

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S
Longitude 4 to 8 °E

Correction to Latitude
Correction to Longitude

Latitude										Longitude									
4°	4°	5°	5°	6°	6°	7°	7°	8°	Longitude	4°	4°	5°	5°	6°	6°	7°	7°	8°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0	0.1	0.1
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	-0.1	-0.1	0	41° 0'	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0.1	0	0	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	42° 0'	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	42° 15'	0.1	0	0	0.1	0.1	0.1	0	0	0	0.1
0	0	0	0	0	0	0	0	0	42° 30'	0.1	0	0	0.1	0	0.1	0	0	0	0.1
0	0	0	-0.1	0	0	-0.1	-0.1	0	42° 45'	0.1	0	0	0.1	0	0	0.1	0	0	0
0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	43° 0'	0.1	0	0	0.1	0	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	43° 15'	0.1	0	0	0.1	0	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	43° 30'	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0
0	0	0	0	0	0	0	0	0	43° 45'	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	0
0	0	0	0	0	0	0	0	0	44° 0'	0.1	0	0	0.1	0.1	0.1	0	0	0	0
-0.1	0	0	0	0	0	0	0	0	44° 15'	0.1	0	0	0.1	0.1	0.1	0	0	0	0
-0.1	0	0	0	0	0	0	0	0	44° 30'	0.1	0	0	0.1	0.1	0.1	0	0	0	0.1
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0.1	0.1	0.1	0	0	0	0.1
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0.1	0.1	0	0	0	0.1	0.1
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0.1	0	0	0	0.1	0.1
0	0	0	0	0	0	0	0	0	45° 30'	0.1	0	0	0	0	0	0	0	0.1	0.1
0	0	0	0	0	0	-0.1	-0.1	0	45° 45'	0.1	0	0	0	0	0.1	0	0	0	0.1
0	0	0	0	0	0	-0.1	-0.1	-0.1	46° 0'	0	0	0	0	0.1	0.1	0	0	0	0.1
0	0	0	0	0	0	0	0	-0.1	46° 15'	0	0	0	0.1	0.1	0.1	0	0	0	0
0	0	0	0	0	0	0	0	-0.1	46° 30'	0	0	0	0.1	0.1	0.1	0	0	0	0
0	0	0	0	0	0	0	0	-0.1	46° 45'	0	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0
0	0	0	0	0	0	0	0	0	47° 0'	0	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0
0	0	0	0	0	0	0	0	0.1	47° 15'	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0
0	0	0	0	0	0	0	0	0	47° 30'	0	0	0	0.1	0.1	0	0.1	0.1	0	0
0	0	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0.1	0	0	0	0.1	0
0	0	0	0	0	0	0	0	-0.1	48° 0'	0	0	0	0	0.1	0	0.1	0.2	0	0
0	0	0	-0.1	-0.1	0	0	0	0	48° 15'	0	0	0	0.1	0	0	0.1	0.2	0	0
0	0	0	-0.1	0	0	0	0	0.1	48° 30'	0	0	0.1	0.1	0	0	0.1	0.1	0	0
0	0	0	0	0	0	0	0	0.1	48° 45'	0	0	0.1	0	-0.1	-0.1	0.1	0.1	-0.1	-0.1
0	0	0	0	0	0	-0.1	0	0	49° 0'	0	0	0.1	0	-0.1	0	0.1	0.1	-0.2	-0.2
0	0	0	0	0	0	-0.1	-0.1	0	49° 15'	0	0	0	0	-0.1	0.1	0.1	0	-0.2	-0.2
0	0	0	0	0	0	-0.1	0	0.1	49° 30'	0	0	0	0	0	0.1	0.1	-0.1	-0.2	-0.2
0	0	0	0	0	0	0	0	0.1	49° 45'	0	0	0	0	0.1	0.1	0	-0.2	-0.1	-0.1
0	0	0	0	0	0	0	0.1	0	50° 0'	0	0	0	0	0.1	0.1	-0.1	-0.1	0	0

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 8 to 12 °E									
Correction to Latitude										Correction to Longitude									
8°	8°	9°	9°	10°	10°	11°	11°	12°	Longitude	8°	8°	9°	9°	10°	10°	11°	11°	12°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	40° 15'	0.1	0.1	0.1	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	0.1	0.1	0.1	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 45'	0.1	0.1	0.1	0.1	0	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	41° 0'	0.1	0.1	0.1	0.1	0	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	41° 15'	0.1	0.1	0.1	0.1	0	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	41° 30'	0.1	0.1	0.1	0.1	0	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	41° 45'	0.1	0	0.1	0.1	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	42° 0'	0.1	0	0.1	0.1	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 15'	0.1	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	-0.1	0	0	42° 30'	0.1	0	0	0	0.1	0.1	0.1	0	0	
0	0	0	0	-0.1	-0.1	0	0	0	42° 45'	0	0	0	0.1	0.1	0.1	0.1	0	0	
0	0	0	-0.1	-0.1	-0.1	0	0	0	43° 0'	0	0	0	0.1	0.1	0.1	0	0	0	
0	0	0	-0.1	-0.1	0	0	0	0	43° 15'	0	0	0.1	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0.1	0.1	0.1	0	0	0	0	
0	0	0	0	0.1	0	0	0	0	43° 45'	0	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 0'	0	0.1	0.1	0.1	0	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	44° 15'	0	0.1	0.1	0	0	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	44° 30'	0.1	0.1	0.1	0	0	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	0.1	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0.1	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0.1	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0.1	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0.1	0.1	0	0	0	0	0	0	0	
0	0	0	0.1	0.1	0	0	0	0	46° 0'	0.1	0.1	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0	0	0	0	0.1	
-0.1	0	0	0	0	0	0	0	0	46° 30'	0	-0.1	0	0	0	0	0	0	0.1	
-0.1	0	0	-0.1	-0.1	0	0	0	0	46° 45'	0	-0.1	0	0	0	0	0	0	0	
0	0	0	-0.1	-0.1	-0.1	-0.1	0	0	47° 0'	0	-0.1	0	0.1	0	0	0	0	0	
0	0	0	-0.1	-0.1	-0.1	-0.1	0	0	47° 15'	0	-0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 30'	0	-0.1	0.1	0.2	0	-0.1	0	0	0	
0	0	0	0	0.1	0	0	0	0	47° 45'	0	-0.1	0.1	0.2	0	-0.1	0	0	0	
-0.1	0	0	0.1	0.1	0.1	0.1	0	0	48° 0'	0	-0.1	0	0.1	0	0	0	0	0	
0	0	0.1	0	0	0	0	0	0	48° 15'	0	-0.2	0	0.1	0	0	0.1	0.1	0	
0.1	0.1	0.1	0	0	0	0	0	0	48° 30'	0	-0.2	0	0.1	0	0	0.1	0.1	0	
0.1	0.1	0.1	0	0	0	0	0	0	48° 45'	-0.1	-0.2	0.1	0.2	0	0	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	49° 0'	-0.2	-0.2	0.1	0.2	0.1	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	49° 15'	-0.2	-0.2	0.1	0.1	0.1	0.1	0.1	0	0	
0.1	0	-0.1	0	0	0	0	0	0	49° 30'	-0.2	-0.1	0	0.1	0.1	0.1	0	0	0.1	
0.1	0	0	0	0	0	0	0	0	49° 45'	-0.1	0	0	0	0.1	0.1	0	0	0.1	
0	0	0	0	0	0	0	0	0	50° 0'	0	0.1	0	0	0.1	0.1	0	0	0	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S
Longitude 16 to 20 °E

Correction to Latitude
Correction to Longitude

Correction to Latitude										Correction to Longitude									
16° 0'	16° 30'	17° 0'	17° 30'	18° 0'	18° 30'	19° 0'	19° 30'	20° 0'	Longitude Latitude	16° 0'	16° 30'	17° 0'	17° 30'	18° 0'	18° 30'	19° 0'	19° 30'	20° 0'	
-0.1	0	0	0	0	0	0	0	0	40° 0'	0	0.1	0	0	0	0	0	0	0	0
-0.1	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0.1	0	0	0
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	44° 15'	0.1	0	0	0	0	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	44° 30'	0.1	0	0	0	0	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	44° 45'	0.1	0	0	0.1	0.1	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	45° 0'	0.1	0	0	0.1	0.1	0.1	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 15'	0.1	0	0	0.1	0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0.1	0.1	0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 45'	0	0.1	0.1	0.1	0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	46° 0'	0.1	0.1	0.1	0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	46° 15'	0.1	0.1	0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	46° 30'	0.1	0.1	0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	46° 45'	0.1	0.1	0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	47° 0'	0.1	0.1	0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	47° 15'	0	0.1	0.1	0	0	0.1	0	0	0	0
0	0	0	0	0	0	0	0	0	47° 30'	0	0.1	0.1	0	0.1	0.1	0	0	0	0
0	0	0	0	0	0	0	0	0	47° 45'	0	0.1	0	0	0.1	0.1	0	0	0	0
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0	0	0.1	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	48° 15'	0	0	0	0.1	0.1	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	48° 30'	0	0	0	0.1	0.1	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	48° 45'	0	0	0.1	0.1	0.1	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0.1	0.1	0.1	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	49° 15'	0.1	0	0	0.1	0.1	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	49° 30'	0.1	0	0	0.1	0.1	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	49° 45'	0.1	0	0	0.1	0	0	0.1	0	0	0
0	0	0	0	0	0	0	0	0	50° 0'	0.1	0.1	0.1	0	0	0	0.1	0.1	0	0

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 20 to 24 °E									
Correction to Latitude										Correction to Longitude									
20°	20°	21°	21°	22°	22°	23°	23°	24°	Longitude	20°	20°	21°	21°	22°	22°	23°	23°	24°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	-0.1	-0.1	40° 0'	0	0	0	0	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	-0.1	-0.1	41° 30'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	-0.1	-0.1	41° 45'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	-0.1	0	42° 0'	0	0	0	0	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0.1	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0	0.1	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0.1	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 30'	0	0	0	0	0	0	0	0.1	0	
0	0	0	0	0	0	0	0	0	48° 45'	0	0	0	0	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0	0	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	49° 15'	0	0	0	0	0	0	0	0.1	0	
0	0	0	0	0	0	0	0	0	49° 30'	0	0	0	0	0	0	0	0.1	0	
0	0	0	0	0	0	0	0	0	49° 45'	0	0	0.1	0	0	0	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	50° 0'	0	0	0.1	0	0	0	0.1	0	0	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 24 to 28 °E									
Correction to Latitude										Correction to Longitude									
24° 0'	24° 30'	25° 0'	25° 30'	26° 0'	26° 30'	27° 0'	27° 30'	28° 0'	Longitude Latitude	24° 0'	24° 30'	25° 0'	25° 30'	26° 0'	26° 30'	27° 0'	27° 30'	28° 0'	
-0.1	0	0	0	0	0	0	0	-0.1	-0.1	40° 0'	0.1	0.1	0.1	0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	-0.1	0	40° 15'	0.1	0.1	0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	40° 30'	0.1	0.1	0.1	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	0	40° 45'	0.1	0.1	0.1	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	0	41° 0'	0.1	0.1	0.1	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	0	41° 15'	0.1	0.1	0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	41° 30'	0.1	0.1	0.1	0	0	0	0	0	0
-0.1	0	0	0	0	0	0	0	0	0	41° 45'	0.1	0.1	0.1	0	0	0	0	0	0
-0.1	0	0	0	0	0	0	0	0	0	42° 0'	0.1	0	0.1	0	0	0	0	0	0
0	0	0	0.1	0	0	0	0	0	0	42° 15'	0	0	0	0	0	0	0	0	0
0	0	0.1	0.1	0.1	0	0	0	0	0	42° 30'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	46° 30'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	47° 0'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0	0	0	0	0	0.1
0	0	0	0	0	0	0	0	0	0	47° 30'	0	0	0	0	0	0	0	0.1	0.1
0	0	0	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0	0	0	0.1	0.1
0	0	0	0	0	0	0	0	-0.1	0	48° 0'	0	0	0	0.1	0	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	-0.1	-0.1	48° 15'	0	0	0	0.1	0	0	0.1	0.1	0
0	0	0	0	0	0	0	0	-0.1	-0.1	48° 30'	0	0	0	0.1	0	0	0.1	0.1	0
0	0	0	0	0	0	0	0	0	0	48° 45'	0.1	0	0	0.1	0	0	0.1	0.1	0
0	0	0	0	0	0	0	0	0	0	49° 0'	0.1	0	0	0.1	0	0	0.1	0.1	0
0	0	0	0	0	0	0	0	0	0	49° 15'	0	0	0	0.1	0	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	0	49° 30'	0	0	0	0.1	0	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	0	49° 45'	0	0	0	0.1	0	0.1	0.1	0	0.1
0	0	0	0	0	0	0	0	0	0	50° 0'	0	0	0	0	0.1	0.1	0	0	0.1

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 28 to 32 °E									
Correction to Latitude										Correction to Longitude									
28°	28°	29°	29°	30°	30°	31°	31°	32°	Longitude	28°	28°	29°	29°	30°	30°	31°	31°	32°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
-0.1	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	40° 15'	0	-0.1	0	0	0	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 45'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 0'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 15'	0	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 30'	0	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 45'	0	-0.1	-0.1	0	0	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	42° 0'	0	-0.1	0	0	-0.1	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0	-0.1	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0	0	-0.1	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	-0.1	-0.1	44° 0'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	-0.1	-0.1	44° 15'	0	0	0	0.1	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	-0.1	-0.1	44° 30'	0	0	0	0.1	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	-0.1	-0.1	44° 45'	0	0	0	0.1	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	-0.1	-0.1	45° 0'	0	0	0	0.1	0	0.1	0.1	0.2	0.1	
0	0	0	0	0	0	-0.1	-0.1	-0.1	45° 15'	0	0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	45° 30'	0	0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	
0	0	0	0	0	-0.1	-0.1	-0.1	0	45° 45'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	
0	0	0	0	0	-0.1	-0.1	-0.1	0	46° 0'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	
0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	46° 15'	0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	
0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	46° 30'	0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0	
0	0	0	-0.1	-0.1	-0.1	-0.1	0	0	46° 45'	0	0.1	0.1	0.1	0.1	0.2	0.2	0	0	
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	47° 0'	0	0.1	0.1	0.1	0.2	0.2	0.1	0	0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	47° 15'	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0	0.1	
0	-0.1	-0.1	-0.1	-0.1	0	0	0	0	47° 30'	0.1	0.1	0.1	0.1	0.2	0.2	0	0	0.2	
0	0	0	-0.1	-0.1	0	0	0.1	0	47° 45'	0.1	0.2	0.1	0.1	0.2	0.1	0	0	0.2	
0	0	0	-0.1	-0.1	0	0.1	0	0	48° 0'	0.1	0.1	0.2	0.1	0.2	0	-0.1	0.1	0.3	
-0.1	0	0	0	0	0	0.1	0	0	48° 15'	0	0.1	0.2	0.2	0.1	0	-0.1	0.2	0.3	
-0.1	0	0	0	0	0.1	0	-0.1	0	48° 30'	0	0.1	0.2	0.2	0	-0.1	0	0.2	0.2	
0	0	0	0	0.1	0.1	0	-0.1	0	48° 45'	0	0.1	0.2	0.1	0	0	0.1	0.3	0.2	
0	-0.1	0	0	0.1	0	0	0	0	49° 0'	0	0.1	0.2	0	-0.1	0	0.2	0.2	0.1	
0	0	0	0.1	0.1	0	0	0	0.1	49° 15'	0.1	0.1	0.1	0	0	0.1	0.2	0.1	0	
0	0	0	0.1	0	0	0	0	0.1	49° 30'	0.1	0.1	0	-0.1	0	0.2	0.2	0	0	
0	0	0	0.1	0	0	0	0	0	49° 45'	0.1	0.1	0	-0.1	0.1	0.2	0.1	0	0	
0	0	0.1	0	0	0	0	0	0	50° 0'	0.1	0.1	-0.1	-0.1	0.2	0.2	0.1	0	0	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 36 to 40 °E									
Correction to Latitude										Correction to Longitude									
36°	36°	37°	37°	38°	38°	39°	39°	40°	Longitude	36°	36°	37°	37°	38°	38°	39°	39°	40°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	40° 0'	0.1	0	0	0	0	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	40° 15'	0.1	0	0.1	0	0	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	40° 30'	0.1	0	0.1	0.1	0	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	40° 45'	0.1	0	0.1	0.1	0.1	0.1	0.1	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	41° 0'	0.1	0	0.1	0.1	0.1	0.1	0.1	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	41° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	41° 30'	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	41° 45'	0.1	0.1	0.1	0.1	0	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	42° 0'	0.1	0.1	0.1	0.1	0	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	42° 15'	0	0.1	0.1	0.1	0	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	42° 30'	0	0.1	0.1	0	0	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	42° 45'	0.1	0.1	0.1	0	0	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	43° 0'	0.1	0.2	0.1	0	0	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	43° 15'	0.2	0.2	0	0	0	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	43° 30'	0.2	0.1	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	43° 45'	0.2	0.1	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	44° 0'	0.2	0.1	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	44° 15'	0.2	0.1	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	44° 30'	0.2	0	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	44° 45'	0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0.1	0	0	45° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0	0	-0.1	0	0	0	
0	0	0	-0.1	-0.1	0	0	0	0	46° 15'	0	0	0	0.1	0	-0.1	0	0.1	-0.1	
0	0.1	0	0	-0.1	0	0.1	0	0	46° 30'	0	0	0.1	0.1	-0.1	-0.2	0	0.1	-0.1	
0	0.1	0.1	0	0	0.1	0.1	0.1	0	46° 45'	0	0	0.1	0.2	-0.1	-0.3	0	0.2	-0.1	
0	0	0.1	0.1	0.1	0.1	0.1	0.1	0	47° 0'	-0.1	-0.1	0.1	0.2	-0.1	-0.3	0	0.1	0	
0	0	0.1	0.1	0.2	0.1	0	0.1	0	47° 15'	0	-0.1	0	0.1	-0.1	-0.2	0	0.1	0	
0	0	0	0.1	0.1	0	0	0	0	47° 30'	0	-0.1	0	0	-0.1	-0.1	0.1	0.1	0	
0.1	0	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0	-0.1	0	0	0.1	0	0.1	
0	0	0	0	0	0	0	0	0	48° 15'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	48° 30'	0	0	0	-0.1	0	0.1	0.1	0	0.1	
0	0	0	0	0	0	0	0	0	48° 45'	0	0	0	-0.1	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0	-0.1	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	49° 15'	0	0	0	-0.1	0	0.1	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	49° 30'	0.1	0	0	0	0.1	0.1	0.1	0.1	0	
0	0	0	0	-0.1	0	0	0	0	49° 45'	0.1	0.1	0	0	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	50° 0'	0.1	0.1	0	0	0.1	0.1	0.1	0.1	0	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 52 to 56 °E									
Correction to Latitude										Correction to Longitude									
52° 0'	52° 30'	53° 0'	53° 30'	54° 0'	54° 30'	55° 0'	55° 30'	56° 0'	Longitude Latitude	52° 0'	52° 30'	53° 0'	53° 30'	54° 0'	54° 30'	55° 0'	55° 30'	56° 0'	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	40° 0'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	40° 15'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	-0.1	-0.1	-0.1	40° 30'	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	
0	-0.1	-0.1	0	0	0	0	0	0	40° 45'	0	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	
0	-0.1	-0.1	0	0	0	0	0	0	41° 0'	0	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	41° 15'	0	0	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	
0	0	0	-0.1	-0.1	0	0	0	0	41° 30'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	-0.1	-0.1	0	0	0	0	41° 45'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	0	0	-0.1	-0.1	0	0	0	0	42° 0'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	0	42° 15'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	42° 30'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	-0.1	-0.1	-0.1	0	0	42° 45'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	-0.1	0	0	-0.1	0	43° 0'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	-0.1	-0.1	0	43° 15'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	-0.1	-0.1	0	43° 30'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	-0.1	44° 0'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	-0.1	44° 15'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	-0.1	44° 30'	0	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	-0.1	44° 45'	0	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	-0.1	-0.1	0	0	
-0.1	0	0	0	0	0	0	0	0	45° 15'	-0.1	0	0	0	0	-0.1	0	0	0	
-0.1	-0.1	0	0	0	0	0	0	0	45° 30'	-0.1	-0.1	0	0	0	-0.1	0	0	-0.1	
-0.2	-0.1	0	0	0	0	0	0	0	45° 45'	-0.2	-0.1	-0.1	0	0	0	0	0	-0.1	
-0.2	-0.2	-0.1	0	0	0	0	0	0	46° 0'	-0.2	-0.2	-0.2	-0.1	0	0	0	0	-0.1	
-0.2	-0.2	-0.1	0	0	0	0	0	0	46° 15'	-0.2	-0.3	-0.3	-0.1	0	0	0	0	-0.1	
0	0	-0.1	0	0	0	0	0	0	46° 30'	-0.2	-0.3	-0.3	-0.2	0	0	0	0	0	
0.2	0.1	0	0	0	0	0	0	0	46° 45'	-0.2	-0.2	-0.3	-0.2	-0.1	0	0	0	0	
0.3	0.2	0.1	0	0	0	0	0	0	47° 0'	-0.1	-0.1	-0.2	-0.1	-0.1	0	0	0	-0.1	
0.2	0.2	0.1	0	0	0	0	0	0	47° 15'	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	0	
0.1	0.1	0	0	0	0	0	0	0	47° 30'	0	0	0	0	0	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0	0	0	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	48° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 30'	0	0	0	0	-0.1	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	48° 45'	0	0	0	0	0	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0	0	0	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	49° 15'	0	0	0	0	0	-0.1	0	0	-0.1	
0	0	0	0	0	0	0	0	0	49° 30'	0	0	0	0	0	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	49° 45'	0	0	-0.1	0	0	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	50° 0'	0	0	0	0	0	0	0	-0.1	-0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 56 to 60 °E									
Correction to Latitude										Correction to Longitude									
56°	56°	57°	57°	58°	58°	59°	59°	60°	Longitude	56°	56°	57°	57°	58°	58°	59°	59°	60°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	0	0	40° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	40° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	
-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	0	40° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	
0	0	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	40° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	41° 0'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	41° 15'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	41° 30'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	41° 45'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	42° 0'	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	42° 15'	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	-0.1	-0.1	0	0	0	0	42° 30'	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	42° 45'	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	43° 0'	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	43° 15'	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	0	0	0	0	0	0	43° 30'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	-0.1	-0.1	0	0	0	0	0	0	43° 45'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	0	0	0	0	44° 0'	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	0	0	0	0	44° 15'	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0	-0.1	0	0	-0.1	0	44° 30'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	44° 45'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	-0.1	-0.1	-0.1	0	45° 0'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	-0.1	-0.1	0	0	45° 15'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	45° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	45° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	46° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	46° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	46° 30'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	46° 45'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	47° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	47° 15'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	47° 30'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	47° 45'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	48° 0'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	48° 15'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	48° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	48° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	49° 0'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	49° 15'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	49° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	49° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	50° 0'	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 60 to 64 °E									
Correction to Latitude										Correction to Longitude									
60°	60°	61°	61°	62°	62°	63°	63°	64°	Longitude	60°	60°	61°	61°	62°	62°	63°	63°	64°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	-0.1	-0.1	0	0	0	0	0	0	40° 0'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 15'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	
-0.1	-0.1	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	
-0.1	-0.1	0	0	0	0	0	0	0	41° 0'	0	0	-0.1	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	41° 15'	0	-0.1	-0.1	-0.1	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	41° 30'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
-0.1	-0.1	-0.1	0	0	-0.1	0	0	0	41° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
-0.1	-0.1	-0.1	0	-0.1	-0.1	0	0	0	42° 0'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
-0.1	-0.1	0	0	-0.1	0	0	0	0	42° 15'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	-0.1	0	0	0	0	42° 30'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 45'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	-0.1	-0.1	0	0	-0.1	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	43° 15'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 30'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 45'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 0'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 15'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 30'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	0	-0.1	-0.1	0	45° 45'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	-0.1	-0.1	0	46° 0'	-0.1	-0.1	-0.1	0	-0.1	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	-0.1	-0.1	46° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	-0.1	46° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	46° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	
0	0	0	0	0	-0.1	-0.1	0	0	47° 0'	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	
0	0	0	0	0	-0.1	-0.1	0	0	47° 15'	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	47° 30'	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	
0	0	0	-0.1	-0.1	0	0	0	0	47° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	
0	0	0	-0.1	-0.1	0	0	0	-0.1	48° 0'	-0.1	-0.1	-0.1	0	0	0	0	-0.1	0	
0	0	0	0	-0.1	-0.1	0	0	-0.1	48° 15'	-0.1	-0.1	0	0	0	-0.1	-0.1	0	0	
0	0	0	0	0	-0.1	0	0	0	48° 30'	-0.1	-0.1	0	0	0	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	48° 45'	-0.1	-0.1	0	0	0	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	49° 0'	-0.1	-0.1	0	0	0	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	-0.1	49° 15'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0.1	0.1	0	-0.1	49° 30'	-0.1	0	0	0	-0.1	0	0.1	0.1	0.1	
0	0	0	0	0	0.1	0.1	0	0	49° 45'	-0.1	0	0	0	-0.1	-0.1	0.1	0.2	0.2	
0	0	0	0	0	0	0	0.1	0.1	50° 0'	-0.1	-0.1	0	0	-0.1	-0.1	0.1	0.2	0.2	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 64 to 68 °E									
Correction to Latitude										Correction to Longitude									
64° 0'	64° 30'	65° 0'	65° 30'	66° 0'	66° 30'	67° 0'	67° 30'	68° 0'	Longitude	64° 0'	64° 30'	65° 0'	65° 30'	66° 0'	66° 30'	67° 0'	67° 30'	68° 0'	Latitude
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0	0	40° 0'
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0	0	40° 15'
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	40° 30'
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	40° 45'
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0	0	0	0	41° 0'
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	0	0	0	0	0	41° 15'
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0	0	0	0	0	0	0	41° 30'
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0	0	0	0	0	0	0	41° 45'
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0	0	0	0	0	0	0	42° 0'
0	0	0	0	0	0	0	0	0	42° 15'	0	-0.1	0	0	0	0	0	0	0	42° 15'
0	0	0	0	0	0	0	0	0	42° 30'	0	-0.1	0	0	0	0	0	0	0	42° 30'
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	0	0	0	42° 45'
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	0	0	0	43° 0'
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0	43° 15'
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0	43° 30'
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	0	0	43° 45'
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0	44° 0'
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	44° 15'
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0	44° 30'
0	0	0	0	-0.1	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0	44° 45'
0	0	0	0	-0.1	0	0	0	-0.1	45° 0'	0	0	0	0	0	0	0	0	0	45° 0'
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	45° 15'	0	0	0	0	0	0	0	0	0	45° 15'
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	45° 30'	0	0	0	0	0	0	0	0	0	45° 30'
0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	45° 45'	0	0	0	0	0	0	0	0	0	45° 45'
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	46° 0'	-0.1	0	0	0	0	0.1	0.1	0	-0.1	46° 0'
-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	46° 15'	-0.1	0	0.1	0.1	0.1	0.1	0.1	0	0	46° 15'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	46° 30'	-0.1	0	0.1	0.1	0.1	0.1	0.1	0	0	46° 30'
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	46° 45'	-0.1	0	0.1	0.1	0.1	0.1	0	0	0	46° 45'
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	47° 0'	-0.1	0	0.1	0.1	0.1	0.1	0	0	0	47° 0'
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	47° 15'	0	0	0.1	0.2	0.2	0.1	0	0	0	47° 15'
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	47° 30'	-0.1	0	0.1	0.2	0.2	0.1	0	0	0	47° 30'
0	0	0	0	0	0	0	-0.1	-0.1	47° 45'	-0.1	0	0.1	0.2	0.2	0	0	0	0	47° 45'
-0.1	-0.1	-0.1	0	0	0	0	-0.1	-0.1	48° 0'	0	0	0.1	0.2	0.1	0	0	0	0	48° 0'
-0.1	-0.1	-0.1	0	0	0	0	0	0	48° 15'	0	0	0.1	0.2	0.1	0.1	0.1	0.1	0	48° 15'
0	-0.1	-0.1	0	0	0	0	0	0	48° 30'	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0	48° 30'
0	0	0	0	0	0	0	0	0	48° 45'	0	0.1	0.1	0	0	0.1	0.2	0.1	0	48° 45'
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0	0	0	0.1	0.2	0.1	0	49° 0'
-0.1	-0.1	-0.1	-0.1	0	0	0.1	0.1	0	49° 15'	0	0	0	0	0	0.1	0.2	0.2	0.1	49° 15'
-0.1	-0.2	-0.2	-0.1	-0.1	0	0.1	0.1	0.1	49° 30'	0.1	0	0	-0.1	-0.1	0	0.2	0.2	0.1	49° 30'
0	-0.1	-0.1	-0.1	0	0	0.1	0.1	0.1	49° 45'	0.2	0.1	0	-0.1	-0.2	-0.1	0.1	0.2	0.2	49° 45'
0.1	0.1	0.1	0	0	0	0.1	0.1	0.2	50° 0'	0.2	0.1	0	-0.1	-0.2	-0.1	0	0.2	0.2	50° 0'

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 68 to 72 °E									
Correction to Latitude										Correction to Longitude									
68°	68°	69°	69°	70°	70°	71°	71°	72°	Longitude	68°	68°	69°	69°	70°	70°	71°	71°	72°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	40° 0'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	-0.1	-0.1	-0.1	0	0	0	-0.1	40° 15'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	-0.1	-0.1	0	0	0	-0.1	40° 30'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	0	-0.1	-0.1	0	0	-0.1	40° 45'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	0	-0.1	-0.1	-0.1	0	0	41° 0'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	-0.1	-0.1	0	41° 15'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	-0.1	-0.1	-0.1	41° 30'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	-0.1	-0.1	41° 45'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	-0.1	-0.1	42° 0'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0	-0.1	-0.1	0	-0.1	-0.1	-0.1
0	0	0	0	0	0	-0.1	0	0	42° 30'	0	0	0	0	0	0	0	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1
0	0	0	-0.1	-0.1	0	0	0	0	43° 0'	0	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1
0	0	0	-0.1	0	0	0	0	-0.1	43° 15'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	0
0	0	0	0	0	0	-0.1	-0.1	-0.1	43° 30'	0	0	0	0	-0.1	-0.1	0	0	0	0
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	43° 45'	0	0	0	0	-0.1	0	0	0	0	0
0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	44° 0'	0	0	0	0	0	0	0	-0.1	-0.1	-0.1
0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	44° 15'	0	0	0	0	0	0	0	-0.1	-0.1	-0.1
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	44° 30'	0	0	0	0	0	0	0	-0.1	-0.1	-0.1
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	44° 45'	0	0	0	0	0	0	0	0	-0.1	-0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	45° 0'	0	0	0	0	0	0	0	0	0	-0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	45° 15'	0	0	0	0	0	0	0	0	-0.1	-0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	45° 30'	0	0	0	0	0	0	0	0	-0.1	-0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	45° 45'	0	0	0	0	0	0	0	0	-0.1	0
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	46° 0'	-0.1	-0.1	0	0	-0.1	0	0	-0.1	0	0
-0.1	-0.1	-0.1	-0.1	0	0	0	0	-0.1	46° 15'	-0.1	-0.1	0	0	-0.1	0	0	-0.1	-0.1	-0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	46° 30'	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	46° 45'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1
-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	47° 0'	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	47° 15'	0	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	47° 30'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2
-0.1	-0.1	-0.1	-0.1	0	-0.1	0	0	0	47° 45'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2
-0.1	0	0	0	0	0	0	0	0	48° 0'	0	0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
0	0	0	0	0	0	0	0	0	48° 15'	0	0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1
0	0	0	0	-0.1	0	0	0	0	48° 30'	0	0	0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1
0	0	0	0	-0.1	0	0	0	0	48° 45'	0	0	0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
0	0	0	0	0	0	0	0	0	49° 15'	0.1	0	0	0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
0.1	0	0	0	0	0	0	0	0	49° 30'	0.1	0	0	0	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1
0.1	0.1	0	0	0	0.1	0	0	0	49° 45'	0.2	0.1	0	0	-0.1	-0.2	-0.2	-0.2	-0.1	0
0.2	0.1	0.1	0.1	0.1	0.1	0.1	0	0	50° 0'	0.2	0.1	0.1	-0.1	-0.2	-0.2	-0.2	0	0	0

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 72 to 76 °E									
Correction to Latitude										Correction to Longitude									
72°	72°	73°	73°	74°	74°	75°	75°	76°	Longitude	72°	72°	73°	73°	74°	74°	75°	75°	76°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	40° 0'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	40° 15'	-0.1	-0.1	0	-0.1	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	40° 30'	-0.1	-0.1	0	0	-0.1	0	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	40° 45'	-0.1	-0.1	0	0	-0.1	-0.1	0	0	0	
0	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	41° 0'	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	0	0	
0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	41° 15'	-0.1	-0.1	0	-0.1	-0.1	0	0	0	0	
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	41° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	41° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	42° 0'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	42° 15'	-0.1	-0.1	-0.1	0	0	0	0	-0.1	0	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	42° 30'	-0.1	-0.1	-0.1	0	0	0	0	-0.1	0	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	42° 45'	-0.1	-0.1	0	0	0	0	-0.1	-0.1	0	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	43° 0'	-0.1	0	0	0	0	0	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	43° 15'	0	0	0	0	0	0	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	43° 30'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	43° 45'	0	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	44° 0'	-0.1	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	44° 15'	-0.1	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	44° 30'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	0	0	0	0	0	-0.1	-0.1	44° 45'	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	-0.1	
-0.1	-0.1	0	0	0	0	-0.1	-0.1	-0.1	45° 0'	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	0	
0	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	45° 15'	-0.1	-0.1	-0.1	-0.1	0	-0.1	0	0	0	
0	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	45° 30'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	-0.1	
0	-0.1	0	0	-0.1	-0.1	-0.1	0	0	45° 45'	0	-0.1	-0.1	-0.1	0	0	0	0	-0.1	
0	0	0	-0.1	-0.1	-0.1	-0.1	0	0	46° 0'	0	-0.1	-0.1	0	0	0	0	-0.1	-0.1	
-0.1	0	0	-0.1	-0.1	-0.1	0	0	0	46° 15'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	0	0	0	0	0	0	0	46° 30'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	0	0	0	0	46° 45'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	0	0	0	0	47° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	
-0.1	0	0	0	0	0	0	0	0	47° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	47° 30'	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	47° 45'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	48° 0'	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	0	0	0	0	-0.1	48° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	-0.1	-0.1	-0.1	0	0	-0.1	48° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	-0.1	0	0	0	48° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	49° 0'	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	49° 15'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
0	-0.1	-0.1	-0.1	0	0	0	0	0	49° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	49° 45'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	50° 0'	0	0	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 76 to 80 °E									
Correction to Latitude										Correction to Longitude									
76°	76°	77°	77°	78°	78°	79°	79°	80°	Longitude	76°	76°	77°	77°	78°	78°	79°	79°	80°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	0	40° 0'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	0	0	0	0	-0.1	-0.1	0	40° 15'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	0	0	0	0	-0.1	-0.1	0	40° 30'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	0	40° 45'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	0	41° 0'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	0	0	0	0	-0.1	-0.1	0	41° 15'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	0	-0.1	0	0	0	-0.1	0	0	41° 30'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	0	-0.1	-0.1	0	0	41° 45'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	42° 0'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	
-0.1	-0.1	0	0	0	0	-0.1	-0.1	0	42° 15'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	
0	-0.1	0	0	0	0	0	-0.1	0	42° 30'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	-0.1	0	42° 45'	0	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	
-0.1	0	0	0	-0.1	-0.1	0	0	0	43° 0'	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	
-0.1	0	0	0	0	-0.1	0	0	0	43° 15'	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	0	0	0	0	0	0	0	0	43° 30'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	43° 45'	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	44° 0'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	44° 15'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	44° 30'	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	0	0	0	0	44° 45'	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	0	0	0	0	45° 0'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	0	0	0	0	0	0	0	45° 15'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	0	0	0	0	0	0	0	0	45° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	45° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	46° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	46° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	46° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	46° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	47° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	47° 15'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	47° 30'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	47° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	48° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	0	0	0	0	0	0	0	0	48° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	0	0	0	0	0	0	0	48° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	48° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	49° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	49° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	49° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	49° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	50° 0'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 116 to 120 °E									
Correction to Latitude										Correction to Longitude									
116°	116°	117°	117°	118°	118°	119°	119°	120°	Longitude	116°	116°	117°	117°	118°	118°	119°	119°	120°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	47° 30'	0	0	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 0'	0	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 15'	0	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 30'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 45'	-0.1	0	0	0	0	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	50° 0'	0	0	0	0	0	0	0	-0.1	-0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S
Longitude 140 to 144 °E

Correction to Latitude
Correction to Longitude

Latitude										Longitude									
140°	140°	141°	141°	142°	142°	143°	143°	144°	Longitude	140°	140°	141°	141°	142°	142°	143°	143°	144°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	40° 0'	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.1	
0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 15'	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.4	0.1	
0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 30'	0	0	0	0.1	0.1	0.2	0.4	0.4	0.1	
0	0	0	0.1	0.1	0.1	0.1	0.2	0.2	40° 45'	0	0	0	0.1	0.1	0.1	0.3	0.4	0.2	
0	0	0	0	0.1	0	0.1	0.2	0.2	41° 0'	0	0	0	0.1	0.1	0.1	0.2	0.3	0.3	
0	0	0	0	0.1	0.1	0.1	0.2	0.2	41° 15'	0	0	0	0	0.1	0.1	0.1	0.3	0.3	
0	0	0	0	0	0.1	0.1	0.1	0.2	41° 30'	0	0.1	0	0	0.1	0.1	0.1	0.2	0.4	
0	0	0	0	0	0.1	0.1	0.1	0.2	41° 45'	0	0.1	0	0	0.1	0.1	0.1	0.2	0.3	
0	0	0	0	0	0	0.1	0.1	0.1	42° 0'	0	0	0	0	0	0	0.1	0.1	0.3	
0	0	0	0	0	0	0	0	0.1	42° 15'	0	0	0.1	0	0	0	0.1	0.1	0.3	
0	0	0	0	0	0	0	0	0.1	42° 30'	0	0	0	0	0	0	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0.1	42° 45'	0	0	0	0.1	0	0	0	0.1	0.2	
0	0	0	0	0	0	0	0	0.1	43° 0'	0	0	0	0.1	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0.1	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	0.1	0	0	0	0	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0.1	0	0	0.1	0	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 30'	0	0	0	0.1	0.1	0	0	0.1	0	
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0	0	0	0	0.1	0	
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0	0	0	0	0	0.1	0	
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 30'	0	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0	0	0	0.1	0	
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0	0	0	0	0	0.1	0	
0	0	0	0	0	0	0	0	0	48° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 30'	0	0	0	0	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 45'	0	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 0'	0	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 15'	-0.1	0	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 30'	-0.1	0	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 45'	0	0	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	50° 0'	0	0	0.1	0	0	0	0	0	0	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 144 to 148 °E									
Correction to Latitude										Correction to Longitude									
144° 0'	144° 30'	145° 0'	145° 30'	146° 0'	146° 30'	147° 0'	147° 30'	148° 0'	Longitude	144° 0'	144° 30'	145° 0'	145° 30'	146° 0'	146° 30'	147° 0'	147° 30'	148° 0'	
									Latitude										
0.1	0.1	0.1	0	0	0	0	0	0	40° 0'	0.1	0	0	0	0	0.1	0.1	0	0.1	
0.1	0.1	0	0	0	0	0	0.1	0	40° 15'	0.1	0	0	0.1	0	0	0	0	0.1	
0.1	0.1	0	0	0	0	0	0	0	40° 30'	0.1	0	0.1	0.1	0	0	0	0	0.1	
0.2	0.1	0	0	0	0	0	0	0	40° 45'	0.2	0.1	0.1	0.1	0	0	0	0	0.1	
0.2	0.1	0	0	0	0	0	0	0	41° 0'	0.3	0.2	0.1	0	0	0	0	0	0	
0.2	0.1	0.1	0	0	0	0	0	0	41° 15'	0.3	0.3	0.2	0.1	0	0	0	0.1	0	
0.2	0.2	0.1	0.1	0	0	0	0	0	41° 30'	0.4	0.3	0.2	0.1	0	0	0	0.1	0	
0.2	0.2	0.1	0.1	0.1	0	0	0.1	0.1	41° 45'	0.3	0.4	0.2	0.2	0.1	0	0	0	-0.1	
0.1	0.1	0.1	0.1	0.1	0	0	0.1	0.1	42° 0'	0.3	0.4	0.3	0.2	0.2	0	-0.1	0	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 15'	0.3	0.4	0.3	0.2	0.2	0.1	-0.1	0	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 30'	0.2	0.4	0.3	0.2	0.1	0.1	0	0	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 45'	0.2	0.4	0.3	0.2	0.1	0.1	0	0	-0.1	
0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	43° 0'	0.1	0.3	0.3	0.2	0.1	0.1	0	-0.1	-0.2	
0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	43° 15'	0.1	0.3	0.3	0.2	0.1	0.1	0	-0.1	-0.2	
0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	43° 30'	0.1	0.2	0.3	0.2	0.2	0.1	0.1	-0.1	-0.2	
0	0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	43° 45'	0	0.2	0.2	0.2	0.2	0.1	0	-0.1	-0.2	
0	0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	44° 0'	0	0.1	0.2	0.2	0.2	0.1	0	-0.1	-0.1	
0	0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	44° 15'	0	0.1	0.1	0.2	0.2	0.1	0	-0.1	-0.1	
0	0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	44° 30'	0	0	0.1	0.1	0.1	0.1	0	-0.1	0	
0	0	0	0	0.1	0.1	0.1	0.1	0.1	44° 45'	0	0	0.1	0.1	0.1	0.1	0	0	0	
0	0	0	0	0	0.1	0.1	0.1	0.1	45° 0'	0	0	0.1	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0	0.1	0.1	0	0	0	0	0	0	
0	0	0.1	0.1	0	0	0	0	0	45° 45'	0	0	0.1	0.1	0	0	0	0	0	
0	0	0.1	0.1	0	0	0	0	0	46° 0'	0	0	0	0.1	0.1	0	0	0	0	
0	0	0.1	0.1	0	0	0	-0.1	0	46° 15'	0	0	0	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	-0.1	-0.1	46° 30'	0	0	0	0.1	0.1	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0.1	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0	0.1	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0.1	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0	0	0	0.1	47° 30'	0	0	0	0.1	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0	0.1	0.1	0.1	47° 45'	0	0	0	0.1	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0	0.1	0.1	0.1	48° 0'	0	0	0	0	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0.1	0.1	0.1	0.1	48° 15'	0	0	0	0	0.1	0	0	0.1	0.1	
0	0	0	0	0.1	0.1	0.1	0.1	0.1	48° 30'	0	0	-0.1	0	0	0	0	0	0.1	
0	0	0	0	0.1	0.1	0.1	0.1	0	48° 45'	0	0	-0.1	0	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	49° 0'	0	0	-0.1	0	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	49° 15'	0	0	-0.1	-0.1	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	49° 30'	0	0	-0.1	-0.1	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	49° 45'	0	0	-0.1	-0.1	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	50° 0'	0	0	-0.1	-0.1	0	0	0	0	0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S

Longitude 156 to 160 °E

Correction to Latitude

Correction to Longitude

Correction to Latitude										Correction to Longitude									
156° 0'	156° 30'	157° 0'	157° 30'	158° 0'	158° 30'	159° 0'	159° 30'	160° 0'	Longitude Latitude	156° 0'	156° 30'	157° 0'	157° 30'	158° 0'	158° 30'	159° 0'	159° 30'	160° 0'	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	40° 0'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	40° 15'	0	0	0	0	0	0	0	0.1	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	40° 30'	0	0	0	0	0	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	40° 45'	0	0	0	0	0	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	41° 0'	0	0	0	0	0	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	41° 15'	0	0.1	0	0	0	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	41° 30'	0	0.1	0	0	0	0	0	0	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	41° 45'	0	0	0	0	0.1	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	42° 0'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	42° 15'	0	0	0	0	0	0.1	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	42° 30'	0	0	0	0	0	0.1	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	42° 45'	0	0	0	0	0	0.1	0	0	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	43° 0'	0	0	0	0	0	0	0	0	0.1	
0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0	43° 15'	0	0	0	0	0	0	0	0	0.1	
0.1	0.1	0.1	0	0	0.1	0.1	0.1	0	43° 30'	0	0	0.1	0.1	0	0	0	0	0.1	
0.1	0.1	0	0	0.1	0.1	0.1	0.1	0	43° 45'	0	0	0.1	0.1	0	0	0	0	0.1	
0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	44° 0'	0	0.1	0.1	0	0	0	0	0	0.1	
0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0	44° 15'	0	0.1	0.1	0	0	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	44° 30'	0	0	0.1	0	0	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	44° 45'	0	0	0.1	0	0	0	0.1	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0	0	0	0	45° 0'	0	0	0.1	0	0	0	0.1	0.1	0	
0.1	0	0.1	0.1	0.1	0	0	0.1	0	45° 15'	0	0	0	0	0	0	0.1	0.1	0.1	
0.1	0	0.1	0.1	0.1	0	0.1	0.1	0	45° 30'	0	0	0	0	0	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	45° 45'	0.1	0	0	0	0.1	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	46° 0'	0.1	0	0	0	0.1	0	0.1	0.1	0.1	
0.1	0.1	0.1	0	0	0.1	0.1	0.1	0	46° 15'	0	0	0	0	0.1	0	0.1	0.1	0	
0.1	0.1	0	0	0	0	0	0.1	0	46° 30'	0	0	0	0.1	0.1	0	0.1	0	0	
0.1	0.1	0	0	0	0	0.1	0.1	0	46° 45'	0	0	0	0.1	0	0	0	0	0	
0.1	0	0	0	0.1	0.1	0.1	0.1	0	47° 0'	0	0	0	0	0	0	0	0	0.1	
0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	47° 15'	0	0.1	0	0	0	0	0	0	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	47° 30'	0	0.1	0	0	0	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0	0	0	0	47° 45'	0	0.1	0	0	0	0	0	0.1	0.1	
0	0.1	0.1	0.1	0	0	0	0	0	48° 0'	0	0.1	0	0	0	0.1	0.1	0.1	0.1	
0	0.1	0.1	0.1	0	0	0	0	0	48° 15'	0	0	0	0	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	48° 30'	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0.1	0	0	0	48° 45'	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0.1	0.1	0	0	49° 0'	0	0	0.1	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	49° 15'	0	0	0.1	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	49° 30'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	49° 45'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	50° 0'	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	

Correct Astronomical Position to WGS84

Latitude 20 to 50 °S
Longitude 160 to 164 °E

Correction to Latitude
Correction to Longitude

Correction to Latitude										Correction to Longitude									
160° 0'	160° 30'	161° 0'	161° 30'	162° 0'	162° 30'	163° 0'	163° 30'	164° 0'	Longitude	160° 0'	160° 30'	161° 0'	161° 30'	162° 0'	162° 30'	163° 0'	163° 30'	164° 0'	Latitude
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 0'	0	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	40° 0'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 15'	0	0	0.1	0.1	0.1	0	0.1	0.1	0.1	40° 15'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 30'	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	40° 30'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 45'	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	40° 45'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 0'	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	41° 0'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 15'	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	41° 15'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 30'	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 30'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 45'	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 45'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 0'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 0'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 15'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 15'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 30'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 30'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 45'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	43° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	43° 0'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	43° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	43° 15'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	43° 30'	0.1	0	0.1	0.1	0.1	0.1	0.1	0	0.1	43° 30'
0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	43° 45'	0.1	0	0.1	0.1	0.1	0.1	0	0	0.1	43° 45'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	44° 0'	0.1	0.1	0	0.1	0.1	0.1	0	0	0.1	44° 0'
0.1	0	0.1	0.1	0	0.1	0.1	0	0	44° 15'	0.1	0.1	0	0.1	0.1	0.1	0	0.1	0.1	44° 15'
0	0.1	0.1	0	0	0.1	0.1	0	0	44° 30'	0.1	0.1	0	0.1	0.1	0	0	0.1	0	44° 30'
0	0.1	0.1	0	0	0.1	0	0	0.1	44° 45'	0.1	0	0	0.1	0.1	0	0.1	0.1	0	44° 45'
0.1	0.1	0	0	0.1	0.1	0	0	0.1	45° 0'	0	0	0.1	0.1	0.1	0	0.1	0.1	0	45° 0'
0.1	0	0	0.1	0.1	0.1	0	0.1	0.1	45° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	45° 15'
0	0	0	0.1	0.1	0	0	0.1	0.1	45° 30'	0.1	0.1	0	0	0.1	0.1	0.1	0	0	45° 30'
0	0.1	0.1	0.1	0.1	0	0	0.1	0	45° 45'	0.1	0.1	0	0	0.1	0.1	0	0	0	45° 45'
0.1	0.1	0.1	0.1	0	0	0	0	0	46° 0'	0.1	0	0	0.1	0.1	0.1	0	0	0	46° 0'
0.1	0.1	0.1	0	0	0	0	0	0	46° 15'	0	0	0.1	0.1	0.1	0.1	0	0	0	46° 15'
0.1	0.1	0	0	0	0	0.1	0.1	0.1	46° 30'	0	0.1	0.1	0.1	0.1	0.1	0	0	0	46° 30'
0.1	0	0	0	0	0	0	0.1	0.1	46° 45'	0	0.1	0.1	0.1	0.1	0	0	0	-0.1	46° 45'
0	0	0	0.1	0	0.1	0.1	0.1	0.1	47° 0'	0.1	0.1	0.1	0.1	0.1	0	0	0	-0.1	47° 0'
0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	47° 15'	0.1	0.1	0.1	0.1	0.1	0	0	0	-0.2	47° 15'
0	0	0.1	0	0.1	0.1	0.1	0.1	0.1	47° 30'	0.1	0.1	0	0.1	0.1	0	0	0	-0.2	47° 30'
0	0	0	0	0	0.1	0	0.1	0.1	47° 45'	0.1	0	0.1	0.1	0.1	0	0	-0.1	-0.2	47° 45'
0.1	0.1	0	0	0.1	0	0	0.1	0.1	48° 0'	0.1	0.1	0.1	0.1	0	0	0	-0.2	-0.3	48° 0'
0	0	0	0.1	0.1	0	0	0.1	0.1	48° 15'	0.1	0.1	0.1	0.1	0	0.1	0	-0.3	-0.2	48° 15'
0	0	0	0.1	0.1	0	0.1	0.1	0	48° 30'	0.1	0.1	0.1	0	0.1	0.1	0	-0.3	-0.1	48° 30'
0	0	0.1	0.1	0	0	0.1	0.1	-0.1	48° 45'	0.1	0.1	0	0	0.1	0.1	-0.1	-0.2	0	48° 45'
0	0.1	0.1	0	0	0.1	0.1	0	-0.1	49° 0'	0.1	0.1	0	0.1	0.1	0	-0.1	-0.1	0.2	49° 0'
0.1	0.1	0.1	0	0	0.1	0.1	0	-0.1	49° 15'	0.1	0	0.1	0.1	0.1	0	-0.1	0.1	0.3	49° 15'
0.1	0	0	0	0.1	0.1	0	-0.1	0	49° 30'	0.1	0.1	0.1	0.1	0	0	0	0.2	0.2	49° 30'
0	0	0	0.1	0.1	0	0	-0.1	0	49° 45'	0.1	0.1	0.1	0.1	0	0	0.1	0.2	0.1	49° 45'
0	0	0.1	0.1	0.1	0	-0.1	-0.1	0.1	50° 0'	0.1	0.1	0.1	0	0	0.1	0.2	0.1	-0.1	50° 0'

Correct Astronomical Position to WGS84

Latitude 20 to 50 °S										Longitude 164 to 168 °E								
Correction to Latitude										Correction to Longitude								
164° 0'	164° 30'	165° 0'	165° 30'	166° 0'	166° 30'	167° 0'	167° 30'	168° 0'	Longitude	164° 0'	164° 30'	165° 0'	165° 30'	166° 0'	166° 30'	167° 0'	167° 30'	168° 0'
									Latitude									
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 0'	0.1	0.1	0	0	0.1	0.2	0.2	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 15'	0.1	0.1	0	0	0.1	0.2	0.2	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 30'	0.1	0.1	0	0	0.1	0.2	0.2	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 45'	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 0'	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 15'	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 15'	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 30'	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 45'	0.1	0	0	0.1	0.1	0	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	43° 0'	0.1	0	0.1	0.1	0.1	0	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	43° 15'	0.1	0.1	0.1	0.1	0	0	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	43° 30'	0.1	0.1	0.1	0.1	0	0	0	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	43° 45'	0.1	0.1	0	0.1	0.1	-0.1	-0.1	0.1	0.2
0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	44° 0'	0.1	0.1	0	0.1	0	-0.1	-0.1	0.2	0.3
0	0.1	0.1	0.1	0.2	0.3	0.2	0	0	44° 15'	0.1	0	0	0.1	0	-0.2	-0.1	0.3	0.4
0	0.1	0.1	0.1	0.3	0.2	0	-0.1	-0.1	44° 30'	0	0	0	0	-0.1	-0.1	0.1	0.4	0.4
0.1	0.1	0.1	0.2	0.2	0.1	-0.1	-0.2	-0.1	44° 45'	0	0	0	-0.1	-0.2	0.1	0.3	0.4	0.3
0.1	0.1	0.1	0.1	0.1	-0.1	-0.2	-0.2	-0.1	45° 0'	0	0	0	-0.2	-0.1	0.4	0.5	0.3	0.1
0.1	0.1	0.1	0.1	0	-0.2	-0.2	-0.1	0	45° 15'	0	0	-0.1	-0.2	0.1	0.6	0.5	0.1	0.1
0.1	0	0.1	0	-0.1	-0.3	-0.1	0	0	45° 30'	0	0	-0.1	-0.1	0.3	0.6	0.4	0	0
0	0	0.1	0	-0.2	-0.2	0	0.1	0	45° 45'	0	0	-0.1	0	0.4	0.6	0.2	-0.1	0.1
0	0	0	0	-0.2	-0.1	0.1	0.1	0	46° 0'	0	0	-0.1	0.2	0.5	0.4	0.1	0	0.1
0	0.1	0	0	-0.1	0.1	0.2	0.1	0	46° 15'	0	-0.1	0	0.3	0.5	0.3	0	0.1	0.1
0.1	0.1	0.1	0	0	0.2	0.2	0.1	0.1	46° 30'	0	-0.1	0	0.3	0.4	0.1	0	0.2	0.1
0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	46° 45'	-0.1	-0.1	0.1	0.3	0.3	0.1	0.1	0.2	0.1
0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	47° 0'	-0.1	-0.1	0.2	0.3	0.2	0.1	0.2	0.2	0.1
0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	47° 15'	-0.2	-0.1	0.2	0.3	0.2	0.2	0.2	0.1	0
0.1	0.1	0.1	0.1	0.1	0	0	0.1	0.2	47° 30'	-0.2	-0.1	0.2	0.2	0.2	0.3	0.2	0	-0.1
0.1	0.1	0	0	0	0	0	0.1	0.1	47° 45'	-0.2	0	0.2	0.2	0.2	0.3	0.2	0	-0.1
0.1	0.1	0	0	0	0	0.1	0.1	0.1	48° 0'	-0.3	0.1	0.3	0.2	0.2	0.2	0.1	-0.1	-0.1
0.1	0	-0.1	0	0.1	0.1	0.1	0.1	0.1	48° 15'	-0.2	0.2	0.4	0.2	0.2	0.2	0	-0.1	0
0	-0.1	-0.1	0	0.1	0.1	0.1	0.1	0.1	48° 30'	-0.1	0.3	0.3	0.1	0.1	0.2	0	-0.1	-0.1
-0.1	-0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	48° 45'	0	0.4	0.2	-0.1	0.1	0.2	0	-0.1	-0.1
-0.1	-0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	49° 0'	0.2	0.3	0	-0.1	0.2	0.2	0	-0.1	0
-0.1	0	0.1	0.1	0	0	0.1	0.1	0.1	49° 15'	0.3	0.1	-0.2	-0.1	0.2	0.2	-0.1	-0.1	0
0	0.1	0.2	0.1	0	0	0.1	0.1	0.1	49° 30'	0.2	0	-0.2	0	0.3	0.2	-0.1	-0.1	0
0	0.1	0.2	0.1	0	0	0.1	0.1	0.1	49° 45'	0.1	-0.2	-0.2	0.1	0.3	0.1	-0.1	-0.1	0
0.1	0.2	0.1	0	0	0.1	0.1	0.1	0.1	50° 0'	-0.1	-0.2	-0.1	0.2	0.3	0.1	-0.1	-0.1	0

Correct Astronomical Position to WGS84

Latitude 20 to 50 °S
Longitude 168 to 172 °E

Correction to Latitude
Correction to Longitude

Correction to Latitude										Correction to Longitude									
168°	168°	169°	169°	170°	170°	171°	171°	172°	Longitude	168°	168°	169°	169°	170°	170°	171°	171°	172°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 0'	0.1	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 15'	0.1	0	0	0	0	0	0	0	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 30'	0.1	0.1	0	0	0	0.1	0	0	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	40° 45'	0.1	0.1	0	0	0	0	0	0	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	41° 0'	0.1	0.1	0	0	0.1	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 15'	0.1	0.1	0	0	0.1	0	0	0.1	0.2	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0.1	41° 30'	0.1	0.1	0	0	0.1	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0.1	41° 45'	0.1	0.1	0	0	0.1	0.1	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 0'	0.1	0.1	0	0	0.1	0.1	0.1	0.1	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 45'	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0	
0.1	0.1	0.1	0.1	0.1	0.1	0	0	0.1	43° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	
0.2	0.1	0.1	0.1	0.1	0	0	0.1	0.1	43° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	
0.2	0.1	0.1	0.1	0	0	0.1	0.1	0.1	43° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	
0.2	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	43° 45'	0.2	0.2	0.1	0.2	0.2	0.1	0	0	0	
0.1	0	0.1	0.1	0	0.1	0.1	0.1	0.1	44° 0'	0.3	0.2	0.1	0.2	0.2	0.1	0	0	0.1	
0	0	0	0	0	0	0.1	0.1	0.1	44° 15'	0.4	0.2	0.1	0.2	0.2	0	0	0	0.1	
-0.1	0	0	0	0	0	0.1	0.1	0.1	44° 30'	0.4	0.1	0	0.2	0.2	0	0	0	0	
-0.1	0	0	0	0	0	0.1	0.1	0.2	44° 45'	0.3	0.1	0	0.2	0.2	0	-0.1	0	0	
-0.1	0	-0.1	0	0	0	0.1	0.1	0.2	45° 0'	0.1	0.1	0.1	0.2	0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	0	0	0.1	0.1	0.2	0.2	45° 15'	0.1	0.1	0.1	0.1	0.1	-0.1	-0.2	-0.1	-0.1	
0	0	0	0	0.1	0.1	0.1	0.1	0.1	45° 30'	0	0.2	0.1	0.1	0	-0.2	-0.2	-0.1	-0.1	
0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	45° 45'	0.1	0.2	0.1	0.1	0	-0.2	-0.2	-0.1	-0.1	
0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	46° 0'	0.1	0.1	0.1	0.1	-0.1	-0.2	-0.2	-0.1	0	
0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	46° 15'	0.1	0	0	0	-0.1	-0.2	-0.2	-0.1	0	
0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	46° 30'	0.1	0	0	0	-0.1	-0.2	-0.1	-0.1	0	
0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	46° 45'	0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	47° 0'	0.1	0	-0.1	-0.1	-0.1	-0.1	0	0	0	
0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	47° 15'	0	0	-0.1	-0.1	-0.1	0	0	0	0	
0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	47° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	47° 45'	-0.1	-0.1	-0.1	0	0	-0.1	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 0'	-0.1	-0.1	-0.1	0	0	-0.1	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 15'	0	0	-0.1	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 30'	-0.1	0	0	0	0	0	0.1	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	48° 45'	-0.1	0	0	0	0	0	0.1	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	49° 0'	0	0	0	0	0	0	0.1	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	49° 15'	0	0	0	0	0	0	0.1	0.1	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	49° 30'	0	-0.1	-0.1	0	0	0	0.1	0.1	0	
0.1	0.1	0.1	0.1	0	0	0.1	0.1	0.1	49° 45'	0	-0.1	0	0	0	0	0.1	0	0	
0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	50° 0'	0	-0.1	0	0	0	0	0	0	0	

Correct Astronomical Position to WGS84

Latitude 20 to 50 °S										Longitude 172 to 176 °E									
Correction to Latitude										Correction to Longitude									
172° 0'	172° 30'	173° 0'	173° 30'	174° 0'	174° 30'	175° 0'	175° 30'	176° 0'	Longitude	172° 0'	172° 30'	173° 0'	173° 30'	174° 0'	174° 30'	175° 0'	175° 30'	176° 0'	
									Latitude										
0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.1	40° 0'	0	0	-0.2	-0.2	-0.2	-0.2	0	0.2	0.2	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	40° 15'	0.1	0	-0.2	-0.2	-0.2	-0.2	0	0.3	0.3	
0.1	0.1	0.1	0.1	0.1	0	-0.1	-0.1	-0.1	40° 30'	0.1	0	-0.2	-0.2	-0.2	-0.2	0.1	0.3	0.3	
0	0	0.1	0.1	0	0	-0.1	-0.2	-0.1	40° 45'	0.1	-0.1	-0.2	-0.2	-0.2	-0.1	0.2	0.3	0.1	
0	0	0.1	0.1	0	0	-0.1	-0.1	0	41° 0'	0.1	-0.1	-0.3	-0.2	-0.1	0	0.3	0.2	0	
0.1	0.1	0.1	0	0.1	0	0	0.1	0.2	41° 15'	0.2	-0.1	-0.2	-0.2	-0.1	0.1	0.3	0.1	-0.1	
0.1	0.1	0	0	0.1	0.1	0.2	0.3	0.3	41° 30'	0.1	-0.1	-0.2	-0.2	-0.1	0	0.2	0.1	-0.1	
0.1	0.1	0	0	0.1	0.1	0.2	0.3	0.3	41° 45'	0.1	0	-0.2	-0.2	-0.2	0	0.1	0	0	
0.1	0.1	0	0	0.1	0.1	0.1	0.2	0.1	42° 0'	0	0	-0.1	-0.3	-0.2	-0.1	0	0	0.1	
0.1	0.1	0.1	0.1	0.1	0	0	0	-0.1	42° 15'	0	0	-0.1	-0.3	-0.3	-0.1	0	0.1	0.1	
0.1	0.1	0.1	0.1	0	-0.1	-0.1	-0.2	-0.2	42° 30'	0	0	-0.1	-0.3	-0.2	0	0.1	0.1	0.1	
0.1	0.1	0.1	0.1	-0.1	-0.1	-0.2	-0.2	-0.2	42° 45'	0	0	-0.1	-0.2	-0.1	0.1	0.1	0.1	0.1	
0.1	0.1	0.1	0	-0.1	-0.2	-0.2	-0.1	-0.1	43° 0'	0	-0.1	-0.1	-0.1	0	0.1	0.1	0.1	0	
0.1	0.1	0	0	-0.1	-0.1	-0.1	0	0	43° 15'	0	-0.1	0	0	0	0.1	0.1	0	0	
0.1	0.1	0	0	0	0	0.1	0.1	0.1	43° 30'	0	0	0	0	0	0.1	0.1	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	43° 45'	0	0.1	0	0	0	0.1	0.1	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	44° 0'	0.1	0.1	0	0	0	0	0.1	0	0	
0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	44° 15'	0.1	0	0	0	0	0	0	0	0	
0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	44° 30'	0	0	0	0	0	0	0	0	0	
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	44° 45'	0	0	0	0	0	0	0	0	0	
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	45° 0'	-0.1	0	0	0	0	0	0	0	0	
0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	45° 15'	-0.1	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	45° 30'	-0.1	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	45° 45'	-0.1	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	46° 0'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	46° 15'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	46° 30'	0	0	0	0	0	0	0	0	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	46° 45'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	47° 0'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	47° 15'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	47° 30'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	47° 45'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 0'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 15'	0	0	0	0	0	0	0	0	-0.1	
0.1	0.1	0	0.1	0.1	0	0.1	0.1	0.1	48° 30'	0	0	0	0	0	0	0	-0.1	0	
0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	48° 45'	0	0	0	0	0	0	0	-0.1	-0.1	
0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	49° 0'	0	0	0	0	0	0	0	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	49° 15'	0	0	0	0	0	0	0	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	49° 30'	0	0	0	0	0	0	0	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	49° 45'	0	0	0	0	0	-0.1	0	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	50° 0'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	

Correct Astronomical Position to WGS84

Latitude 20 to 50 °S										Longitude 180 to 176 °W									
Correction to Latitude										Correction to Longitude									
180°	179°	179°	178°	178°	177°	177°	176°	176°	Longitude	180°	179°	179°	178°	178°	177°	177°	176°	176°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	40° 0'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	40° 15'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40° 30'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	40° 45'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	41° 0'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	41° 15'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	41° 30'	0	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	41° 45'	0	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 0'	0	0	-0.1	0	-0.1	-0.1	0	-0.1	-0.1	
0.1	0.1	0.1	0	0	0	0.1	0.1	0.1	42° 15'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0	0	0	0	43° 0'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	43° 15'	0	0	0	0	0	0	0	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	43° 30'	0	0	0	0	0	0	0	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	43° 45'	0	0	0	0	0	0	0	-0.1	-0.1	
0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	44° 0'	0	0	0	0	0	0	0	0	-0.1	
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	44° 15'	0	0	0	0	0	0	0	0	0	-0.1
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	44° 30'	0	0	0	0	0	0	0	0	0	-0.1
0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	44° 45'	0	0	0	0	0	0	0	0	0	-0.1
0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	45° 0'	0	0	0	0	0	0	0	0	-0.1	-0.1
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	45° 15'	0	0	0	0	0	0	0	0	-0.1	-0.1
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	45° 30'	0	0	-0.1	-0.1	0	0	0	-0.1	-0.1	
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	45° 45'	0	0	-0.1	-0.1	0	0	0	0	0	
0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	46° 0'	-0.1	-0.1	0	-0.1	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	46° 15'	-0.1	-0.1	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	46° 30'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	46° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	47° 0'	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	0	
0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	47° 15'	-0.1	-0.1	-0.2	-0.2	-0.1	0	0	-0.1	0	
0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	47° 30'	-0.1	-0.2	-0.3	-0.2	-0.1	0	0	-0.1	0	
0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	47° 45'	-0.1	-0.2	-0.3	-0.2	-0.1	0	-0.1	-0.1	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 0'	-0.1	-0.2	-0.3	-0.2	-0.1	0	-0.1	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 15'	-0.1	-0.2	-0.3	-0.2	-0.1	0	-0.1	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 30'	-0.1	-0.2	-0.3	-0.2	-0.1	-0.1	-0.1	0	0	
0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 45'	-0.1	-0.2	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0
0.2	0.2	0.2	0.1	0.1	0.1	0.1	0	0.1	49° 0'	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0.2	0.2	0.2	0.1	0.1	0	0	0	0	49° 15'	-0.1	-0.1	-0.2	-0.1	-0.1	0	0	-0.1	-0.1	
0.2	0.2	0.2	0.1	0.1	0	0	0	0	49° 30'	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	-0.2	
0.2	0.2	0.1	0.1	0.1	0	0	0	0	49° 45'	-0.1	0	-0.1	0	0	0.1	0	-0.2	-0.3	
0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	50° 0'	-0.1	0	0	0	0.1	0.1	0.1	-0.2	-0.3	

Correct Astronomical Position to WGS84

Latitude 20 to 50 °S										Longitude 176 to 172 °W									
Correction to Latitude										Correction to Longitude									
176° 0'	175° 30'	175° 0'	174° 30'	174° 0'	173° 30'	173° 0'	172° 30'	172° 0'	Longitude	176° 0'	175° 30'	175° 0'	174° 30'	174° 0'	173° 30'	173° 0'	172° 30'	172° 0'	
									Latitude										
0.1	0.1	0.1	0.1	0	0	0.1	0.1	0.1	40° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0	0	0	0.1	0.1	0.1	40° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0	0	0	0	0.1	0.1	0.1	40° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0.1	0.1	0	40° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	41° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	0	-0.1	
0	0	0	0	0	0	0	0	0	41° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	0	-0.1	
0	0.1	0	0	0.1	0	0	0	0	41° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	0	-0.1	
0.1	0.1	0.1	0.1	0.1	0	0	0	0	41° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0	0	0	0	42° 0'	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	42° 15'	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0.1	0.1	0.1	0.1	0.1	42° 30'	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0.1	0.1	0.1	0.1	0.1	42° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0.1	0.1	0.1	0.1	0.1	43° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	43° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	43° 30'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	
0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	43° 45'	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	44° 0'	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	
0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	44° 15'	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	
0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	44° 30'	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	
0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	44° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	45° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	45° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	45° 30'	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	45° 45'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	46° 0'	0	0	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	46° 15'	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	
0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	46° 30'	0	0	0	0	0	0	0	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	46° 45'	0	0	0	0	0	0	0	0	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	47° 0'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	47° 15'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	47° 30'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	47° 45'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 0'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 15'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 30'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	48° 45'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	49° 0'	-0.1	0	0	0	0	0	0	0	0	
0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	49° 15'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	49° 30'	-0.2	-0.1	0	0	0	0	0	0	0	
0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	49° 45'	-0.3	-0.2	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	50° 0'	-0.3	-0.2	0	0	0	0.1	0	0	0	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 156 to 152 °W									
Correction to Latitude										Correction to Longitude									
156°	155°	155°	154°	154°	153°	153°	152°	152°	Longitude	156°	155°	155°	154°	154°	153°	153°	152°	152°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	-0.1	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	40° 15'	0	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	
0.1	0.1	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	41° 0'	-0.1	0	0	0	0	0	0	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	41° 15'	0	0	0	0	0	0	0	-0.1	0	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	41° 30'	0	0	0	0	0	0	0	-0.1	0	
0.1	0	0	0	0.1	0.1	0.1	0.1	0	41° 45'	0	0	0	0	0	0	0	0	0	
0.1	0	0	0	0.1	0.1	0.1	0.1	0.1	42° 0'	0	0	0	0	0	0	0	0	0	
0.1	0.1	0	0	0.1	0.1	0	0.1	0.1	42° 15'	0	0	0	0	0	0	0	0	-0.1	0
0.1	0.1	0	0	0	0.1	0.1	0.1	0.1	42° 30'	0	0	0	-0.1	0	0	0	0	-0.1	0
0	0.1	0	0	0	0	0.1	0	0	42° 45'	0	0	0	-0.1	-0.1	0	0	0	-0.1	0
0	0	0	0.1	0	0	0	0	0	43° 0'	0	0	0	0	-0.1	0	0	0	0	0
0	0	0	0.1	0.1	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0.1	0.1	0	0	0	0	43° 30'	0	0	0	-0.1	0	0	-0.1	0	0	0
0	0	0	0	0	0	0	0	0	43° 45'	0	0	-0.1	-0.1	0	0	-0.1	0	0	0
0	0	0	0	0	0	0	0	0	44° 0'	0	0	-0.1	-0.1	0	0	-0.1	0	0	0
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	-0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	-0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	-0.1	0	0	0	0	0	0
0.1	0.1	0.1	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	0
0	0.1	0.1	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0.1	0	0	45° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	-0.1	-0.1	0	0	0	0
0	0	0	0	0	0	0	0	0	46° 0'	0	-0.1	0	0	-0.1	-0.1	0	0	0	0
0.1	0	0	0.1	0	0	0	0	0	46° 15'	0	-0.1	0	0	-0.1	-0.1	0	0	0	0
0.1	0.1	0.1	0.1	0.1	0	0	0	0	46° 30'	0	-0.1	0	0	0	-0.1	0	0	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	46° 45'	0	0	0	0	0	0	0	0	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	47° 0'	0	0	0	0	0	0	0	0	-0.1	
0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0	47° 15'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0	0	0	0	0	0.1	0.1	47° 30'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0.1	0	0	0	0	0	0	48° 0'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0.1	0.1	0.1	0	0	0	0	48° 15'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0.1	0.1	0.1	0	0	0	0	48° 30'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0.1	0.1	0	0	0	0	0	48° 45'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	49° 0'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	49° 15'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	49° 30'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	49° 45'	0	0	0	0	0.1	0	0	0	0	0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	50° 0'	0	0	0	0.1	0.1	0	0	0	0	0

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 148 to 144 °W									
Correction to Latitude										Correction to Longitude									
148°	147°	147°	146°	146°	145°	145°	144°	144°	Longitude	148°	147°	147°	146°	146°	145°	145°	144°	144°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 15'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 30'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 45'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 30'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 45'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	46° 0'	0	-0.1	0	0	0	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	46° 30'	0	0	0	0	0	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 45'	0	0	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 0'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 15'	-0.1	-0.1	0	0	0	0	0	0	0	
0.1	0	0	0	0	0	0	0	0	48° 30'	-0.1	0	0	0	0	0	0	0	0	
0.1	0	0	0	0	0	0	0	0	48° 45'	0	0	0	-0.1	-0.1	0	0	0	0	
0.1	0	0	0	0	0	0	0	0	49° 0'	0	0	0	-0.1	-0.1	0	0	0	0	
0	0.1	0.1	0	0	0	0	0	0	49° 15'	0	0	0	0	-0.1	0	0	0	0	
0	0	0.1	0	0	0	0	0	0	49° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 45'	-0.1	0	0	0	0	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	50° 0'	-0.1	-0.1	0	0	0	0	0	0	-0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 144 to 140 °W									
Correction to Latitude										Correction to Longitude									
144°	143°	143°	142°	142°	141°	141°	140°	140°	Longitude	144°	143°	143°	142°	142°	141°	141°	140°	140°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 15'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 30'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 45'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	50° 0'	-0.1	-0.1	0	0	0	0	0	0	0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 132 to 128 °W									
Correction to Latitude										Correction to Longitude									
132°	131°	131°	130°	130°	129°	129°	128°	128°	Longitude	132°	131°	131°	130°	130°	129°	129°	128°	128°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	46° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	47° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	48° 15'	0	0	0	0	0	0	0	0	0	0.1
0	0	0	0	0	0	0	0	0	48° 30'	0	0.1	0	0	0	0	0	0	0	0.1
0	0	0	0	0	0	0	0	0	48° 45'	0	0.1	0	0	0	0	0	0	0	0.1
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0.1	0	0	0	0	0	0	0.1
0	0	0	0	0	0	0	0	0	49° 15'	0	0	0.1	0	0	0	0	0	0	0.1
0	0	0	0	0	0	0	0	0	49° 30'	0	0	0	0	0	0.1	0	0	0	0.1
0	0	0	0	0	0	0	0	0	49° 45'	0	0	0	0	0.1	0.1	0.1	0	0	0.1
0	0	0	0	0	0	0	0	0	50° 0'	0	0	0	0.1	0.1	0.1	0.1	0	0	0.1

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 128 to 124 °W									
Correction to Latitude										Correction to Longitude									
128°	127°	127°	126°	126°	125°	125°	124°	124°	Longitude	128°	127°	127°	126°	126°	125°	125°	124°	124°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 15'	0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 30'	0.1	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 45'	0.1	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 0'	0.1	0	0	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 15'	0.1	0	0	0	0	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	49° 30'	0.1	0.1	0	0	0	0	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	49° 45'	0.1	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	50° 0'	0.1	0.1	0.1	0	0	0	0	0	0	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 100 to 96 °W									
Correction to Latitude										Correction to Longitude									
100°	99°	99°	98°	98°	97°	97°	96°	96°	Longitude	100°	99°	99°	98°	98°	97°	97°	96°	96°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0.1	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0.1	0.1	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0.1	0.1	0.1	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0.1	0.1	0	0	0	0	0	
0	0	0.1	0.1	0.1	0	0	0	0	41° 30'	0	0	0.1	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0	0.1	0.1	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0	0.1	0.1	0.1	0	0	0	
0	0	-0.1	-0.1	0	0	0	0	0	42° 15'	0	0	0	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 30'	0	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 45'	0	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0.1	0.1	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0.1	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0.1	0	0	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0.1	0.1	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	46° 0'	0.1	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	46° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 30'	0	0	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 45'	0	0	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 45'	0.1	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 0'	0	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 15'	0	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 45'	0	0	0	0	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	50° 0'	0.1	0	0	0	0.1	0	0	0	0	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 92 to 88 °W									
Correction to Latitude										Correction to Longitude									
92° 0'	91° 30'	91° 0'	90° 30'	90° 0'	89° 30'	89° 0'	88° 30'	88° 0'	Longitude	92° 0'	91° 30'	91° 0'	90° 30'	90° 0'	89° 30'	89° 0'	88° 30'	88° 0'	
									Latitude										
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0	0	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0.1	0.1	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0.1	0.1	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0.1	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	46° 30'	0	0	0.1	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	46° 45'	0.1	0.1	0.1	0.1	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	47° 0'	0.1	0.1	0.1	0.1	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	47° 15'	0.1	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 30'	0.1	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 45'	0.1	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 0'	0.1	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 15'	0.1	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 30'	0.1	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 45'	0.1	0.1	0.1	0	0	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	49° 0'	0.1	0.1	0.1	0	0	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	49° 15'	0.1	0.1	0.1	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	49° 30'	0.1	0.1	0.1	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	49° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	50° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 88 to 84 °W									
Correction to Latitude										Correction to Longitude									
88°	87°	87°	86°	86°	85°	85°	84°	84°	Longitude	88°	87°	87°	86°	86°	85°	85°	84°	84°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0.1	0	0
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	0	0	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0	0.1	0	0	0	0.1	0.1	0.1
0	-0.1	-0.1	-0.1	0	0	-0.1	0	0	41° 45'	0	0	0	0.1	0	0	0	0.1	0	0.1
0	0	0	0	0	0	0	0	0	42° 0'	0.1	0	0	0	0	0	0	0.1	0	0.1
0	0	0	0	0	0	0	0	0	42° 15'	0.1	0	0	0	0	0	0	0.1	0	0.1
0	0	0	0	0	0	0	0	0	42° 30'	0.1	0	0	0	0	0	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	42° 45'	0.1	0.1	0	0	0	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	43° 0'	0.1	0.1	0	0	0	0	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	43° 15'	0.1	0.1	0	0	0	0	0	0	0.1	0.1
0	0	0	0	0	0	0	0	0	43° 30'	0.1	0.1	0	0	0	0	0	0	0.1	0.1
0	0	0	0	0	0	0	0	0	43° 45'	0.1	0	0.1	0.1	0	0	0	0	0.1	0.1
0	0	0	0	0	0	0	0	0	44° 0'	0.1	0.1	0.1	0.1	0	0	0	0	0.1	0.1
0	0	0	0	0	0	0	0	0	44° 15'	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	44° 30'	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0.1	0.1	0.1	0.1	0	0	0	0.1
0	0	0	0	0	0	0	0	0	45° 0'	0	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	45° 15'	0	0.1	0	0	0.1	0.1	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0.1	0	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0.1	0.1	0	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	46° 15'	0	0	0.1	0.1	0.1	0	0	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	46° 30'	0	0	0.1	0	0.1	0	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	47° 30'	0	0	0	0.1	0	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	47° 45'	0	0	0.1	0.1	0	0	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0.1	0.1	0	0	0.1	0	0	0
0	0	0	0	0	0	0	0	0	48° 15'	0	0	0.1	0.1	0	0	0.1	0	0	0
0	0	0	0	0	0	0	0	0	48° 30'	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0
0	0	0	0	0	0	0	0	0	48° 45'	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0.1
0	0	0	0	0	0	0	0	0	49° 15'	0	0	0.1	0.1	0	0.1	0.1	0.1	0	0.1
0	0	0	0	0	0	0	0	0	49° 30'	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0	0.1
0	0	0	0	0	0	0	0	0	49° 45'	0	0.1	0.1	0	0	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	50° 0'	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.1	0.1

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 80 to 76 °W									
Correction to Latitude										Correction to Longitude									
80°	79°	79°	78°	78°	77°	77°	76°	76°	Longitude	80°	79°	79°	78°	78°	77°	77°	76°	76°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	-0.1	
0	0	0	0	0	0	0	0	0	40° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	-0.1	
0	0	0	0	0	0	0	0	0	40° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	-0.1	
0	0	0	0	0	0	0	0	0	40° 45'	0.1	0.1	0.1	0.1	0.1	0	0.1	0	-0.1	
0	0	0	0	0	0	0	0	0	41° 0'	0.1	0.1	0.1	0.1	0.1	0	0.1	0	-0.1	
0	0	0	0	0	0	0	0	0	41° 15'	0.1	0.1	0.1	0.1	0.1	0	0.1	0	-0.1	
0	0	0	0	0	0	0	0	0	41° 30'	0.1	0.1	0.1	0.1	0.1	0	0.1	0	-0.1	
0	0	0	0	0	0	0	0	0	41° 45'	0.1	0.1	0	0.1	0.1	0.1	0.1	0	-0.1	
0	0	0	0	0	0	0	0	0	42° 0'	0.1	0.1	0	0.1	0.1	0.1	0	0	-0.1	
0	0	0	0	0	0	0	0	0	42° 15'	0.1	0.1	0	0.1	0.1	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	42° 30'	0.1	0.1	0	0.1	0.1	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	42° 45'	0.1	0	0	0.1	0.1	0.1	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	43° 0'	0.1	0.1	0	0.1	0.1	0.1	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	43° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0	-0.1	0	
0	0	0	0	0	0	0	0	0	43° 30'	0.1	0.1	0.1	0.1	0	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	43° 45'	0.1	0.1	0.1	0.1	0	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	44° 0'	0.1	0	0	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 15'	0.1	0.1	0	0.1	0	0.1	0	0	0	
0.1	0.1	0	0	0	0	0	0	0	44° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0	-0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0	-0.1	0.1	
0	0	0	0	0	0	0	0	0	45° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0	-0.1	0.1	
-0.1	0	0	0	0	0	0	0	0	45° 15'	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	45° 30'	0.1	0.1	0.1	0.1	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	45° 45'	0.1	0.1	0.1	0.1	0	0.1	0	0	0.1	
0	0	0	0	0	0	0	0	0	46° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0.1	
0	0	0	0	0	0	0	0	0	46° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0.1	
0	0	0	0	0	0	0.1	0.1	0.1	46° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0.2	
0	0	0	0	0	0	0.1	0.1	0.1	46° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0.2	
0	0	0	0	0	0.1	0.1	0.1	0	47° 0'	0.1	0.1	0.1	0	0.1	0	-0.1	0	0.3	
0	0	0	0	0	0.1	0.1	0.1	0	47° 15'	0.1	0.1	0.1	0	0	0	-0.1	0.1	0.4	
0	0	0	0	0	0.1	0.1	0	0	47° 30'	0.1	0.1	0.1	0	0	0	-0.1	0.1	0.4	
0	0	0	0	0	0.1	0	0	-0.1	47° 45'	0.1	0.1	0.1	0	0	0	0	0.2	0.5	
0	0	0	0	0	0.1	0	0	-0.1	48° 0'	0.1	0.1	0.1	0	0	0	0	0.3	0.5	
0	0	0	0	0	0.1	0	0	0	48° 15'	0.1	0	0.1	0	-0.1	0	0.1	0.3	0.5	
0	0	0	0	0.1	0.1	0	0	0	48° 30'	0.1	0	0.1	0	-0.1	0	0.1	0.4	0.5	
0	0	0	0	0.1	0	0	0	0.1	48° 45'	0.1	0	0.1	0	-0.1	0	0.1	0.4	0.6	
0	0	0	0	0	0	0	0	0.1	49° 0'	0.1	0	0	0	-0.1	0	0.1	0.3	0.5	
0	0	0	0	0	0	0	0	0	49° 15'	0	0	0	-0.1	-0.1	0	0.1	0.3	0.5	
0	0	0	0	0	0	0	0	0	49° 30'	0	0	0.1	-0.1	-0.1	0	0.1	0.3	0.5	
0	0	0	0	0	0	0	0	0	49° 45'	0	0	0.1	0	-0.1	0	0.1	0.3	0.5	
0	0	0	0	0	0	0	0	0	50° 0'	0	0	0.1	0	-0.1	0	0.1	0.3	0.5	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 76 to 72 °W									
Correction to Latitude										Correction to Longitude									
76°	75°	75°	74°	74°	73°	73°	72°	72°	Longitude	76°	75°	75°	74°	74°	73°	73°	72°	72°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	-0.1	-0.1	-0.1	0	0	40° 0'	-0.1	-0.1	0	0.2	0.3	0.2	0.2	0.2	0.2	
0	0	0	-0.1	-0.1	-0.1	-0.1	0	0	40° 15'	-0.1	-0.1	0.1	0.3	0.3	0.2	0.1	0.2	0.2	
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	40° 30'	-0.1	-0.1	0.1	0.3	0.3	0.2	0.1	0.2	0.2	
0	0	-0.1	-0.1	-0.1	0	0	0	0	40° 45'	-0.1	0	0.1	0.3	0.3	0.2	0.1	0.2	0.2	
0	0	0	0	0	0	0	0	0	41° 0'	-0.1	0	0.1	0.2	0.3	0.1	0	0.2	0.2	
0	0	0	0	0	0	0	0	0	41° 15'	-0.1	0	0.1	0.2	0.3	0.1	0.1	0.2	0.2	
0	0	0	0	0	0	0.1	0	0.1	41° 30'	-0.1	0	0.1	0.2	0.3	0.1	0.1	0.2	0.1	
0	0	0	0	0	0	0	0	0	41° 45'	-0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	
0	0	0	0	0	0	0	0	0	42° 0'	-0.1	0.1	0.2	0.2	0.2	0	0.1	0.2	0.1	
0	0	0	0	0	0	0	0	0	42° 15'	-0.1	0.1	0.2	0.2	0.2	0	0.1	0.2	0.1	
0	0	0	0	0	0	0	0	0	42° 30'	-0.1	0.1	0.2	0.2	0.2	0	0.1	0.2	0.1	
0	0	0	0	0.1	0	0	0	0	42° 45'	-0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	
0	0	0	0	0.1	0	0	0	0	43° 0'	-0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	
0	0	0	0	0.1	0.1	0	0	0	43° 15'	0	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	
0	0	0	0	0	0	0	0	0.1	43° 30'	0	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	
0	0	0	0	0	0	0	0	0.1	43° 45'	0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0	
0	0	-0.1	-0.1	-0.1	0	0	0	0.1	44° 0'	0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0.1	44° 15'	0	0.2	0.1	0.1	0.1	0.1	0.2	0	-0.2	
0	0	0	0	-0.1	-0.1	-0.1	0	0	44° 30'	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0	-0.2	
0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	44° 45'	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0	-0.2	
0	0	0	0	-0.1	-0.2	-0.2	-0.2	-0.2	45° 0'	0.1	0.2	0.1	0.2	0.3	0.2	0.1	0	-0.1	
0	0	0	0	-0.1	-0.1	-0.2	-0.2	-0.2	45° 15'	0.1	0.2	0.1	0.2	0.3	0.3	0.1	0	-0.1	
0	0	-0.1	-0.1	0	0	-0.1	-0.2	-0.1	45° 30'	0.1	0.2	0.1	0.2	0.3	0.3	0.2	0	-0.2	
0	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	45° 45'	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0	-0.2	
0	0	-0.1	-0.1	0	0	0	-0.1	-0.1	46° 0'	0.1	0.3	0.2	0.2	0.2	0.4	0.4	0	-0.3	
0	0	0	0	0	0	0.1	0.1	0	46° 15'	0.1	0.3	0.2	0.1	0.2	0.3	0.4	0.1	-0.3	
0.1	0	0.1	0.1	0	0	0.1	0.2	0.1	46° 30'	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.1	-0.2	
0.1	0	0.1	0.1	0	0	0.1	0.2	0.2	46° 45'	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.1	-0.1	
0	0	0	0	0	0	0	0.1	0.1	47° 0'	0.3	0.3	0.1	0.3	0.4	0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0.1	47° 15'	0.4	0.3	0.1	0.3	0.4	0.1	-0.1	0	-0.1	
0	-0.1	-0.1	0	0.1	0.1	0.1	0	0.1	47° 30'	0.4	0.3	0.1	0.2	0.4	0.2	-0.1	-0.1	-0.1	
-0.1	-0.1	0	0	0.1	0.2	0.2	0.1	0.1	47° 45'	0.5	0.3	0	0.1	0.3	0.2	0	0	-0.1	
-0.1	-0.1	-0.1	0	0.1	0.1	0.2	0.1	0.1	48° 0'	0.5	0.3	0	0	0.2	0.1	0	0	-0.1	
0	0	0	0	0	0	0.1	0.1	0	48° 15'	0.5	0.3	0	0	0.1	0.1	0	0.1	0	
0	0	0	0	0	-0.1	0	0.1	0	48° 30'	0.5	0.3	0	0	0.1	0	-0.1	0.1	0.1	
0.1	0.1	0.1	0	0	-0.1	-0.1	0	0.1	48° 45'	0.6	0.3	0	0	0.2	0	-0.1	0.1	0.1	
0.1	0.1	0.1	0	0	-0.1	-0.1	0	0.1	49° 0'	0.5	0.4	0	0.1	0.3	0	-0.2	0	0.1	
0	0	0	0	0	-0.1	0	0	0.1	49° 15'	0.5	0.4	0	0.1	0.4	0.1	-0.3	-0.1	0	
0	0	0	0	0	0	0	0.1	0.1	49° 30'	0.5	0.3	0	0.2	0.5	0.1	-0.4	-0.2	0	
0	0	0	0	0	0.1	0.1	0.1	0.1	49° 45'	0.5	0.3	0	0.2	0.5	0	-0.4	-0.2	0	
0	0	0	0	0.1	0.1	0.1	0.1	0	50° 0'	0.5	0.3	-0.1	0.2	0.4	0	-0.4	-0.2	0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 72 to 68 °W									
Correction to Latitude										Correction to Longitude									
72°	71°	71°	70°	70°	69°	69°	68°	68°	Longitude	72°	71°	71°	70°	70°	69°	69°	68°	68°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0.1	0	0	-0.1	-0.1	-0.1	-0.1	40° 0'	0.2	0.1	0	0	0	0	0	-0.1	-0.2	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	40° 15'	0.2	0.1	-0.1	0	0.1	0	0	-0.1	-0.2	
0	0	0	0	0	0	0	-0.1	-0.1	40° 30'	0.2	0	-0.1	0	0.1	0.1	0	-0.1	-0.2	
0	0	0	0	0	0	0	0	-0.1	40° 45'	0.2	0	-0.1	0	0.1	0.1	0.1	-0.1	-0.2	
0	0.1	0	0	0	0	0	0	-0.1	41° 0'	0.2	0	0	0	0	0.1	0.1	0	-0.2	
0	0.1	0	0	0	0	0	0	0	41° 15'	0.2	0	0	0	0	0.1	0.1	0	-0.2	
0.1	0.1	0	0	0	0	0	0	0	41° 30'	0.1	0	0	0	0	0.1	0.1	0	-0.2	
0	0	0	0	0	0	0	0	0.1	41° 45'	0.1	0.1	0	0	0	0.1	0.1	0	-0.2	
0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	42° 0'	0.1	0.1	0	0	0.1	0.1	0.1	0	-0.2	
0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	42° 15'	0.1	0	0	0	0.1	0.1	0	0	-0.2	
0	0	0	0	0	0.1	0.1	0.1	0.1	42° 30'	0.1	0	0	0	0.1	0.1	0	-0.1	-0.2	
0	0	0	0	0	0.1	0.1	0.1	0.1	42° 45'	0.1	0	0	0	0	0.1	0	-0.1	-0.2	
0	0	0	0	0	0.1	0.1	0.1	0.1	43° 0'	0.1	0	0	0	0	0	0	-0.1	-0.2	
0	0.1	0	0	0	0.1	0.1	0.1	0.1	43° 15'	0.1	0	0	0	0	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.1	43° 30'	0.1	0	0.1	0	0	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	43° 45'	0	0	0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	44° 0'	-0.1	0	0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	44° 15'	-0.2	0	0.2	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0.1	0.1	0	44° 30'	-0.2	0	0.2	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	0	0	0	0	44° 45'	-0.2	0	0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.2	-0.2	-0.1	0	0.1	0.1	0	0	0	45° 0'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.2	-0.1	-0.1	0	0	0	0	0	0	45° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	0	-0.1	
-0.1	-0.1	0	0	0	0	0	0	0	45° 30'	-0.2	-0.2	-0.2	-0.2	-0.1	0	0	0	-0.1	
-0.1	0	0	0	0	0	0	0	0	45° 45'	-0.2	-0.3	-0.2	-0.2	-0.1	0	0	0	-0.1	
-0.1	0	0	0	0	0	0	0	0	46° 0'	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	0	0	-0.1	
0	0	0	0	0	0	0	0	0	46° 15'	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	0	-0.1	-0.1	
0.1	0.1	0	0	0	0	0	0	0	46° 30'	-0.2	-0.3	-0.2	-0.2	-0.1	-0.1	0	-0.1	0	
0.2	0.1	0.1	0	0	0	0	0	0	46° 45'	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0	0	0	0	0	0	47° 0'	0	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0	0	0	0	0	0	47° 15'	-0.1	-0.2	-0.1	0	0	-0.1	-0.2	-0.1	-0.1	
0.1	0.1	0.1	0	0	0	0	0	0	47° 30'	-0.1	-0.2	-0.1	0	0	-0.1	-0.2	-0.2	-0.1	
0.1	0	0	0	0.1	0.1	0.1	0	0	47° 45'	-0.1	-0.2	0	0	-0.1	-0.1	-0.1	-0.2	-0.1	
0.1	0	0	0	0.1	0.1	0.1	0.1	0	48° 0'	-0.1	-0.2	0	0	-0.1	-0.1	-0.1	-0.2	-0.1	
0	0	0	0.1	0.1	0.1	0.1	0.1	0	48° 15'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0.1	0.1	0.1	0.1	0	0	48° 30'	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	
0.1	0	0.1	0.1	0.1	0.1	0	0	0	48° 45'	0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	49° 0'	0.1	-0.1	-0.2	-0.1	-0.1	-0.1	0	0	0	
0.1	0.1	0.1	0	0.1	0.1	0.1	0	0	49° 15'	0	-0.1	-0.2	-0.1	-0.1	-0.1	0	0	0	
0.1	0.1	0	0	0	0.1	0.1	0	0	49° 30'	0	-0.1	-0.2	-0.1	-0.1	-0.1	0	0	0	
0.1	0.1	0.1	0	0	0	0	0	0	49° 45'	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	
0	0.1	0.1	0.1	0	0	0	0	0	50° 0'	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 68 to 64 °W									
Correction to Latitude										Correction to Longitude									
68°	67°	67°	66°	66°	65°	65°	64°	64°	Longitude	68°	67°	67°	66°	66°	65°	65°	64°	64°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
-0.1	0	0	0	0	0	0	0	0	40° 0'	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
-0.1	0	0	0.1	0	0	0	0	0	40° 15'	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0	0	
-0.1	0	0	0	0	0	0	0	0	40° 30'	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	40° 45'	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	41° 0'	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0	0	
0	-0.1	-0.1	-0.1	0	0	0	0	0	41° 15'	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	41° 30'	-0.2	-0.2	-0.2	-0.3	-0.2	-0.1	-0.1	0	0	
0.1	0.1	0.1	0.1	0.1	0	0	0	0	41° 45'	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0	
0.1	0.1	0.1	0.1	0.1	0	0	0	0	42° 0'	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0	0	
0.1	0.1	0.1	0.1	0.1	0	0	0	0	42° 15'	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0	0	
0.1	0.1	0.1	0.1	0	0	0	0	0	42° 30'	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0	0	
0.1	0.1	0.1	0.1	0	0	0	0	0	42° 45'	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0	0	
0.1	0.1	0.1	0	0	0	0	0.1	0.1	43° 0'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0.1	0.1	0.1	0	0	0	0	0.1	0.1	43° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0.1	0.1	0	0	0	0	0	0	0	43° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0.1	0.1	0	0	0	0	0	0	0	43° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0.1	0.1	0	0	0	0	0	0	0	44° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0.1	0.1	0	0	0	0	0	0	0	44° 15'	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0.1	0.1	0	0	0	44° 30'	-0.1	-0.1	0	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	-0.1	-0.1	0	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	-0.1	-0.1	0	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	-0.1	-0.1	0	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 30'	0	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 45'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 0'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 15'	-0.1	0	0	0	0	0	0	0	0	
0	0.1	0	0	0	0	0	0	0	47° 30'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 45'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 0'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 15'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 30'	0	0	0	0	0	0	0	0	0	0.1
0	0	0	0	0	0	0	0	0	49° 45'	0	0	0	0	0	0	0	0	0.1	0.1
0	0	0	0	0	0	0	0	0	50° 0'	0	0	0	0	0.1	0.1	0	0.1	0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 60 to 56 °W									
Correction to Latitude										Correction to Longitude									
60°	59°	59°	58°	58°	57°	57°	56°	56°	Longitude	60°	59°	59°	58°	58°	57°	57°	56°	56°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0.1	0.1	40° 0'	0	0	0	0	0	0	-0.1	-0.1	-0.2	
0	0	0	0	0.1	0	0	0.1	0.1	40° 15'	0	0	0	-0.1	0	0	-0.1	-0.2	-0.2	
0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	40° 30'	0	0	0	-0.1	0	0	-0.1	-0.2	-0.2	
0	0.1	0	0	0	0.1	0.1	0.2	0.1	40° 45'	0	0	0	-0.1	0	0	-0.2	-0.2	-0.2	
0	0.1	0	0	0	0.1	0.1	0.2	0.1	41° 0'	0	0	0	-0.1	0	-0.1	-0.2	-0.2	-0.2	
0	0	0	0	0	0	0.1	0.1	0.1	41° 15'	0	0	0	-0.1	-0.1	-0.1	-0.3	-0.2	-0.2	
0	0	0	0	0	0.1	0.1	0.1	0.1	41° 30'	0	0	0	0	-0.1	-0.2	-0.3	-0.2	-0.2	
0	0	0	0	0.1	0.1	0.1	0.1	0.1	41° 45'	0	0	0	-0.1	-0.1	-0.2	-0.3	-0.2	-0.1	
0	0	0	0.1	0.1	0.2	0.1	0.1	0.1	42° 0'	0	0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	
0	0	0	0.1	0.1	0.1	0.1	0.1	0	42° 15'	0	0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	
0	0	0.1	0.1	0.1	0.1	0.1	0	0	42° 30'	0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	
0	0.1	0.1	0.1	0.1	0.1	0	0	0	42° 45'	0	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.1	0	0	0	0	43° 0'	0	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0	0	0	0	0	43° 15'	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0	0	0	0	0	0	43° 30'	-0.1	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.1	0	
0	0.1	0.1	0	0	0	0	0	0	43° 45'	-0.2	-0.2	-0.1	0	-0.1	-0.2	-0.2	-0.1	0	
0	0.1	0	0	0	0	0	0	0	44° 0'	-0.2	-0.2	-0.1	0	-0.1	-0.2	-0.2	-0.1	0	
0	0.1	0.1	0.1	0.1	0.1	0	0	0	44° 15'	-0.2	-0.2	-0.1	0	-0.1	-0.2	-0.2	-0.1	0	
0	0	0.1	0.1	0.1	0.1	0	0	0	44° 30'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	
0	0	0	0.1	0.1	0	0	0	0	44° 45'	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	45° 0'	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	45° 15'	-0.2	-0.2	-0.2	-0.1	0	-0.1	-0.2	-0.1	0	
0	0	0	0	-0.1	0	0	0	0	45° 30'	-0.2	-0.2	-0.2	-0.1	0	-0.1	-0.2	-0.1	0	
0	0	0	0	-0.1	0	0	0	0	45° 45'	-0.2	-0.2	-0.2	-0.1	0	-0.1	-0.2	-0.1	0	
0	0	0	0	0	0	0	0	0	46° 0'	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	
0	0	0	0	0	0	0	0	-0.1	46° 15'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	
0	0	0	0	0	0	-0.1	-0.1	0	46° 30'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	-0.1	-0.1	0	46° 45'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	
0	0	0	0	0	0	0	-0.1	-0.1	47° 0'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	
0	0	0	0	0	0	0	0	-0.1	47° 15'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	
0	0	0	0	0	0	0	0	-0.1	47° 30'	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	0	0	0	0	-0.1	-0.1	47° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	48° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	48° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	48° 30'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	48° 45'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 0'	0	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 15'	0	0	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	49° 30'	0	0	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	0	0	0	-0.1	-0.1	-0.1	49° 45'	0	0	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	50° 0'	0	0	0	-0.1	0	0	-0.1	-0.1	-0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 56 to 52 °W									
Correction to Latitude										Correction to Longitude									
56°	55°	55°	54°	54°	53°	53°	52°	52°	Longitude	56°	55°	55°	54°	54°	53°	53°	52°	52°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0.1	0.1	0.1	0.1	0	0	0	0	0	40° 0'	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0	-0.1	
0.1	0.1	0.1	0.1	0	0	0	0	0	40° 15'	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0	-0.1	
0.1	0.1	0.1	0.1	0	0	0	0	0	40° 30'	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0	0	0	
0.1	0.1	0.1	0	0	0	0	0	0	40° 45'	-0.2	-0.2	-0.2	-0.1	-0.1	0	0	0	0	
0.1	0.1	0.1	0	0	0	0	0	0	41° 0'	-0.2	-0.2	-0.1	-0.1	-0.1	0	0	0	0	
0.1	0.1	0	0	0	0	0	0	0	41° 15'	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	
0.1	0.1	0	0	0	0	0	0	0	41° 30'	-0.2	-0.1	-0.1	0	-0.1	0	0	0	0	
0.1	0	0	0	0	0	0	0	0	41° 45'	-0.1	-0.1	0	0	-0.1	0	0	0	0	
0.1	0	0	0	0	0	0	0	0	42° 0'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 15'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 30'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 45'	-0.1	0	0	0	0	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	-0.1	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	43° 15'	-0.1	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	46° 0'	-0.1	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	46° 15'	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	46° 30'	-0.1	-0.1	0	-0.1	-0.1	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	46° 45'	-0.2	-0.1	0	-0.1	-0.1	0	0	-0.1	-0.1	
-0.1	-0.1	0	0	0	0	0	0	0	47° 0'	-0.2	-0.1	0	-0.1	-0.1	0	0	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	0	0	0	0	47° 15'	-0.2	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	47° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	47° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	48° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	48° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	48° 30'	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	48° 45'	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	49° 0'	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 15'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 30'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	49° 45'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	50° 0'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	0	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 52 to 48 °W									
Correction to Latitude										Correction to Longitude									
52°	51°	51°	50°	50°	49°	49°	48°	48°	Longitude	52°	51°	51°	50°	50°	49°	49°	48°	48°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	-0.1	-0.1	0	-0.1	-0.1	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	40° 15'	-0.1	-0.1	0	-0.1	-0.1	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	-0.1	-0.1	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	-0.1	0	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 15'	0	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 30'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 45'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 0'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 30'	0	-0.1	-0.1	0	0	0	0	0	0	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	47° 45'	-0.1	-0.1	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	48° 0'	-0.1	0	0	0	0	0	0	0	0	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	48° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	-0.1	-0.1	-0.1	48° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	48° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 15'	-0.1	0	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 30'	-0.1	0	0	0	0	0	0	0	0	
-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 45'	0	0	0	0	0	0	0	0	0	
-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	50° 0'	0	0	0	-0.1	0	0	0	0	0	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 48 to 44 °W									
Correction to Latitude										Correction to Longitude									
48°	47°	47°	46°	46°	45°	45°	44°	44°	Longitude	48°	47°	47°	46°	46°	45°	45°	44°	44°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	-0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	-0.1	0	0	-0.1	0	0
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	-0.1	0	0	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	42° 0'	0	0	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	42° 15'	0	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	42° 30'	0	0	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	0	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	-0.1	0	0
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	46° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0	0	0	0	0	0.1	0	0
0	0	0	0	0	0	0	0	0	47° 15'	0	0	0	0	0	0	0	0.1	0.1	0
0	0	0	0	0	0	0	0	0	47° 30'	0	0	0	0	0	0	0	0.1	0.1	0
0	0	0	0	0	0	0	0	0	47° 45'	0	0	0	0	0	0	0	0.1	0.1	0
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	48° 0'	0	0	0	0	0	0	0	0.1	0.1	0
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	48° 15'	0	0	0	0	0	0	0	0.1	0	0
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	48° 30'	0	0	0	0	0	0	0	0.1	0	0
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	48° 45'	0	0	0	0	0	0	0	0	0	0
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 0'	0	0	0	0	0	0	0	0	0	0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 15'	0	0	0	0	0	0	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 30'	0	0	0	0	0	0	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 45'	0	0	0	0	0	0	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	50° 0'	0	0	0	0	0	0	0.1	0.1	0.1	0.1

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 44 to 40 °W									
Correction to Latitude										Correction to Longitude									
44°	43°	43°	42°	42°	41°	41°	40°	40°	Longitude	44°	43°	43°	42°	42°	41°	41°	40°	40°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 15'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 30'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 45'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 0'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 15'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 30'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 45'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	-0.1	0	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 15'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 30'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 45'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	-0.1	-0.1	-0.1	44° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	-0.1	0	0	44° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	-0.1	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	46° 15'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	46° 30'	0	0	0	0	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0	0	0	0	0	0	0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	47° 0'	0	0	0	0	0	0	0	0	0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	47° 15'	0	0	0	0	0	0	0	0	0	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	47° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	47° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	48° 0'	0	0	0	0	0	0	0	0	0	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	48° 15'	0	0	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	48° 30'	0	0	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	48° 45'	0	0	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	49° 0'	0.1	0.1	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	49° 15'	0.1	0.1	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	0	49° 30'	0.1	0.1	0.1	0	0	0	-0.1	-0.1	-0.1	
-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	0	49° 45'	0.1	0.1	0.1	0	0	0	-0.1	-0.1	-0.1	
-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0	50° 0'	0.1	0.1	0.1	0	0	0	-0.1	-0.2	-0.2	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 40 to 36 °W									
Correction to Latitude										Correction to Longitude									
40°	39°	39°	38°	38°	37°	37°	36°	36°	Longitude	40°	39°	39°	38°	38°	37°	37°	36°	36°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	40° 15'	0	0.1	0	0.1	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	40° 30'	0	0.1	0.1	0.1	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0.1	0.1	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	41° 0'	0	0.1	0.1	0.1	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	41° 15'	0	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0.1	0.1	0.1	0.1	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0.1	0.1	0.1	0.1	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0.1	0.1	0.1	0.1	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0.1	0	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0.1	0.1	0.1	0.1	
-0.1	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 15'	0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 30'	0.1	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	46° 45'	0.1	0	0	0	0	0	0	0	0.1	
-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	47° 0'	0.1	0	0	0	0	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	47° 15'	0	0	0	0	0	0	0	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	47° 30'	0	0	0	0	0	0	0	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	47° 45'	0	0	0	0	0	0	0	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	48° 0'	0	0	0	0	0	0	0.1	0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	48° 15'	0	0	0	0	0	0	0.1	0.1	0	
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	0	48° 30'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	48° 45'	0	0	0	0	0.1	0.1	0	0	0.1	
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0	0	0.1	0.1	0	0	0.1	
-0.1	0	0	0	0	0	0	0	0	49° 15'	0	0	0	0	0.1	0.1	0	0	0.1	
-0.1	0	0	0	0	0	0	-0.1	-0.1	49° 30'	-0.1	-0.1	0	0	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 45'	-0.1	-0.1	0	0	0	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	50° 0'	-0.2	0	0	0	0	0.1	0.1	0.1	0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 36 to 32 °W									
Correction to Latitude										Correction to Longitude									
36°	35°	35°	34°	34°	33°	33°	32°	32°	Longitude	36°	35°	35°	34°	34°	33°	33°	32°	32°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	40° 15'	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	40° 30'	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	40° 45'	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	41° 0'	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	41° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	41° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	41° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	42° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	42° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	42° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	42° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	43° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	43° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	43° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	43° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	44° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	44° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	44° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	44° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	45° 0'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	45° 15'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	45° 30'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	45° 45'	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	46° 0'	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	46° 15'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	46° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	-0.1	46° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	47° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	47° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	47° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	47° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	48° 0'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	48° 15'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	-0.1	-0.1	-0.1	0	0	0	0	0	48° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	48° 45'	0.1	0.1	0.1	0	0.1	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	49° 0'	0.1	0.1	0	0	0	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	49° 15'	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.1	0.1
-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 30'	0.1	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	49° 45'	0.1	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	50° 0'	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 32 to 28 °W									
Correction to Latitude										Correction to Longitude									
32°	31°	31°	30°	30°	29°	29°	28°	28°	Longitude	32°	31°	31°	30°	30°	29°	29°	28°	28°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	40° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	40° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	40° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	41° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	41° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	41° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	41° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	42° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	43° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	44° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	45° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	45° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	45° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	45° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	46° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	46° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	46° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
-0.1	0	0	0	0	0	0	0	0	46° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	47° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	47° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	47° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	47° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	0	0	0	0	0	0	0	48° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	48° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	48° 30'	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0.1	0	0	0	48° 45'	0	0	0	0.1	0.1	0.1	0.2	0.1	0.1	
0	0	0	0	0	0	0	0	0	49° 0'	0	0	0	0.1	0.1	0.1	0.2	0.2	0.1	
0	-0.1	-0.1	-0.1	-0.1	0	0	0	0	49° 15'	0.1	0.1	0.1	0	0	0.1	0.2	0.2	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	49° 30'	0.1	0.1	0.1	0.1	0	0	0.2	0.2	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	49° 45'	0.1	0.1	0.1	0.1	0	0	0.1	0.2	0.1	
-0.1	-0.1	0	0	-0.1	-0.1	-0.1	0	0	50° 0'	0.1	0.1	0.1	0.1	0	0	0	0.1	0.1	

Correct Astronomical Position to WGS84

Latitude 40 to 50 °S										Longitude 16 to 12 °W									
Correction to Latitude										Correction to Longitude									
16°	15°	15°	14°	14°	13°	13°	12°	12°	Longitude	16°	15°	15°	14°	14°	13°	13°	12°	12°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	40° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	40° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	41° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	42° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	43° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	44° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 15'	0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 30'	0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	45° 45'	0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 0'	0.1	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 15'	0.1	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 30'	0	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	46° 45'	0	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 0'	0	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 15'	0.1	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	47° 30'	0.1	0	0.1	0	0	0	0	0	0	
0	0	0	0	0	0.1	0	0	0	47° 45'	0.1	0	0	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	48° 0'	0	0	0.1	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	48° 15'	0	0.1	0.1	0.1	0.1	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	48° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	48° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	49° 0'	0	0.1	0.1	0.1	0.1	0.1	0	0	0	
0	0	0	0	0	0	0	0	0	49° 15'	0	0.1	0.1	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 30'	0.1	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	49° 45'	0.1	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	50° 0'	0.1	0.1	0.1	0.1	0.1	0	0	0	0	

