

LAT 60°

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

N. Lat. { LHA. greater than 180° .....Zn=Z  
LHA. less than 180° .....Zn=360-Z

Table with columns for LHA (0-69) and rows for Declination (0-14) and Latitude (0-69). Each cell contains three values: Hc, d, z.

S. Lat. { LHA. greater than 180° .....Zn=180-Z  
LHA. less than 180° .....Zn=180+Z

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

LAT 60°

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

N. Lat. { LHA: greater than 180° .....Z=180-Z  
LHA: less than 180° .....Z=360°-Z

Table with columns for Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a value representing the relationship between the two coordinates. The table is organized into a grid where the top row and left column represent the latitude, and the inner grid represents the declination values.

Table with columns for Latitude (14° to 0°) and Declination (14° to 0°). This is a mirror image of the first table, with the top row and left column representing the latitude, and the inner grid representing the declination values.

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

S. Lat. { LHA: greater than 180° .....Z=180-Z  
LHA: less than 180° .....Z=180+Z



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

N. Lat. { LHA, greater than 180° .....Z=180-Z  
LHA, less than 180° .....Z=360-Z

Table with columns for LHA, 0° to 14° declination (Hc, d, Z), and 1° to 14° latitude (Hc, d, Z). The table contains 360 rows of data, each representing a specific declination and latitude combination.

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

S. Lat. { LHA, greater than 180° .....Z=180-Z  
LHA, less than 180° .....Z=180+Z

LAT 60°

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

N. Lat. { LHA, greater than 180° .....; Z=Z  
LHA, less than 180° .....; Z=360°-Z

Table with columns for LHA (0-64) and rows for latitude (15°-29°). Each cell contains a 3x3 grid of values for declination (15°-29°).

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

S. Lat. { LHA, greater than 180° .....; Z=180°-Z  
LHA, less than 180° .....; Z=180°+Z

LAT 60°

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

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

Table with columns for Latitude (15° to 29°) and Declination (15° to 29°). Each cell contains a value representing the relationship between the two coordinates. The table is organized into a grid with 15 columns and 15 rows of data.

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

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



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

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

Main table with columns for latitude (15° to 29°) and declination (15° to 29°). Each cell contains a numerical value representing the conversion between the two coordinates.

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

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



LAT 61°

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

N. Lat. { LHA, greater than 180° .....; Z=Z  
{ LHA, less than 180° .....; Z=360°-Z

Table with columns for LHA, Declination (0°-14°), and Latitude (1°-14°). Each declination column contains 14 rows of data for latitudes 1° through 14°. The table is organized into 14 vertical sections, one for each declination value from 0° to 14°.

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

S. Lat. { LHA, greater than 180° .....; Z=180°-Z  
{ LHA, less than 180° .....; Z=180°+Z

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

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

Table with columns for Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a numerical value representing the declination for a given latitude. The table is organized in a grid where the top row represents the latitude and the left column represents the declination.

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

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

LAT 61°

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

N. Lat. { L.H.A. greater than 180° ..... Zh=Z  
L.H.A. less than 180° ..... Zh=60°-Z

0°		1°		2°		3°		4°		5°		6°		7°		8°		9°		10°		11°		12°		13°		14°								
LHA	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	LHA						
102	-5	47	-53	79	288																															
101	-5	18	-52	81	-5	42	-52	83	260																											
100	-4	50	-52	81	-5	42	-52	83	261																											
99	-4	21	-53	82	-5	14	-52	83	263																											
98	-3	52	-53	83	-4	45	-52	84	262																											
97	-3	23	-53	84	-4	16	-52	84	263																											
96	-2	54	-53	85	-3	47	-52	85	262																											
95	-2	25	-53	86	-3	18	-52	86	264																											
94	-1	56	-53	87	-2	49	-52	87	265																											
93	-1	27	-53	87	-2	20	-52	88	266																											
92	-0	58	-53	88	-1	51	-52	89	267																											
91	-0	29	-53	89	-1	22	-52	90	268																											
90	0	0	-52	90	-0	52	-53	90	269																											
89	0	29	-52	91	-0	23	-53	91	270																											
88	0	58	-52	92	0	06	-53	92	271																											
87	0	17	-52	93	0	35	-53	93	272																											
86	0	16	-52	93	0	14	-53	94	273																											
85	0	25	-52	94	0	13	-53	95	274																											
84	0	24	-52	95	0	2	-53	96	275																											
83	0	24	-52	96	0	1	-53	97	276																											
82	0	32	-52	97	0	3	-53	98	277																											
81	0	41	-53	98	0	28	-52	99	278																											
80	0	45	-53	99	0	37	-53	100	279																											
79	0	51	-52	100	0	46	-53	100	280																											
78	0	54	-53	101	0	54	-52	101	281																											
77	0	57	-53	101	0	53	-52	102	282																											
76	0	44	-53	102	0	51	-53	103	283																											
75	0	13	-53	103	0	20	-53	104	284																											
74	0	41	-53	104	0	48	-53	105	285																											
73	0	09	-53	105	0	16	-53	106	286																											
72	0	08	-53	105	0	14	-53	107	287																											
71	0	09	-53	-54	108	0	7	-54	108																											
70	0	19	-53	-54	108	0	32	-53	109																											

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

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

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

N. Lat. { LHA, greater than 180° .....Z=Z  
LHA, less than 180° .....Z=360-Z

Table with columns for Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a 3-digit number representing the difference between LHA and Z. The table is organized into a grid where the top row and left column represent the latitude and declination values respectively.

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

S. Lat. { LHA, greater than 180° .....Z=180-Z  
LHA, less than 180° .....Z=180+Z

LAT 61°

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

N. Lat. { LHA. greater than 180° .....Zh=Z  
LHA. less than 180° .....Zh=360°-Z

Table with columns for latitude (15° to 61°) and declination (15° to 29°). Each cell contains three values: Hc, d, Z. The table is organized into 11 columns for declination and 11 columns for latitude.

S. Lat. { LHA. greater than 180° .....Zh=180°-Z  
LHA. less than 180° .....Zh=180°+Z

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

S. Lat. { LHA. greater than 180° .....Zh=180°-Z  
LHA. less than 180° .....Zh=180°+Z

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

N. Lat. { LHA, greater than 180° .....Z=Z  
LHA, less than 180° .....Z=360°-Z

Table with columns for Latitude (15° to 29°) and Declination (15° to 29°). Each cell contains a value representing the relationship between the two coordinates. The table is organized into a grid where the top row and left column represent the primary coordinates, and the interior cells represent the resulting values.

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

S. Lat. { LHA, greater than 180° .....Z=180°-Z  
LHA, less than 180° .....Z=180°+Z



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

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

Table with columns for latitude (15° to 29°) and declination (15° to 29°). Each cell contains a numerical value representing the declination for a given latitude. The table is organized into a grid with latitude on the vertical axis and declination on the horizontal axis.

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

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



Table with columns for Declination (0° to 14°) and Latitude (1° to 69°). Each cell contains three-letter codes (LHA, Hc, d, Z) for navigation purposes. The table is organized in a grid with 14 columns for declination and 69 rows for latitude.

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

N. Lat. { LHA, greater than 180° .....Z=Z  
LHA, less than 180° .....Z=360°-Z

Table with columns for LHA (70-227) and rows for declination (0°-14°). Each cell contains a 3x3 grid of values for hour angle (Hc) and declination (d, Z).

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

S. Lat. { LHA, greater than 180° .....Z=180°-Z  
LHA, less than 180° .....Z=180°+Z



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

N. Lat. { LHA, greater than 180° .....Z=Z  
LHA, less than 180° .....Z=360-Z

Table with columns for Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a 3-digit number representing the value for that specific latitude and declination combination.

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

S. Lat. { LHA, greater than 180° .....Z=180-Z  
LHA, less than 180° .....Z=180+Z

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

LAT 62°

N. Lat. { LHA, greater than 180° .....; Z=Z  
LHA, less than 180° .....; Z=360°-Z

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

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

S. Lat. { LHA, greater than 180° .....; Z=180°-Z  
LHA, less than 180° .....; Z=180°+Z

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

N. Lat. { LHA, greater than 180° .....Z=Z  
LHA, less than 180° .....Z=360°-Z

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

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

S. Lat. { LHA, greater than 180° .....Z=180°-Z  
LHA, less than 180° .....Z=180°+Z



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

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

Table with columns for latitude (15° to 29°) and declination (15° to 29°). Each cell contains a numerical value representing the declination for a given latitude. The table is organized into a grid where the top row represents the latitude and the left column represents the declination.

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

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



N. Lat. { LHA. greater than 180° .....Zn=Z  
LHA. less than 180° .....Zn=360°-Z

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

LAT 63°

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	27	00	60	180	28	00	60	180	29	00	60	180	30	00	60	180	31	00	60	180	32	00	60	180	33	00	60	180	34	00	60	180	35	00	60	180	36	00	60	180	37	00	60	180	38	00	60	180	39	00	60	180	40	00	60	180	41	00	60	180	42	00	60	180	43	00	60	180	44	00	60	180	45	00	60	180	46	00	60	180	47	00	60	180	48	00	60	180	49	00	60	180	50	00	60	180	51	00	60	180	52	00	60	180	53	00	60	180	54	00	60	180	55	00	60	180	56	00	60	180	57	00	60	180	58	00	60	180	59	00	60	180	60	00	60	180	61	00	60	180	62	00	60	180	63	00	60	180	64	00	60	180	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	81	00	60	180	82	00	60	180	83	00	60	180	84	00	60	180	85	00	60	180	86	00	60	180	87	00	60	180	88	00	60	180	89	00	60	180	90	00	60	180	91	00	60	180	92	00	60	180	93	00	60	180	94	00	60	180	95	00	60	180	96	00	60	180	97	00	60	180	98	00	60	180	99	00	60	180	100	00	60	180

S. Lat. { LHA. greater than 180° .....Zn=180°-Z  
LHA. less than 180° .....Zn=180°+Z

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

LAT 63°

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

N. Lat. { LHA: greater than 180° .....Zn=Z  
LHA: less than 180° .....Zn=360°-Z

Table with columns for Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a value representing the LHA for a given latitude and declination. The table is organized into a grid with latitude on the vertical axis and declination on the horizontal axis.

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

S. Lat. { LHA: greater than 180° .....Zn=180°-Z  
LHA: less than 180° .....Zn=180°+Z

LAT 63°

0°		1°		2°		3°		4°		5°		6°		7°		8°		9°		10°		11°		12°		13°		14°						
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	LHA			
103	-5	52	-53	76	257																													
102	-4	58	-54	80	258																													
101	-4	31	-54	81	255																													
100	-4	04	-54	82	260																													
99	-3	37	-54	83	261																													
98	-3	10	-54	84	262																													
97	-2	43	-54	85	263																													
96	-2	16	-54	86	264																													
95	-1	49	-53	86	265																													
94	-1	22	-53	87	266																													
93	-0	54	-54	88	267																													
92	-0	27	-54	89	268																													
91	-0	00	-54	90	269																													
90	0	27	-53	91	270																													
89	0	00	-53	92	271																													
88	0	27	-53	93	272																													
87	0	00	-53	94	273																													
86	0	16	-54	94	274																													
85	0	21	-53	95	275																													
84	0	24	-53	96	276																													
83	0	37	-53	97	277																													
82	0	43	-53	98	278																													
81	0	44	-53	99	279																													
80	0	31	-53	100	280																													
79	0	4	-54	100	281																													
78	0	25	-54	101	282																													
77	0	52	-54	102	283																													
76	0	18	-53	103	284																													
75	0	6	-54	103	285																													
74	0	7	-54	104	286																													
73	0	38	-54	105	287																													
72	0	8	-54	106	288																													
71	0	8	-54	107	289																													
70	0	8	-54	108	290																													

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

N. Lat. { LHA, greater than 180° .....Z=Z  
LHA, less than 180° .....Z=360-Z

Table with columns for LHA (0-30) and rows for declination (0-14) and latitude (0-63). Each cell contains a 3x3 grid of values representing celestial coordinates.

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

S. Lat. { LHA, greater than 180° .....Z=180-Z  
LHA, less than 180° .....Z=180+Z



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

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

Table with columns for Latitude (15° to 29°) and Declination (15° to 29°). Each cell contains a numerical value representing the declination for a given latitude. The table is organized into a grid where the top row represents the latitude and the left column represents the declination.

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

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



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

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

Table with columns for latitude (15° to 29°) and longitude (LHA). Each cell contains a value representing declination. The table is organized into rows for each latitude and columns for each longitude.

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

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



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

LAT 64°

N. Lat. { LHA. greater than 180° .....Zn=Z  
LHA. 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	26	00	60	180	27	00	60	180	29	00	60	180	30	00	60	180	32	00	60	180	34	00	60	180	35	00	60	180	36	00	60	180	37	00	60	180	38	00	60	180	39	00	60	180	40	00	60	180	41	00	60	180	42	00	60	180	43	00	60	180	44	00	60	180	45	00	60	180	46	00	60	180	47	00	60	180	48	00	60	180	49	00	60	180	50	00	60	180	51	00	60	180	52	00	60	180	53	00	60	180	54	00	60	180	55	00	60	180	56	00	60	180	57	00	60	180	58	00	60	180	59	00	60	180	60	00	60	180	61	00	60	180	62	00	60	180	63	00	60	180	64	00	60	180	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	81	00	60	180	82	00	60	180	83	00	60	180	84	00	60	180	85	00	60	180	86	00	60	180	87	00	60	180	88	00	60	180	89	00	60	180	90	00	60	180	91	00	60	180	92	00	60	180	93	00	60	180	94	00	60	180	95	00	60	180	96	00	60	180	97	00	60	180	98	00	60	180	99	00	60	180	100	00	60	180

S. Lat. { LHA. greater than 180° .....Zn=180-Z  
LHA. less than 180° .....Zn=180+Z

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

LAT 64°

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 Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a numerical value representing the result of the declination calculation. The table is organized into a grid with latitude on the vertical axis and declination on the horizontal axis.

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

N. Lat. { LHA. greater than 180° .....Zn=Z  
LHA. less than 180° .....Zn=360°-Z

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

LAT 64°

LAT 64°

Table with columns for latitude (0° to 14°) and declination (103 to 71) containing various numerical values. The table is organized into a grid with latitude on the top and declination on the left side. Values include integers and small decimal fractions, with some bolded numbers indicating specific data points.

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

S. Lat. { LHA. greater than 180° .....Zn=180°-Z  
LHA. less than 180° .....Zn=180°+Z

N. Lat. { LHA, greater than 180° .....Z=Z  
LHA, less than 180° .....Z=360-Z

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

Table with columns for Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a 3-digit number representing the LHA value. The table is organized into a grid where the top row and left column represent the latitude and declination values, and the interior cells contain the corresponding LHA values.

S. Lat. { LHA, greater than 180° .....Z=180-Z  
LHA, less than 180° .....Z=180+Z

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

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

LAT 64°

LAT 64°

Main data table with columns for Latitude (15-29), Declination (15-29), and LHA (0-60). Each cell contains numerical values representing astronomical data.

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

LAT 64°

LAT 64°

N. Lat. { LHA: greater than 180°, .....Zn=Z  
LHA: less than 180°, .....Zn=360°-Z

S. Lat. { LHA: greater than 180°, .....Zn=180°-Z  
LHA: less than 180°, .....Zn=180°+Z

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

N. Lat. { LHA: greater than 180° .....Z=Z  
LHA: less than 180° .....Z=360°-Z

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 in a grid where the top row represents the latitude and the left column represents the declination.

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

S. Lat. { LHA: greater than 180° .....Z=180°-Z  
LHA: less than 180° .....Z=180°+Z

LAT 64°

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

N. Lat. { LHA, greater than 180° .....;Zn=Z  
LHA, less than 180° .....;Zn=360°-Z

Table with columns for latitude (15° to 29°) and declination (15° to 29°). Each cell contains LHA, Hc, d, z values. Includes LHA values at the bottom of each column and LHA values on the left side of each row.

71 -5 26 -55 113 289  
70 -5 02 -55 114 290

S. Lat. { LHA, greater than 180° .....;Zn=180°-Z  
LHA, less than 180° .....;Zn=180°+Z

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

Table with columns for latitude (15° to 29°) and declination (15° to 29°) for the 'CONTRARY NAME TO LATITUDE' section.

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

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

Table with columns for Latitude (15° to 29°) and Longitude (Hc, d, Z). It contains numerical data for declination values, organized in a grid format with 15-degree latitude increments and 1-degree longitude increments.

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

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



LAT 65°

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

N. Lat. { LHA, greater than 180°.....;Zn=Z  
LHA, less than 180°.....;Zn=360°-Z

Table with columns for LHA (0-64), Declination (0-14), and Latitude (65-14). Each cell contains a 3-digit number representing the value for that specific coordinate pair.

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

S. Lat. { LHA, greater than 180°.....;Zn=180°-Z  
LHA, less than 180°.....;Zn=180°-Z

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

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

Table with columns for Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a value representing the relationship between the two coordinates. The table is organized into a grid with 15 columns and 15 rows.

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

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

N. Lat. { LHA: greater than 180° .....Zn=Z  
LHA: less than 180° .....Zn=360°-Z

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

LAT 65°

LAT 65°

0°		1°		2°		3°		4°		5°		6°		7°		8°		9°		10°		11°		12°		13°		14°				
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	LHA	
103	-5.27	-55	76	257																												
102	-5.02	-55	79	258																												
101	-4.38	-54	80		-5.32	-55	80	259																								
100	-4.13	-54	81		-5.07	-55	81	260																								
99	-3.47	-55	82		-4.42	-54	82		-5.36	-55	83	261																				
98	-3.22	-55	83		-4.17	-54	83		-5.11	-55	84	262																				
97	-2.57	-55	84		-3.52	-54	84		-4.46	-54	84		-5.15	-55	86	264																
96	-2.32	-54	85		-3.26	-55	85		-4.21	-54	85		-5.15	-55	86	264																
95	-2.07	-54	85		-3.01	-54	86		-4.50	-54	87		-5.44	-55	87	265																
94	-1.41	-55	86		-2.36	-54	87		-4.25	-54	88		-5.19	-54	88	266																
93	-1.16	-54	87		-2.10	-55	88		-3.59	-55	89		-5.48	-54	89	267																
92	-0.51	-54	88		-1.45	-54	89		-3.34	-54	89		-5.23	-54	90	268																
91	-0.25	-55	89		-1.20	-54	90		-3.08	-55	90		-4.57	-55	91	269																
90	0.00	-54	90		-0.54	-55	90		-2.43	-54	91		-3.37	-55	92		-5.26	-54	93	270												
89	0.25	-54	91		-0.29	-54	91		-2.18	-54	92		-4.06	-55	93		-5.01	-54	93	271												
88	0.51	-55	92		-0.04	-54	92		-1.52	-55	93		-3.41	-55	94		-5.30	-54	94													
87	0.16	-54	93		0.22	-55	93		-1.27	-55	94		-3.16	-54	94		-5.05	-54	96	273												
86	0.41	-54	94		0.47	-54	94		-1.02	-54	95		-2.51	-54	95		-4.39	-55	97	274												
85	0.27	-55	95		0.12	-54	95		-0.37	-54	96		-2.25	-55	97		-4.14	-55	97	274												
84	0.22	-55	95		0.37	-54	96		-0.11	-55	97		-2.00	-55	98		-3.49	-55	98	275												
83	0.22	-54	96		0.62	-54	97		0.14	-55	98		-1.74	-54	98		-3.24	-55	99													
82	0.32	-54	97		0.28	-55	98		0.33	-54	99		-1.49	-54	99		-2.59	-55	100													
81	0.37	-54	98		0.53	-55	99		0.58	-54	100		-1.24	-54	100		-2.34	-55	101													
80	0.41	-55	99		0.35	-54	100		0.29	-55	100		-1.00	-54	101		-2.09	-55	102													
79	0.43	-55	100		0.34	-55	100		0.12	-54	100		-0.75	-54	101		-1.84	-55	103													
78	0.52	-54	101		0.48	-54	101		0.59	-54	102		-0.50	-55	102		-1.59	-54	103													
77	0.57	-54	102		0.49	-55	102		0.29	-54	103		-0.25	-55	103		-1.34	-54	104													
76	0.52	-55	103		0.47	-54	103		0.19	-55	104		-0.01	-54	104		-1.09	-55	105													
75	0.61	-55	104		0.45	-54	104		0.08	-55	105		0.24	-55	106		-0.84	-54	106													
74	0.64	-54	105		0.47	-55	105		0.03	-55	106		0.43	-55	107		-0.59	-55	108													
73	0.70	-55	106		0.46	-54	106		0.21	-54	107		0.32	-55	108		-0.34	-54	109													
72	0.73	-55	106		0.35	-54	107		0.03	-55	108		0.51	-55	109		-0.09	-54	110													
71	0.81	-55	107		0.24	-55	108		0.05	-55	109		0.45	-55	110		0.30	-55	111													
70	0.88	-55	108		0.07	-54	109		0.05	-54	110		0.34	-55	111		0.14	-55	112													

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

S. Lat. { LHA: greater than 180° .....Zn=180°-Z  
LHA: less than 180° .....Zn=180°+Z

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

N. Lat. { LHA, greater than 180° .....Z=Z  
LHA, less than 180° .....Z=360-Z

Table with columns for Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a 3-digit number representing the difference between LHA and the declination. The table is organized into a grid where the top row and left column represent the declination, and the inner grid represents the LHA values.

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

S. Lat. { LHA, greater than 180° .....Z=180-Z  
LHA, less than 180° .....Z=180+Z



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

N. Lat. { LHA: greater than 180° .....Z=Z LHA: less than 180° .....Z=360°-Z

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

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

S. Lat. { LHA: greater than 180° .....Z=180°-Z LHA: less than 180° .....Z=180°-Z



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

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

Table with columns for Latitude (15° to 29°) and Longitude (Hc, d, Z). It contains numerical data for declination values. Includes a 'CONTRARY NAME TO LATITUDE' section on the right side of the table.

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

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





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

N. Lat. { LHA, greater than 180° .....Z=Z  
LHA, less than 180° .....Z=360°-Z

Table with columns for latitude (0° to 14°) and declination (0° to 14°). Each cell contains a 3-digit number representing the LHA. The table is organized into a grid where the top row and left column represent the latitude, and the inner grid represents the declination. The numbers are arranged in a regular pattern, with some variations in the last few rows and columns.

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

S. Lat. { LHA, greater than 180° .....Z=180°-Z  
LHA, less than 180° .....Z=180°+Z

N. Lat. { LHA, greater than 180° .....Zn=Z  
LHA, less than 180° .....Zn=360°-Z

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

LAT 66°

0°		1°		2°		3°		4°		5°		6°		7°		8°		9°		10°		11°		12°		13°		14°					
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	LHA		
104	-5	39	-55	77	256																												
103	-5	15	-55	78	257																												
102	-4	51	-55	79	258																												
101	-4	27	-55	80	259																												
100	-4	03	-55	81	260																												
99	-3	39	-55	82	261																												
98	-3	15	-55	83	262																												
97	-3	15	-55	84	263																												
96	-2	26	-55	85	264																												
95	-2	02	-55	85	265																												
94	-1	38	-54	86	266																												
93	-1	13	-55	87	267																												
92	-0	49	-55	88	268																												
91	-0	24	-55	89	269																												
90	0	00	-55	90	270																												
89	0	24	-54	91	271																												
88	0	49	-55	92	272																												
87	0	13	-55	93	273																												
86	0	13	-55	94	274																												
85	0	20	-55	95	275																												
84	0	26	-55	95	276																												
83	0	26	-55	96	277																												
82	0	31	-55	97	278																												
81	0	39	-55	98	279																												
80	0	43	-55	99	280																												
79	0	47	-55	100	281																												
78	0	51	-55	101	282																												
77	0	51	-55	102	283																												
76	0	53	-55	103	284																												
75	0	63	-56	104	285																												
74	0	66	-55	105	286																												
73	0	67	-55	106	287																												
72	0	73	-55	107	288																												
71	0	77	-56	108	289																												
70	0	80	-56	109	290																												

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

S. Lat. { LHA, greater than 180° .....Zn=180°-Z  
LHA, less than 180° .....Zn=180°+Z

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

Table with columns for LHA, 0° to 14° declination (Hc, d, Z), and LHA. Rows 69-300. Includes a secondary table on the right for LAT 66°.

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

S. Lat. { LHA: greater than 180° .....Z=180°-Z / LHA: less than 180° .....Z=180°+Z



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

N. Lat. { LHA: greater than 180° .....Z=Z  
LHA: less than 180° .....Z=360-Z

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

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

S. Lat. { LHA: greater than 180° .....Z=180-Z  
LHA: less than 180° .....Z=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 numerical value representing declination. The table is organized in a grid with latitude on the vertical axis and longitude on the horizontal axis.

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 67°

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

N. Lat. { LHA. greater than 180° .....Zn=Z  
LHA. 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	Hc	d	Z																																																																																																																																																																																																
0	23.00	60	180	24.00	60	180	25.00	60	180	26.00	60	180	27.00	60	180	28.00	60	180	29.00	60	180	30.00	60	180	31.00	60	180	32.00	60	180	33.00	60	180	34.00	60	180	35.00	60	180	36.00	60	180	37.00	60	180	38.00	60	180	39.00	60	180	40.00	60	180	41.00	60	180	42.00	60	180	43.00	60	180	44.00	60	180	45.00	60	180	46.00	60	180	47.00	60	180	48.00	60	180	49.00	60	180	50.00	60	180	51.00	60	180	52.00	60	180	53.00	60	180	54.00	60	180	55.00	60	180	56.00	60	180	57.00	60	180	58.00	60	180	59.00	60	180	60.00	60	180	61.00	60	180	62.00	60	180	63.00	60	180	64.00	60	180	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	81.00	60	180	82.00	60	180	83.00	60	180	84.00	60	180	85.00	60	180	86.00	60	180	87.00	60	180	88.00	60	180	89.00	60	180	90.00	60	180	91.00	60	180	92.00	60	180	93.00	60	180	94.00	60	180	95.00	60	180	96.00	60	180	97.00	60	180	98.00	60	180	99.00	60	180	100.00	60	180

S. Lat. { LHA. greater than 180° .....Zn=180-Z  
LHA. less than 180° .....Zn=180+Z

LAT 67°

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

N. Lat. { LHA. greater than 180° .....Zn=Z  
LHA. less than 180° .....Zn=360-Z

LAT 67°

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

N. Lat. { LHA. greater than 180° .....Zn=Z  
LHA. less than 180° .....Zn=360-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 Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a numerical value representing the result of a calculation. The table is organized into a grid with latitude on the vertical axis and declination on the horizontal axis.

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. { LHA, greater than 180° .....Zn=Z  
LHA, less than 180° .....Zn=360°-Z

Table with columns for Declination (0° to 14°) and LHA (100 to 290). Each cell contains values for Hc, d, and Z. Includes numerical data for each declination degree and its sub-minutes.

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

S. Lat. { LHA, greater than 180° .....Zn=180°-Z  
LHA, less than 180° .....Zn=180°+Z

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

N. Lat. { LHA, greater than 180° .....Z=180-Z  
LHA, less than 180° .....Z=360-Z

Table with columns for Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a 3x3 grid of values representing celestial coordinates. The table is organized into 15 rows and 15 columns, with each cell containing a 3x3 grid of numbers.

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

S. Lat. { LHA, greater than 180° .....Z=180-Z  
LHA, less than 180° .....Z=180+Z

LAT 67°

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

N. Lat. { LHA, greater than 180° .....; Z=Z  
{ LHA, less than 180° .....; Z=360°-Z

Table with columns for Latitude (15° to 69°) and Declination (15° to 29°). Each cell contains a 3x3 grid of values (LHA, d, Z).

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

S. Lat. { LHA, greater than 180° .....; Z=180°-Z  
{ LHA, less than 180° .....; Z=180°-Z

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

N. Lat. { LHA: greater than 180° ..... Z=180°-Z  
LHA: less than 180° ..... Z=360°-Z

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 in a grid where the top row and left column represent the latitude and the bottom row and right column represent the declination.

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

S. Lat. { LHA: greater than 180° ..... Z=180°-Z  
LHA: less than 180° ..... Z=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 numerical value representing declination. The table is organized in a grid with latitude on the vertical axis and longitude on the horizontal axis.

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 68°

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

N. Lat. { LHA: greater than 180° .....; Z<sub>n</sub>=Z  
LHA: less than 180° .....; Z<sub>n</sub>=360°-Z

Table with columns for LHA, Declination (0° to 14°), and Latitude (0° to 68°). Each cell contains a numerical value representing the relationship between these variables.

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

S. Lat. { LHA: greater than 180° .....; Z<sub>n</sub>=180°-Z  
LHA: less than 180° .....; Z<sub>n</sub>=180°+Z

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

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

Table with columns for Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a numerical value representing the result of the declination calculation. The table is organized into a grid with 15 columns and 15 rows.

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

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

N. Lat. { LHA. greater than 180° .....Zn=Z  
 LHA. less than 180° .....Zn=360°-Z

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

LAT 68°

0°			1°			2°			3°			4°			5°			6°			7°			8°			9°			10°			11°			12°			13°			14°																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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	Hc	d	Z	Hc	d	Z	LHA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
105	-5	34	-56	76	255	104	-4	50	-56	77	256	103	-4	28	-56	78	257	102	-4	06	-56	80	259	101	-3	44	-56	81	260	100	-3	22	-56	82	261	99	-3	00	-56	83	262	98	-2	59	-56	83	262	97	-2	37	-56	84	263	96	-2	15	-56	85	264	95	-1	52	-56	86	265	94	-1	30	-56	87	266	93	-1	07	-56	88	267	92	-0	45	-56	89	268	91	-0	22	-56	90	269	90	0	00	-56	90	269	89	0	22	-56	91	270	88	0	45	-56	92	271	87	0	10	-56	93	272	86	0	10	-56	94	273	85	0	52	-56	95	274	84	0	25	-56	96	275	83	0	25	-56	97	276	82	0	59	-56	98	277	81	0	32	-56	99	278	80	0	34	-56	100	279	79	0	44	-56	100	280	78	0	48	-56	101	281	77	0	50	-56	101	282	76	0	52	-56	102	283	75	0	54	-56	103	284	74	0	56	-56	104	285	73	0	57	-56	104	286	72	0	58	-56	105	287	71	0	59	-56	105	288	70	0	59	-56	106	289	69	0	59	-56	106	290	68	0	59	-56	107	291	67	0	59	-56	107	292	66	0	59	-56	108	293	65	0	59	-56	108	294	64	0	59	-56	109	295	63	0	59	-56	109	296	62	0	59	-56	110	297	61	0	59	-56	110	298	60	0	59	-56	111	299	59	0	59	-56	111	300	58	0	59	-56	112	301	57	0	59	-56	112	302	56	0	59	-56	113	303	55	0	59	-56	113	304	54	0	59	-56	114	305	53	0	59	-56	114	306	52	0	59	-56	115	307	51	0	59	-56	115	308	50	0	59	-56	116	309	49	0	59	-56	116	310	48	0	59	-56	117	311	47	0	59	-56	117	312	46	0	59	-56	118	313	45	0	59	-56	118	314	44	0	59	-56	119	315	43	0	59	-56	119	316	42	0	59	-56	120	317	41	0	59	-56	120	318	40	0	59	-56	121	319	39	0	59	-56	121	320	38	0	59	-56	122	321	37	0	59	-56	122	322	36	0	59	-56	123	323	35	0	59	-56	123	324	34	0	59	-56	124	325	33	0	59	-56	124	326	32	0	59	-56	125	327	31	0	59	-56	125	328	30	0	59	-56	126	329	29	0	59	-56	126	330	28	0	59	-56	127	331	27	0	59	-56	127	332	26	0	59	-56	128	333	25	0	59	-56	128	334	24	0	59	-56	129	335	23	0	59	-56	129	336	22	0	59	-56	130	337	21	0	59	-56	130	338	20	0	59	-56	131	339	19	0	59	-56	131	340	18	0	59	-56	132	341	17	0	59	-56	132	342	16	0	59	-56	133	343	15	0	59	-56	133	344	14	0	59	-56	134	345	13	0	59	-56	134	346	12	0	59	-56	135	347	11	0	59	-56	135	348	10	0	59	-56	136	349	9	0	59	-56	136	350	8	0	59	-56	137	351	7	0	59	-56	137	352	6	0	59	-56	138	353	5	0	59	-56	138	354	4	0	59	-56	139	355	3	0	59	-56	139	356	2	0	59	-56	140	357	1	0	59	-56	140	358	0	0	59	-56	141	359	0	0	59	-56	141	360

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

S. Lat. { LHA. greater than 180° .....Zn=180°-Z  
 LHA. less than 180° .....Zn=180°+Z

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

N. Lat. { LHA, greater than 180° .....Z=Z  
LHA, less than 180° .....Z=360-Z

Table with columns for Latitude (0° to 14°) and Declination (0° to 14°). Each cell contains a 3-digit number representing the difference between LHA and the sum of latitude and declination. The table is organized into a grid with latitude on the left and declination on the top.

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

S. Lat. { LHA, greater than 180° .....Z=180-Z  
LHA, less than 180° .....Z=180+Z



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

N. Lat. { LHA: greater than 180° .....Z=Z  
LHA: less than 180° .....Z=360°-Z

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

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

S. Lat. { LHA: greater than 180° .....Z=180°-Z  
LHA: less than 180° .....Z=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 declination (15° to 29°). Each cell contains a numerical value representing the declination. The table is organized into a grid where the top row and left column represent the primary coordinates, and the interior cells contain the resulting 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 69°**

**DECLINATION (0° – 14°) SAME NAME AS LATITUDE**

N. Lat. { LHA. greater than 180° .....Zn=Z  
LHA. 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																																																																																																																																																																																																																																																																																																
0	21	00	60	180	22	00	60	180	23	00	60	180	24	00	60	180	25	00	60	180	26	00	60	180	27	00	60	180	28	00	60	180	29	00	60	180	30	00	60	180	31	00	60	180	32	00	60	180	33	00	60	180	34	00	60	180	35	00	60	180	36	00	60	180	37	00	60	180	38	00	60	180	39	00	60	180	40	00	60	180	41	00	60	180	42	00	60	180	43	00	60	180	44	00	60	180	45	00	60	180	46	00	60	180	47	00	60	180	48	00	60	180	49	00	60	180	50	00	60	180	51	00	60	180	52	00	60	180	53	00	60	180	54	00	60	180	55	00	60	180	56	00	60	180	57	00	60	180	58	00	60	180	59	00	60	180	60	00	60	180	61	00	60	180	62	00	60	180	63	00	60	180	64	00	60	180	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	81	00	60	180	82	00	60	180	83	00	60	180	84	00	60	180	85	00	60	180	86	00	60	180	87	00	60	180	88	00	60	180	89	00	60	180	90	00	60	180	91	00	60	180	92	00	60	180	93	00	60	180	94	00	60	180	95	00	60	180	96	00	60	180	97	00	60	180	98	00	60	180	99	00	60	180	100	00	60	180
1	21	00	60	180	22	00	60	180	23	00	60	180	24	00	60	180	25	00	60	180	26	00	60	180	27	00	60	180	28	00	60	180	29	00	60	180	30	00	60	180	31	00	60	180	32	00	60	180	33	00	60	180	34	00	60	180	35	00	60	180	36	00	60	180	37	00	60	180	38	00	60	180	39	00	60	180	40	00	60	180	41	00	60	180	42	00	60	180	43	00	60	180	44	00	60	180	45	00	60	180	46	00	60	180	47	00	60	180	48	00	60	180	49	00	60	180	50	00	60	180	51	00	60	180	52	00	60	180	53	00	60	180	54	00	60	180	55	00	60	180	56	00	60	180	57	00	60	180	58	00	60	180	59	00	60	180	60	00	60	180	61	00	60	180	62	00	60	180	63	00	60	180	64	00	60	180	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	81	00	60	180	82	00	60	180	83	00	60	180	84	00	60	180	85	00	60	180	86	00	60	180	87	00	60	180	88	00	60	180	89	00	60	180	90	00	60	180	91	00	60	180	92	00	60	180	93	00	60	180	94	00	60	180	95	00	60	180	96	00	60	180	97	00	60	180	98	00	60	180	99	00	60	180	100	00	60	180

S. Lat. { LHA. greater than 180° .....Zn=180°-Z  
LHA. less than 180° .....Zn=180°+Z

**DECLINATION (0° – 14°) SAME NAME AS LATITUDE**

**LAT 69°**