

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (70-97) and declination (0°-14°). Each declination column contains Hc, d, Z values. The table is organized into 15-degree declination increments.

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

Table with columns for LHA (97-290) and declination (0°-14°). Each declination column contains Hc, d, Z values. The table is organized into 15-degree declination increments.

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

LAT 20°

N. Lat. { L.H.A. greater than 180°.....Zn=Z, L.H.A. less than 180°.....Zn=360-Z

Table with columns for Declination (0° to 14°) and Latitude (0° to 14°). Each cell contains a 3x3 grid of numbers representing celestial coordinates.

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°.....Zn=180-Z, L.H.A. less than 180°.....Zn=180+Z

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
{ L.H.A. less than 180°Zn=360°-Z

Table with 69 rows and 24 columns. Columns are labeled with latitude (15° to 29°) and longitude (LHA). Each cell contains a 3-digit number representing the declination. The numbers are arranged in a grid where the top-left cell is 0 85 00 and the bottom-right cell is 69 29 01.

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
{ L.H.A. less than 180°Zn=180°+Z

LAT 20°

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for Latitude (15° to 29°) and Declination (15° to 29°). Each cell contains a 3x3 grid of values (Hc, d, Z) for LHA values from 70 to 290.

Table with columns for Latitude (15° to 29°) and Declination (15° - 29°) CONTRARY NAME TO LATITUDE. Each cell contains a 3x3 grid of values (Hc, d, Z) for LHA values from 91 to 290.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (69-360) and latitude (15°-29°). Each cell contains a 3-digit number representing the declination value.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

N. Lat. { L.H.A. greater than 180°.....Zn=Z, L.H.A. less than 180°.....Zn=360°-Z

Main table with columns for declination (0° to 14°) and latitude (0° to 69°). Each column contains three sub-columns: 'd' (degrees), 'm' (minutes), and 's' (seconds).

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA, 0°, 1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 11°, 12°, 13°, 14°, and LHA. It contains numerical data for declinations from 70 to 97 degrees.

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

Table with columns for LHA, 0°, 1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 11°, 12°, 13°, 14°, and LHA. It contains numerical data for declinations from 97 to 290 degrees.

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (0-69) and rows for declination (15°-29°). Each cell contains a 3x3 grid of values for hour angle (Hc) and distance (d) in degrees and minutes.

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA, latitude (15° to 19°), and declination (15° to 29°). Each declination column contains three sub-columns: Hc, d, and Z. The table lists 360 rows of data.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (0° – 14°) CONTRARY NAME TO LATITUDE

DECLINATION (0° – 14°) CONTRARY NAME TO LATITUDE

N. Lat. { L.H.A. greater than 180°.....Zn=Z
L.H.A. less than 180°.....Zn=360°-Z

Main table with columns for LHA, 0° to 14° (Hc, d, Z), and 14° to 0° (Hc, d, Z). Each degree column contains three sub-columns for hour, distance, and zone. The table lists celestial coordinates for various stars.

DECLINATION (0° – 14°) CONTRARY NAME TO LATITUDE

DECLINATION (0° – 14°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°.....Zn=180°-Z
L.H.A. less than 180°.....Zn=180°+Z

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (0-69) and rows for declination (15°-29°). Each cell contains a 3x3 grid of values for hour angle (Hc) and distance (d). The table is organized into 5-degree declination increments.

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

LAT 22°

LAT 27°

LAT 28°

LAT 29°

LAT 30°

LAT 31°

LAT 22°

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for Latitude (15° to 29°) and Declination (15° to 29°). Each cell contains three values: Hc, d, Z. The table is organized in a grid where the top row represents the latitude and the left column represents the declination.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

Table with columns for Latitude (15° to 29°) and Declination (15° to 29°). Each cell contains three values: Hc, d, Z. The table is organized in a grid where the top row represents the latitude and the left column represents the declination.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for Latitude (15° to 29°) and Longitude (0° to 360°). Each cell contains a 5-digit number representing declination. The table is organized into 15-degree latitude bands, with each band containing 360 longitude entries.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360-Z

Table with columns for LHA (70-97) and degrees 0° to 14°. Each degree column contains Hc, d, Z values. The table is organized into 15-degree intervals.

Table with columns for LHA (97-290) and degrees 1° to 14°. Each degree column contains Hc, d, Z values. The table is organized into 1-degree intervals.

S. Lat. { L.H.A. greater than 180°Zn=180-Z
L.H.A. less than 180°Zn=180+Z

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

DECLINATION (0° – 14°) CONTRARY NAME TO LATITUDE

LAT 23°

N. Lat. { L.H.A. greater than 180°.....Zn=Z
L.H.A. less than 180°.....Zn=360°-Z

Table with columns for LHA, 0°, 1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 11°, 12°, 13°, 14°, and LHA. Each degree column contains three sub-columns: Hc, d, Z. The table lists 67 rows of data.

DECLINATION (0° – 14°) CONTRARY NAME TO LATITUDE

LAT 23°

S. Lat. { L.H.A. greater than 180°.....Zn=180°-Z
L.H.A. less than 180°.....Zn=180°+Z

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°.....Zn=Z
L.H.A. less than 180°.....Zn=360-Z

S. Lat. { L.H.A. greater than 180°.....Zn=180-Z
L.H.A. less than 180°.....Zn=180+Z

Table with 60 columns (LHA, 15°-29°, 29°) and 60 rows (0-59). Each cell contains a 4-part code (Hc, d, Z, Hc).

LHA greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

LAT 23°

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

Table with columns for Latitude (15° to 29°) and Declination (15° to 29°). Each cell contains a 3-digit number representing the LHA value. The table is organized into 15-degree intervals for both latitude and declination.

Table with columns for Latitude (15° to 29°) and Declination (15° to 29°). Each cell contains a 3-digit number representing the LHA value. The table is organized into 15-degree intervals for both latitude and declination.

N. Lat. { L.H.A. greater than 180°Zn=180°+Z
L.H.A. less than 180°Zn=180°-Z

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

LAT 23°

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA, latitude (15° to 29°), and longitude (15° to 29°). Each cell contains a numerical value representing declination. The table is organized in a grid where the top row is labeled 'LHA' and the left column is labeled '29°' through '15°'. The grid contains 36 rows and 36 columns of data.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn-Z
L.H.A. less than 180°Zn=360°-Z

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

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA, 0°, 1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 11°, 12°, 13°, 14°, and LHA. It contains numerical data for declinations from 0° to 14°.

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

Table with columns for LHA, 0°, 1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 11°, 12°, 13°, 14°, and LHA. It contains numerical data for declinations from 0° to 14°.

DECLINATION (0° – 14°) CONTRARY NAME TO LATITUDE

LAT 24°

L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

LHA	0°		1°		2°		3°		4°		5°		6°		7°		8°		9°		10°		11°		12°		13°		14°		LHA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
68	19	07	-26	99	18	41	-27	100	17	48	-27	102	17	21	-27	103	16	54	-27	104	16	27	-28	105	15	59	-28	106	15	31	-28	106	15	05	-28	107	14	56	-29	108	14	50	-29	109	14	44	-29	110	14	38	-29	111	14	32	-29	112	14	26	-29	113	14	20	-29	114	14	14	-29	115	14	08	-29	116	14	02	-29	117	14	-2	-29	118	13	56	-29	119	13	50	-29	120	13	44	-29	121	13	38	-29	122	13	32	-29	123	13	26	-29	124	13	20	-29	125	13	14	-29	126	13	08	-29	127	13	02	-29	128	13	-4	-29	129	13	-10	-29	130	13	-16	-29	131	13	-22	-29	132	13	-28	-29	133	13	-34	-29	134	13	-40	-29	135	13	-46	-29	136	13	-52	-29	137	13	-58	-29	138	13	-64	-29	139	13	-70	-29	140	13	-76	-29	141	13	-82	-29	142	13	-88	-29	143	13	-94	-29	144	13	-100	-29	145	13	-106	-29	146	13	-112	-29	147	13	-118	-29	148	13	-124	-29	149	13	-130	-29	150	13	-136	-29	151	13	-142	-29	152	13	-148	-29	153	13	-154	-29	154	13	-160	-29	155	13	-166	-29	156	13	-172	-29	157	13	-178	-29	158	13	-184	-29	159	13	-190	-29	160	13	-196	-29	161	13	-202	-29	162	13	-208	-29	163	13	-214	-29	164	13	-220	-29	165	13	-226	-29	166	13	-232	-29	167	13	-238	-29	168	13	-244	-29	169	13	-250	-29	170	13	-256	-29	171	13	-262	-29	172	13	-268	-29	173	13	-274	-29	174	13	-280	-29	175	13	-286	-29	176	13	-292	-29	177	13	-298	-29	178	13	-304	-29	179	13	-310	-29	180	13	-316	-29	181	13	-322	-29	182	13	-328	-29	183	13	-334	-29	184	13	-340	-29	185	13	-346	-29	186	13	-352	-29	187	13	-358	-29	188	13	-364	-29	189	13	-370	-29	190	13	-376	-29	191	13	-382	-29	192	13	-388	-29	193	13	-394	-29	194	13	-400	-29	195	13	-406	-29	196	13	-412	-29	197	13	-418	-29	198	13	-424	-29	199	13	-430	-29	200	13	-436	-29	201	13	-442	-29	202	13	-448	-29	203	13	-454	-29	204	13	-460	-29	205	13	-466	-29	206	13	-472	-29	207	13	-478	-29	208	13	-484	-29	209	13	-490	-29	210	13	-496	-29	211	13	-502	-29	212	13	-508	-29	213	13	-514	-29	214	13	-520	-29	215	13	-526	-29	216	13	-532	-29	217	13	-538	-29	218	13	-544	-29	219	13	-550	-29	220	13	-556	-29	221	13	-562	-29	222	13	-568	-29	223	13	-574	-29	224	13	-580	-29	225	13	-586	-29	226	13	-592	-29	227	13	-598	-29	228	13	-604	-29	229	13	-610	-29	230	13	-616	-29	231	13	-622	-29	232	13	-628	-29	233	13	-634	-29	234	13	-640	-29	235	13	-646	-29	236	13	-652	-29	237	13	-658	-29	238	13	-664	-29	239	13	-670	-29	240	13	-676	-29	241	13	-682	-29	242	13	-688	-29	243	13	-694	-29	244	13	-700	-29	245	13	-706	-29	246	13	-712	-29	247	13	-718	-29	248	13	-724	-29	249	13	-730	-29	250	13	-736	-29	251	13	-742	-29	252	13	-748	-29	253	13	-754	-29	254	13	-760	-29	255	13	-766	-29	256	13	-772	-29	257	13	-778	-29	258	13	-784	-29	259	13	-790	-29	260	13	-796	-29	261	13	-802	-29	262	13	-808	-29	263	13	-814	-29	264	13	-820	-29	265	13	-826	-29	266	13	-832	-29	267	13	-838	-29	268	13	-844	-29	269	13	-850	-29	270	13	-856	-29	271	13	-862	-29	272	13	-868	-29	273	13	-874	-29	274	13	-880	-29	275	13	-886	-29	276	13	-892	-29	277	13	-898	-29	278	13	-904	-29	279	13	-910	-29	280	13	-916	-29	281	13	-922	-29	282	13	-928	-29	283	13	-934	-29	284	13	-940	-29	285	13	-946	-29	286	13	-952	-29	287	13	-958	-29	288	13	-964	-29	289	13	-970	-29	290	13	-976	-29	291	13	-982	-29	292	13	-988	-29	293	13	-994	-29	294	13	-1000	-29	295	13	-1006	-29	296	13	-1012	-29	297	13	-1018	-29	298	13	-1024	-29	299	13	-1030	-29	300	13	-1036	-29	301	13	-1042	-29	302	13	-1048	-29	303	13	-1054	-29	304	13	-1060	-29	305	13	-1066	-29	306	13	-1072	-29	307	13	-1078	-29	308	13	-1084	-29	309	13	-1090	-29	310	13	-1096	-29	311	13	-1102	-29	312	13	-1108	-29	313	13	-1114	-29	314	13	-1120	-29	315	13	-1126	-29	316	13	-1132	-29	317	13	-1138	-29	318	13	-1144	-29	319	13	-1150	-29	320	13	-1156	-29	321	13	-1162	-29	322	13	-1168	-29	323	13	-1174	-29	324	13	-1180	-29	325	13	-1186	-29	326	13	-1192	-29	327	13	-1198	-29	328	13	-1204	-29	329	13	-1210	-29	330	13	-1216	-29	331	13	-1222	-29	332	13	-1228	-29	333	13	-1234	-29	334	13	-1240	-29	335	13	-1246	-29	336	13	-1252	-29	337	13	-1258	-29	338	13	-1264	-29	339	13	-1270	-29	340	13	-1276	-29	341	13	-1282	-29	342	13	-1288	-29	343	13	-1294	-29	344	13	-1300	-29	345	13	-1306	-29	346	13	-1312	-29	347	13	-1318	-29	348	13	-1324	-29	349	13	-1330	-29	350	13	-1336	-29	351	13	-1342	-29	352	13	-1348	-29	353	13	-1354	-29	354	13	-1360	-29	355	13	-1366	-29	356	13	-1372	-29	357	13	-1378	-29	358	13	-1384	-29	359	13	-1390	-29	360	13	-1396	-29	361	13	-1402	-29	362	13	-1408	-29	363	13	-1414	-29	364	13	-1420	-29	365	13	-1426	-29	366	13	-1432	-29	367	13	-1438	-29	368	13	-1444	-29	369	13	-1450	-29	370	13	-1456	-29	371	13	-1462	-29	372	13	-1468	-29	373	13	-1474	-29	374	13	-1480	-29	375	13	-1486	-29	376	13	-1492	-29	377	13	-1498	-29	378	13	-1504	-29	379	13	-1510	-29	380	13	-1516	-29	381	13	-1522	-29	382	13	-1528	-29	383	13	-1534	-29	384	13	-1540	-29	385	13	-1546	-29	386	13	-1552	-29	387	13	-1558	-29	388	13	-1564	-29	389	13	-1570	-29	390	13	-1576	-29	391	13	-1582	-29	392	13	-1588	-29	393	13	-1594	-29	394	13	-1600	-29	395	13	-1606	-29	396	13	-1612	-29	397	13	-1618	-29	398	13	-1624	-29	399	13	-1630	-29	400	13	-1636	-29	401	13	-1642	-29	402	13	-1648	-29	403	13	-1654	-29	404	13	-1660	-29	405	13	-1666	-29	406	13	-1672	-29	407	13	-1678	-29	408	13	-1684	-29	409	13	-1690	-29	410	13	-1696	-29	411	13	-1702	-29	412	13	-1708	-29	413	13	-1714	-29	414	13	-1720	-29	415	13	-1726	-29	416	13	-1732	-29	417	13	-1738	-29	418	13	-1744	-29	419	13	-1750	-29	420	13	-1756	-29	421	13	-1762	-29	422	13	-1768	-29	423	13	-1774	-29	424	13	-1780	-29	425	13	-1786	-29	426	13	-1792	-29	427	13	-1798	-29	428	13	-1804	-29	429	13	-1810	-29	430	13	-1816	-29	431	13	-1822	-29	432	13	-1828	-29	433	13	-1834	-29	434	13	-1840	-29	435	13	-1846	-29	436	13	-1852	-29	437	13	-1858	-29	438	13	-1864	-29	439	13	-1870	-29	440	13	-1876	-29	441	13	-1882	-29	442	13	-1888	-29	443	13	-1894	-29	444	13	-1900	-29	445	13	-1906	-29	446	13	-1912	-29	447	13	-1918	-29	448	13	-1924	-29	449	13	-1930	-29	450	13	-1936	-29	451	13	-1942	-29	452	13	-1948	-29	453	13	-1954	-29	454	13	-1960	-29	455	13	-1966	-29	456	13	-1972	-29	457	13	-1978	-29	458	13	-1984	-29	459	13	-1990	-29	460	13	-1996	-29	461	13	-2002	-29	462	13	-2008	-29	463	13	-2014	-29	464	13	-2020	-29	465	13	-2026	-29	466	13	-2032	-29	467	13	-2038	-29	468	13	-2044	-29	469	13	-2050	-29	470	13	-2056	-29	471	13	-2062	-29	472	13	-2068	-29	473	13	-2074	-29	474	13	-2080	-29	475	13	-2086	-29	476	13	-2092	-29	477	13	-2098	-29	478	13	-2104	-29	479	13	-2110	-29	480	13	-2116	-29	481	13	-2122	-29	482	13	-2128	-29	

DECLINATION (15° – 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

LHA	15°		16°		17°		18°		19°		20°		21°		22°		23°		24°		25°		26°		27°		28°		29°		LHA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
0	81	00	0	80	00	0	79	00	0	78	00	0	77	00	0	76	00	0	75	00	0	74	00	0	73	00	0	72	00	0	71	00	0	70	00	0	69	00	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
1	80	57	0	80	54	0	80	51	0	80	48	0	80	45	0	80	42	0	80	39	0	80	36	0	80	33	0	80	30	0	80	27	0	80	24	0	80	21	0	80	18	0	80	15	0	80	12	0	80	09	0	80	06	0	80	03	0	80	00	0	79	57	0	79	54	0	79	51	0	79	48	0	79	45	0	79	42	0	79	39	0	79	36	0	79	33	0	79	30	0	79	27	0	79	24	0	79	21	0	79	18	0	79	15	0	79	12	0	79	09	0	79	06	0	79	03	0	78	57	0	78	54	0	78	51	0	78	48	0	78	45	0	78	42	0	78	39	0	78	36	0	78	33	0	78	30	0	78	27	0	78	24	0	78	21	0	78	18	0	78	15	0	78	12	0	78	09	0	78	06	0	78	03	0	77	57	0	77	54	0	77	51	0	77	48	0	77	45	0	77	42	0	77	39	0	77	36	0	77	33	0	77	30	0	77	27	0	77	24	0	77	21	0	77	18	0	77	15	0	77	12	0	77	09	0	77	06	0	77	03	0	76	57	0	76	54	0	76	51	0	76	48	0	76	45	0	76	42	0	76	39	0	76	36	0	76	33	0	76	30	0	76	27	0	76	24	0	76	21	0	76	18	0	76	15	0	76	12	0	76	09	0	76	06	0	76	03	0	75	57	0	75	54	0	75	51	0	75	48	0	75	45	0	75	42	0	75	39	0	75	36	0	75	33	0	75	30	0	75	27	0	75	24	0	75	21	0	75	18	0	75	15	0	75	12	0	75	09	0	75	06	0	75	03	0	74	57	0	74	54	0	74	51	0	74	48	0	74	45	0	74	42	0	74	39	0	74	36	0	74	33	0	74	30	0	74	27	0	74	24	0	74	21	0	74	18	0	74	15	0	74	12	0	74	09	0	74	06	0	74	03	0	73	57	0	73	54	0	73	51	0	73	48	0	73	45	0	73	42	0	73	39	0	73	36	0	73	33	0	73	30	0	73	27	0	73	24	0	73	21	0	73	18	0	73	15	0	73	12	0	73	09	0	73	06	0	73	03	0	72	57	0	72	54	0	72	51	0	72	48	0	72	45	0	72	42	0	72	39	0	72	36	0	72	33	0	72	30	0	72	27	0	72	24	0	72	21	0	72	18	0	72	15	0	72	12	0	72	09	0	72	06	0	72	03	0	71	57	0	71	54	0	71	51	0	71	48	0	71	45	0	71	42	0	71	39	0	71	36	0	71	33	0	71	30	0	71	27	0	71	24	0	71	21	0	71	18	0	71	15	0	71	12	0	71	09	0	71	06	0	71	03	0	70	57	0	70	54	0	70	51	0	70	48	0	70	45	0	70	42	0	70	39	0	70	36	0	70	33	0	70	30	0	70	27	0	70	24	0	70	21	0	70	18	0	70	15	0	70	12	0	70	09	0	70	06	0	70	03	0	69	57	0	69	54	0	69	51	0	69	48	0	69	45	0	69	42	0	69	39	0	69	36	0	69	33	0	69	30	0	69	27	0	69	24	0	69	21	0	69	18	0	69	15	0	69	12	0	69	09	0	69	06	0	69	03	0	68	57	0	68	54	0	68	51	0	68	48	0	68	45	0	68	42	0	68	39	0	68	36	0	68	33	0	68	30	0	68	27	0	68	24	0	68	21	0	68	18	0	68	15	0	68	12	0	68	09	0	68	06	0	68	03	0	67	57	0	67	54	0	67	51	0	67	48	0	67	45	0	67	42	0	67	39	0	67	36	0	67	33	0	67	30	0	67	27	0	67	24	0	67	21	0	67	18	0	67	15	0	67	12	0	67	09	0	67	06	0	67	03	0	66	57	0	66	54	0	66	51	0	66	48	0	66	45	0	66	42	0	66	39	0	66	36	0	66	33	0	66	30	0	66	27	0	66	24	0	66	21	0	66	18	0	66	15	0	66	12	0	66	09	0	66	06	0	66	03	0	65	57	0	65	54	0	65	51	0	65	48	0	65	45	0	65	42	0	65	39	0	65	36	0	65	33	0	65	30	0	65	27	0	65	24	0	65	21	0	65	18	0	65	15	0	65	12	0	65	09	0	65	06	0	65	03	0	64	57	0	64	54	0	64	51	0	64	48	0	64	45	0	64	42	0	64	39	0	64	36	0	64	33	0	64	30	0	64	27	0	64	24	0	64	21	0	64	18	0	64	15	0	64	12	0	64	09	0	64	06	0	64	03	0	63	57	0	63	54	0	63	51	0	63	48	0	63	45	0	63	42	0	63	39	0	63	36	0	63	33	0	63	30	0	63	27	0	63	24	0	63	21	0	63	18	0	63	15	0	63	12	0	63	09	0	63	06	0	63	03	0	62	57	0	62	54	0	62	51	0	62	48	0	62	45	0	62	42	0	62	39	0	62	36	0	62	33	0	62	30	0	62	27	0	62	24	0	62	21	0	62	18	0	62	15	0	62	12	0	62	09	0	62	06	0	62	03	0	61	57	0	61	54	0	61	51	0	61	48	0	61	45	0	61	42	0	61	39	0	61	36	0	61	33	0	61	30	0	61	27	0	61	24	0	61	21	0	61	18	0	61	15	0	61	12	0	61	09	0	61	06	0	61	03	0	60	57	0	60	54	0	60	51	0	60	48	0	60	45	0	60	42	0	60	39	0	60	36	0	60	33	0	60	30	0	60	27	0	60	24	0	60	21	0	60	18	0	60	15	0	60	12	0	60	09	0	60	06	0	60	03	0	59	57	0	59	54	0	59	51	0	59	48	0	59	45	0	59	42	0	59	39	0	59	36	0	59	33	0	59	30	0	59	27	0	59	24	0	59	21	0	59	18	0	59	15	0	59	12	0	59	09	0	59	06	0	59	03	0	58	57	0	58	54	0	58	51	0	58	48	0	58	45	0	58	42	0	58	39	0	58	36	0	58	33	0	58	30	0	58	27	0	58	24	0	58	21	0	58	18	0	58	15	0	58	12	0	58	09	0	58	06	0	58	03	0	57	57	0	57	54	0	57	51	0	57	48	0	57	45	0	57	42	0	57	39	0	57	36	0	57	33	0	57	30	0	57	27	0	57	24	0	57	21	0	57	18	0	57	15	0	57	12	0	57	09	0	57	06	0	57	03	0	56	57	0	56	54	0	56	51	0	56	48	0	56	45	0	56	42	0	56	39	0	56	36	0	56	33	0	56	30	0	56	27	0	56	24	0	56	21	0	56	18	0	56	15	0	56	12	0	56	09	0	56	06	0	56	03	0	55	57	0	55	54	0	55	51	0	55	48	0	55	45	0	55	42	0	55	39	0	55	36	0	55	33	0	55	30	0	55	27	0	55	24	0	55	21	0	55	18	0	55	15	0	55	12	0	55	09	0	55	06	0	55	03	0	54	57	0	54	54	0	54	51	0	54	48	0	54	45	0	54	42	0	54	39	0	54	36	0	54	33	0	54	30	0	54	27	0	54	24	0	54	21	0	54	18	0	54	15	0	54	12	0	54	09	0	54	06	0	54	03	0	53	57	0	53	54	0	53	51	0	53	48	0	53	45	0	53	42	0	53	39	0	53	36	0	53	33	0	53	30	0	53	27	0	53	24	0	53	21	0	53	18	0	53	15	0	53	12	0	53	09	0	53	06	0	53	03	0	52	57	0	52	54	0	52	51	0	52	48	0	52	45	0	52	42	0	52	39	0	52	36	0	52	33	0	52	30	0	52	27	0	52	24	0	52	21	0	52	18	0	52	15	0	52	12	0	52	09	0	52	06	0	52	03	0	51	57	0	51	54	0	51	51	0	51	48	0	51	45	0	51	42	0	51	39	0	51	36	0	51	33	0	51	30	0	51	27	0	51	24	0	51	21	0	51	18	0	51	15	0	51	12	0	51	09	0	51	06	0	51	03	0	50	57	0	50	54	0	50	51	0	50	48	0	50	45	0	

Table with columns for Latitude (15° to 29°) and Declination (15° to 29°). Each cell contains a 3-digit number representing the LHA value.

Table with columns for Latitude (15° to 29°) and Declination (15° to 29°). Each cell contains a 3-digit number representing the LHA value.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA, latitude (15° to 29°), and longitude (15° to 29°). Each cell contains a numerical value representing the declination.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

LAT 25°

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn-Z
L.H.A. less than 180°Zn=360°-Z

LHA	0°			1°			2°			3°			4°			5°			6°			7°			8°			9°			10°			11°			12°			13°			14°								
	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z	Hc	d	Z												
0	65.00	60	180	66.00	60	180	67.00	60	180	68.00	60	180	69.00	60	180	70.00	60	180	71.00	60	180	72.00	60	180	73.00	60	180	74.00	60	180	75.00	60	180	76.00	60	180	77.00	60	180	78.00	60	180	79.00	60	180	80.00	60	180			
1	64.59	60	178	65.59	60	175	66.59	60	172	67.59	60	169	68.59	60	166	69.59	60	163	70.59	60	160	71.59	60	157	72.59	60	154	73.59	60	151	74.59	60	148	75.59	60	145	76.59	60	142	77.59	60	139	78.59	60	136	79.59	60	133	80.59	60	130
2	64.56	59	173	65.56	59	170	66.56	59	167	67.56	59	164	68.56	59	161	69.56	59	158	70.56	59	155	71.56	59	152	72.56	59	149	73.56	59	146	74.56	59	143	75.56	59	140	76.56	59	137	77.56	59	134	78.56	59	131	79.56	59	128	80.56	59	125
3	64.52	59	168	65.52	59	165	66.52	59	162	67.52	59	159	68.52	59	156	69.52	59	153	70.52	59	150	71.52	59	147	72.52	59	144	73.52	59	141	74.52	59	138	75.52	59	135	76.52	59	132	77.52	59	129	78.52	59	126	79.52	59	123	80.52	59	120
4	64.48	59	163	65.48	59	160	66.48	59	157	67.48	59	154	68.48	59	151	69.48	59	148	70.48	59	145	71.48	59	142	72.48	59	139	73.48	59	136	74.48	59	133	75.48	59	130	76.48	59	127	77.48	59	124	78.48	59	121	79.48	59	118	80.48	59	115
5	64.44	59	158	65.44	59	155	66.44	59	152	67.44	59	149	68.44	59	146	69.44	59	143	70.44	59	140	71.44	59	137	72.44	59	134	73.44	59	131	74.44	59	128	75.44	59	125	76.44	59	122	77.44	59	119	78.44	59	116	79.44	59	113	80.44	59	110
6	64.40	59	153	65.40	59	150	66.40	59	147	67.40	59	144	68.40	59	141	69.40	59	138	70.40	59	135	71.40	59	132	72.40	59	129	73.40	59	126	74.40	59	123	75.40	59	120	76.40	59	117	77.40	59	114	78.40	59	111	79.40	59	108	80.40	59	105
7	64.36	59	148	65.36	59	145	66.36	59	142	67.36	59	139	68.36	59	136	69.36	59	133	70.36	59	130	71.36	59	127	72.36	59	124	73.36	59	121	74.36	59	118	75.36	59	115	76.36	59	112	77.36	59	109	78.36	59	106	79.36	59	103	80.36	59	100
8	64.32	59	143	65.32	59	140	66.32	59	137	67.32	59	134	68.32	59	131	69.32	59	128	70.32	59	125	71.32	59	122	72.32	59	119	73.32	59	116	74.32	59	113	75.32	59	110	76.32	59	107	77.32	59	104	78.32	59	101	79.32	59	98	80.32	59	95
9	64.28	59	138	65.28	59	135	66.28	59	132	67.28	59	129	68.28	59	126	69.28	59	123	70.28	59	120	71.28	59	117	72.28	59	114	73.28	59	111	74.28	59	108	75.28	59	105	76.28	59	102	77.28	59	99	78.28	59	96	79.28	59	93	80.28	59	90
10	64.24	59	133	65.24	59	130	66.24	59	127	67.24	59	124	68.24	59	121	69.24	59	118	70.24	59	115	71.24	59	112	72.24	59	109	73.24	59	106	74.24	59	103	75.24	59	100	76.24	59	97	77.24	59	94	78.24	59	91	79.24	59	88	80.24	59	85
11	64.20	59	128	65.20	59	125	66.20	59	122	67.20	59	119	68.20	59	116	69.20	59	113	70.20	59	110	71.20	59	107	72.20	59	104	73.20	59	101	74.20	59	98	75.20	59	95	76.20	59	92	77.20	59	89	78.20	59	86	79.20	59	83	80.20	59	80
12	64.16	59	123	65.16	59	120	66.16	59	117	67.16	59	114	68.16	59	111	69.16	59	108	70.16	59	105	71.16	59	102	72.16	59	99	73.16	59	96	74.16	59	93	75.16	59	90	76.16	59	87	77.16	59	84	78.16	59	81	79.16	59	78	80.16	59	75
13	64.12	59	118	65.12	59	115	66.12	59	112	67.12	59	109	68.12	59	106	69.12	59	103	70.12	59	100	71.12	59	97	72.12	59	94	73.12	59	91	74.12	59	88	75.12	59	85	76.12	59	82	77.12	59	79	78.12	59	76	79.12	59	73	80.12	59	70
14	64.08	59	113	65.08	59	110	66.08	59	107	67.08	59	104	68.08	59	101	69.08	59	98	70.08	59	95	71.08	59	92	72.08	59	89	73.08	59	86	74.08	59	83	75.08	59	80	76.08	59	77	77.08	59	74	78.08	59	71	79.08	59	68	80.08	59	65
15	64.04	59	108	65.04	59	105	66.04	59	102	67.04	59	99	68.04	59	96	69.04	59	93	70.04	59	90	71.04	59	87	72.04	59	84	73.04	59	81	74.04	59	78	75.04	59	75	76.04	59	72	77.04	59	69	78.04	59	66	79.04	59	63	80.04	59	60
16	64.00	59	103	65.00	59	100	66.00	59	97	67.00	59	94	68.00	59	91	69.00	59	88	70.00	59	85	71.00	59	82	72.00	59	79	73.00	59	76	74.00	59	73	75.00	59	70	76.00	59	67	77.00	59	64	78.00	59	61	79.00	59	58	80.00	59	55
17	63.56	59	98	64.56	59	95	65.56	59	92	66.56	59	89	67.56	59	86	68.56	59	83	69.56	59	80	70.56	59	77	71.56	59	74	72.56	59	71	73.56	59	68	74.56	59	65	75.56	59	62	76.56	59	59	77.56	59	56	78.56	59	53	79.56	59	50
18	63.52	59	93	64.52	59	90	65.52	59	87	66.52	59	84	67.52	59	81	68.52	59	78	69.52	59	75	70.52	59	72	71.52	59	69	72.52	59	66	73.52	59	63	74.52	59	60	75.52	59	57	76.52	59	54	77.52	59	51	78.52	59	48	79.52	59	45
19	63.48	59	88	64.48	59	85	65.48	59	82	66.48	59	79	67.48	59	76	68.48	59	73	69.48	59	70	70.48	59	67	71.48	59	64	72.48	59	61	73.48	59	58	74.48	59	55	75.48	59	52	76.48	59	49	77.48	59	46	78.48	59	43	79.48	59	40
20	63.44	59	83	64.44	59	80	65.44	59	77	66.44	59	74	67.44	59	71	68.44	59	68	69.44	59	65	70.44	59	62	71.44	59	59	72.44	59	56	73.44	59	53	74.44	59	50	75.44	59	47	76.44	59	44	77.44	59	41	78.44	59	38	79.44	59	35
21	63.40	59	78	64.40	59	75	65.40	59	72	66.40	59	69	67.40	59	66	68.40	59	63	69.40	59	60	70.40	59	57	71.40	59	54	72.40	59	51	73.40	59	48	74.40	59	45	75.40	59	42	76.40	59	39	77.40	59	36	78.40	59	33	79.40	59	30
22	63.36	59	73	64.36	59	70	65.36	59	67	66.36	59	64	67.36	59	61	68.36	59	58	69.36	59	55	70.36	59	52	71.36	59	49	72.36	59	46	73.36	59	43	74.36	59	40	75.36	59	37	76.36	59	34	77.36	59	31	78.36	59	28	79.36	59	25
23	63.32	59	68	64.32	59	65	65.32	59	62	66.32	59	59	67.32	59	56	68.32	59	53	69.32	59	50	70.32	59	47	71.32	59	44	72.32	59	41	73.32	59	38	74.32	59	35	75.32	59	32	76.32	59	29	77.32	59	26	78.32	59	23	79.32	59	20
24	63.28	59	63	64.28	59	60	65.28	59	57	66.28	59	54	67.28	59	51	68.28	59	48	69.28	59	45	70.28	59	42	71.28	59	39	72.28	59	36	73.28	59	33	74.28	59	30	75.28	59	27	76.28	59	24	77.28	59	21	78.28	59	18	79.28	59	15
25	63.24	59	58	64.24	59	55	65.24	59	52	66.24	59	49	67.24	59	46	68.24	59	43	69.24	59	40	70.24	59	37	71.24	59	34	72.24	59	31	73.24	59	28	74.24	59	25	75.24	59	22	76.24	59	19	77.24	59	16	78.24	59	13	79.24	59	10
26	63.20	59	53	64.20	59	50	65.20	59	47	66.20	59	44	67.20	59	41	68.20	59	38	69.20	59	35	70.20	59	32	71.20	59	29	72.20	59	26	73.20	59	23	74.20	59	20	75.20	59	17	76.20	59	14	77.20	59	11	78.20	59	8	79.20	59	5
27	63.16	59	48	64.16	59	45	65.16	59	42	66.16	59	39	67.16	59	36	68.16	59	33	69.16	59	30	70.16	59	27	71.16																										

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

LHA	0°		1°		2°		3°		4°		5°		6°		7°		8°		9°		10°		11°		12°		13°		14°		LHA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d		Z																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
70	18.03	27	99	18.30	26	98	18.56	26	97	19.22	26	96	19.48	25	95	20.13	25	94	20.38	25	93	21.03	24	92	21.27	24	91	21.51	24	90	22.15	23	89	22.38	23	88	23.01	23	87	23.24	22	86	23.46	22	85	23.68	22	84	23.90	22	83	24.12	21	82	24.34	21	81	24.56	21	80	25.18	20	79	25.40	20	78	25.62	20	77	25.84	19	76	26.06	19	75	26.28	19	74	26.50	18	73	26.72	18	72	26.94	18	71	27.16	18	70	27.38	18	69	27.60	17	68	27.82	17	67	28.04	17	66	28.26	17	65	28.48	17	64	28.70	16	63	28.92	16	62	29.14	16	61	29.36	16	60	29.58	16	59	30.20	15	58	30.42	15	57	30.64	15	56	30.86	15	55	31.08	15	54	31.30	14	53	31.52	14	52	31.74	14	51	31.96	14	50	32.18	14	49	32.40	14	48	32.62	14	47	32.84	14	46	33.06	14	45	33.28	14	44	33.50	14	43	33.72	14	42	33.94	14	41	34.16	14	40	34.38	14	39	34.60	14	38	34.82	14	37	35.04	14	36	35.26	14	35	35.48	14	34	35.70	14	33	35.92	14	32	36.14	14	31	36.36	14	30	36.58	14	29	36.80	14	28	37.02	14	27	37.24	14	26	37.46	14	25	37.68	14	24	37.90	14	23	38.12	14	22	38.34	14	21	38.56	14	20	38.78	14	19	39.00	14	18	39.22	14	17	39.44	14	16	39.66	14	15	39.88	14	14	40.10	14	13	40.32	14	12	40.54	14	11	40.76	14	10	40.98	14	9	41.20	14	8	41.42	14	7	41.64	14	6	41.86	14	5	42.08	14	4	42.30	14	3	42.52	14	2	42.74	14	1	42.96	14	0	43.18	14	0	43.40	14	0	43.62	14	0	43.84	14	0	44.06	14	0	44.28	14	0	44.50	14	0	44.72	14	0	44.94	14	0	45.16	14	0	45.38	14	0	45.60	14	0	45.82	14	0	46.04	14	0	46.26	14	0	46.48	14	0	46.70	14	0	46.92	14	0	47.14	14	0	47.36	14	0	47.58	14	0	47.80	14	0	48.02	14	0	48.24	14	0	48.46	14	0	48.68	14	0	48.90	14	0	49.12	14	0	49.34	14	0	49.56	14	0	49.78	14	0	50.00	14	0	50.22	14	0	50.44	14	0	50.66	14	0	50.88	14	0	51.10	14	0	51.32	14	0	51.54	14	0	51.76	14	0	51.98	14	0	52.20	14	0	52.42	14	0	52.64	14	0	52.86	14	0	53.08	14	0	53.30	14	0	53.52	14	0	53.74	14	0	53.96	14	0	54.18	14	0	54.40	14	0	54.62	14	0	54.84	14	0	55.06	14	0	55.28	14	0	55.50	14	0	55.72	14	0	55.94	14	0	56.16	14	0	56.38	14	0	56.60	14	0	56.82	14	0	57.04	14	0	57.26	14	0	57.48	14	0	57.70	14	0	57.92	14	0	58.14	14	0	58.36	14	0	58.58	14	0	58.80	14	0	59.02	14	0	59.24	14	0	59.46	14	0	59.68	14	0	59.90	14	0	60.12	14	0	60.34	14	0	60.56	14	0	60.78	14	0	61.00	14	0	61.22	14	0	61.44	14	0	61.66	14	0	61.88	14	0	62.10	14	0	62.32	14	0	62.54	14	0	62.76	14	0	62.98	14	0	63.20	14	0	63.42	14	0	63.64	14	0	63.86	14	0	64.08	14	0	64.30	14	0	64.52	14	0	64.74	14	0	64.96	14	0	65.18	14	0	65.40	14	0	65.62	14	0	65.84	14	0	66.06	14	0	66.28	14	0	66.50	14	0	66.72	14	0	66.94	14	0	67.16	14	0	67.38	14	0	67.60	14	0	67.82	14	0	68.04	14	0	68.26	14	0	68.48	14	0	68.70	14	0	68.92	14	0	69.14	14	0	69.36	14	0	69.58	14	0	69.80	14	0	70.02	14	0	70.24	14	0	70.46	14	0	70.68	14	0	70.90	14	0	71.12	14	0	71.34	14	0	71.56	14	0	71.78	14	0	72.00	14	0	72.22	14	0	72.44	14	0	72.66	14	0	72.88	14	0	73.10	14	0	73.32	14	0	73.54	14	0	73.76	14	0	73.98	14	0	74.20	14	0	74.42	14	0	74.64	14	0	74.86	14	0	75.08	14	0	75.30	14	0	75.52	14	0	75.74	14	0	75.96	14	0	76.18	14	0	76.40	14	0	76.62	14	0	76.84	14	0	77.06	14	0	77.28	14	0	77.50	14	0	77.72	14	0	77.94	14	0	78.16	14	0	78.38	14	0	78.60	14	0	78.82	14	0	79.04	14	0	79.26	14	0	79.48	14	0	79.70	14	0	79.92	14	0	80.14	14	0	80.36	14	0	80.58	14	0	80.80	14	0	81.02	14	0	81.24	14	0	81.46	14	0	81.68	14	0	81.90	14	0	82.12	14	0	82.34	14	0	82.56	14	0	82.78	14	0	83.00	14	0	83.22	14	0	83.44	14	0	83.66	14	0	83.88	14	0	84.10	14	0	84.32	14	0	84.54	14	0	84.76	14	0	84.98	14	0	85.20	14	0	85.42	14	0	85.64	14	0	85.86	14	0	86.08	14	0	86.30	14	0	86.52	14	0	86.74	14	0	86.96	14	0	87.18	14	0	87.40	14	0	87.62	14	0	87.84	14	0	88.06	14	0	88.28	14	0	88.50	14	0	88.72	14	0	88.94	14	0	89.16	14	0	89.38	14	0	89.60	14	0	89.82	14	0	90.04	14	0	90.26	14	0	90.48	14	0	90.70	14	0	90.92	14	0	91.14	14	0	91.36	14	0	91.58	14	0	91.80	14	0	92.02	14	0	92.24	14	0	92.46	14	0	92.68	14	0	92.90	14	0	93.12	14	0	93.34	14	0	93.56	14	0	93.78	14	0	94.00	14	0	94.22	14	0	94.44	14	0	94.66	14	0	94.88	14	0	95.10	14	0	95.32	14	0	95.54	14	0	95.76	14	0	95.98	14	0	96.20	14	0	96.42	14	0	96.64	14	0	96.86	14	0	97.08	14	0	97.30	14	0	97.52	14	0	97.74	14	0	97.96	14	0	98.18	14	0	98.40	14	0	98.62	14	0	98.84	14	0	99.06	14	0	99.28	14	0	99.50	14	0	99.72	14	0	99.94	14	0	100.16	14	0	100.38	14	0	100.60	14	0	100.82	14	0	101.04	14	0	101.26	14	0	101.48	14	0	101.70	14	0	101.92	14	0	102.14	14	0	102.36	14	0	102.58	14	0	102.80	14	0	103.02	14	0	103.24	14	0	103.46	14	0	103.68	14	0	103.90	14	0	104.12	14	0	104.34	14	0	104.56	14	0	104.78	14	0	105.00	14	0	105.22	14	0	105.44	14	0	105.66	14	0	105.88	14	0	106.10	14	0	106.32	14	0	106.54	14	0	106.76	14	0	106.98	14	0	107.20	14	0	107.42	14	0	107.64	14	0	107.86	14	0	108.08	14	0	108.30	14	0	108.52	14	0	108.74	14	0	108.96	14	0	109.18	14	0	109.40	14	0	109.62	14	0	109.84	14	0	110.06	14	0	110.28	14	0	110.50	14	0	110.72	14	0	110.94	14	0	111.16	14	0	111.38	14	0	111.60	14	0	111.82	14	0	112.04	14	0	112.26	14	0	112.48	14	0	112.70	14	0	112.92	14	0	113.14	14	0	113.36	14	0	113.58	14	0	113.80	14	0	114.02	14	0	114.24	14	0	114.46	14	0	114.68	14	0	114.90	14	0	115.12	14	0	115.34	14	0	115.56	14	0	115.78	14	0	116.00	14	0	116.22	14	0	116.44	14	0	116.66	14	0	116.88	14	0	117.10	14	0	117.32	14	0	117.54	14	0	117.76	14	0	117.98	14	0	118.20	14	0	118.42	14	0	118.64	14	0	118.86	14	0	119.08	14	0	119.30	14	0	119.52	14	0	119.74	14	0	119.96	14	0	120.18	14	0	120.40	14	0	120.62	14	0	120.84	14	0	121.06	14	0	121.28	14	0	121.50	14	0	121.72	14	0	121.94	14	0	122.16	14	0	122.38	14	0	122.60	14	0	122.82	14	0	123.04	14	0	123.26	14	0	123.48	14	0	123.70	14	0	123.92	14	0	124.14	14	0	124.36	14	0	124.58	14	0	124.80	14	0	125.02	14	0	125.24	14	0	125.46	14	0	125.68	14	0	125.90	14	0	126.12	14	0	126.34	14	0	126.56	14	0	126.78	14	0	127.00	14	0	127.22	14	0	127.44	14	0	127.66	14	0	127.88	14	0	128.10	14	0	128.32	14	0	128.54	14	0	128.76	14	0	128.98	14	0	129.20	14	0	129.42	14	0	129.64	14	0	129.86	14	0	130.08	14	0	130.30	14	0	130.52	14	0	130.74	14	0	130.96	14	0	131.18	14	0	131.40	14	0	131

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (0-69) and rows for declination (15°-29°). Each cell contains a 3x3 grid of values for Hc, d, and Z.

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for Latitude (15° to 29°) and Longitude (15° to 30°). Each cell contains a 3-digit number representing the declination value.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

LAT 26°

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn-Z
{ L.H.A. less than 180°Zn=360-Z

Table with columns for LHA (0-69) and rows for declinations (0-14 degrees). Each cell contains a 3x3 grid of values for hour circles (Hc), degrees (d), and minutes (Z).

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180-Z
{ L.H.A. less than 180°Zn=180+Z

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA, 0°, 1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 11°, 12°, 13°, 14°, and LHA. It contains declination values for the same name as latitude.

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

Table with columns for LHA, 0°, 1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 11°, 12°, 13°, 14°, and LHA. It contains declination values for the contrary name to latitude.

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (0-69) and rows for declination (15°-29°). Each cell contains a 3x3 grid of values representing hour, minute, and second components for various LHA values.

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

LAT 26°

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for latitude (15° to 29°) and declination (15° to 29°). Each cell contains three values: LHA, Hc, and Z. The table is organized in a grid where the top row represents the latitude and the left column represents the declination.

LAT 26°

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

Table with columns for latitude (15° to 29°) and declination (15° to 29°). Each cell contains three values: LHA, Hc, and Z. The table is organized in a grid where the top row represents the latitude and the left column represents the declination.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (69-360) and latitude (15°-29°). Each cell contains a 3-digit number representing declination. The table is organized into 10-degree latitude bands, with each band containing 10-degree longitude increments.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn-Z
L.H.A. less than 180°Zn+Z

Table with columns for LHA (0-69) and rows for declination (0-14 degrees). Each cell contains a 3x3 grid of values for hour angle (Hc, d, Z) and latitude (1°-14°).

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

S. Lat. { L.H.A. greater than 180°Zn-Z
L.H.A. less than 180°Zn+Z

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (70-97) and rows for declination (0°-14°). Each cell contains a 3x3 grid of values for hours (Hc), degrees (d), and minutes (Z).

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

Table with columns for LHA (97-290) and rows for declination (0°-14°). Each cell contains a 3x3 grid of values for hours (Hc), degrees (d), and minutes (Z).

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

LAT 27°

LHA	0°		1°		2°		3°		4°		5°		6°		7°		8°		9°		10°		11°		12°		13°		14°		LHA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d	Hc	d																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
68	18 37	-29	100	18 08	-28	101	17 39	-28	102	17 10	-30	103	16 40	-30	104	16 10	-30	105	15 40	-30	106	15 10	-31	107	14 38	-31	108	14 08	-31	109	13 37	-32	110	12 04	-32	111	12 04	-32	111	11 32	-32	112	11 32	-32	112	10 59	-33	113	10 59	-33	113	10 25	-33	114	10 25	-33	114	9 51	-33	115	9 51	-33	115	9 27	-34	116	9 27	-34	116	8 52	-34	117	8 52	-34	117	8 29	-34	118	8 29	-34	118	7 54	-34	119	7 54	-34	119	7 31	-35	120	7 31	-35	120	7 07	-35	121	7 07	-35	121	6 43	-35	122	6 43	-35	122	6 20	-35	123	6 20	-35	123	5 56	-35	124	5 56	-35	124	5 33	-36	125	5 33	-36	125	5 10	-36	126	5 10	-36	126	4 46	-36	127	4 46	-36	127	4 23	-37	128	4 23	-37	128	4 00	-37	129	4 00	-37	129	3 45	-38	130	3 45	-38	130	3 29	-38	131	3 29	-38	131	3 13	-39	132	3 13	-39	132	3 00	-39	133	3 00	-39	133	2 44	-39	134	2 44	-39	134	2 29	-39	135	2 29	-39	135	2 14	-40	136	2 14	-40	136	2 00	-40	137	2 00	-40	137	1 45	-40	138	1 45	-40	138	1 30	-40	139	1 30	-40	139	1 16	-41	140	1 16	-41	140	1 01	-41	141	1 01	-41	141	0 46	-41	142	0 46	-41	142	0 32	-42	143	0 32	-42	143	0 18	-42	144	0 18	-42	144	0 04	-42	145	0 04	-42	145	0 00	-42	146	0 00	-42	146	0 00	-42	147	0 00	-42	147	0 00	-42	148	0 00	-42	148	0 00	-42	149	0 00	-42	149	0 00	-42	150	0 00	-42	150	0 00	-42	151	0 00	-42	151	0 00	-42	152	0 00	-42	152	0 00	-42	153	0 00	-42	153	0 00	-42	154	0 00	-42	154	0 00	-42	155	0 00	-42	155	0 00	-42	156	0 00	-42	156	0 00	-42	157	0 00	-42	157	0 00	-42	158	0 00	-42	158	0 00	-42	159	0 00	-42	159	0 00	-42	160	0 00	-42	160	0 00	-42	161	0 00	-42	161	0 00	-42	162	0 00	-42	162	0 00	-42	163	0 00	-42	163	0 00	-42	164	0 00	-42	164	0 00	-42	165	0 00	-42	165	0 00	-42	166	0 00	-42	166	0 00	-42	167	0 00	-42	167	0 00	-42	168	0 00	-42	168	0 00	-42	169	0 00	-42	169	0 00	-42	170	0 00	-42	170	0 00	-42	171	0 00	-42	171	0 00	-42	172	0 00	-42	172	0 00	-42	173	0 00	-42	173	0 00	-42	174	0 00	-42	174	0 00	-42	175	0 00	-42	175	0 00	-42	176	0 00	-42	176	0 00	-42	177	0 00	-42	177	0 00	-42	178	0 00	-42	178	0 00	-42	179	0 00	-42	179	0 00	-42	180	0 00	-42	180	0 00	-42	181	0 00	-42	181	0 00	-42	182	0 00	-42	182	0 00	-42	183	0 00	-42	183	0 00	-42	184	0 00	-42	184	0 00	-42	185	0 00	-42	185	0 00	-42	186	0 00	-42	186	0 00	-42	187	0 00	-42	187	0 00	-42	188	0 00	-42	188	0 00	-42	189	0 00	-42	189	0 00	-42	190	0 00	-42	190	0 00	-42	191	0 00	-42	191	0 00	-42	192	0 00	-42	192	0 00	-42	193	0 00	-42	193	0 00	-42	194	0 00	-42	194	0 00	-42	195	0 00	-42	195	0 00	-42	196	0 00	-42	196	0 00	-42	197	0 00	-42	197	0 00	-42	198	0 00	-42	198	0 00	-42	199	0 00	-42	199	0 00	-42	200	0 00	-42	200

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

LAT 27°

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (0-69) and rows for declination (15°-29°). Each cell contains a 3x3 grid of values representing hour, minute, and second components for various astronomical calculations.

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

LAT 27°

LAT 27°

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (15° to 29°) and rows for declination (15° to 29°). Each cell contains three values: Hc, d, Z.

Table with columns for LHA (15° to 29°) and rows for declination (15° to 29°). Each cell contains three values: Hc, d, Z.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for Latitude (15° to 29°) and Longitude (15° to 180°). Each cell contains a 3-digit number representing declination. The table is organized in a grid where the top row is labeled with latitude values and the left column with longitude values.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

LAT 28°

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn-Z
L.H.A. less than 180°Zn=360°-Z

Table with 19 columns (LHA, 1°-14°) and 69 rows (0-68). Each cell contains astronomical data for a specific declination and latitude combination.

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA, 0°, 1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 11°, 12°, 13°, 14°, and LHA. It contains numerical data for declinations from 0° to 14°.

Table with columns for LHA, 1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 11°, 12°, 13°, 14°, and LHA. It contains numerical data for declinations from 180° to 194°.

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (0-69) and rows for declination (15°-29°). Each cell contains a 3x3 grid of values for hour angle (Hc) and distance (d) in degrees and minutes.

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

LAT 28°

L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Main table with columns for Latitude (15° to 29°) and LHA (70 to 290). Rows represent declination values from 15° to 29°.

Continuation of the main table, showing declination values from 15° to 29° and corresponding LHA values.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360-Z

Table with columns for Latitude (15° to 29°) and Longitude (0° to 360°). Each cell contains a 5-digit number representing declination. The table is organized into 15-degree latitude bands, with each band containing 360 longitude entries.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180-Z
L.H.A. less than 180°Zn=180+Z

DECLINATION (0° - 14°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA and declination degrees from 0° to 14°. Each declination column contains three sub-columns: Hc, d, and Z. The table lists values for various LHA values from 70 to 97.

DECLINATION (0° - 14°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

Table with columns for LHA and declination degrees from 0° to 14°. Each declination column contains three sub-columns: Hc, d, and Z. The table lists values for various LHA values from 97 to 290.

Table with columns for LHA (0-60) and rows for declination (0-14). Each cell contains a 3x3 grid of values for hours (Hc, d, Z) and minutes (o, ' , ").

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for LHA (0-69) and rows for declination (15°-29°). Each cell contains a 3x3 grid of values for Hc, d, and Z. The table is organized into 1-degree increments for both latitude and declination.

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (15° - 29°) SAME NAME AS LATITUDE

LAT 29°

LAT 29°

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for Latitude (15°-29°) and Declination (15°-29°). Each cell contains three values: LHA, Hc, and d. The table is organized by latitude rows and declination columns.

Table with columns for Latitude (15°-29°) and Declination (15°-29°). Each cell contains three values: LHA, Hc, and d. The table is organized by latitude rows and declination columns.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

N. Lat. { L.H.A. greater than 180°Zn=Z
L.H.A. less than 180°Zn=360°-Z

Table with columns for Latitude (15° to 29°) and Longitude (15° to 29°). Each cell contains a 3-digit number representing the declination value. The table is organized in a grid where the top row represents the latitude and the left column represents the longitude.

DECLINATION (15° - 29°) CONTRARY NAME TO LATITUDE

S. Lat. { L.H.A. greater than 180°Zn=180°-Z
L.H.A. less than 180°Zn=180°+Z