 00	23:05	15 04	79 83	59 00	33 07	49 00	58 62	62 35
17:10	18 30	79 86	4 00	30 00	23 00	10 00	16 00	23:10	16 25	80 86	60 00	35 00	50 00	59 63	63 38
17:15	19 39	80 89	5 00	1 00	24 00	11 00	17 00	23:15	17 46	81 89	61 00	36 51	51 00	60 64	64 41
17:20	20 49	81 92	6 00	2 00	25 00	12 00	18 00	23:20	19 07	82 92	62 00	38 43	52 00	61 65	65 44
17:25	21 58	82 95	7 00	3 00	26 00	13 00	19 00	23:25	20 29	83 95	63 00	40 35	53 00	62 66	66 47
17:30	23 07	83 98	8 00	4 00	27 00	14 00	20 00	23:30	21 50	84 98	64 00	42 26	54 00	63 67	67 50
17:35	24 16	84 01	9 00	5 00	28 00	15 00	21 00	23:35	23 12	85 01	65 00	44 15	55 00	64 68	68 53
17:40	25 25	85 04	10 00	6 00	29 00	16 00	22 00	23:40	24 33	86 04	66 00	46 08	56 00	65 69	69 56
17:45	26 34	86 07	11 00	7 00	30 00	17 00	23 00	23:45	25 55	87 07	67 00	48 00	57 00	66 70	70 59
17:50	27 42	87 10	12 00	8 00	1 00	18 00	24 00	23:50	27 17	88 10	68 00	49 50	58 00	67 71	71 62
17:55	28 51	88 13	13 00	9 00	2 00	19 00	25 00	23:55	28 38	89 13	69 00	51 40	59 00	68 72	72 65
18:00	0 00	89 16	14 00	10 00	3 00	20 00	26 00	24:00	0 00	90 16	70 00	53 30	60 00	69 73	73 68

Latitude : 58 N 00

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00:05	1 22	25 12	3 18	29 16	17 07			06:05	1 09	27 26	0 48	6 6	1 52		
00:10	2 43	26 13	4 07	0 17	18 12			06:10	2 18	28 27	1 37	7 7	3 44		
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Latitude : 59 N 00

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Latitude : 61 N 00

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Latitude : 61 N 00

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Latitude : 62 N 00

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Latitude : 62 N 00

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17:25	21 58	25 29	16 10	13 19	22 15			23:25	20 29	9 29	28 01	38 26	9 10	27	
17:30	23 07	26 10	21 01	14 20	23 22			23:30	21 50	11 50	29 02	22 27	10 11	31	
17:35	24 16	27 21	26 22	16 22	24 28			23:35	23 12	12 12	1 30	07 28	11 12	36	
17:40	25 25	28 32	2 15	17 23	25 34			23:40	24 33	14 33	3 3	51 28	12 13	41	
17:45	26 34	29 43	8 38	18 24	26 41			23:45	25 55	16 55	5 4	36 29	13 14	47	
17:50	27 42	0 50	15 28	20 25	27 47			23:50	27 17	17 17	6 5	20 00	14 15	52	
17:55	28 51	1 07	22 38	21 26	28 54			23:55	28 38	19 38	8 6	04 1	15 16	58	
18:00	0 00	3 08	0 00	22 27	0 00			24:00	0 00	21 00	9 6	48 2	16 18	03	

Latitude : 63 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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00:05	1 22	22 10	8 42	4 18	19 39				1 09	25 24	0 44	8 7	1 45		
00:10	2 43	24 12	9 25	5 19	20 45				2 18	26 25	1 28	9 8	3 30		
00:15	4 05	25 13	10 07	5 20	21 52				3 26	27 26	2 12	9 9	5 15		
00:20	5 27	27 15	10 50	6 21	22 58				4 35	28 27	2 57	10 10	6 59		
00:25	6 48	28 16	11 33	7 22	24 06				5 44	29 28	3 41	11 11	8 44		
00:30	8 10	0 00	12 15	8 24	25 13				6 53	0 00	4 25	12 13	10 28		
00:35	9 31	2 19	12 58	9 25	26 21				8 02	2 29	5 09	13 14	12 12		
00:40	10 53	3 20	13 40	10 26	27 29				9 11	3 00	5 53	14 15	13 55		
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00:50	13 35	6 23	15 06	12 28	29 45				11 30	5 2	7 21	16 17	17 21		
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01:00	16 17	10 25	16 31	13 00	2 04				13 49	7 4	8 49	17 19	20 44		
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01:30	24 18	19 2	20 47	19 7	9 07				20 48	13 9	13 13	23 26	0 00		
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01:50	29 34	24 7	23 38	22 11	13 59				25 32	18 13	16 09	26 0 00	7 05		
01:55	0 00	53 26	8 24	23 13	15 13				26 43	19 14	16 53	27 1	8 39		
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02:10	4 47	0 00	26 30	26 16	18 59				0 00	22 16	19 04	0 00	5 13		
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02:30	9 55	5 15	29 22	0 00	24 09				5 09	26 20	21 58	4 10	19 13		
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02:40	12 27	8 17	0 48	1 23	26 48				7 35	29 22	23 25	6 12	22 07		
02:45	13 42	9 18	1 31	2 24	28 09				8 49	0 00	24 09	7 13	23 33		
02:50	14 58	10 19	2 14	3 25	29 30				10 03	1 23	24 52	7 15	24 58		
02:55	16 13	12 20	2 58	4 26	0 00				11 17	2 24	25 36	8 16	26 22		
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06:00	0 00	24 23	0 00	7 6	0 00				0 00	13 27	22 01	21 10	11 28		

Latitude : 63 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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12:10	2 43	15 29	23 26	24 13	13 39			18:10	2 18	4 09	17 49	26 00	2 14		
12:15	4 05	16 00	24 09	26 15	14 45			18:15	3 26	6 10	25 55	28 01	3 21		
12:20	5 27	18 01	24 52	28 17	15 51			18:20	4 35	7 11	3 00	29 03	4 28		
12:25	6 48	19 02	25 35	29 18	16 56			18:25	5 44	8 13	9 42	0 00	5 35		
12:30	8 10	20 02	26 18	1 20	18 01			18:30	6 53	9 14	15 24	1 05	6 42		
12:35	9 31	21 03	27 01	3 22	19 06			18:35	8 02	10 15	20 24	2 06	7 48		
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12:45	12 14	23 05	28 28	7 25	21 16			18:45	10 21	13 18	28 38	4 08	10 02		
12:50	13 35	24 06	29 11	8 27	22 21			18:50	11 30	14 20	2 00	5 09	11 09		
12:55	14 56	25 07	29 55	10 29	23 25			18:55	12 39	15 21	5 07	6 10	12 16		
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13:15	20 18	0 10	2 50	19 06	27 43			19:15	17 18	20 28	14 43	11 15	16 42		
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13:40	26 57	5 15	6 33	1 14	3 05			19:40	23 10	27 07	23 10	16 20	22 14		
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14:20	7 21	14 22	12 44	23 28	11 40			20:20	2 43	8 24	2 56	23 29	1 01		
14:25	8 38	15 23	13 32	26 29	12 44			20:25	3 56	9 26	3 58	24 00	2 06		
14:30	9 55	16 24	14 20	28 1 00	13 49			20:30	5 09	11 29	4 59	25 01	3 11		
14:35	11 11	17 25	15 10	1 14	14 54			20:35	6 22	12 1 00	5 58	26 02	4 17		
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15:45	28 29	2 08	28 08	9 24	0 00			21:45	23 56	4 10	18 04	10 17	19 25		
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16:15	5 39	9 14	5 25	21 02	6 40			22:15	1 44	14 26	22 42	16 24	25 51		
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16:40	11 32	14 19	13 22	1 08	12 12			22:40	8 22	23 09	26 26	21 29	1 12		
16:45	12 42	15 20	15 17	2 10	13 18			22:45	9 42	24 11	27 10	22 00	2 17		
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18:00	0 00	2 06	0 00	24 28	0 00			24:00	0 00	20 09	12 59	3 17	18 32		

Latitude : 64 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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00:10	2 43	23 12	10 35	5 20	21 14				2 18	26 25	1 27	9 8	3 27		
00:15	4 05	25 13	11 16	6 21	22 21				3 26	27 25	2 10	10 10	5 11		
00:20	5 27	26 15	11 58	7 22	23 28				4 35	28 26	2 53	11 11	6 54		
00:25	6 48	28 16	12 39	8 23	24 35				5 44	29 27	3 36	12 12	8 37		
00:30	8 10	0 00	13 20	9 24	25 43				6 53	0 00	4 20	13 13	10 20		
00:35	9 31	1 19	14 02	10 25	26 51				8 02	1 29	5 03	13 14	12 03		
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00:45	12 14	4 21	15 24	12 27	29 07				10 21	3 1	6 29	15 16	15 27		
00:50	13 35	6 23	16 06	13 28	0 16				11 30	4 2	7 12	16 17	17 09		
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01:10	18 58	12 27	18 51	16 3	4 54				16 08	9 5	10 05	20 22	23 50		
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01:30	24 18	18 2	21 38	20 7	9 39				20 48	13 9	12 57	23 26	0 21		
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01:50	29 34	24 6	24 25	23 12	14 31				25 32	17 12	15 49	27 1	6 41		
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02:00	2 11	27 9	25 48	25 14	17 00				27 55	20 14	17 15	28 3	9 47		
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02:50	14 58	10 19	2 49	4 25	0 00				10 03	0 23	24 22	8 15	24 28		
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03:35	26 04	21 27	9 11	12 5	12 42				21 22	10 1	0 42	16 26	6 38		
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03:50	29 42	25 0	11 19	14 8	17 10				25 13	14 3	2 48	19 1	10 29		
03:55	0 54	26 1	12 02	15 9	18 41				26 31	15 4	3 30	20 2	11 45		
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04:10	4 28	29 3	14 11	18 13	23 19				0 26	18 7	5 35	24 6	15 29		
04:15	5 39	1 4	14 54	19 14	24 53				1 44	19 8	6 17	25 8	16 43		
04:20	6 50	2 5	15 37	20 15	26 27				3 03	20 9	6 59	26 9	17 56		
04:25	8 01	3 6	16 20	21 16	28 03				4 23	21 10	7 41	27 10	19 09		
04:30	9 12	4 7	17 03	21 17	29 39				5 42	23 10	8 22	28 12	20 21		
04:35	10 22	5 8	17 46	22 18	1 16				7 02	24 11	9 04	29 13	21 33		
04:40	11 32	6 9	18 29	23 19	2 53				8 22	25 12	9 45	0 15	22 44		
04:45	12 42	7 10	19 12	24 20	4 32				9 42	26 13	10 27	1 16	23 55		
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05:00	16 11	11 12	21 21	27 23	9 30				13 43	29 16	12 31	5 21	27 26		
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05:35	24 16	18 18	26 24	3 1	21 23				23 12	7 22	17 21	14 2	5 25		
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05:45	26 34	20 20	27 50	5 3	24 49				25 55	9 24	18 44	17 5	7 39		
05:50	27 42	22 21	28 33	5 4	26 33				27 17	10 25	19 25	18 7	8 46		
05:55	28 51	23 22	29 17	6 5	28 16				28 38	12 25	20 06	20 9	9 53		
06:00	0 00	24 23	0 00	7 6	0 00				0 00	13 26	20 48	21 10	10 59		

Latitude : 64 N 00

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12:10	2 43	15 28	22 10	25 14	13 11			18:10	2 18	4 7	23 24	28 1	2 15		
12:15	4 05	16 29	22 52	26 16	14 17			18:15	3 26	5 8	3 16	29 2	3 22		
12:20	5 27	17 00	23 33	28 17	15 23			18:20	4 35	6 9	11 36	0 00	3 4	30	
12:25	6 48	18 1	24 14	0 19	16 28			18:25	5 44	7 11	18 32	1 4	5 37		
12:30	8 10	19 2	24 56	1 21	17 34			18:30	6 53	9 12	24 18	3 5	6 45		
12:35	9 31	20 2	25 37	3 22	18 39			18:35	8 02	10 13	29 07	4 6	7 52		
12:40	10 53	22 3	26 19	5 24	19 44			18:40	9 11	11 15	3 12	5 8	8 59		
12:45	12 14	23 4	27 00	7 26	20 49			18:45	10 21	12 16	6 42	6 9	10 07		
12:50	13 35	24 5	27 42	9 28	21 54			18:50	11 30	13 18	9 44	7 10	11 14		
12:55	14 56	25 6	28 24	11 29	22 59			18:55	12 39	15 19	12 24	8 11	12 21		
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13:05	17 38	27 8	29 47	15 3	25 09			19:05	14 58	17 22	16 55	10 13	14 36		
13:10	18 58	28 9	0 29	18 5	26 14			19:10	16 08	18 24	18 52	11 14	15 43		
13:15	20 18	29 9	1 11	20 6	27 19			19:15	17 18	20 25	20 39	12 15	16 50		
13:20	21 38	0 10	1 53	22 8	28 23			19:20	18 28	21 27	22 17	13 16	17 57		
13:25	22 58	1 11	2 36	25 10	29 28			19:25	19 38	22 29	23 49	14 17	19 04		
13:30	24 18	3 12	3 18	27 12	0 33			19:30	20 48	23 1	25 15	15 19	20 10		
13:35	25 37	4 13	4 00	0 13	1 37			19:35	21 59	25 2	26 36	16 20	21 17		
13:40	26 57	5 14	4 43	2 15	2 42			19:40	23 10	26 4	27 52	17 21	22 24		
13:45	28 16	6 15	5 26	5 17	3 46			19:45	24 21	27 6	29 05	18 22	23 30		
13:50	29 34	7 16	6 09	8 18	4 51			19:50	25 32	29 8	0 15	19 23	24 37		
13:55	0 53	8 16	6 52	10 20	5 56			19:55	26 43	0 10	1 22	20 24	25 43		
14:00	2 11	9 17	7 36	13 22	7 00			20:00	27 55	2 12	2 26	21 25	26 50		
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14:25	8 38	15 22	11 17	28 0	12 24			20:25	3 56	9 24	7 19	26 0	2 20		
14:30	9 55	16 23	12 02	1 2	13 29			20:30	5 09	10 26	8 13	26 2	3 26		
14:35	11 11	17 24	12 48	4 3	14 34			20:35	6 22	11 29	9 06	27 3	4 32		
14:40	12 27	18 24	13 34	7 5	15 39			20:40	7 35	13 1	9 58	28 4	5 38		
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16:00	2 05	5 9	27 34	18 28	3 10			22:00	27 49	8 17	22 24	13 21	23 00		
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16:10	4 28	7 11	29 45	22 1	5 23			22:10	0 26	12 22	23 51	14 23	25 09		
16:15	5 39	8 12	0 55	24 3	6 30			22:15	1 44	13 25	24 34	15 24	26 14		
16:20	6 50	9 13	2 08	26 4	7 36			22:20	3 03	15 28	25 17	16 25	27 18		
16:25	8 01	10 14	3 24	28 5	8 43			22:25	4 23	17 0	26 00	17 26	28 23		
16:30	9 12	11 15	4 45	29 7	9 50			22:30	5 42	18 3	26 42	18 27	29 27		
16:35	10 22	13 16	6 11	1 8	10 56			22:35	7 02	20 5	27 24	19 29	0 32		
16:40	11 32	14 17	7 43	3 9	12 03			22:40	8 22	22 8	28 07	20 0	1 37		
16:45	12 42	15 18	9 21	5 10	13 10			22:45	9 42	24 10	28 49	21 1	2 41		
16:50	13 52	16 19	11 08	6 12	14 17			22:50	11 02	25 12	29 31	21 2	3 46		
16:55	15 02	17 20	13 05	8 13	15 24			22:55	12 22	27 15	0 13	22 3	4 51		
17:00	16 11	18 21	15 13	9 14	16 32			23:00	13 43	29 17	0 55	23 4	5 56		
17:05	17 21	19 22	17 36	11 15	17 39			23:05	15 04	1 19	1 36	24 5	7 01		
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17:20	20 49	22 25	26 48	15 19	21 01			23:20	19 07	6 25	3 41	27 8	10 16		
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18:00	0 00	1 4	0 00	26 29	0 00			24:00	0 00	20 9	9 12	4 17	19 01		

Latitude : 65 N 00

Sid T	M.C.	11	12	Asc.	2	3	E.P.	Sid T	M.C.	11	12	Asc.	2	3	E.P.
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00:05	1 22	21 10	11 08	5 19	20 36	6 20	21 43	06:05	1 09	24 23	0 42	9 8	1 42		
00:10	2 43	22 11	11 48	6 20	21 43	7 21	22 50	06:10	2 18	26 24	1 25	9 9	3 25		
00:15	4 05	24 13	12 28	7 21	22 50	8 22	23 57	06:15	3 26	27 25	2 07	10 10	5 07		
00:20	5 27	26 14	13 08	8 22	23 57	9 23	25 05	06:20	4 35	28 26	2 49	11 11	6 49		
00:25	6 48	27 16	13 48	9 23	25 05	10 24	26 12	06:25	5 44	29 27	3 32	12 12	8 31		
00:30	8 10	29 17	14 28	10 24	26 12	11 26	27 20	06:30	6 53	0 28	4 14	13 13	10 13		
00:35	9 31	1 18	15 08	11 26	27 20	12 27	28 28	06:35	8 02	1 28	4 56	14 14	11 55		
00:40	10 53	2 20	15 48	12 27	28 28	13 28	29 37	06:40	9 11	2 29	5 39	15 15	13 36		
00:45	12 14	4 21	16 28	13 28	29 37	14 29	0 46	06:45	10 21	3 0 00	6 21	16 16	15 17		
00:50	13 35	5 22	17 08	14 29	0 46	15 0 00	1 55	06:50	11 30	4 1 00	7 03	16 16	16 57		
00:55	14 56	7 24	17 48	15 0 00	1 55	16 1 00	3 05	06:55	12 39	5 2 00	7 46	17 17	18 37		
01:00	16 17	9 25	18 28	16 1 00	3 05	17 2 00	4 14	07:00	13 49	6 3 00	8 28	18 18	20 16		
01:05	17 38	10 26	19 09	17 2 00	4 14	18 3 00	5 25	07:05	14 58	7 4 00	9 10	19 19	21 55		
01:10	18 58	12 27	19 49	18 3 00	5 25	19 4 00	6 35	07:10	16 08	8 5 00	9 52	20 22	23 34		
01:15	20 18	13 28	20 29	19 4 00	6 35	20 5 00	7 46	07:15	17 18	9 5 00	10 34	21 23	25 12		
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01:25	22 58	16 1 00	21 50	21 6 00	8 58	22 7 00	10 10	07:25	19 38	12 7 00	11 59	23 25	28 26		
01:30	24 18	18 2 00	22 30	22 7 00	10 10	23 8 00	11 22	07:30	20 48	13 8 00	12 41	23 26	0 02		
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01:40	26 57	21 4 00	23 52	24 9 00	12 35	25 10 00	13 48	07:40	23 10	15 10 00	14 05	25 29	3 12		
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01:50	29 34	23 6 00	25 13	26 11 00	15 02	27 12 00	16 16	07:50	25 32	17 12 00	15 29	27 1 00	6 19		
01:55	0 53	25 7 00	25 54	27 12 00	16 16	28 13 00	17 30	07:55	26 43	18 12 00	16 11	28 2 00	7 51		
02:00	2 11	26 8 00	26 34	28 13 00	17 30	29 14 00	18 46	08:00	27 55	19 13 00	16 53	29 3 00	9 23		
02:05	3 29	28 9 00	27 15	29 14 00	18 46	30 15 00	20 02	08:05	29 06	20 14 00	17 35	0 4 00	10 54		
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02:40	12 27	7 16 00	2 02	36 21 00	27 49	37 22 00	29 09	08:40	7 35	28 20 00	22 27	7 13 00	21 11		
02:45	13 42	8 17 00	2 43	37 22 00	29 09	38 23 00	30 30	08:45	8 49	29 21 00	23 08	8 14 00	22 36		
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03:00	17 28	12 20 00	4 47	40 25 00	3 14	41 26 00	4 36	09:00	12 32	2 24 00	25 13	11 18 00	26 46		
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03:20	22 25	17 24 00	7 33	44 29 00	8 49	45 30 00	10 15	09:20	17 33	6 28 00	27 58	15 23 00	2 11		
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03:30	24 51	20 26 00	8 57	46 31 00	11 42	47 32 00	13 09	09:30	20 05	8 29 00	29 20	17 26 00	4 49		
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04:45	12 42	6 10 00	19 26	61 46 00	34 05	62 47 00	35 11	10:45	9 42	23 14 00	9 31	32 31 00	23 25		
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05:30	23 07	15 19 00	25 46	70 55 00	48 05	71 56 00	49 47	11:30	21 50	32 23 00	15 32	41 40 00	3 48		
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05:40	25 25	17 21 00	27 11	72 57 00	51 29	73 58 00	53 11	11:40	24 33	34 25 00	16 52	43 42 00	6 03		
05:45	26 34	18 22 00	27 53	73 58 00	53 11	74 59 00	54 53	11:45	25 55	35 26 00	17 32	44 43 00	7 10		
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05:55	28 51	20 24 00	29 18	75 60 00	56 35	76 61 00	58 18	11:55	28 38	37 28 00	18 52	46 45 00	9 24		
06:00	0 00	21 25 00	0 00	76 61 00	58 18	77 62 00	60 00	12:00	0 00	38 29 00	19 32	47 46 00	10 31		

Latitude : 65 N 00

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12:10	2 43	14 27	20 51	25 14	12 43	12 43	12 43	18:10	2 18	3 5	4 34	0 34	1 2	2 16	2 16
12:15	4 05	16 28	21 31	27 16	13 49	13 49	13 49	18:15	3 26	4 6	6 16	26 1	3 3	3 24	3 24
12:20	5 27	17 29	22 11	28 18	14 55	14 55	14 55	18:20	4 35	6 8	8 25	09 2	4 4	4 32	4 32
12:25	6 48	18 00	22 51	0 20	16 01	16 01	16 01	18:25	5 44	7 9	9 1	39 3	5 5	5 40	5 40
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Galactic Conversion Tables (Positions as of Epoch 1950.0)

Ecliptic	Galactic	Ecliptic	Galactic	Ecliptic	Galactic	Ecliptic	Galactic	Ecliptic	Galactic	Ecliptic	Galactic
26 ♈ 09	0 ♎	11 ♊ 36	0 ♏	3 ♋ 22	0 ♏	16 ♋ 42	0 ♎	10 ♋ 42	0 ♎	9 ♋ 14	0 ♏
26 39	1	12 10	1	4 21	1	18 39	1	12 02	1	9 54	1
27 09	2	12 45	2	5 21	2	20 38	2	13 20	2	10 33	2
27 39	3	13 20	3	6 23	3	22 37	3	14 36	3	11 12	3
28 09	4	13 55	4	7 27	4	24 36	4	15 50	4	11 51	4
28 39	5	14 31	5	8 32	5	26 37	5	17 01	5	12 28	5
29 09	6	15 07	6	9 39	6	28 37	6	18 12	6	13 06	6
29 39	7	15 44	7	10 48	7	0 ♎ 38	7	19 20	7	13 42	7
0 ♊ 09	8	16 22	8	11 59	8	2 39	8	20 26	8	14 18	8
0 38	9	16 59	9	13 11	9	4 39	9	21 31	9	14 54	9
1 08	10	17 38	10	14 26	10	6 38	10	22 34	10	15 29	10
1 38	11	18 17	11	15 42	11	8 37	11	23 36	11	16 04	11
2 08	12	18 57	12	17 01	12	10 35	12	24 36	12	16 39	12
2 38	13	19 37	13	18 21	13	12 31	13	25 34	13	17 13	13
3 09	14	20 18	14	19 44	14	14 27	14	26 32	14	17 46	14
3 39	15	21 00	15	21 09	15	16 20	15	27 27	15	18 20	15
4 09	16	21 43	16	22 36	16	18 12	16	28 22	16	18 52	16
4 40	17	22 26	17	24 05	17	20 03	17	29 15	17	19 25	17
5 10	18	23 11	18	25 37	18	21 51	18	0 ♋ 07	18	19 58	18
5 41	19	23 56	19	27 11	19	23 37	19	0 58	19	20 30	19
6 12	20	24 42	20	28 47	20	25 22	20	1 48	20	21 01	20
6 44	21	25 29	21	0 ♋ 25	21	27 04	21	2 37	21	21 33	21
7 15	22	26 17	22	2 06	22	28 44	22	3 24	22	22 04	22
7 47	23	27 06	23	3 48	23	0 ♋ 21	23	4 11	23	22 36	23
8 19	24	27 56	24	5 33	24	1 57	24	4 57	24	23 07	24
8 51	25	28 47	25	7 20	25	3 30	25	5 42	25	23 37	25
9 23	26	29 39	26	9 09	26	5 01	26	6 26	26	24 08	26
9 56	27	0 ♋ 33	27	11 00	27	6 29	27	7 09	27	24 39	27
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Galactic Conversion Tables (Positions as of Epoch 1950.0)

Ecliptic	Galactic	Ecliptic	Galactic	Ecliptic	Galactic	Ecliptic	Galactic	Ecliptic	Galactic	Ecliptic	Galactic
26 ♀ 09	0 ♀	11 ♀ 36	0 ♀	3 ♀ 22	0 ♀	16 ♀ 42	0 ♀	10 ♀ 42	0 ♀	9 ♀ 14	0 ♀
26 39	1	12 10	1	4 21	1	18 39	1	12 02	1	9 54	1
27 09	2	12 45	2	5 21	2	20 38	2	13 20	2	10 33	2
27 39	3	13 20	3	6 23	3	22 37	3	14 36	3	11 12	3
28 09	4	13 55	4	7 27	4	24 36	4	15 50	4	11 51	4
28 39	5	14 31	5	8 32	5	26 37	5	17 01	5	12 28	5
29 09	6	15 07	6	9 39	6	28 37	6	18 12	6	13 06	6
29 39	7	15 44	7	10 48	7	0 ♀ 38	7	19 20	7	13 42	7
0 ♀ 09	8	16 22	8	11 59	6	2 39	8	20 26	8	14 18	8
0 38	9	16 59	9	13 11	9	4 39	9	21 31	9	14 54	9
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1 38	11	18 17	11	15 42	11	8 37	11	23 36	11	16 04	11
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3 39	15	21 00	15	21 09	15	16 20	15	27 27	15	18 20	15
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4 40	17	22 26	17	24 05	17	20 03	17	29 15	17	19 25	17
5 10	18	23 11	18	25 37	18	21 51	18	0 ♀ 07	18	19 58	18
5 41	19	23 56	19	27 11	19	23 37	19	0 58	19	20 30	19
6 12	20	24 42	20	28 47	20	25 22	20	1 48	20	21 01	20
6 44	21	25 29	21	0 ♀ 25	21	27 04	21	2 37	21	21 33	21
7 15	22	26 17	22	2 06	22	28 44	22	3 24	22	22 04	22
7 47	23	27 06	23	3 48	33	0 ♀ 21	23	4 11	23	22 36	23
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9 23	26	29 39	26	9 09	26	5 01	26	6 26	26	24 08	26
9 56	27	0 ♀ 33	27	11 00	27	6 29	27	7 09	27	24 39	27
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