

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 0 to 4 °E									
Correction to Latitude										Correction to Longitude									
0°	0°	1°	1°	2°	2°	3°	3°	4°	Longitude	0°	0°	1°	1°	2°	2°	3°	3°	4°	
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	0° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 30'	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	1° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0.1	2° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0.1	0.1	2° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0.1	0.1	0.1	2° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0.1	0.1	0.1	0.1	3° 0'	0	0	0	0	0	-0.1	0	0	0	
0	0	0	0	0.1	0.1	0.1	0.1	0.1	3° 15'	0	0	0	0	-0.1	-0.1	0	0	0	
0	0	0.1	0.1	0.1	0.1	0	0.1	0.1	3° 30'	0	0	0	0	-0.1	-0.1	0	-0.1	-0.1	
0	0	0.1	0.1	0.1	0	0.1	0.1	0.1	3° 45'	0	0	0	0	-0.1	0	0	-0.1	0	
0	0	0.1	0	0	0	0.1	0.1	0.1	4° 0'	0	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0.1	0.1	0.1	0.1	4° 15'	0	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0.1	0.1	0.1	0	0	4° 30'	0	0	0	0	0	-0.1	-0.1	0	0	
0	0	0	0	0.1	0.1	0	0	0	4° 45'	0	0	0	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	5° 0'	0	0	0	-0.1	-0.1	-0.1	0	-0.1	0	
0	0	0	0	0	0	0	0	0	5° 15'	0	-0.1	0	-0.1	-0.1	-0.1	0	-0.1	0	
0	0	0	0	0.1	0	0	0	0	5° 30'	0	-0.1	0	-0.1	-0.1	0	0	-0.1	0	
0	0	0	0	0.1	0	0	0	0	5° 45'	0	0	0	-0.1	-0.1	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	6° 0'	0	0	0	-0.2	-0.1	0	0	-0.1	0	
0	0	0	0	0	0	0.1	0	0	6° 15'	0	-0.1	0	-0.2	-0.1	0	0	0	0	
0	0.1	0.1	0.1	0	0	0	0	0	6° 30'	0	-0.1	0	-0.1	0	0	-0.1	0	0	
0.1	0.1	0.1	0.1	0	0	0	0	0	6° 45'	-0.1	-0.1	0	-0.1	0	-0.1	0	0	0	
0.1	0.1	0.1	0.1	0	0	0	0	0	7° 0'	-0.1	-0.1	0	-0.1	0	-0.1	0	0	0	
0.1	0	0	0.1	0	0	0	0	0	7° 15'	-0.1	-0.1	0	-0.1	0	0	0	0	0	
0.1	0	0	0	0	0	0	0	0	7° 30'	-0.1	0	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 45'	-0.1	0	-0.1	-0.1	0	0	0	0	0	
0.1	0.1	0.1	0	0	0	0	0	0	8° 0'	0	0	-0.1	-0.1	0	0	0	0	0	
0.1	0.1	0.1	0	0	0	0	0	0	8° 15'	0	0	-0.1	0	0	0	0	0	0	
0	0.1	0.1	0	0	0	0	0	0	8° 30'	-0.1	0	-0.1	0	0	0	0	0	0	
0	0.1	0.1	0	0	0	0	0	0	8° 45'	-0.1	0	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	9° 0'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	9° 15'	0	0	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	9° 30'	0	0	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	9° 45'	0	0	-0.1	0	0	0	0	0	0	
0.1	0.1	0	0	0	0	0	0	0	10° 0'	0	0	-0.1	0	0	0	0	0	0	





# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 12 to 16 °E									
Correction to Latitude										Correction to Longitude									
12° 0'	12° 30'	13° 0'	13° 30'	14° 0'	14° 30'	15° 0'	15° 30'	16° 0'	Longitude Latitude	12° 0'	12° 30'	13° 0'	13° 30'	14° 0'	14° 30'	15° 0'	15° 30'	16° 0'	
0.1	0.1	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	0	0	0	0	0	0	0	0° 15'	0	0	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	0° 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	0	0	0° 45'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	0	0	0	0	0	0	0	0	1° 0'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.2	0	
0	0	0	0	0	0	0	0	0	1° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	
0	0	0	0	0	0	0	-0.1	0	1° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	
0.1	0	0	0	0	0	0	-0.1	0	1° 45'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	
0.1	0	0	0	0	0	0	-0.1	0	2° 0'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	
0.1	0.1	0.1	0	0	0	0	-0.1	0	2° 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	0	0	-0.1	0	2° 30'	0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.2	
0.1	0.1	0.1	0	0	0	0	0	0	2° 45'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.2	
0.1	0.1	0.1	0	0	0	0	0	0	3° 0'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.2	
0.1	0.1	0.1	0	0	0	0	0	0	3° 15'	0	0	0.1	0	-0.1	-0.1	-0.1	-0.2	-0.2	
0	0	0	0	0	0	0	0	0	3° 30'	0	0	0.1	0	-0.1	-0.1	-0.1	-0.2	-0.2	
0	0	0	0.1	0.1	0	0	0	0	3° 45'	0	0	0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0.1	0.1	0	0	0	-0.1	4° 0'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	-0.1	4° 15'	0	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	-0.1	-0.1	4° 30'	0	0	0	0	0	0	-0.1	-0.1	0	
-0.1	0	0	0	0	0	-0.1	-0.1	-0.1	4° 45'	0	0	0	0	0	0	-0.1	-0.1	0	
-0.2	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	5° 0'	-0.1	0	0	0	0	0	0	-0.1	-0.1	
-0.2	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	5° 15'	-0.1	0	0	0	0	0	0	-0.1	-0.1	
-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 30'	-0.1	-0.1	0	0	0	0	0	-0.1	-0.1	
-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 45'	-0.1	-0.1	-0.1	0	0	0	0	0	-0.1	
-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	6° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	6° 15'	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	-0.1	-0.1	-0.1	-0.1	6° 30'	0	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 45'	0	-0.1	-0.1	0	-0.1	0	0	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	7° 0'	0	-0.1	0	0	-0.1	0	0	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	7° 15'	0	0	0	0	0	0	0	-0.1	-0.1	
0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 30'	0	0	0	0	0	0	0	-0.1	-0.1	
0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 45'	0	0	0	0	0	0	0	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	8° 0'	0	0.1	0.1	0	-0.1	0	0	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	8° 15'	0	0.1	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	8° 30'	0	0.1	0.1	0	-0.1	0	0	-0.1	-0.1	
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	8° 45'	0	0.1	0.1	0	-0.1	0	0	-0.1	-0.1	
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	9° 0'	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	-0.1	-0.1	9° 15'	0	0.1	0	0	0	0	0	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	9° 30'	0	0.1	0	0	0	0	0	-0.1	-0.1	
-0.1	0	0	-0.1	0	0	0	-0.1	-0.1	9° 45'	0	0.1	0.1	0	-0.1	0	0.1	0	-0.1	
-0.1	0	0	-0.1	0	0	-0.1	0	-0.1	10° 0'	0	0.1	0.1	0	-0.1	0	0.1	0	-0.1	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 16 to 20 °E									
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	16° 0'	16° 30'	17° 0'	17° 30'	18° 0'	18° 30'	19° 0'	19° 30'	20° 0'	Latitude
0	0	0	0.1	0	0	0	0.1	0.1	0° 0'	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0° 0'
0	0	0	0.1	0	0	0	0.1	0.1	0° 15'	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0° 15'
0	0	0	0	0.1	0	0	0	0.1	0° 30'	-0.1	-0.1	-0.2	-0.1	0	-0.1	-0.1	-0.1	-0.1	0° 30'
0	0	0	0	0.1	0.1	0	0	0	0° 45'	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0° 45'
0	0	0	0	0	0.1	0	0	0	1° 0'	0	-0.1	-0.2	-0.2	-0.1	0	-0.1	-0.1	-0.1	1° 0'
0	0	0	-0.1	0	0	0	0	0	1° 15'	-0.1	-0.1	-0.2	-0.2	-0.1	0	-0.1	-0.1	-0.1	1° 15'
0	0	0	-0.1	-0.1	-0.1	0	0	0	1° 30'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	1° 30'
0	0	0	0	-0.1	-0.1	0	0	0	1° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1° 45'
0	0	0	0	-0.1	-0.1	0	0	0	2° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2° 0'
0	0	0	0	0	0	-0.1	-0.1	-0.1	2° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2° 15'
0	0	0	0	0	0	0	-0.1	-0.1	2° 30'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2° 30'
0	0	0	0	0	0	0	-0.1	-0.1	2° 45'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2° 45'
0	0	0	0	0	0	-0.1	-0.1	-0.1	3° 0'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3° 0'
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	3° 15'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3° 15'
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3° 30'	-0.2	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	3° 30'
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	3° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	3° 45'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	4° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 0'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	4° 15'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 15'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 30'	0	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 30'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 45'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	4° 45'
-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	5° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	5° 0'
-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	5° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	5° 15'
-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	5° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	5° 30'
-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	5° 45'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 45'
-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	6° 0'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 0'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	6° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 15'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 30'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 45'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 0'	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	7° 0'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 15'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	7° 15'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 30'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	7° 30'
-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 45'	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	7° 45'
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 0'	-0.1	-0.1	0	-0.1	0	0	-0.1	-0.1	-0.1	8° 0'
-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 15'	-0.1	-0.1	0	0	0	0	-0.1	-0.1	-0.1	8° 15'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 30'	-0.1	-0.1	0	0	0	0	-0.1	-0.1	-0.1	8° 30'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 45'	-0.1	-0.1	0	0	0	0	-0.1	-0.1	-0.1	8° 45'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 0'	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	9° 0'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 15'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 30'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	9° 45'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	10° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	10° 0'

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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'	
0.1	0.1	0.1	0.1	0	0	0.1	0.1	0	0° 0'	-0.1	-0.1	0	0	0	0	0	0	0	
0.1	0.1	0.1	0.1	0	0	0	0	0	0° 15'	-0.1	-0.1	0	0	0	0	0	0	0	
0.1	0	0	0	0	0	0	0	0	0° 30'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0.1	0	0	0	0	0° 45'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 0'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 15'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 30'	-0.1	-0.1	0	0	0	0	0	0	0	
0	-0.1	-0.1	0	0	0	0	0	0	1° 45'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	-0.1	-0.1	-0.1	0	0	0	0	0	2° 0'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	2° 15'	-0.1	0	-0.1	-0.1	0	0	0	0	0	
-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	0	0	-0.1	2° 30'	0	0	-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	2° 45'	0	0	-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	3° 0'	0	0	0	-0.1	-0.1	0	0	0	0	
-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	3° 15'	0	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	3° 30'	0	0	0	-0.1	-0.1	0	0	0	0	
0	0	0	0	-0.1	-0.1	-0.1	0	0	3° 45'	0	0	0	-0.1	-0.1	0	0	0	0	
0	0	0	0	-0.1	-0.1	-0.1	0	-0.1	4° 0'	0	-0.1	0	0	0	-0.1	-0.1	0	0	
-0.1	0	0	0	-0.1	-0.1	-0.1	0	-0.1	4° 15'	-0.1	-0.1	0	0	0	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	4° 30'	-0.1	-0.1	0	0	0	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	0	4° 45'	-0.1	-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	5° 0'	-0.1	-0.1	-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	5° 15'	-0.1	-0.1	-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	5° 30'	-0.1	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 45'	-0.1	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	0	-0.1	-0.1	6° 0'	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	6° 15'	-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	-0.1	-0.1	6° 30'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.2	6° 45'	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.2	7° 0'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	7° 15'	-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	-0.1	7° 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	-0.1	7° 45'	-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	-0.1	8° 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	-0.1	-0.1	-0.1	-0.1	-0.1	8° 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	8° 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	0	0	8° 45'	-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	0	0	9° 0'	-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	0	0	9° 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	9° 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	9° 45'	-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	10° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	0	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 24 to 28 °E									
Correction to Latitude										Correction to Longitude									
24°	24°	25°	25°	26°	26°	27°	27°	28°	Longitude	24°	24°	25°	25°	26°	26°	27°	27°	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	0° 0'	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	0° 15'	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	0° 30'	0	0.1	0.1	0	0	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	0° 45'	0	0.1	0.1	0	0	0.1	0.1	0.1	0.2	
0	0	0	0.1	0.1	0	0	0	0	1° 0'	0	0.1	0.1	0	0	0.1	0.1	0.1	0.2	
0	0	0	0.1	0	0	0	0	0	1° 15'	0	0	0.1	0	0	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0.1	0.1	1° 30'	0	0	0	0	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0.1	0.1	1° 45'	0	0	0	0	0.1	0	0.1	0.2	
0	0	0	0	0	0	0	0	0	2° 0'	0	0	0	0	0.1	0	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	2° 15'	0	0	0	0	0.1	0	0.1	0.1	0.2	
-0.1	0	0	0	0	0	0	0	0	2° 30'	0	0	0	0	0.1	0.1	0.1	0.1	0.2	
-0.1	0	0	0	0	0	0	0	0	2° 45'	0	0	0	0.1	0.1	0.1	0.1	0.1	0.2	
0	0	-0.1	0	0	0	0	0	0	3° 0'	0	0	0	0	0	0.1	0.1	0.1	0.2	
0	0	-0.1	0	0	0	0	0	0	3° 15'	0	0	0	0	0	0	0	0.1	0.2	
0	0	0	0	0	0	0	0	0	3° 30'	0	0	0	0	0	0	0	0	0.2	
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	0	0	0	0	0	0.1	
-0.1	0	0	0	0	0	0	0	0	4° 0'	0	0	0	0	0	0	0	0	0.1	
-0.1	0	0	0	0	0	0	0	0	4° 15'	0	0	0	0	0	0	0	0	0.1	
-0.1	-0.1	-0.1	0	0	0	0	0	0	4° 30'	0	0	0	0	0	0	0	0	0.1	
0	-0.1	-0.1	0	0	0	0	0	0	4° 45'	0	0	0	0	0	0	0	0	0	
0	-0.1	-0.1	0	0	0	0	0	0	5° 0'	0	0	0	0	0	0	0	0	0.1	
0	-0.1	-0.1	-0.1	0	0	0	0	0	5° 15'	0	0	0	0	0	0	0	0	0	
0	0	-0.1	-0.1	0	0	0	0	0	5° 30'	0	0	0	0	0	0	0	0	0.1	
-0.1	0	0	0	0	0	0	0	0	5° 45'	0	0	0	0	0	0	0	0	0.1	
-0.1	0	0	0	-0.1	0	0	0	0	6° 0'	0	0	0	0	0	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	6° 15'	0	0	0	0	0	-0.1	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	6° 30'	0	0	0	0	0	-0.1	0	0	0.1	
-0.2	-0.2	-0.2	-0.1	0	0	0	0	0	6° 45'	0	0	0	0	-0.1	-0.1	0	0	0.1	
-0.2	-0.2	-0.2	-0.1	0	0	0	0	0	7° 0'	0	0	0	-0.1	-0.1	-0.1	0	0	0.1	
-0.1	-0.2	-0.1	-0.1	0	0	0	-0.1	-0.1	7° 15'	0	0	-0.1	-0.1	-0.1	-0.1	0	0	0.1	
-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	7° 30'	0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.2	-0.1	7° 45'	0	0	-0.1	-0.2	-0.1	-0.1	0	0.1	0	
-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	8° 0'	0	0	-0.1	-0.1	-0.1	-0.1	0.1	0.1	0	
-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	8° 15'	0	0	-0.1	-0.1	-0.1	-0.1	0.1	0.1	0	
-0.1	0	0	0	-0.1	-0.1	-0.2	-0.1	-0.1	8° 30'	-0.1	0	-0.1	-0.1	-0.1	0	0.1	0.1	-0.1	
0	0	0	0	-0.1	-0.2	-0.1	-0.1	-0.1	8° 45'	0	-0.1	-0.1	-0.1	0	0	0.1	0	-0.1	
0	0	0	0	-0.1	-0.2	-0.1	-0.1	-0.1	9° 0'	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	-0.1	9° 15'	-0.1	-0.1	0	-0.1	0	0	0	0	-0.1	
0	0	-0.1	-0.1	-0.2	-0.1	0	0	-0.1	9° 30'	-0.1	0	0	0	0	0	0	0.1	-0.1	
-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	0	0	0	9° 45'	-0.1	0	0	0	0	-0.1	0	0.1	-0.1	
-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	0	0	0	10° 0'	0	0	0	0	0	-0.1	0	0.1	-0.1	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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	-0.1	-0.1	0	0.1	0	0	0	0	0° 0'	0.2	0.2	0	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0	0.1	0	0	0	0	0.1	0° 15'	0.2	0.2	0	-0.2	0	0	-0.1	0	0	
0	0	0.1	0	-0.1	0	0	0	0.1	0° 30'	0.2	0.2	-0.1	-0.2	0	0	-0.1	0	-0.1	
0	0.1	0	-0.1	-0.1	0	0	0.1	0.1	0° 45'	0.2	0.2	0	-0.1	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	-0.2	-0.1	0	0	0	0.1	1° 0'	0.2	0.2	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	0	0	0	0.1	1° 15'	0.2	0.2	0.1	0	-0.2	-0.2	-0.1	-0.1	-0.1	
0.1	0	0	0	0	0	0	0	0.1	1° 30'	0.2	0.2	0.1	0	-0.2	-0.2	-0.1	-0.1	-0.1	
0.1	0	0	0.1	0.1	0	0	0	0.1	1° 45'	0.2	0.2	0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0.1	0	0	0	0	0	2° 0'	0.2	0.3	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0.1	0	0	0	0	0	0	2° 15'	0.2	0.3	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0.1	0.1	0	0	0	0	0	2° 30'	0.2	0.2	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0.1	0.1	0	0.1	0	0	0	2° 45'	0.2	0.2	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	3° 0'	0.2	0.2	0	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0.1	0.1	0.1	0	0.1	0.1	0	0	3° 15'	0.2	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	0	3° 30'	0.2	0.1	-0.1	0.1	-0.1	-0.2	-0.1	-0.1	-0.1	
0	0.1	0.1	0.1	0.2	0.1	0	0	0	3° 45'	0.1	0.1	-0.1	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0.1	0	0.2	0.2	0.1	0	0	0	4° 0'	0.1	0.1	-0.1	0.1	-0.1	-0.1	0	-0.1	-0.1	
0	0	0	0.1	0.2	0	0	0	0	4° 15'	0.1	0.1	-0.1	0	0	0	0	-0.1	-0.1	
0	0	0	0.1	0.1	0	0	0	0	4° 30'	0.1	0.1	-0.1	-0.1	0	0	0	0	-0.1	
0	0.1	0	0	0	0	0	0	0	4° 45'	0	0.1	-0.1	-0.1	0.1	0	0	0	0	-0.1
0	0	0.1	0	0	0	0	0	0	5° 0'	0	0.1	-0.1	-0.1	0.1	0	0	0	0	-0.2
0	0	0	0	0	0	-0.1	0	0	5° 15'	0	0.1	-0.1	-0.1	0.1	0	0	0	0	-0.2
0	0	0	-0.1	0	0	0	0	0	5° 30'	0.1	0	-0.1	0	0.1	0	0	0	0	-0.1
0	0	-0.1	-0.1	-0.1	0	0	0	0	5° 45'	0.1	0.1	0	0	0	0	0	0	-0.1	-0.1
0	0	-0.1	-0.2	-0.1	0	0	0	0	6° 0'	0.1	0.1	0	0	0	0	-0.1	0	-0.1	
0	0	-0.1	-0.1	-0.1	0	0	0	-0.1	6° 15'	0.1	0.1	0.1	0	-0.1	0	-0.1	0	-0.1	
0	0	-0.1	-0.1	-0.1	0	0	0	0	6° 30'	0.1	0.2	0.1	0	-0.1	0	0	0	0	-0.1
0	0	0	-0.1	0	0	0	0	0	6° 45'	0.1	0.2	0.1	0	-0.1	0	0	0	0	0
0	0	0	-0.1	-0.1	0	0	-0.1	0	7° 0'	0.1	0.2	0.1	0	-0.1	0	0	0	-0.1	0
-0.1	0	0.1	0	0	0.1	0	-0.1	0	7° 15'	0.1	0.1	0.1	0.1	-0.2	-0.1	0.1	-0.1	-0.1	
-0.1	-0.1	0	0	0	0.1	0	-0.1	0	7° 30'	0	0.1	0.1	0.1	-0.2	-0.1	0.1	-0.1	-0.1	
-0.1	-0.1	0	0.1	0.1	0.1	0.1	-0.1	0	7° 45'	0	0	0.1	0.1	-0.2	-0.1	0.2	-0.1	-0.2	
-0.1	-0.1	0	0.1	0.1	0	0.1	0	-0.1	8° 0'	0	0	0.1	0.1	-0.2	-0.1	0.2	0	-0.3	
-0.1	-0.1	0	0.1	0.1	0	0	0	-0.1	8° 15'	0	0	0	0	-0.1	-0.1	0.2	0.1	-0.3	
-0.1	0	0	0.1	0.1	-0.1	0	0	-0.1	8° 30'	-0.1	-0.1	-0.1	0	-0.1	-0.1	0.1	0.1	-0.2	
-0.1	0	0	0	0	-0.1	-0.1	0	-0.1	8° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0.1	0.1	-0.1	
-0.1	-0.1	0	0	0	-0.1	-0.1	0	0	9° 0'	-0.1	-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	0	9° 15'	-0.1	-0.1	-0.1	0	0	0	0.1	0	0	
-0.1	-0.1	-0.1	0	0	0	0	0	0	9° 30'	-0.1	-0.1	-0.1	-0.1	0	0	0.1	0	0	
0	-0.1	-0.1	0	0	0	0	0	0	9° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0.1	0	0	
0	-0.1	-0.1	0	0	-0.1	0	0	0	10° 0'	-0.1	-0.1	-0.2	-0.1	0	0	0	0	0	



## Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 32 to 36 °E									
Correction to Latitude										Correction to Longitude									
32°	32°	33°	33°	34°	34°	35°	35°	36°	Longitude	32°	32°	33°	33°	34°	34°	35°	35°	36°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0° 0'	0	-0.1	-0.1	-0.1	0	0	0.1	0.1	0	
0.1	0.1	0.1	0.1	0.1	0	0	0	0	0° 15'	0	-0.1	-0.1	-0.1	0	0	0.1	0.1	0	
0.1	0.1	0.1	0	0	-0.1	-0.1	0	0	0° 30'	-0.1	-0.1	-0.1	0	0	0	0.1	0.1	0	
0.1	0.1	0.1	0	0	-0.1	-0.1	0	0.1	0° 45'	-0.1	-0.1	-0.1	0	0	0.1	0.1	0.1	0	
0.1	0.1	0	0	0	0	0	0	0.1	1° 0'	-0.1	-0.1	0	0	0	0.1	0	0	0	
0.1	0	0	0	0	0.1	0.1	0	0.1	1° 15'	-0.1	-0.1	0	0	0	0.1	0	0	-0.1	
0.1	0	0	0	0	0.1	0.1	0	0.1	1° 30'	-0.1	-0.1	0	0	0	0	0.1	0	-0.1	
0.1	0	0	0	0	0	0	0	0.1	1° 45'	-0.1	0	0	0	0	0	0.1	0	-0.2	
0	0	0	0	0	0	0	0	0.1	2° 0'	-0.1	0	0	0	0	0.1	0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0.1	2° 15'	-0.1	0	0	0	0	0.1	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	2° 30'	-0.1	0	0	0	0	0.1	0	-0.1	0	
0	0	0	0	0	0	0	0	-0.1	2° 45'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0.1	0	0	0.1	0	0	3° 0'	-0.1	-0.1	0	0	0	0	0	0	-0.1	
0	0	0.1	0.1	0.1	0.1	0.1	0.1	0	3° 15'	-0.1	-0.1	0	0	0	0	0	0	-0.1	
0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	3° 30'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 45'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	-0.1	-0.1	0	4° 0'	-0.1	-0.1	-0.1	0	0	0	0.1	0	0	
0	0	0	0	0	0	-0.1	0	0	4° 15'	-0.1	-0.1	-0.1	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	4° 30'	-0.1	-0.1	0	0	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0.1	0	4° 45'	-0.1	-0.1	0	0	0	0.1	0	0	0	
0	0	0	0	0	0	0	0.1	0	5° 0'	-0.2	-0.1	0	0	0	0.1	0	0	0.1	
0	0	0	0	0	0	0.1	0.1	0	5° 15'	-0.2	-0.1	0	0	0	0.1	-0.1	0	0.1	
0	0	0	0	-0.1	0	0.1	0	0	5° 30'	-0.1	-0.1	0	0	0	0	-0.1	0	0.1	
0	0	0	-0.1	-0.1	0	0	0	0.1	5° 45'	-0.1	-0.1	0	0	0	0	-0.1	0	0.1	
0	-0.1	-0.1	-0.1	-0.1	0	0	0	0.1	6° 0'	-0.1	-0.1	0	0	0	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	6° 15'	-0.1	-0.1	0	0	0	-0.1	-0.1	0	0	
0	-0.1	-0.1	-0.1	-0.1	0	-0.1	0	0	6° 30'	-0.1	-0.1	0	0	0	-0.1	-0.1	0	0	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	6° 45'	0	-0.1	0	0	-0.1	-0.1	-0.1	0	0	
0	0	-0.1	0	-0.1	-0.1	-0.1	0	-0.1	7° 0'	0	0	0	0	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	7° 15'	-0.1	0	0	0	0	0	-0.1	0	0	
0	0.1	0	0	0	0	-0.1	-0.2	-0.1	7° 30'	-0.1	0	0	0	0	0	-0.1	0	-0.1	
0	0.1	0	0	0	0	-0.1	-0.2	-0.1	7° 45'	-0.2	0	0	-0.1	0	0	0	0	-0.1	
-0.1	0	0	0	0	0	-0.1	-0.1	0	8° 0'	-0.3	0	0.1	-0.1	0	0.1	0	-0.1	-0.2	
-0.1	-0.1	0	0	0	0	0	0	0.1	8° 15'	-0.3	-0.1	0.1	-0.1	0	0.1	0	-0.1	-0.2	
-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	0	0.1	0.1	8° 30'	-0.2	-0.1	0	-0.1	0	0.1	0	-0.2	-0.1	
-0.1	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1	0.1	0.1	8° 45'	-0.1	-0.1	0	-0.1	0	0	-0.1	-0.2	-0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	9° 0'	0	0	0	-0.1	0	0	-0.1	-0.2	0	
0	0	-0.1	0	0.1	0	0	0	0	9° 15'	0	0	0	-0.1	0	0.1	-0.2	-0.2	0	
0	0	0	0	0.2	0.2	0.1	0	0	9° 30'	0	0	0	-0.2	0	0.1	-0.2	-0.2	0	
0	0	0	0	0.1	0.2	0.2	0	0	9° 45'	0	0	0	-0.2	-0.1	0.2	-0.1	-0.2	0	
0	0	0	-0.1	0	0.2	0.2	0	0	10° 0'	0	0	0	-0.2	-0.2	0.1	0	-0.1	0	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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	0	0	0	0.1	0	0	0	0	0° 0'	0	0.1	0	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	
0	0	0.1	0.1	0.1	0	0	0	0	0° 15'	0	0.1	-0.1	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	
0	0	0.2	0.1	0	0	0	0	0	0° 30'	0	0	-0.1	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.2	0.1	0	0	0	0	0	0° 45'	0	0	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.2	0.1	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	0.2	0	-0.1	0	0	0	0	0	1° 15'	-0.1	0	0	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	
0.1	0.1	0	0	0	0	0	0	0	1° 30'	-0.1	0.1	0	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	
0.1	0	0	0	0	0	0	0	0	1° 45'	-0.2	0.1	0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	
0.1	0	0	0	0	0	0	0	0	2° 0'	-0.1	0.2	0	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	2° 15'	-0.1	0.2	0	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	2° 30'	0	0.2	0	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	
-0.1	0	0	0	0	-0.1	0	0	0	2° 45'	0	0.1	0.1	-0.1	-0.2	-0.2	-0.1	-0.2	-0.1	
0	0	0	0	0	-0.1	0	0	0	3° 0'	-0.1	0.1	0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	
0	0	0.1	0.1	0	-0.1	-0.1	0	0	3° 15'	-0.1	0.1	0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	
0.1	0	0.1	0.1	0	0	0	0	0	3° 30'	0	0.1	0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	
0	0	0	0.1	0.1	0.1	0	0	0	3° 45'	0	0.1	0	-0.1	0	-0.1	-0.2	-0.2	-0.1	
0	0	0	0	0.1	0.1	0	0	0	4° 0'	0	0.1	-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	0	4° 15'	0	0.1	0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	
0	0	0	0	0.1	0	0.1	0	0	4° 30'	0	0.1	0	-0.2	-0.1	-0.1	-0.2	-0.2	-0.1	
0	0	0	0	0.1	0	0.1	0	0	4° 45'	0	0	0	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	
0	0	0	0	0	0.1	0.1	0	0	5° 0'	0.1	0	0	-0.2	-0.1	-0.1	-0.2	0	-0.1	
0	0	0	0	0	0.1	0.1	0	0	5° 15'	0.1	0	0	-0.2	-0.1	-0.1	-0.2	0	-0.1	
0	0	0	0	0	0.1	0	0	0	5° 30'	0.1	0	0	-0.2	-0.1	-0.2	-0.2	0	-0.1	
0.1	0	0	0	0	0	0	0	0	5° 45'	0.1	0	0	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0	0	0	0	0	6° 0'	0	0.1	-0.1	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1	
0	0.1	0.1	0.1	0	0	0	0	0	6° 15'	0	0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	
0	0.1	0.1	0.1	0	0	0	0	0	6° 30'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0.1	0.1	0	0	-0.1	0	0	6° 45'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	0	0	0	0.1	0	-0.1	0	0	7° 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	7° 15'	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	7° 30'	-0.1	-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	7° 45'	-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	0	8° 0'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0	-0.1	0	-0.1	0	0	0	0	8° 15'	-0.2	-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	8° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	
0.1	0	0	0	0	0	-0.1	0	0	8° 45'	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	
0	0	0	0	0	0	-0.1	-0.1	0	9° 0'	0	-0.1	-0.1	-0.1	0	0	-0.1	-0.2	-0.2	
0	0	0	0	0	0	-0.1	-0.1	0	9° 15'	0	-0.1	-0.1	-0.1	0	0	-0.1	-0.2	-0.2	
0	0	0	0	0	0	0	-0.1	0	9° 30'	0	-0.1	-0.1	-0.1	0	0	-0.1	-0.2	-0.2	
0	0	0	0	0	0	0	-0.1	0	9° 45'	0	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.2	
0	0	0	0	0	0	0	-0.1	0	10° 0'	0	-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 40 to 44 °E									
Correction to Latitude										Correction to Longitude									
40°	40°	41°	41°	42°	42°	43°	43°	44°	Longitude	40°	40°	41°	41°	42°	42°	43°	43°	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	0.1	0.1	0.1	0° 0'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.2	-0.2	-0.1	
0	0	0	0	0	0.1	0.1	0.1	0	0° 15'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.2	-0.2	-0.1	
0	0	0	0	0	0.1	0.2	0.1	0	0° 30'	-0.1	-0.1	-0.1	-0.1	0	-0.2	-0.2	-0.1	0	
0	0	0	0	0	0.1	0.1	0	0	0° 45'	-0.1	-0.1	-0.1	0	-0.1	-0.2	-0.2	-0.1	0	
0	0	0	0	0.1	0.1	0.1	0	0	1° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	0	0	
0	0	0	0	0.1	0.1	0	0	0	1° 15'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	0	0	
0	0	0	0	0.1	0.1	0	0	0	1° 30'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	0	0	
0	0	0	0.1	0.1	0.1	0	0	0	1° 45'	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	0	0	0	
0	0	0	0.1	0.1	0	0	0	0	2° 0'	-0.1	0	-0.1	-0.2	-0.2	-0.1	0	0	0	
0.1	0	0	0.1	0	0	0	0	0	2° 15'	-0.1	0	-0.1	-0.3	-0.2	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	2° 30'	-0.1	0	-0.2	-0.3	-0.1	-0.1	0	0	0	
0	0.1	0.1	0	0	0	0	0	0	2° 45'	-0.1	0	-0.2	-0.2	-0.1	-0.1	0	0	-0.1	
0	0.1	0.1	0	0	0	0	0	0	3° 0'	-0.1	0	-0.1	-0.2	-0.1	-0.1	0	0	-0.1	
0	0.1	0.1	0	0	0	0	0	0	3° 15'	-0.1	0	-0.1	-0.2	-0.1	-0.1	0	0	-0.1	
0	0.1	0	0	0	0	0	0	0	3° 30'	-0.1	0	-0.1	-0.2	-0.1	-0.1	0	0	-0.1	
0	0	0	0	0	0	0	0	0	3° 45'	-0.1	0	-0.1	-0.2	-0.2	-0.1	0	0	-0.1	
0	0	0	0	0	0	0	0	0	4° 0'	-0.1	0	0	-0.1	-0.2	-0.1	0	0	-0.1	
0	0	0.1	0	0	0	0	0	0	4° 15'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	
0	0	0.1	0.1	0	0	0	0	0	4° 30'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0.1	0.1	0	0	0	0	0	4° 45'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	5° 0'	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	5° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0.1	0	0	0	0	0	0	0	0	5° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0.1	0	0	0	0	0	0	0	0	5° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 0'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 15'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
-0.1	-0.1	0	0	0	0	0	0	0	6° 30'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	6° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 0'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 15'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	-0.1	7° 30'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	-0.1	7° 45'	-0.1	-0.2	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	-0.1	0	0	0	-0.1	8° 0'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0.1	0	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	8° 15'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	8° 30'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	8° 45'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	9° 0'	-0.2	-0.1	0	0	0	0	0	0	0	
-0.1	0	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	9° 15'	-0.2	-0.1	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	9° 30'	-0.2	-0.1	0	0.1	0	-0.1	0	0	0	
-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 45'	-0.2	-0.1	-0.1	0.1	0	-0.1	0	0	0	
-0.2	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	10° 0'	-0.1	-0.1	-0.1	0.1	0	-0.1	0	0	0	



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 48 to 52 °E									
Correction to Latitude										Correction to Longitude									
48° 0'	48° 30'	49° 0'	49° 30'	50° 0'	50° 30'	51° 0'	51° 30'	52° 0'	Longitude	48° 0'	48° 30'	49° 0'	49° 30'	50° 0'	50° 30'	51° 0'	51° 30'	52° 0'	Latitude
0	0	0	0	0	0	0	0	0	0° 0'	0	0	0	0	0	0	0	0	0	0° 0'
0	0	0	0	0	0	0	0	0	0° 15'	0	0	0	0	0	0	0	0	0	0° 15'
0	0	0	0	0	0	0	0	0	0° 30'	0	0	0	0	0	0	0	0	0	0° 30'
0	0	0	0	0	0	0	0	0	0° 45'	0	0	0	0	0	0	0	0	0	0° 45'
0	0	0	0	0	0	-0.1	0	0	1° 0'	0	0	0	0	0	0	0	0	0	1° 0'
0	0	0	0	0	-0.1	-0.1	0	0	1° 15'	0	0	0	0	0	0	0	0	0	1° 15'
0	0	0	0	-0.1	-0.1	-0.1	0	0	1° 30'	0	0	0	0	0	0	0	0	0	1° 30'
-0.1	-0.1	0	0	-0.1	0	0	0	0	1° 45'	0	0	0	0	0	0	0	0	0	1° 45'
-0.1	-0.1	0	0	0	0	0	0	0	2° 0'	0	0	0	0	0	0	0	0	0	2° 0'
-0.1	-0.1	-0.1	-0.1	0	-0.1	0	0	0	2° 15'	0	0	0	0	0	0	0	0	0	2° 15'
0	0	-0.1	-0.1	0	0	0	0	-0.1	2° 30'	0	0	0	0	0	0	0	0	0	2° 30'
0	0	0	0	0	0	0	-0.1	-0.1	2° 45'	0	0	0	0	0	0	0	0	0	2° 45'
0	0	0	0	0	0	0	-0.1	-0.1	3° 0'	0	0	0	0	0	0	0	0	0	3° 0'
-0.1	-0.1	-0.1	0	0	0	0	0	0	3° 15'	0	0	0	0	0	0	0	0	0	3° 15'
-0.1	-0.1	-0.1	0	0	0	0	0	0	3° 30'	0	0	0	0	0	0	0	0	0	3° 30'
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	0	0	0	0	0	0	3° 45'
-0.1	0	0	0	0	0	0	0	-0.1	4° 0'	0	0	0	0	0	0	0	0	0	4° 0'
-0.1	0	0	0	0	0	-0.1	-0.1	-0.1	4° 15'	0	0	0	0	0	0	0	0	0	4° 15'
0	0	0	0	0	0	-0.1	-0.1	-0.1	4° 30'	0	0	0	0	0	0	0	0	0	4° 30'
0	0	0	0	0	0	-0.1	-0.1	-0.1	4° 45'	0	0	0	0	0	0	0	0	0	4° 45'
0	0	0	-0.1	0	0	0	-0.1	-0.1	5° 0'	0	0	0	0	0	0	0	0	0	5° 0'
-0.1	-0.1	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	5° 15'	0	0	0	0	0	0	0	0	0	5° 15'
-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	5° 30'	0	0	0	0	0	0	0	0	0	5° 30'
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	5° 45'	0	0	0	0	0	0	0	0	0	5° 45'
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	6° 0'	0	0	0	0	0	0	0	0	0	6° 0'
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 15'	0	0	0	0	0	0	0	0	0	6° 15'
0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 30'	0.1	0.1	0	0	0	0	0	0	0	6° 30'
0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 45'	0.1	0.1	0.1	0	0	0	0	0	0	6° 45'
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 0'	0.1	0.2	0.1	0	0	0	0.1	0	0	7° 0'
-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 15'	0	0.2	0.1	0	0	0	0.1	0	0	7° 15'
-0.2	0	0	-0.1	-0.1	-0.1	0	0	-0.1	7° 30'	-0.1	0.1	0.1	0	0	0	0	0	0	7° 30'
-0.1	-0.1	0	-0.1	-0.1	-0.1	0	0	0	7° 45'	-0.1	0.1	0.1	0	0	0	0	0	0	7° 45'
0	-0.1	-0.1	-0.1	0	0	0	0	-0.1	8° 0'	-0.1	0.1	0.1	0	0	0	0	0.1	0	8° 0'
0	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	8° 15'	0	0.1	0.1	0	0	0	0	0.1	-0.1	8° 15'
-0.1	-0.1	-0.1	0	0	0	-0.1	-0.2	-0.1	8° 30'	0	0.2	0.1	0	0	0	0	0.1	-0.1	8° 30'
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	8° 45'	0	0.2	0	0	0	0	0.1	0	-0.1	8° 45'
-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	0	9° 0'	0	0.2	0	0	0	0	0.1	0	-0.1	9° 0'
-0.2	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	0	9° 15'	0	0.1	0	0	0.1	0	0.1	0	-0.1	9° 15'
-0.2	-0.1	0	0	0	-0.1	-0.1	-0.1	0	9° 30'	0	0.1	0	0	0.1	0	0.1	-0.1	-0.1	9° 30'
-0.2	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	9° 45'	0	0	0	0	0.1	0	0.1	-0.1	-0.1	9° 45'
-0.1	0	-0.1	-0.1	0	-0.1	-0.1	0	-0.1	10° 0'	-0.1	0	0	0	0.1	0.1	0.1	-0.1	-0.1	10° 0'



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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	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	0	0	0	0	0	0	0	0	0° 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	0° 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	0° 45'	-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	1° 0'	-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	-0.1	0	1° 15'	-0.1	0	-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	1° 30'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	-0.1	0	0	0	-0.1	-0.1	0	-0.1	1° 45'	-0.1	-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	-0.1	0	0	2° 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	-0.1	0	-0.1	0	0	2° 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	-0.1	-0.1	-0.1	2° 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	2° 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	3° 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	3° 15'	-0.1	-0.1	-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	3° 30'	-0.1	-0.1	0	-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	-0.1	3° 45'	-0.1	-0.2	-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	-0.1	4° 0'	-0.1	-0.2	-0.1	-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	4° 15'	-0.1	-0.2	-0.1	-0.1	-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	4° 30'	-0.1	-0.2	-0.2	-0.1	-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	4° 45'	0	-0.1	-0.2	-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	5° 0'	0	-0.1	-0.2	-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	5° 15'	0	-0.1	-0.2	-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	5° 30'	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	5° 45'	0.1	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	-0.1	-0.1	-0.1	6° 0'	0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	6° 15'	0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	0	0	0	0	-0.1	-0.1	-0.1	-0.1	6° 30'	0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	6° 45'	0.1	-0.1	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	7° 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	0	-0.1	-0.1	-0.1	7° 15'	0	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	
-0.1	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	7° 30'	0	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	
-0.1	0	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	7° 45'	0	-0.1	0	-0.1	0	0	0	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	8° 0'	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	8° 15'	0	-0.1	0	-0.1	-0.1	0	0	0	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	8° 30'	0	-0.1	0	-0.1	-0.1	0	0	0	-0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	8° 45'	0	-0.1	0	-0.1	-0.1	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	9° 0'	0	-0.1	0	-0.1	-0.1	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	9° 15'	0	-0.1	0	-0.1	-0.1	0	0	0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	9° 30'	0	-0.1	0	-0.1	-0.1	0	0	0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	9° 45'	0	-0.1	-0.1	-0.1	-0.1	0	0	0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	10° 0'	0	0	-0.1	-0.1	-0.1	0	0	0.1	0	





# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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	-0.1	0	0° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	-0.1	0	0	0° 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	-0.1	0° 30'	-0.1	-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	-0.1	0° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	0	0	-0.1	-0.1	1° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1
0	-0.1	-0.1	0	-0.1	0	0	-0.1	-0.1	1° 15'	-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	-0.1	0	-0.1	-0.1	1° 30'	-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	-0.1	0	-0.1	-0.1	1° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
-0.1	0	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	2° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
0	0	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	2° 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	-0.1	-0.1	0	-0.1	-0.1	-0.1	2° 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	0	-0.1	-0.1	-0.1	-0.1	-0.1	2° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1
-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3° 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	-0.1	-0.1	-0.1	3° 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	-0.1	3° 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	3° 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	4° 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	-0.1	4° 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	-0.1	4° 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	-0.1	-0.1	-0.1	-0.1	4° 45'	-0.1	-0.1	0	-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	5° 0'	-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	-0.1	5° 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	-0.1	5° 30'	-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	-0.1	-0.1	-0.1	-0.1	5° 45'	-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	-0.1	-0.1	-0.1	6° 0'	-0.1	-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	-0.1	-0.1	-0.1	6° 15'	-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	-0.1	-0.1	6° 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	-0.1	6° 45'	-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	-0.1	-0.1	-0.1	-0.1	7° 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	-0.1	-0.1	-0.1	-0.1	7° 15'	-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	-0.1	7° 30'	-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	-0.1	-0.1	-0.1	-0.1	7° 45'	-0.1	-0.1	-0.1	-0.1	-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	8° 0'	-0.1	-0.1	-0.1	-0.1	0	-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	8° 15'	-0.1	-0.1	-0.1	-0.1	0	-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	8° 30'	-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	-0.1	-0.1	-0.1	8° 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	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 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	-0.1	9° 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	-0.1	9° 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	9° 45'	-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	-0.2	-0.1	-0.1	-0.1	10° 0'	-0.1	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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	0	0	0	0	0	0	0	0	0° 0'	-0.1	0	0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0	-0.1	0	0	-0.1	0	0	0	0	0° 15'	-0.1	0	0	-0.1	-0.1	-0.2	-0.1	0	0	
0	-0.1	-0.1	0	-0.1	0	0	0	0	0° 30'	-0.1	0	0	-0.1	-0.1	-0.2	0	0	0	
0	-0.1	-0.1	0	-0.1	0	0	-0.1	0	0° 45'	-0.1	0	0	-0.1	-0.1	-0.2	0	0	0	
-0.1	-0.1	0	0	-0.1	0	0	-0.1	-0.1	1° 0'	-0.1	0	0	0	-0.1	-0.2	0	0	0	
-0.1	-0.1	0	0	-0.1	0	0	-0.1	-0.1	1° 15'	-0.1	0	0	0	-0.1	-0.2	0	0	0	
-0.1	-0.1	0	-0.1	-0.1	0	-0.1	-0.1	0	1° 30'	0	0	0	0	-0.1	-0.2	0	0	0	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	0	1° 45'	0	0	0	0	-0.1	-0.2	0	0	0	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	0	0	2° 0'	-0.1	0	0	0	-0.1	-0.2	0	0	-0.1	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	0	0	2° 15'	-0.1	0	0	0	-0.1	-0.2	0	0	-0.1	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	0	0	2° 30'	-0.1	0	0	0	-0.1	-0.1	0	0	0	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	0	-0.1	2° 45'	-0.1	0	0	0	-0.2	-0.1	0	0	0	
-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	3° 0'	0	0	0	0	-0.2	-0.1	0	0	0	
-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	3° 15'	0	0	0	0	-0.2	-0.1	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3° 30'	0	0	0	-0.1	-0.2	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3° 45'	0	0	0	-0.1	-0.2	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 0'	0	0	0	-0.1	-0.2	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 15'	0	0	-0.1	-0.1	-0.2	0	0	0	0	
-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 30'	0	0	-0.1	-0.2	-0.2	0	0	0	0	
-0.2	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	4° 45'	0	0	-0.1	-0.2	-0.1	0	0	0	0	
-0.2	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	5° 0'	0	-0.1	-0.1	-0.2	-0.1	0	0	0	0	
-0.2	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	5° 15'	0	-0.1	-0.1	-0.2	-0.1	0	-0.1	0	0	
-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 30'	0	-0.1	-0.1	-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	5° 45'	0	-0.1	-0.2	-0.2	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	6° 0'	0	-0.2	-0.2	-0.2	0	-0.1	0	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 15'	0	-0.2	-0.2	-0.2	0	-0.1	0	0	0	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 30'	-0.1	-0.2	-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	-0.1	6° 45'	-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	-0.1	7° 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	-0.1	-0.1	-0.1	-0.1	-0.1	7° 15'	-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	-0.1	7° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	
-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 45'	-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	-0.1	-0.1	-0.1	8° 0'	-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	8° 15'	-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	8° 30'	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 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	-0.1	-0.1	-0.1	9° 15'	-0.1	-0.1	-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	9° 30'	-0.1	-0.1	-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	9° 45'	-0.1	-0.1	-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	10° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	





# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 84 to 88 °E									
Correction to Latitude										Correction to Longitude									
84° 0'	84° 30'	85° 0'	85° 30'	86° 0'	86° 30'	87° 0'	87° 30'	88° 0'	Longitude	84° 0'	84° 30'	85° 0'	85° 30'	86° 0'	86° 30'	87° 0'	87° 30'	88° 0'	
0	-0.1	-0.1	0	0	0	0	0	0	0 ° 0 '	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	
0	0	0	0	0	0	0	0	0	0 ° 15 '	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	
0	0	0	0	0	0	0	0	0	0 ° 30 '	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	
0	0	0	0	0	0	0	0	0	0 ° 45 '	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	
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	0.2	0.2	
0	0	0	0	0	0	0	0	0	1 ° 15 '	0.1	0.1	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	1 ° 30 '	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	
-0.1	-0.1	0	0	0	0	0	-0.1	-0.1	1 ° 45 '	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	
-0.1	-0.1	0	0	0	0	-0.1	-0.1	0	2 ° 0 '	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	
-0.1	0	0	0	0	0	-0.1	0	0	2 ° 15 '	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	0	2 ° 30 '	0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	
0	0	0	0	0	0	0	0	0	2 ° 45 '	0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	3 ° 0 '	0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	
0	-0.1	-0.1	-0.1	0	0	0	0	0	3 ° 15 '	0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	3 ° 30 '	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
-0.1	-0.1	0	0	0	0	0	0	0	3 ° 45 '	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	
-0.1	0	0	0	0	0	0	0	0	4 ° 0 '	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	4 ° 15 '	0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	
0	0	0	-0.1	-0.1	0	0	0	0	4 ° 30 '	0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	
0	-0.1	-0.1	-0.1	0	0	0	0	0	4 ° 45 '	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	
0	-0.1	-0.1	-0.1	0	0	0	0	0	5 ° 0 '	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	
0	0	-0.1	-0.1	-0.1	0	0	0	0	5 ° 15 '	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	0	0	0	5 ° 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	0	0	0	5 ° 45 '	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	0	0	0	0	6 ° 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	0	0	6 ° 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	0	0	0	0	0	6 ° 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	0	0	0	0	0	6 ° 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	0	0	0	0	0	7 ° 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	0	0	0	0	0	7 ° 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	7 ° 30 '	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	-0.1	-0.1	0	0	0	0	0	0	7 ° 45 '	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	0	8 ° 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	0	8 ° 15 '	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	8 ° 30 '	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	8 ° 45 '	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	9 ° 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	0	0	9 ° 15 '	0.1	0.1	0	0.1	0.1	0.1	0	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	9 ° 30 '	0.1	0.1	0	0	0.1	0.1	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	9 ° 45 '	0.1	0.1	0	0	0	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	10 ° 0 '	0.1	0.1	0	0	0	0	0	0	0.1	

## Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 88 to 92 °E									
Correction to Latitude										Correction to Longitude									
88°	88°	89°	89°	90°	90°	91°	91°	92°	Longitude	88°	88°	89°	89°	90°	90°	91°	91°	92°	
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	0	0	0	0° 0'	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	
0	0	0	-0.1	-0.1	0	0	0	0	0° 15'	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	
0	0	0	-0.1	0	0	0	0	0	0° 30'	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	
0	0	0	0	0	0	0	0	0	0° 45'	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	
0	0	0	0	0	0	0	0	0	1° 0'	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	
0	0	0	0	0.1	0	0	0	0	1° 15'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	
-0.1	0	0	0.1	0.1	0	0	0	0	1° 30'	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	
-0.1	0	0	0.1	0	0	0	0	0	1° 45'	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	
0	0	0	0	0	0	0	0	0	2° 0'	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	
0	0	0	0	0	0	0	0	0	2° 15'	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	
0	0	0	0	0	0	0	0	0	2° 30'	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	
0	0	0	0	0	0	0	0	0	2° 45'	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	3° 0'	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	
0	0	0	0	0	0	0	0	0	3° 15'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	3° 30'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	3° 45'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	
0	0	0	0	0	0	0	0	0	4° 0'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	
0	0	0	0	0.1	0	0	0	0	4° 15'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	
0	0	0	0.1	0.1	0	0	0	0	4° 30'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	4° 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	5° 0'	0.1	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	5° 15'	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	
0	0	0	-0.1	0	0	0	0	0	5° 30'	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	
0	0	-0.1	-0.1	0	0	0	0	0	5° 45'	0.1	0.2	0.2	0.1	0	0.1	0.1	0.2	0.2	
0	0	-0.1	0	0	0	0	0	0.1	6° 0'	0.1	0.2	0.1	0.1	0	0.1	0.1	0.1	0.2	
0	0	-0.1	0	0	0	0	0	0	6° 15'	0.1	0.2	0.1	0.1	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	6° 30'	0.1	0.2	0.1	0.1	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	6° 45'	0.1	0.2	0.1	0	0	0.1	0.1	0.1	0.1	
0	0	0	0.1	0.1	0	0	0	0	7° 0'	0.1	0.2	0.1	0	0	0.1	0.1	0.1	0.2	
0	0	0	0.1	0	0	0	0	0	7° 15'	0.1	0.2	0.1	0	0	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	7° 30'	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	7° 45'	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	8° 0'	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	8° 15'	0.1	0.2	0	0	0.1	0.1	0.1	0	0.1	
0	0	0	0	0	0	0	0	0	8° 30'	0.1	0.1	0	0	0.1	0.2	0.1	0	0.1	
-0.1	0	0	0	0	0	0	0	0	8° 45'	0.1	0.1	0	0	0.1	0.2	0.1	0	0.1	
0	0	0	0	0	0	0	0	0	9° 0'	0.1	0.1	0	0	0.1	0.2	0.1	0	0.1	
0	0	0	0	0	0	0	0	0	9° 15'	0.1	0.1	0	0	0.1	0.2	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	9° 30'	0.1	0.1	0	0	0.1	0.2	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	9° 45'	0.1	0.1	0	0	0	0.2	0.1	0	0.1	
0	0	0	0	0	0	0	0	0	10° 0'	0.1	0.1	0	0	0	0.2	0.1	0	0.1	

## Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 92 to 96 °E									
Correction to Latitude										Correction to Longitude									
92°	92°	93°	93°	94°	94°	95°	95°	96°	Longitude	92°	92°	93°	93°	94°	94°	95°	95°	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	0° 0'	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0	
0	0	0	0	0	0	0	0	0	0° 15'	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	
0	0	0	0	0	0	0	0	0	0° 30'	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	
0	0	0	0	0	0	0	0	0	0° 45'	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	
0	0	0	0	0	0	0	0.1	0	1° 0'	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
0	0	0	0	0	0	0	0	0	1° 15'	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	
0	0	0	0	0	0	0	0	0	1° 30'	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	
0	0	0	0	0.1	0	0	0	0	1° 45'	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
0	0	0	0	0	0	0	0	0	2° 0'	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
0	0	0	0	0	0	0	0	0	2° 15'	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	
0	0	0	0	0	0	0	0	0	2° 30'	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	
0	0	0	0	0	0	0	0.1	0	2° 45'	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	
0	0	0	0	0	0	0.1	0.1	0.1	3° 0'	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	
0	0	0	0	0	0	0.1	0.1	0.1	3° 15'	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	
0	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	3° 30'	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	
0	0.1	0.1	0	0.1	0.1	0	0	0	3° 45'	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	
0	0.1	0.1	0	0	0.1	0	0	0	4° 0'	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	
0	0	0	0	0	0.1	0.1	0	0	4° 15'	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	
0	0	0	0	0	0.1	0.1	0.1	0.1	4° 30'	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	
0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	4° 45'	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	
0	0	0	0.1	0.1	0.1	0.1	0	0	5° 0'	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	
0	0	0	0.1	0.1	0.1	0.1	0	0.1	5° 15'	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	
0	0	0	0.1	0.1	0	0.1	0.1	0.1	5° 30'	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	
0	0	0	0	0	0	0.1	0.1	0.1	5° 45'	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	
0.1	0.1	0	0	0	0	0.1	0.1	0.1	6° 0'	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	
0	0.1	0	0	0	0	0	0.1	0.1	6° 15'	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	
0	0	0	0	0	0.1	0	0	0.1	6° 30'	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	
0	0	0	0	0	0	0	0	0.1	6° 45'	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	
0	0	0	0	0	0	0	0	0.1	7° 0'	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	
0	0	0	0	0	0	0	0.1	0.1	7° 15'	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	
0	0	0	0	0.1	0	0	0.1	0.1	7° 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	0	0	7° 45'	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	8° 0'	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	8° 15'	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	8° 30'	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	
0	0	0	0	0	0.1	0	0	0	8° 45'	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0	
0	0	0	0	0	0.1	0	0	0	9° 0'	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0	
0	0	0	0	0.1	0.1	0	0	0	9° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0	
0	0	0	0	0.1	0	0	0.1	0	9° 30'	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	0	0.1	0	9° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	
0	0	0	0.1	0	0	0	0	0	10° 0'	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	





## Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 100 to 104 °E									
Correction to Latitude										Correction to Longitude									
100°	100°	101°	101°	102°	102°	103°	103°	104°	Longitude	100°	100°	101°	101°	102°	102°	103°	103°	104°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0.1	0	-0.1	-0.1	-0.1	0	0	-0.1	0	0° 0'	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0.1	0.1	-0.1	-0.1	-0.1	0	0	0	0	0° 15'	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0.2	0.1	0	0	0	0	0	0	0	0° 30'	0.2	0.3	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° 45'	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	
0.1	0.1	0	-0.1	0	-0.1	0	0	0	1° 0'	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	
0.1	0.1	0	-0.1	0	0	0	0	0	1° 15'	0.3	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	
0.1	0.2	0.1	-0.1	-0.1	0	0	0	0	1° 30'	0.3	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	
0.1	0.2	0.1	0	-0.1	0	0	0	0	1° 45'	0.2	0.4	0.4	0.2	0	0.1	0.1	0.1	0.1	
0	0.2	0.2	0	-0.1	0	0	0	0	2° 0'	0.2	0.4	0.5	0.3	0	0.1	0.1	0.1	0.1	
0	0.1	0.2	0.1	-0.1	-0.1	0	0	0	2° 15'	0.1	0.4	0.5	0.3	0.1	0	0.1	0.1	0.1	
0	0	0.2	0.2	0	-0.1	0	0	0	2° 30'	0.1	0.3	0.5	0.4	0.2	0	0.1	0.1	0.1	
0	0	0.2	0.3	0.1	0	-0.1	0	0	2° 45'	0.1	0.2	0.4	0.5	0.3	0	0.1	0.1	0.1	
0	-0.1	0.1	0.2	0.2	0	0	0	0	3° 0'	0.2	0.1	0.3	0.5	0.3	0.1	0.1	0.1	0.1	
0.1	0	0	0.2	0.2	0.1	0	0	0	3° 15'	0.3	0.1	0.2	0.4	0.4	0.2	0.1	0.1	0.1	
0.1	0	0	0.1	0.2	0.1	0	0	0	3° 30'	0.3	0.2	0.2	0.3	0.4	0.2	0.1	0.1	0.1	
0.1	0.1	0.1	0.1	0.2	0.2	0.1	0	0	3° 45'	0.2	0.3	0.1	0.3	0.4	0.3	0.1	0.1	0.1	
0.1	0.2	0.1	0.1	0.2	0.3	0.1	0	0	4° 0'	0.2	0.3	0.1	0.2	0.4	0.3	0.2	0.1	0.1	
0	0.2	0.1	0.1	0.3	0.3	0.3	0.1	0	4° 15'	0.1	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.1	
0	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.1	4° 30'	0	0.3	0.2	0.1	0.2	0.3	0.3	0.2	0.1	
0	0.1	0.2	0.1	0.1	0.3	0.4	0.4	0.2	4° 45'	0	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.2	
-0.1	0	0.2	0.1	0	0.2	0.4	0.5	0.3	5° 0'	0	0.1	0.3	0.2	0.2	0.1	0.2	0.4	0.4	
-0.1	0	0.1	0.1	0	0.1	0.3	0.4	0.3	5° 15'	0	0	0.2	0.2	0.1	0	0.1	0.4	0.5	
-0.1	-0.1	0	0.2	0.1	0.1	0.2	0.3	0.4	5° 30'	0	0	0.2	0.2	0.2	0	0	0.4	0.5	
0	-0.1	0	0.2	0.2	0.1	0.1	0.2	0.4	5° 45'	0	0	0.1	0.2	0.2	0	0	0.3	0.5	
0	-0.1	0	0.1	0.2	0.1	0	0.1	0.3	6° 0'	0.1	0	0	0.1	0.2	0	0	0.2	0.5	
0	0	0	0	0.1	0.1	0	0	0.2	6° 15'	0.1	0	0	0.1	0.2	0.1	0	0.1	0.4	
0	0	0	0	0.1	0.1	0	0	0.2	6° 30'	0	0	0	0	0.1	0.2	0.1	0.1	0.2	
0.1	0.1	0	-0.1	0	0.1	0.1	0	0.1	6° 45'	0	0	0	0	0.1	0.2	0.1	0.1	0	
0.1	0.1	0	-0.1	0	0.1	0.1	0.1	0.1	7° 0'	0	0	0.1	0.1	0	0.1	0.1	0.1	0	
0.1	0.1	0	0	0	0	0.1	0.2	0.1	7° 15'	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0	
0.1	0.1	0.1	0	0	0	0.1	0.1	0.1	7° 30'	0.1	0.1	0.1	0.1	0	0	0	0.1	0	
0.1	0.1	0.1	0.1	0	0	0	0	0.1	7° 45'	0.1	0.1	0.1	0.1	0	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0	0	-0.1	-0.1	0	8° 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	-0.1	-0.1	-0.1	8° 15'	0.1	0.1	0.2	0.1	0.1	0.1	0	0	0	
0.1	0.1	0.1	0.1	0.1	0	0	0	-0.1	8° 30'	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0	
0.1	0	0	0.1	0.1	0.1	0	0	0	8° 45'	0.1	0.1	0.2	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	9° 0'	0.1	0.1	0.2	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	9° 15'	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0.1	0.1	0.1	0.1	0.1	0.1	0	9° 30'	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	
0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	9° 45'	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	
0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	10° 0'	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 104 to 108 °E									
Correction to Latitude										Correction to Longitude									
104° 0'	104° 30'	105° 0'	105° 30'	106° 0'	106° 30'	107° 0'	107° 30'	108° 0'	Longitude	104° 0'	104° 30'	105° 0'	105° 30'	106° 0'	106° 30'	107° 0'	107° 30'	108° 0'	
									Latitude										
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	0.1
0	0	0	0	0	0	0	0	0	0° 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	0° 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	0° 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	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	0	0	0	1° 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	1° 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° 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	2° 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	2° 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	2° 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	2° 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	3° 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	3° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0.1	0	0	0	0	0	3° 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	3° 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	4° 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	0.1	0	0	4° 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	0.1	0.1	0	4° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.2	0	0	0	0.1	0	0	0	0	4° 45'	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.3	0.1	0.1	0	0	0	0	0	0	5° 0'	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.3	0.2	0.1	0.1	0	0	0	0	0	5° 15'	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.4	0.3	0.2	0.1	0.1	0	0	0.1	0	5° 30'	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.4	0.3	0.2	0.2	0.1	0	0	0.1	0.1	5° 45'	0.5	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1
0.3	0.4	0.2	0.1	0.1	0	0	0.1	0.1	6° 0'	0.5	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
0.2	0.4	0.3	0.2	0.1	0	0	0	0.1	6° 15'	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1
0.2	0.5	0.4	0.3	0.2	0	-0.1	-0.1	0	6° 30'	0.2	0.3	0.4	0.3	0.3	0.2	0.1	0	0	0.1
0.1	0.4	0.5	0.5	0.3	0.1	-0.1	-0.2	-0.1	6° 45'	0	0.2	0.4	0.4	0.4	0.3	0.1	0	0	0
0.1	0.2	0.5	0.6	0.4	0.2	0	-0.1	-0.1	7° 0'	0	0.1	0.4	0.4	0.5	0.4	0.2	0	0	0
0.1	0.1	0.3	0.5	0.5	0.4	0.3	0.1	0.1	7° 15'	0	0	0.2	0.4	0.6	0.5	0.3	0.1	-0.1	0
0.1	0	0.1	0.3	0.5	0.7	0.6	0.5	0.3	7° 30'	0	0	0.1	0.3	0.6	0.5	0.3	0.2	0	0
0.1	0	0.1	0.1	0.4	0.7	0.8	0.7	0.5	7° 45'	0.1	0	0	0.2	0.4	0.4	0.4	0.3	0.1	0
0	0	0.1	0	0.2	0.5	0.7	0.8	0.6	8° 0'	0	0	0	0.2	0.3	0.3	0.3	0.3	0.3	0.3
-0.1	-0.1	0	0	0.1	0.2	0.4	0.6	0.7	8° 15'	0	0	0	0.2	0.2	0.1	0.2	0.3	0.3	0.3
-0.1	-0.1	-0.1	0	0.1	0.1	0.2	0.3	0.5	8° 30'	0	-0.1	0	0.1	0.1	0.1	0.1	0.2	0.3	0.3
0	-0.1	-0.2	-0.1	0	0.1	0.1	0.1	0.3	8° 45'	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	-0.1	-0.2	-0.1	0	0.1	0.1	0.1	0.1	9° 0'	0.1	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1
0	0	-0.2	-0.2	-0.1	0.1	0.1	0.1	0.1	9° 15'	0.1	0.1	0	0	0	0.1	0.1	0.1	0.1	0.1
0	0	-0.1	-0.2	-0.2	0	0.1	0.2	0.1	9° 30'	0.1	0.1	0.1	0	-0.1	0	0.1	0.1	0.1	0.1
0	0	0	-0.1	-0.2	-0.1	0	0.1	0.2	9° 45'	0.2	0.1	0.1	0	-0.1	-0.1	0	0.1	0.2	0.2
0.1	0	0	-0.1	-0.1	-0.1	-0.1	0	0.1	10° 0'	0.2	0.2	0.1	0.1	-0.1	-0.1	0	0	0	0.1

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 108 to 112 °E									
Correction to Latitude										Correction to Longitude									
108°	108°	109°	109°	110°	110°	111°	111°	112°	Longitude	108°	108°	109°	109°	110°	110°	111°	111°	112°	
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	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	0° 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	0° 30'	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	0° 45'	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0.1	1° 0'	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	
0	0	0	0	0	0	0	0	0	1° 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	1° 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	1° 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	0.1	0.1	0.1	2° 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	0.1	0.1	0.1	2° 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	0.1	0.1	0.1	2° 30'	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	0	0	0	0	2° 45'	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	0	0	0	3° 0'	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	0	0.1	3° 15'	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	3° 30'	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	3° 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	4° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0.1	0	0.1	0.1	0.1	0.1	0.1	4° 15'	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	0.1	0.1	4° 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	0.1	0.1	4° 45'	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	0.1	5° 0'	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	
0	0	0	0.1	0	0	0	0	0.1	5° 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	0	0.1	0.1	0.1	5° 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	5° 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	6° 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	6° 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	6° 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	0.1	0.1	0.1	0.1	6° 45'	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	
-0.1	0	0	-0.1	-0.1	0	0.1	0.1	0.1	7° 0'	0	0	0	0.1	0.1	0	0	0.1	0.1	
0.1	0.1	0	0	-0.1	0	0	0	0.1	7° 15'	-0.1	0	0.1	0.1	0	0	0	0.1	0.1	
0.3	0.2	0.1	0	0	0	-0.1	0	0	7° 30'	0	0.1	0.1	0.1	0.1	-0.1	0	0.1	0.1	
0.5	0.3	0.2	0.1	0.1	0	0	0	0	7° 45'	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1	
0.6	0.5	0.3	0.3	0.2	0.1	0.1	0.1	0	8° 0'	0.3	0.2	0.2	0.1	0.1	0	0	0	0.1	
0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.2	0.2	8° 15'	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0	0.1	
0.5	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.3	8° 30'	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	
0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	8° 45'	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.2	
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.7	0.6	9° 0'	0.1	0.1	0.2	0.2	0.2	0.1	0	0.1	0.2	
0.1	0	0.1	0.2	0.3	0.4	0.5	0.5	0.5	9° 15'	0.1	0.1	0.1	0.1	0.2	0.1	0	0.2	0.2	
0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	9° 30'	0.1	0.1	0.1	0.1	0.1	0	0	0.2	0.2	
0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.2	9° 45'	0.2	0.1	0.1	0	0.1	0	0.1	0.2	0.1	
0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	10° 0'	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 112 to 116 °E									
Correction to Latitude										Correction to Longitude									
112°	112°	113°	113°	114°	114°	115°	115°	116°	Longitude	112°	112°	113°	113°	114°	114°	115°	115°	116°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0.1	0.1	0.1	0.1	0° 0'	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0	0	
0	-0.1	0	0	0	0.1	0.1	0.1	0.1	0° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	
0	-0.1	0	0	0.1	0.1	0.1	0.1	0	0° 30'	0.2	0.1	0.1	0.1	0.1	0.1	0	0.1	0	
0	0	0	0.1	0.1	0.1	0.1	0.1	0	0° 45'	0.2	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	0	1° 0'	0.2	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	0	1° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0	
0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1° 30'	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	0.1	1° 45'	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	2° 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	2° 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	0.1	0.1	0.1	0.1	0	2° 30'	0.1	0.1	0.1	0.1	0.1	0	0.1	0.2	0.1	
0	0	0	0	0.1	0.1	0	0	0	2° 45'	0.1	0.1	0.1	0.1	0.1	0	0.1	0.2	0.1	
0	0	0	0	0.1	0.1	0	0	0.1	3° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	
0.1	0	0.1	0	0.1	0.1	0	0	0.1	3° 15'	0.1	0.1	0.1	0.1	0	0.1	0.1	0.2	0.1	
0.1	0.1	0.1	0	0	0	0	0.1	0.1	3° 30'	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	0	0.1	0.1	0.1	3° 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	0	0	0	0.1	4° 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	0.1	4° 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	0.1	4° 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	0.1	0.1	4° 45'	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	5° 0'	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	5° 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	5° 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	5° 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	6° 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	6° 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	6° 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	6° 45'	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	0.2	0.2	7° 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	0.2	0.2	0.2	7° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0.1	0.1	0.2	0.2	7° 30'	0.1	0.1	0	0.1	0.1	0.1	0.1	0	0.1	
0	-0.1	-0.1	-0.1	-0.1	0	0	0.1	0.2	7° 45'	0.1	0.1	0	0.1	0.1	0	0	0	0.1	
0	0	0	0	0	0	-0.1	-0.1	0	8° 0'	0.1	0.2	0	0.1	0	0	0	-0.1	0	
0.2	0.2	0.2	0.1	0.1	0	0	-0.1	-0.1	8° 15'	0.1	0.2	0	0.1	0.1	0	0.1	-0.1	0	
0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0	8° 30'	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0	0	
0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.3	0.2	8° 45'	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0	0	
0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.4	9° 0'	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0.5	0.5	0.5	0.4	0.5	0.6	0.6	0.5	0.5	9° 15'	0.2	0.2	0.2	0.1	0	0.1	0.2	0.1	0.1	
0.3	0.4	0.3	0.4	0.5	0.5	0.5	0.6	0.6	9° 30'	0.2	0.2	0.2	0.1	0	0.1	0.2	0.1	0.1	
0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.5	9° 45'	0.1	0.2	0.2	0	0	0.1	0.1	0.1	0.1	
0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	10° 0'	0.1	0.2	0.2	0	0	0	0.1	0.1	0.1	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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'	
0.1	0.1	0.1	0	-0.1	0.1	0	-0.1	0	0° 0'	0	0	0	-0.1	-0.1	0	0.1	0.2	0.1	
0.1	0	0	0	-0.1	0	0	-0.1	0	0° 15'	0	0	0	0	-0.1	0	0.1	0.1	0.1	
0	0	0	0	0	0	-0.1	-0.1	0	0° 30'	0	0	0	0	-0.1	0	0.2	0.1	0.1	
0	0	0	0	0	0	-0.1	-0.1	0	0° 45'	0	0	0.1	0	-0.1	0	0.2	0.2	0.1	
0	0	0	0.1	0.1	0	-0.1	-0.1	0	1° 0'	0	0	0.1	0	-0.1	0	0.2	0.2	0.1	
0	0	0	0.1	0.1	0	0	0	0	1° 15'	0	0	0.1	0	-0.1	0.1	0.2	0.2	0.1	
0.1	0.1	0	0.1	0.1	0	0	0	0	1° 30'	0	0	0	0	-0.1	0.1	0.2	0.2	0.2	
0.1	0.1	0	0	0.1	0	-0.1	-0.1	0	1° 45'	0	0	0	-0.1	0	0.2	0.2	0.2	0.2	
0.1	0	0	0	0	0	-0.1	-0.2	0	2° 0'	0.1	0.1	0	-0.1	0	0.2	0.3	0.2	0.2	
0	0	0	-0.1	-0.1	0	0	-0.2	0	2° 15'	0.1	0.1	0.1	-0.1	0	0.2	0.4	0.2	0.1	
0	0	0	-0.1	-0.1	0	0	0	0	2° 30'	0.1	0.1	0.1	0	-0.1	0.1	0.4	0.2	-0.1	
0	0	0	0	-0.1	0	0.1	0.1	0	2° 45'	0.1	0.1	0.1	0	-0.1	0	0.5	0.2	-0.2	
0.1	0	0	0.1	0	0	0.1	0.2	0	3° 0'	0.1	0.1	0.1	0	-0.1	0	0.4	0.2	-0.2	
0.1	0	0	0.1	0.1	0.1	0.1	0.2	0	3° 15'	0.1	0.1	0.1	0	-0.1	0	0.4	0.2	-0.1	
0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0	3° 30'	0.1	0.1	0	0	-0.1	0	0.3	0.2	-0.1	
0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0	3° 45'	0.1	0.1	0	0	-0.1	0.1	0.2	0.2	0	
0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0	4° 0'	0.1	0.1	0	-0.1	-0.1	0.1	0.2	0.2	0	
0.1	0.1	0.1	0.1	0.1	0	0	0	0	4° 15'	0.1	0	0	-0.1	0	0.1	0.2	0.2	0	
0.1	0.1	0.1	0.1	0	0	0	0	0	4° 30'	0.1	0.1	0	-0.1	0	0.2	0.2	0.2	0	
0.1	0.1	0.1	0	0	0	0	0	0	4° 45'	0	0.1	0	-0.1	0	0.1	0.2	0.1	0	
0.1	0.1	0.1	0	-0.1	0	0.1	0.1	0	5° 0'	0	0.1	0	0	0	0.1	0.2	0.1	-0.1	
0.1	0.1	0.1	0	0	0	0.1	0.2	0	5° 15'	0.1	0.1	0.1	0	0	0	0.2	0.1	0	
0.1	0.1	0.1	0	0	0.1	0.1	0.2	0	5° 30'	0.1	0.1	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	0.2	0	5° 45'	0.1	0	0.1	0.1	0	0	0	0.1	0.1	
0.1	0.1	0.1	0.1	0.1	0	0.1	0.2	0	6° 0'	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	0	0.1	0	6° 15'	0.1	0.1	0.1	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	6° 30'	0	0.1	0.1	0.1	0.1	0.1	0	0	0.1	
0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0	6° 45'	0	0	0.1	0.1	0.1	0.1	0	0	0.1	
0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0	7° 0'	0.1	0	0	0.1	0.1	0	0	0	0.1	
0.2	0.2	0.1	0.2	0.2	0.3	0.4	0.4	0	7° 15'	0.1	0.1	0	0	0.1	0	-0.1	0	0.2	
0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0	7° 30'	0.1	0.1	0	0	0	0	-0.1	0	0.1	
0.2	0.2	0.2	0.2	0.2	0.2	0.1	0	0	7° 45'	0.1	0.1	0	0	0	0	0	0	0.1	
0	0.1	0.1	0	0	0	-0.1	-0.2	0	8° 0'	0	0.1	0.1	0	0	0	0	0	0	
-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	0	8° 15'	0	0	0.1	0	0	0	0	0	0	
0	0	-0.1	-0.1	0	0.1	0.1	0	0	8° 30'	0	0.1	0.1	0	0	0	0	0.1	0.1	
0.2	0.2	0.1	0.2	0.3	0.3	0.2	0.1	0	8° 45'	0	0.1	0.2	-0.1	0	0	0.1	0.1	0.1	
0.4	0.4	0.4	0.5	0.4	0.3	0.2	0.1	0	9° 0'	0.1	0.1	0.1	-0.1	0	0.1	0.1	0.1	0	
0.5	0.5	0.6	0.6	0.4	0.3	0.1	0	0	9° 15'	0.1	0.1	0.1	-0.1	0	0.2	0.2	0.2	0	
0.6	0.6	0.6	0.6	0.4	0.3	0.2	0.1	0	9° 30'	0.1	0.1	0.1	0	0.1	0.3	0.3	0.2	0	
0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0	9° 45'	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.1	
0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0	10° 0'	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.2	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 120 to 124 °E									
Correction to Latitude										Correction to Longitude									
120°	120°	121°	121°	122°	122°	123°	123°	124°	Longitude	120°	120°	121°	121°	122°	122°	123°	123°	124°	
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	-0.1	-0.1	0	0.2	0.5	0° 0'	0.1	0.1	0.1	0.1	-0.1	-0.2	-0.2	0	0.1	
0	0	0	0	0	-0.1	-0.1	0.1	0.4	0° 15'	0.1	0.1	0.1	0.1	-0.1	-0.2	-0.2	-0.2	0	
-0.1	-0.1	0	0	0	-0.1	-0.2	-0.1	0.2	0° 30'	0.1	0.1	0.1	0.1	0	-0.2	-0.2	-0.3	-0.1	
-0.2	-0.1	0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	0° 45'	0.1	0	0.1	0.1	-0.1	-0.1	-0.2	-0.4	-0.2	
-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.2	-0.3	1° 0'	0.1	-0.1	0.1	0.1	-0.1	-0.1	-0.2	-0.4	-0.3	
-0.1	-0.1	-0.2	-0.1	0	0	-0.1	-0.3	-0.5	1° 15'	0.1	-0.1	0.1	0.1	-0.1	-0.1	-0.1	-0.3	-0.2	
0	-0.1	-0.1	0	0.1	0.1	0	-0.2	-0.4	1° 30'	0.2	0	0.1	0.1	-0.2	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0.1	0.2	0.1	0	-0.1	-0.2	1° 45'	0.2	0	0	0	-0.2	0	0	0	0	
-0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2° 0'	0.2	0	-0.1	-0.1	-0.1	0	0	0	0	
0	0.2	0.1	0.1	0	0.1	0.2	0.2	0.2	2° 15'	0.1	0	-0.1	-0.1	-0.1	0	0	0	0	
0.1	0.3	0.1	0	0	0.1	0.2	0.2	0.1	2° 30'	-0.1	0	0	0	-0.2	-0.1	0	0	0.1	
0.2	0.2	0.1	0	0	0	0	0.1	0	2° 45'	-0.2	0	0.1	0	-0.2	-0.1	0	0	0.1	
0.1	0.1	0	0	-0.1	-0.1	-0.1	0	0	3° 0'	-0.2	0	0.2	0	-0.2	-0.1	-0.1	0	0.1	
0.1	0.1	0.1	0	0	-0.1	-0.2	-0.1	0.1	3° 15'	-0.1	0	0.2	0	-0.1	-0.1	-0.1	-0.1	0.1	
0.1	0.1	0.1	0	0	0	0	0	0.1	3° 30'	-0.1	0	0.3	0	-0.1	0	-0.1	-0.1	0	
0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	3° 45'	0	0	0.3	0.1	-0.1	0	-0.1	-0.2	0	
0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	4° 0'	0	0	0.2	0.1	-0.1	0	-0.1	-0.1	0.1	
0.1	0.1	0.1	0.2	0.1	0	0.1	0.1	0.1	4° 15'	0	0	0.2	0.1	0	0	-0.1	-0.1	0.1	
0.1	0.1	0.1	0.2	0.1	0.1	0.1	0	0	4° 30'	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	-0.1	4° 45'	0	0	0.1	0.1	0.1	0	-0.1	-0.1	0.1	
0.1	0.1	0.2	0.1	0.1	0.1	0.1	0	-0.1	5° 0'	-0.1	0	0.1	0.1	0.1	0	-0.1	-0.1	0	
0.1	0.1	0.2	0.1	0.1	0.2	0.2	0	-0.1	5° 15'	0	0	0.1	0.2	0.1	0	0	0	0	
0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0	5° 30'	0	-0.1	0.1	0.2	0	0	0	0	0.1	0
0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	5° 45'	0.1	-0.1	0.1	0.2	0	0	0	0	0.1	0.1
0.1	0.1	0	0.1	0.2	0.1	0.1	0.2	0.2	6° 0'	0.1	-0.1	0.1	0.1	0	0	0	0	0.1	0.1
0.1	0.1	0	0.1	0.2	0.1	0.1	0.2	0.3	6° 15'	0.1	0	0.1	0	0.1	0.1	-0.1	0	0.1	
0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0.2	6° 30'	0.1	0	0.1	0	0.1	0.1	-0.1	0	0.1	
0.2	0.1	0	0	0	0.2	0.2	0.1	0.1	6° 45'	0.1	0.1	0	-0.1	0	0	0	0	0	0.1
0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	7° 0'	0.1	0.2	0.1	-0.1	0	0	0	0	0	0.1
0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.2	7° 15'	0.2	0.2	0.1	0	0	-0.1	0	0.1	0	
0.3	0.4	0.5	0.4	0.3	0.2	0.1	0.1	0.1	7° 30'	0.1	0.1	0.1	0.1	0.1	0	0	0	0	
0	0.2	0.3	0.3	0.3	0.1	0.1	0.1	0.1	7° 45'	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1	0
-0.2	-0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	8° 0'	0	0	0	0.1	0.2	0.1	0	0.1	0	
-0.2	-0.2	-0.1	-0.1	0.1	0.2	0.2	0.3	0.2	8° 15'	0	0	0	0.1	0.1	0	0	0	0.1	0.1
0	0	0	0	0.2	0.3	0.4	0.4	0.3	8° 30'	0.1	0	-0.1	0	0	0	-0.1	0.1	0.1	
0.1	0.1	0.2	0.2	0.4	0.5	0.4	0.4	0.3	8° 45'	0.1	-0.1	-0.1	0	-0.1	-0.1	0	0.1	0.1	
0.1	0.1	0.2	0.4	0.5	0.5	0.4	0.3	0.1	9° 0'	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0.2	0.2	
0	0	0.1	0.3	0.4	0.4	0.3	0.2	0.1	9° 15'	0	-0.1	-0.2	-0.2	-0.1	-0.1	0.1	0.3	0.2	
0	0	0.1	0.2	0.2	0.2	0.2	0.1	0.1	9° 30'	0	-0.1	-0.3	-0.2	-0.2	0	0.2	0.3	0.2	
0.2	0.1	0.1	0.1	0.1	0.1	0	0.1	0.2	9° 45'	0.1	-0.1	-0.3	-0.2	-0.2	0	0.2	0.3	0.2	
0.4	0.3	0.2	0	0	0	0	0.1	0.3	10° 0'	0.2	-0.1	-0.2	-0.2	-0.2	0	0.2	0.2	0.1	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 124 to 128 °E									
Correction to Latitude										Correction to Longitude									
124° 0'	124° 30'	125° 0'	125° 30'	126° 0'	126° 30'	127° 0'	127° 30'	128° 0'	Longitude	124° 0'	124° 30'	125° 0'	125° 30'	126° 0'	126° 30'	127° 0'	127° 30'	128° 0'	Latitude
0.5	0.6	0.6	0.4	0.3	0.2	0.2	0.3	0.2	0° 0'	0.1	-0.1	-0.2	-0.2	0.3	0.8	0.6	0	0	0° 0'
0.4	0.5	0.5	0.3	0.2	0.3	0.4	0.3	0.2	0° 15'	0	-0.2	-0.2	-0.1	0.3	0.7	0.6	0	0.1	0° 15'
0.2	0.3	0.3	0.1	0.1	0.3	0.5	0.3	0.1	0° 30'	-0.1	-0.2	-0.2	0	0.2	0.6	0.6	0.1	0.2	0° 30'
-0.1	0	0	-0.1	-0.1	0.2	0.5	0.3	0.1	0° 45'	-0.2	-0.2	-0.1	0.1	0.2	0.4	0.6	0.3	0.2	0° 45'
-0.3	-0.3	-0.4	-0.5	-0.4	-0.1	0.2	0.2	0.1	1° 0'	-0.3	-0.2	-0.1	0.1	0.1	0.3	0.5	0.4	0.3	1° 0'
-0.5	-0.6	-0.7	-0.7	-0.6	-0.4	-0.1	0	0.2	1° 15'	-0.2	-0.2	0	0	0	0.1	0.4	0.4	0.2	1° 15'
-0.4	-0.6	-0.7	-0.7	-0.7	-0.6	-0.3	0	0.2	1° 30'	-0.1	-0.1	0	0	0	0	0.3	0.3	0.1	1° 30'
-0.2	-0.3	-0.4	-0.5	-0.5	-0.5	-0.3	0	0.4	1° 45'	0	0	0	0	0	-0.1	0.1	0.1	0	1° 45'
0.1	0	-0.1	-0.1	-0.2	-0.2	-0.2	0.2	0.4	2° 0'	0	0	0.1	0.1	0	-0.1	0	-0.1	0	2° 0'
0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	2° 15'	0	0.1	0.1	0.1	0	-0.1	-0.1	-0.2	0	2° 15'
0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0	2° 30'	0.1	0.1	0.1	0	0	0	-0.1	-0.3	0	2° 30'
0	0	0.1	0.1	0.1	0.1	0.1	0	-0.2	2° 45'	0.1	0.1	0	0	0	0	-0.1	-0.2	0.1	2° 45'
0	0	0.1	0.1	0	0	0	-0.2	-0.3	3° 0'	0.1	0.1	0	0	0	0	-0.1	0	0.1	3° 0'
0.1	0.1	0	0.1	0	0	0	-0.2	-0.2	3° 15'	0.1	0.1	0	0	0.1	0	-0.1	0	0.1	3° 15'
0.1	0	0	0	0	0.1	0	-0.1	0	3° 30'	0	0.1	0	0	0.1	0	0	0.1	0	3° 30'
0.1	0	0	0	0.1	0.1	0	0	0.1	3° 45'	0	0.1	0	0	0.1	0	0	0	0	3° 45'
0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	4° 0'	0.1	0.1	0	0	0	0	0.1	0	0	4° 0'
0.1	0.1	0.1	0	0	0	0	0.1	0.1	4° 15'	0.1	0.1	0	0	0	0	0.1	0	0	4° 15'
0	0.1	0.1	0	0	0	0	0.1	0	4° 30'	0.1	0.1	0	0	0	0	0	0	0	4° 30'
-0.1	0	0	0	0	0	0	0	0	4° 45'	0.1	0	0	0	0	0	0	0	0	4° 45'
-0.1	0	0	0.1	0.1	0.1	0	0	0	5° 0'	0	0	0.1	0	0	0	0	0	0	5° 0'
-0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	5° 15'	0	0	0	0	0	0	0	0	0	5° 15'
0	0	0	0.1	0.1	0.1	0.1	0.1	0.2	5° 30'	0	-0.1	0	0	0	0	0	0	-0.1	5° 30'
0.1	0.1	0	0.1	0.1	0.1	0.1	0.2	0.2	5° 45'	0.1	0	0	0	0	0	0	0	-0.1	5° 45'
0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	6° 0'	0.1	0	0	0	0	0	0	0	0	6° 0'
0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	6° 15'	0.1	0	0	0	0	0	0	0	0	6° 15'
0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	6° 30'	0.1	0.1	0	0	0	0	0	0	0	6° 30'
0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	6° 45'	0.1	0.1	0	0	0	0	0	0	0	6° 45'
0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	7° 0'	0.1	0.1	0	0	0	0	0	0	0	7° 0'
0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	7° 15'	0	0.1	0	0	0	0	0	0	0	7° 15'
0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	7° 30'	0	0	0.1	0.1	0	0	0	0	0	7° 30'
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	7° 45'	0	0	0.1	0.1	0	0	-0.1	-0.1	0	7° 45'
0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.4	8° 0'	0	0	0	0.1	0	-0.1	-0.1	-0.1	0	8° 0'
0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.4	8° 15'	0.1	0	0	0.1	0	-0.1	-0.2	-0.2	0	8° 15'
0.3	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.3	8° 30'	0.1	0.1	0.1	0.1	0	-0.2	-0.3	-0.2	0	8° 30'
0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.1	8° 45'	0.1	0.2	0.1	0	0	-0.2	-0.3	-0.2	0.1	8° 45'
0.1	0.1	0.2	0.3	0.4	0.4	0.2	-0.1	-0.2	9° 0'	0.2	0.2	0.1	0	-0.1	-0.1	-0.2	-0.1	0.1	9° 0'
0.1	0.1	0.3	0.4	0.4	0.3	0	-0.3	-0.4	9° 15'	0.2	0.1	0	-0.1	-0.1	0	0	0	0.1	9° 15'
0.1	0.2	0.3	0.3	0.2	0	-0.2	-0.4	-0.5	9° 30'	0.2	0	-0.1	0	0	0.1	0.1	0.1	0.1	9° 30'
0.2	0.3	0.2	0.1	-0.1	-0.2	-0.3	-0.4	-0.4	9° 45'	0.2	-0.1	-0.1	0	0.1	0.2	0.2	0.1	0.1	9° 45'
0.3	0.3	0.1	-0.1	-0.2	-0.3	-0.3	-0.3	-0.2	10° 0'	0.1	0	0	0.1	0.1	0.2	0.2	0.1	0.1	10° 0'





# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 132 to 136 °E									
Correction to Latitude										Correction to Longitude									
132°	132°	133°	133°	134°	134°	135°	135°	136°	Longitude	132°	132°	133°	133°	134°	134°	135°	135°	136°	
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	-0.1	-0.3	-0.2	-0.1	0° 0'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
-0.2	-0.3	-0.2	-0.1	-0.1	-0.1	-0.2	-0.3	-0.2	0° 15'	0.1	0.1	-0.1	-0.1	0	0.1	0	-0.2	-0.1	
-0.2	-0.3	-0.3	-0.3	-0.2	0	-0.1	-0.2	-0.3	0° 30'	0.2	0.1	-0.1	-0.1	0	0.1	0	-0.2	-0.2	
-0.1	0	-0.1	-0.3	-0.2	0	0	0	-0.2	0° 45'	0.2	0.1	-0.1	-0.1	-0.1	0	0.1	-0.1	-0.1	
0.1	0.2	0.1	-0.1	-0.1	0	0.1	0.1	-0.1	1° 0'	0.2	0.1	0	0	-0.2	-0.1	0	0	0	
0.2	0.3	0.3	0.2	0.1	0	0.1	0.1	0	1° 15'	0.1	0.1	0.1	0	-0.2	-0.1	0	0	0.1	
0.2	0.2	0.3	0.4	0.4	0.1	0.1	0.1	0.1	1° 30'	0	0	0.1	0	-0.1	-0.1	0	0	0.1	
0.2	0.2	0.3	0.4	0.4	0.2	0.1	0.1	0.1	1° 45'	0	0	0	0	0	0	0	0	0.1	
0.2	0.1	0.2	0.3	0.3	0.1	0.1	0.1	0.2	2° 0'	0	0	-0.1	0	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	2° 15'	0.1	0	-0.1	-0.1	0.1	0.1	0	0	0	
0.2	0.1	0	0	0	0.1	0.1	0.1	0.1	2° 30'	0.1	0	-0.1	0	0.1	0.1	0	-0.1	0	
0.3	0.1	0	0	0	0.1	0.1	0.1	0	2° 45'	0.2	0.1	0	0	0.1	0	-0.1	0	0.1	
0.4	0.2	0	0	0	0	0	-0.1	-0.2	3° 0'	0.2	0.2	0	0	0.1	0	-0.1	0	0.1	
0.4	0.3	0.1	0	0	0	-0.1	-0.2	-0.3	3° 15'	0.2	0.3	0.1	0	0.1	0	0	0.1	0.2	
0.3	0.3	0.1	0	0	0	-0.1	-0.3	-0.3	3° 30'	0.2	0.4	0.1	0	0.1	0	0.1	0.1	0.1	
0.1	0.2	0.1	0.1	0.1	0.1	0	-0.1	-0.1	3° 45'	0.2	0.4	0.2	0	0	0.1	0.2	0.2	0.1	
0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	4° 0'	0.1	0.4	0.2	0	0	0.1	0.2	0.2	0.1	
0.1	0.2	0.3	0.3	0.3	0.2	0.1	0.3	0.3	4° 15'	0.1	0.3	0.2	0	0	0.2	0.2	0.1	0.1	
0.2	0.2	0.2	0.3	0.3	0.1	0.1	0.3	0.3	4° 30'	0.1	0.3	0.2	0	0.1	0.2	0.1	0.1	0	
0.2	0.1	0.1	0.2	0.3	0.1	0	0.1	0.2	4° 45'	0.2	0.3	0.2	-0.1	0.1	0.3	0.1	0	0.1	
0.3	0.1	0	0.2	0.2	0	0	0	0	5° 0'	0.3	0.3	0.2	-0.1	0.2	0.4	0	0	0.1	
0.2	0	0	0.2	0.1	0	0	0	0	5° 15'	0.4	0.4	0.1	-0.2	0.3	0.4	0	0	0.1	
0.2	0.1	0.2	0.2	0	0	0.1	0	0	5° 30'	0.5	0.5	0	-0.2	0.3	0.4	0.1	0	0.1	
0.1	0.2	0.3	0.2	-0.1	0	0.1	0	0	5° 45'	0.5	0.4	0	-0.1	0.4	0.3	0.1	0	0.1	
0	0.2	0.3	0	-0.2	0	0	0	0	6° 0'	0.5	0.3	0	0.1	0.4	0.3	0.1	0.1	0.1	
0	0.2	0.1	-0.2	-0.2	0	0	0	0	6° 15'	0.4	0.2	0.1	0.3	0.4	0.2	0.1	0.1	0.1	
-0.1	0.1	-0.1	-0.3	-0.2	0	0	0	0	6° 30'	0.3	0.2	0.3	0.4	0.3	0.2	0.1	0	0.1	
-0.1	-0.1	-0.2	-0.3	-0.1	-0.1	0	0	0	6° 45'	0.2	0.2	0.4	0.3	0.2	0.2	0.1	0	0.1	
-0.2	-0.2	-0.3	-0.2	-0.1	-0.1	0	0	0	7° 0'	0.1	0.2	0.4	0.3	0.2	0.1	0.1	0	0.1	
-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0	0	0	7° 15'	0.2	0.3	0.3	0.2	0.2	0.1	0	0	0.1	
-0.2	-0.2	-0.1	0	0	0	0	0	0	7° 30'	0.2	0.3	0.3	0.2	0.2	0.1	0	0	0	
-0.1	-0.2	-0.1	0	0	0.1	0	0	0	7° 45'	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0	0	
-0.1	-0.1	-0.1	0	0.1	0.1	0	0	0	8° 0'	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0	0	
-0.2	-0.1	0	0	0	0.1	0.1	0	0	8° 15'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0	0	
-0.2	-0.1	0	0	0	0.1	0.1	0	0	8° 30'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0	0	
-0.2	-0.1	0	0	0	0.1	0.1	0	0	8° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	
-0.1	0	0	0	0	0.1	0.1	0	0	9° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	
-0.1	0	0	0	0	0.1	0.1	0	0.1	9° 15'	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0	
0	0	0	0	0	0	0.1	0.1	0.1	9° 30'	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0	
0	0	0	0	0	0	0.1	0.1	0.1	9° 45'	0.1	0.1	0.1	0	0	0	0.1	0.1	0	
0	0	0	0	0	0	0.1	0.1	0	10° 0'	0.1	0.1	0.1	0	0	0	0.1	0.1	0	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 136 to 140 °E									
Correction to Latitude										Correction to Longitude									
136°	136°	137°	137°	138°	138°	139°	139°	140°	Longitude	136°	136°	137°	137°	138°	138°	139°	139°	140°	
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	0° 0'	-0.1	0	0	0.1	0.1	0	0	0	0	
-0.2	-0.1	0	0.1	0.1	0.1	0.1	0	0	0° 15'	-0.1	0	0	0	0.1	0.1	0.1	0	0	
-0.3	-0.2	-0.1	-0.1	0	0.1	0.1	0	0	0° 30'	-0.2	-0.1	-0.1	0	0	0.1	0.1	0.1	0	
-0.2	-0.3	-0.3	-0.2	-0.1	-0.1	0	0.1	0	0° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0.1	0.1	0	
-0.1	-0.2	-0.3	-0.3	-0.3	-0.2	0	0	0	1° 0'	0	-0.1	-0.1	-0.1	-0.1	0	0	0.1	0.1	
0	-0.1	-0.2	-0.2	-0.3	-0.3	-0.1	0	0	1° 15'	0.1	0	0	-0.1	-0.1	-0.1	-0.1	0.1	0.1	
0.1	0	0	-0.1	-0.2	-0.2	-0.2	0	0.1	1° 30'	0.1	0	0	0	0	-0.1	-0.2	0	0.1	
0.1	0.2	0.1	0.1	0	-0.1	-0.1	-0.1	0	1° 45'	0.1	0	0	0	0	-0.1	-0.2	-0.1	0	
0.2	0.2	0.2	0.2	0.1	0.1	0	-0.1	-0.1	2° 0'	0	0.1	0	0	0.1	0	-0.1	-0.1	0	
0.2	0.2	0.1	0.1	0.1	0.1	0	-0.1	-0.2	2° 15'	0	0.1	0	0	0.1	0	-0.1	0	0.1	
0.1	0	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.3	2° 30'	0	0.1	0.1	0	0	0.1	0	0	0.1	
0	-0.1	-0.3	-0.4	-0.3	-0.2	-0.2	-0.1	-0.1	2° 45'	0.1	0.2	0.1	0	0	0	0	0.1	0.1	
-0.2	-0.2	-0.3	-0.4	-0.3	-0.2	-0.1	-0.1	0	3° 0'	0.1	0.3	0.2	0	-0.1	0	-0.1	0	0.1	
-0.3	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1	0	0.1	3° 15'	0.2	0.3	0.2	0	-0.2	-0.1	-0.1	0	0.1	
-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0	3° 30'	0.1	0.3	0.2	0	-0.2	-0.1	-0.1	0	0	
-0.1	0	0	0	-0.1	-0.2	-0.2	-0.2	-0.1	3° 45'	0.1	0.2	0.2	0	-0.2	-0.1	-0.1	-0.1	0	
0.2	0.2	0.3	0.2	0.1	-0.1	-0.2	-0.2	-0.1	4° 0'	0.1	0.2	0.2	0	-0.1	0	-0.1	-0.1	0	
0.3	0.4	0.4	0.5	0.4	0.2	0.1	0	0	4° 15'	0.1	0.1	0.2	0.1	0	0	-0.1	-0.1	-0.1	
0.3	0.3	0.4	0.5	0.6	0.5	0.4	0.2	0.1	4° 30'	0	0.1	0.2	0.1	0.1	0.1	0	0	-0.1	
0.2	0.1	0.2	0.4	0.5	0.5	0.4	0.3	0.1	4° 45'	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0	
0	0	0	0.1	0.1	0.2	0.2	0.2	0.2	5° 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	0	0.1	0.2	5° 15'	0.1	0.1	0	-0.1	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0.1	0.1	5° 30'	0.1	0.1	0.1	0	0	0	0.1	0.1	0.1	
0	0	0.1	0	0	0	0	0	0	5° 45'	0.1	0.1	0.1	0	-0.1	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	6° 0'	0.1	0.1	0	0	-0.1	0	0.1	0.1	0.1	
0	0	0	0	0	-0.1	0	0	0	6° 15'	0.1	0.1	0	0	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	6° 30'	0.1	0.1	0	0	0	0	0	0.1	0.1	
0	0	0	0	0.1	0	0	0	0	6° 45'	0.1	0.1	0	0	0	0	0	0.1	0.1	
0	0	0	0	0.1	0	0	0	0	7° 0'	0.1	0.1	0	0	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	7° 15'	0.1	0.1	0	0	0	0	0	0.1	0.1	
0	0	0.1	0.1	0	0	0	0	0.1	7° 30'	0	0.1	0	0	0	0	0	0	0	
0	0	0.1	0.1	0	0	0	0	0	7° 45'	0	0.1	0	0	0	0	0	0	0	
0	0	0.1	0	0	0	0	0	0	8° 0'	0	0	0	0	0	0	0	0	0	
0	0	0.1	0	0	0	0	0	0	8° 15'	0	0	0	0	0	0.1	0.1	0	0	
0	0.1	0.1	0	0	0	0	0	0	8° 30'	0	0	0	0	0	0.1	0.1	0	0	
0	0.1	0.1	0.1	0	0	0.1	0	0	8° 45'	0	0	0	0	0	0.1	0	0	0	
0	0.1	0.1	0	0	0	0.1	0	0	9° 0'	0	0	0	0	0.1	0	0	0.1	0	
0.1	0.1	0.1	0	0	0	0	0	0	9° 15'	0	0	0	0	0.1	0	0	0.1	0	
0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	9° 30'	0	0	0	0.1	0.1	0	0	0.1	0	
0.1	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	9° 45'	0	0	0	0.1	0	0	0.1	0.1	0	
0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	10° 0'	0	0	0	0	0	0.1	0.1	0.1	0	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 140 to 144 °E										
Correction to Latitude										Correction to Longitude										
140° 0'	140° 30'	141° 0'	141° 30'	142° 0'	142° 30'	143° 0'	143° 30'	144° 0'	Longitude	140° 0'	140° 30'	141° 0'	141° 30'	142° 0'	142° 30'	143° 0'	143° 30'	144° 0'		
										Latitude										
0	0	0	0	0	0	0	0	0	0° 0'	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 15'	0	0	0	0	0	0	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	0° 30'	0	0	0	0	0	0	0	0	-0.1	0	
0	0	0	0	0	0	0	-0.1	-0.2	0° 45'	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	-0.1	-0.1	-0.2	1° 0'	0.1	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	-0.1	-0.1	-0.2	-0.2	1° 15'	0.1	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	-0.1	1° 30'	0.1	0	0	0	0	0.1	0	0.1	0.1	0.1	
0	0	0.1	0.1	0	-0.1	-0.1	-0.1	0	1° 45'	0	0	0	0.1	0.1	0.1	0	0	0	0.1	
-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	0	2° 0'	0	0	0	0.1	0.1	0.1	0	0	0	0.1	
-0.2	-0.3	-0.2	-0.2	-0.1	0	0	-0.1	0	2° 15'	0.1	0	0	0	0.1	0.1	0.1	0	0	0	
-0.3	-0.3	-0.3	-0.3	-0.1	0	0	0	0	2° 30'	0.1	0	-0.1	0	0	0.1	0.1	0	0	0	
-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	0	0	0	2° 45'	0.1	0	0	-0.1	0	0	0.1	0	0	0	
0	0.1	0	-0.1	-0.1	-0.1	0	0	0	3° 0'	0.1	0	0	0	0	0	0	0	0	0	
0.1	0.1	0.1	0	0	0	0	0	0.1	3° 15'	0.1	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0.1	3° 30'	0	0	0	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	0	0	0.1	0.1	0.1	3° 45'	0	0	0.1	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	0.1	0.2	0.2	4° 0'	0	0.1	0.1	0	0	-0.1	-0.1	0	0	0	
0	0	-0.1	-0.2	-0.1	-0.1	0	0.1	0.1	4° 15'	-0.1	0.1	0.1	0	-0.1	-0.1	-0.2	-0.1	0	0	
0.1	0	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	0	4° 30'	-0.1	0.1	0.2	0	-0.1	-0.1	-0.2	-0.1	-0.1	0	
0.1	0	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3	-0.2	4° 45'	0	0.1	0.2	0	-0.1	-0.1	-0.2	-0.1	-0.1	0	
0.2	0.1	0	0	-0.1	-0.2	-0.3	-0.4	-0.4	5° 0'	0.1	0.2	0.2	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	
0.2	0.1	0.2	0.2	0	-0.1	-0.2	-0.3	-0.3	5° 15'	0.1	0.2	0.2	0.1	0	0	-0.1	-0.1	-0.1	0	
0.1	0.1	0.3	0.3	0.2	0.1	0	-0.1	-0.2	5° 30'	0.1	0.2	0.2	0.2	0.1	0	0	-0.1	-0.1	0	
0	0.1	0.2	0.3	0.3	0.2	0.2	0.1	0	5° 45'	0.1	0.1	0.1	0.2	0.1	0.1	0	0	0	0	
0	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.1	6° 0'	0.1	0	0.1	0.1	0.1	0.1	0	0	0	0	
0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	6° 15'	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	0	
0	0	0	0	0.1	0.1	0.1	0.2	0.2	6° 30'	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0	
0	0	0	0	0	0.1	0.1	0.2	0.2	6° 45'	0.1	0	0.1	0	0	0.1	0.1	0	0	0	
0	0	0	0	0	0.1	0.1	0.1	0.1	7° 0'	0.1	0	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0.1	0.1	0.1	7° 15'	0.1	0	0.1	0.1	0	0	0	0	0	0	
0.1	0.1	0	0	0	0	0	0.1	0.1	7° 30'	0	0	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0.1	7° 45'	0	0	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	8° 0'	0	0	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	8° 15'	0	0	0.1	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	8° 30'	0	0	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	8° 45'	0	0	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	9° 0'	0	0	0	0.1	0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	9° 15'	0	0	0	0.1	0.1	0.1	0	0	0	0	
0	0.1	0	0	0	0	0	0	0	9° 30'	0	0	0.1	0.1	0.1	0.1	0	0	0	0	
0.1	0.1	0.1	0	0	0.1	0	0	0	9° 45'	0	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	0	0.1	10° 0'	0	0	0.1	0.1	0.1	0.1	0	0	0	0	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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	0	0	0	0	0	0	0	0	0° 0'	0	-0.1	0	0	0	-0.1	0	0	0	0° 15'
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0° 15'	0	0	0	0	0	-0.1	0	0	0	0° 30'
0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.2	0° 30'	0	0	0	0	0	0	0	0	0	0° 45'
-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	0° 45'	0	0	0	0	0	0	0	0	0	1° 0'
-0.2	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	1° 0'	0.1	0	0	0	0	0	-0.1	0	-0.1	1° 15'
-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1° 15'	0.1	0	-0.1	0	0	0	0	0	0	1° 30'
-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1° 30'	0.1	0	-0.1	-0.1	0	0	0	0	0	1° 45'
0	0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	1° 45'	0.1	0	-0.1	-0.1	0	0	0	0	0	2° 0'
0	0	-0.1	-0.2	-0.2	-0.2	-0.3	-0.2	-0.2	2° 0'	0.1	0	0	0	0	0	0	0	0	2° 15'
0	0	0	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	2° 15'	0	0	0	0	0	0	0	0	-0.1	2° 30'
0	0	0	0	0	0	0	0	-0.1	2° 30'	0	0	0	0	0.1	0	0	0	-0.1	2° 45'
0	0	0	0	0	0	0	0	-0.1	2° 45'	0	0	0	0	0	0	0	0	0	3° 0'
0	0	0	0	0	0	0	0	-0.1	3° 0'	0	0	0	0	0	0	0	0	0	3° 15'
0.1	0.1	0.1	0.1	0	0	0	0	-0.1	3° 15'	0	0	0	0	0	0	0	0	0	3° 30'
0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	3° 30'	0	0	0	0	0	0	0	0	0	3° 45'
0.1	0.2	0.2	0.1	0.1	0.1	0	0	0	3° 45'	0	0	0	0	0	0	0.1	0	0	4° 0'
0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0	4° 0'	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0	4° 15'
0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	4° 15'	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0	4° 30'
0	0.1	0.2	0.3	0.3	0.3	0.2	0.1	0.1	4° 30'	-0.1	-0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4° 45'
-0.2	-0.2	0.1	0.3	0.4	0.4	0.2	0.1	0.1	4° 45'	-0.1	-0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	5° 0'
-0.4	-0.4	-0.2	0.2	0.3	0.3	0.3	0.2	0.1	5° 0'	-0.1	-0.2	-0.2	-0.1	0.1	0.2	0.2	0.1	0.1	5° 15'
-0.3	-0.4	-0.3	-0.1	0.1	0.2	0.2	0.3	0.2	5° 15'	-0.1	-0.2	-0.4	-0.2	0	0.1	0.2	0.2	0.1	5° 30'
-0.2	-0.3	-0.4	-0.3	-0.2	0	0.1	0.2	0.3	5° 30'	-0.1	-0.2	-0.4	-0.3	-0.1	0.1	0.2	0.2	0.2	5° 45'
0	-0.1	-0.3	-0.4	-0.3	-0.2	-0.1	0.1	0.3	5° 45'	0	-0.1	-0.4	-0.3	-0.1	0	0.1	0.1	0.2	6° 0'
0.1	0.1	-0.1	-0.4	-0.3	-0.1	-0.1	0	0.4	6° 0'	0	0	-0.2	-0.3	-0.2	0	0.1	-0.1	0.1	6° 15'
0.1	0.2	0	-0.2	-0.2	0	0	0.1	0.4	6° 15'	0	0	-0.1	-0.2	-0.3	0	0.1	-0.2	-0.1	6° 30'
0.2	0.2	0.2	0	-0.2	-0.1	0	0.2	0.4	6° 30'	0	0	0	-0.1	-0.4	-0.1	0	-0.3	-0.3	6° 45'
0.2	0.2	0.2	0.1	-0.2	-0.3	-0.1	0.1	0.2	6° 45'	0	0	0.1	0	-0.3	-0.2	-0.1	-0.4	-0.3	7° 0'
0.1	0.1	0.2	0.2	-0.1	-0.4	-0.4	-0.2	0	7° 0'	0	0	0	0.1	-0.2	-0.2	-0.2	-0.5	-0.4	7° 15'
0.1	0.1	0.1	0.2	0	-0.3	-0.5	-0.5	-0.3	7° 15'	0	0	0	0.2	0	0	-0.2	-0.6	-0.5	7° 30'
0.1	0.1	0.1	0.1	0.1	-0.1	-0.4	-0.6	-0.5	7° 30'	0	0	0	0.1	0.1	0.1	-0.1	-0.6	-0.5	7° 45'
0.1	0.1	0.1	0.1	0.2	0.1	-0.2	-0.5	-0.6	7° 45'	0	0	0	0.1	0.1	0.3	0.1	-0.5	-0.6	8° 0'
0	0	0	0.1	0.1	0.1	0	-0.3	-0.5	8° 0'	0	0	0	0.1	0.1	0.3	0.2	-0.4	-0.5	8° 15'
0	0	0	0.1	0.1	0.2	0.1	-0.1	-0.3	8° 15'	0	0	0	0	0	0.3	0.3	-0.2	-0.4	8° 30'
0	0	0	0.1	0.1	0.2	0.2	0.1	-0.2	8° 30'	0	0	0	0	0	0.3	0.4	-0.1	-0.3	8° 45'
0	0	0	0.1	0.1	0.2	0.3	0.2	-0.1	8° 45'	0	0	-0.1	-0.1	0	0.3	0.4	0	-0.2	9° 0'
0	0	0.1	0.1	0.1	0.2	0.3	0.3	0	9° 0'	0	0	-0.1	-0.1	0	0.2	0.4	0.2	-0.1	9° 15'
0	0	0.1	0.1	0.1	0.2	0.3	0.3	0.1	9° 15'	0	0	-0.1	-0.1	0	0.1	0.3	0.3	0	9° 30'
0	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	9° 30'	0	-0.1	-0.2	-0.1	0	0.1	0.3	0.3	0.1	9° 45'
0	0.1	0.1	0	0	0.1	0.2	0.3	0.3	9° 45'	0	-0.1	-0.1	-0.1	-0.1	0	0.2	0.3	0.1	10° 0'
0.1	0.1	0	0	-0.1	0	0.1	0.3	0.4	10° 0'	0	-0.1	-0.1	0	-0.1	0	0.1	0.2	0.1	

## Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 148 to 152 °E									
Correction to Latitude										Correction to Longitude									
148°	148°	149°	149°	150°	150°	151°	151°	152°	Longitude	148°	148°	149°	149°	150°	150°	151°	151°	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	-0.1	-0.1	0	0° 0'	0	-0.1	-0.1	0.1	-0.1	-0.1	0	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0.1	0	-0.1	-0.1	-0.1	0° 15'	0	-0.1	-0.1	0.1	-0.1	0	0	-0.1	-0.1	
-0.2	-0.2	-0.2	-0.1	0	0	0	0	-0.1	0° 30'	0	-0.1	-0.1	0	-0.1	0	0	-0.1	0	
-0.3	-0.2	-0.3	-0.3	-0.1	-0.1	0	0	0	0° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	0	
-0.2	-0.2	-0.2	-0.3	-0.3	-0.2	-0.1	0	0	1° 0'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	0	-0.1	0	
-0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2	-0.2	0	1° 15'	-0.1	-0.1	0	-0.1	-0.2	-0.1	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.3	-0.2	1° 30'	-0.1	-0.1	0	0	-0.1	-0.2	-0.1	-0.1	-0.1	
-0.2	-0.2	-0.1	-0.1	-0.2	-0.3	-0.3	-0.3	-0.3	1° 45'	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.2	
-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.3	2° 0'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.2	
-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	2° 15'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	0	-0.1	
-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	2° 30'	-0.1	0	-0.1	0	0	-0.1	-0.1	0	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	2° 45'	-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	-0.2	-0.1	3° 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	-0.1	3° 15'	0	0	0	0	0	0	-0.1	-0.1	-0.2	
0	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	3° 30'	0	0	0	0	0	-0.1	-0.1	-0.1	-0.2	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3° 45'	0	0	0	0	0	-0.1	-0.1	-0.1	-0.2	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	4° 0'	0	0	0	0	0	-0.1	-0.1	-0.1	-0.2	
0.1	0	0	0	0	0	-0.1	-0.1	-0.1	4° 15'	0	0	0	0	0	0	-0.1	-0.1	-0.2	
0.1	0	0	0	-0.1	-0.1	0	-0.1	0	4° 30'	0.1	0	0	0	0	-0.1	0	-0.1	-0.3	
0.1	0.1	0	0	-0.1	-0.1	-0.1	-0.1	0.1	4° 45'	0.1	0.1	0	0	0	-0.1	0	-0.1	-0.4	
0.1	0.1	0	0	-0.1	-0.1	-0.1	0	0.3	5° 0'	0.1	0.1	0	0.1	0	-0.1	0	-0.1	-0.5	
0.2	0	0	0	0	-0.1	-0.1	0.2	0.5	5° 15'	0.1	0.1	0	0.1	0	0	-0.1	-0.3	-0.6	
0.3	0.2	0.1	0	-0.1	0	0.1	0.5	0.5	5° 30'	0.2	0.2	0	0.1	0	0	-0.2	-0.5	-0.6	
0.3	0.4	0.3	0.2	0.1	0.2	0.4	0.6	0.4	5° 45'	0.2	0.2	0.1	0.2	0	-0.1	-0.3	-0.6	-0.5	
0.4	0.6	0.6	0.5	0.4	0.5	0.6	0.5	0	6° 0'	0.1	0.2	0.1	0.2	0.1	-0.2	-0.4	-0.5	-0.2	
0.4	0.7	0.7	0.7	0.7	0.6	0.5	0.2	-0.2	6° 15'	-0.1	0.1	0.2	0.3	0.1	-0.3	-0.4	-0.3	0	
0.4	0.5	0.6	0.6	0.7	0.5	0.2	-0.2	-0.4	6° 30'	-0.3	0	0.2	0.3	0.1	-0.2	-0.2	0	0.1	
0.2	0.3	0.3	0.3	0.3	0.2	-0.1	-0.3	-0.3	6° 45'	-0.3	0	0.2	0.2	0.1	0	0	0.1	0.1	
0	0	0.1	0.1	0	-0.1	-0.2	-0.2	-0.2	7° 0'	-0.4	0	0.2	0.2	0.1	0.1	0.1	0.1	0	
-0.3	-0.2	0	0	-0.1	-0.1	-0.1	0	0	7° 15'	-0.5	-0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	
-0.5	-0.4	-0.2	-0.2	-0.2	-0.2	-0.1	0	0.1	7° 30'	-0.5	-0.2	0.1	0.3	0.2	0	0	0.1	0.1	
-0.6	-0.6	-0.5	-0.4	-0.3	-0.3	-0.3	-0.1	0.1	7° 45'	-0.6	-0.2	0	0.2	0.2	0	-0.1	0	0.1	
-0.5	-0.6	-0.7	-0.6	-0.5	-0.5	-0.4	-0.3	0	8° 0'	-0.5	-0.2	0	0.1	0.2	0	-0.1	-0.1	0	
-0.3	-0.4	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.2	8° 15'	-0.4	-0.2	0	0.1	0.1	0	-0.2	-0.2	-0.1	
-0.2	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.3	-0.4	8° 30'	-0.3	-0.1	0	0.1	0.1	0	-0.1	-0.2	-0.2	
-0.1	-0.2	-0.1	-0.1	0	0.1	0.1	-0.1	-0.3	8° 45'	-0.2	-0.2	0	0.1	0.1	0	-0.1	-0.1	-0.1	
0	-0.2	-0.2	0	0.1	0.1	0.1	0.1	-0.1	9° 0'	-0.1	-0.2	0	0	0.1	0	-0.1	0	0	
0.1	-0.1	-0.2	-0.1	0.1	0.1	0	0.1	0.1	9° 15'	0	-0.1	-0.1	-0.1	0	0	-0.1	0	0	
0.2	0.1	0	-0.1	0	0	0	0.1	0.1	9° 30'	0.1	0	0	-0.1	0	0	-0.1	-0.1	0	
0.3	0.3	0.1	0	-0.1	0	0	0	0.1	9° 45'	0.1	0	0.1	-0.1	-0.1	0	-0.1	-0.1	0	
0.4	0.4	0.3	0.1	-0.1	0	0	-0.1	0	10° 0'	0.1	0.1	0.2	0	-0.1	0	-0.1	-0.1	0	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 152 to 156 °E									
Correction to Latitude										Correction to Longitude									
152°	152°	153°	153°	154°	154°	155°	155°	156°	Longitude	152°	152°	153°	153°	154°	154°	155°	155°	156°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	0° 0'	-0.1	0	0	0	0.1	0	0	0	0	
-0.1	-0.1	-0.1	0	0	0	0	0	0	0° 15'	-0.1	0	0	0	0	0	0	0	0	
-0.1	-0.1	0	0	0	0	0	0	0	0° 30'	0	0	0	0	0	0	0	0	0	
0	-0.1	-0.1	0	0	0	0	0	0	0° 45'	0	0	-0.1	0	0	0	0	0	0	
0	0	-0.1	-0.1	0	0	-0.1	0	0	1° 0'	0	0	-0.1	0	0	0	0	0	0	
0	0	-0.2	-0.2	-0.1	0	-0.1	-0.1	-0.1	1° 15'	0	0	0	-0.1	0	0	0	0	0	
-0.2	0	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	1° 30'	-0.1	0.1	0.1	-0.1	-0.1	0	0	0	0	
-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	1° 45'	-0.2	0	0.1	-0.1	-0.1	0	0	0	0	
-0.3	-0.3	0	0.1	0	-0.1	0	-0.1	0	2° 0'	-0.2	-0.1	0	-0.1	-0.1	0	0	0	0	
-0.2	-0.3	-0.1	0.1	0	-0.1	0	-0.1	-0.1	2° 15'	-0.1	-0.2	-0.1	-0.1	0	0	0	0	0	
-0.1	-0.2	-0.2	0	0	-0.1	-0.1	0	-0.1	2° 30'	-0.1	-0.2	-0.2	-0.1	0.1	0	0	0	0	
-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	-0.1	2° 45'	-0.1	-0.1	-0.3	-0.2	0.1	0	0	0	0	
-0.1	0	0	-0.1	-0.1	0	-0.1	0	-0.1	3° 0'	-0.1	-0.1	-0.2	-0.2	0	0.1	0	0	0	
-0.1	0	0.1	-0.1	0	0	-0.1	-0.1	-0.1	3° 15'	-0.2	-0.1	-0.2	-0.2	0	0.1	0	0	0	
-0.1	-0.1	0.1	0	0	0.1	0	-0.1	-0.1	3° 30'	-0.2	-0.2	-0.2	-0.1	-0.1	0.1	0	0	0	
-0.1	-0.1	0	0.1	-0.1	0	0.1	-0.1	-0.1	3° 45'	-0.2	-0.2	-0.2	-0.1	-0.1	0	0.1	0	0	
-0.1	0	0.1	0.2	0	0	0.1	-0.1	-0.1	4° 0'	-0.2	-0.3	-0.3	0	0	0	0.1	0	0	
-0.1	0.1	0.2	0.3	0.1	-0.1	0	0	-0.1	4° 15'	-0.2	-0.3	-0.4	0	0.1	-0.1	0.1	0.1	0	
0	0.2	0.3	0.3	0.2	-0.1	0	0	-0.1	4° 30'	-0.3	-0.4	-0.5	0	0.3	0	0	0.1	0	
0.1	0.3	0.3	0.2	0.2	-0.1	0	0.1	0	4° 45'	-0.4	-0.5	-0.4	0	0.4	0.1	0	0.1	0	
0.3	0.4	0.2	0	0	-0.1	-0.1	0.1	0	5° 0'	-0.5	-0.5	-0.3	0	0.4	0.1	-0.1	0.1	0.1	
0.5	0.4	0.2	0	-0.1	-0.2	-0.2	0	0.1	5° 15'	-0.6	-0.5	-0.2	0.1	0.4	0.2	-0.2	0	0.1	
0.5	0.2	0.1	0	0.1	-0.1	-0.3	-0.2	0.1	5° 30'	-0.6	-0.4	0	0.1	0.5	0.2	-0.2	-0.1	0.1	
0.4	-0.1	-0.1	0.1	0.3	0.1	-0.3	-0.3	0	5° 45'	-0.5	-0.2	-0.1	0.1	0.5	0.4	-0.2	-0.2	0	
0	-0.3	-0.3	0	0.3	0.4	-0.1	-0.3	-0.2	6° 0'	-0.2	-0.1	-0.2	-0.1	0.4	0.6	0	-0.2	-0.2	
-0.2	-0.4	-0.4	-0.3	0.2	0.4	0.1	-0.2	-0.3	6° 15'	0	0	-0.3	-0.3	0.2	0.7	0.3	-0.2	-0.2	
-0.4	-0.3	-0.4	-0.4	-0.2	0.3	0.3	0	-0.2	6° 30'	0.1	0	-0.2	-0.4	0	0.6	0.5	0	-0.2	
-0.3	-0.2	-0.3	-0.4	-0.4	0	0.4	0.2	0	6° 45'	0.1	0	-0.2	-0.4	-0.2	0.4	0.5	0.1	-0.1	
-0.2	-0.2	-0.1	-0.3	-0.5	-0.2	0.2	0.3	0.2	7° 0'	0	0	-0.1	-0.3	-0.3	0.1	0.4	0.2	0	
0	-0.1	-0.1	-0.2	-0.4	-0.4	0	0.2	0.2	7° 15'	0.1	-0.1	-0.1	-0.2	-0.2	-0.1	0.2	0.2	0	
0.1	0	-0.1	-0.1	-0.3	-0.4	-0.2	0	0.1	7° 30'	0.1	0	-0.1	-0.1	-0.1	-0.1	0.1	0.1	0	
0.1	0.1	0	-0.1	-0.2	-0.3	-0.3	-0.1	-0.1	7° 45'	0.1	0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	
0	0.1	0	-0.1	-0.1	-0.2	-0.3	-0.2	-0.1	8° 0'	0	0.1	0	-0.1	0	0	-0.1	0	0	
-0.2	-0.1	0	0	-0.1	-0.1	-0.1	-0.2	-0.1	8° 15'	-0.1	0	0	0	0	0	-0.1	-0.1	0	
-0.4	-0.3	-0.1	0	-0.1	-0.1	0	-0.1	-0.1	8° 30'	-0.2	-0.1	0	0.1	0.1	0	-0.1	-0.1	0	
-0.3	-0.4	-0.2	-0.1	-0.1	0	0	0	0	8° 45'	-0.1	-0.1	-0.1	0.1	0.1	-0.1	0	0	-0.1	
-0.1	-0.2	-0.2	-0.2	-0.1	0	0	0	0	9° 0'	0	-0.1	-0.2	0	0	-0.1	0	0	-0.1	
0.1	0	-0.1	-0.1	0	0	0	0	0	9° 15'	0	0	-0.1	0	-0.1	-0.1	0	0	0	
0.1	0.2	0.1	0	0.1	0	0	0	0	9° 30'	0	0	-0.1	-0.1	-0.1	0	0	-0.1	0	
0.1	0.1	0.1	0.1	0	0	0	0.1	0	9° 45'	0	0	0	0	-0.1	0	0	-0.1	0	
0	0.1	0.1	0.1	0	0	0.1	0	0	10° 0'	0	0	0	0	0	0	-0.1	0	0	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 156 to 160 °E									
Correction to Latitude										Correction to Longitude									
156°	156°	157°	157°	158°	158°	159°	159°	160°	Longitude	156°	156°	157°	157°	158°	158°	159°	159°	160°	
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	-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	0	0	0	0	-0.1	0	0	0° 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	0	0	0	0° 30'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	-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	0	0	-0.1	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	-0.1	-0.1	-0.1	0	-0.1	0	0	0	1° 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	0	0	0	1° 30'	0	-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	1° 45'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	-0.1	-0.1	0	-0.1	0	0	-0.1	0	2° 0'	0	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	-0.1	0	2° 15'	0	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	2° 30'	0	0	-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	2° 45'	0	0	-0.1	-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	3° 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	0	3° 15'	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	3° 30'	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	3° 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	-0.1	0	4° 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	-0.1	0	4° 15'	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	4° 30'	0	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	
0	0	0	0	0	0	-0.1	-0.1	0	4° 45'	0	0	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	
0	0	0	0	0	0	0	-0.1	0	5° 0'	0.1	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	0	0	0	5° 15'	0.1	0	-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	0	0	5° 30'	0.1	0	-0.1	-0.1	-0.1	0	0	0	-0.1	
0	0.1	0.1	0.1	0.1	0.1	0.1	0	0	5° 45'	0	0	-0.1	-0.1	-0.1	0	0	0	-0.1	
-0.2	0	0.1	0.1	0.1	0.1	0.1	0.1	0	6° 0'	-0.2	0	-0.1	-0.1	0	0	0	0	0	
-0.3	-0.2	0	0.1	0.1	0.1	0.1	0.1	0	6° 15'	-0.2	-0.1	-0.2	-0.1	0	0	0.1	0	0	
-0.2	-0.2	-0.2	-0.1	0	0	0.1	0.2	0	6° 30'	-0.2	-0.2	-0.2	-0.1	0	0	0	0	0	
0	-0.2	-0.3	-0.3	-0.2	-0.2	0	0.1	0	6° 45'	-0.1	-0.2	-0.2	-0.2	-0.1	0	-0.1	0	0.1	
0.2	0	-0.2	-0.3	-0.3	-0.3	-0.2	0	0	7° 0'	0	-0.1	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1	0.1	
0.2	0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	0	7° 15'	0	0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	0	
0.1	0	0	-0.1	-0.1	-0.1	-0.2	-0.3	0	7° 30'	0	0.1	0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	
-0.1	-0.1	0	0	0	0.1	0	-0.3	0	7° 45'	0	0.1	0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	
-0.1	-0.1	0	0	0	0.2	0.1	-0.1	0	8° 0'	0	0.1	0	-0.1	-0.2	-0.1	0.1	-0.1	-0.2	
-0.1	0	0	-0.1	0	0.1	0.1	0	0	8° 15'	0	0	0	-0.1	-0.3	-0.1	0.1	0	-0.1	
-0.1	0	0	0	-0.1	-0.1	0	0.1	0	8° 30'	0	0	0	-0.1	-0.3	-0.2	0.1	0	-0.1	
0	0	0.1	0.1	0	-0.2	-0.1	0	0	8° 45'	-0.1	0	0	-0.1	-0.2	-0.2	0	0	-0.1	
0	0	0	0.1	0	-0.1	-0.1	-0.1	0	9° 0'	-0.1	-0.1	0	0	-0.1	-0.1	0	0	-0.1	
0	0	0	0	0.1	0	0	-0.1	0	9° 15'	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0.1	-0.1	
0	0	0	0	0.1	0.1	0.1	0.1	0	9° 30'	0	0	-0.1	-0.1	-0.1	-0.1	0	0.1	0.1	
0	0.1	0.1	0	0	0	0	0.2	0	9° 45'	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0.1	0.1	
0	0.1	0.1	0	-0.1	-0.1	-0.1	0.1	0	10° 0'	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	0.1	



# Correct Astronomical Position to WGS84

Latitude 20 to 10 °S										Longitude 160 to 164 °E									
Correction to Latitude										Correction to Longitude									
160°	160°	161°	161°	162°	162°	163°	163°	164°	Longitude	160°	160°	161°	161°	162°	162°	163°	163°	164°	
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	0° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	
0	0	0	0	-0.1	0	0	0	0	1° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	1° 15'	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	-0.1	-0.1	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1° 30'	-0.1	-0.1	0	0	-0.1	-0.1	0	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	1° 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	0	0	0	0	2° 0'	-0.1	-0.1	0	0	-0.1	-0.1	0	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	2° 15'	-0.1	-0.1	0	0	-0.1	-0.1	0	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	-0.1	-0.1	0	0	2° 30'	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	2° 45'	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	3° 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	-0.1	3° 15'	-0.1	-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	0	-0.1	3° 30'	-0.1	-0.1	0	-0.1	0	-0.1	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	3° 45'	-0.1	-0.1	0	-0.1	0	-0.1	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	4° 0'	-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	-0.1	-0.1	-0.1	4° 15'	-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	4° 30'	-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	0	4° 45'	-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	0	5° 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	-0.1	-0.1	-0.1	-0.1	-0.1	5° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	5° 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	-0.1	5° 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	-0.1	-0.1	-0.1	6° 0'	0	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	
0.1	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	6° 15'	0	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	
0.1	0.1	0	-0.1	-0.1	-0.1	0	0	0	6° 30'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.2	0.1	0	-0.1	-0.1	-0.1	0	0	0	6° 45'	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	-0.1	-0.1	-0.1	0	7° 0'	0.1	0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0.1	0	-0.1	-0.1	-0.1	-0.1	0	7° 15'	0	0.1	0.1	0	0	-0.1	-0.1	-0.1	-0.1	
-0.2	-0.1	0.1	0.1	0	-0.1	-0.1	-0.1	-0.1	7° 30'	-0.1	0	0.1	0.1	0	-0.1	-0.1	-0.1	-0.1	
-0.3	-0.2	0	0.2	0.1	0	0	-0.1	-0.1	7° 45'	-0.1	0	0	0.1	0	-0.1	-0.1	-0.1	-0.1	
-0.2	-0.2	0	0.2	0.2	0	-0.1	-0.1	-0.2	8° 0'	-0.2	-0.1	-0.2	0.1	0.1	0	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.2	0.1	0.2	0	-0.1	-0.2	-0.2	8° 15'	-0.1	-0.1	-0.3	0	0.2	0.1	0	0	-0.1	
0.1	0	-0.2	-0.1	0.2	0.1	-0.1	-0.1	-0.1	8° 30'	-0.1	0	-0.3	-0.2	0.2	0.2	0	0	-0.1	
0	0	-0.1	-0.2	0	0.1	0	0	0	8° 45'	-0.1	0.1	-0.2	-0.3	0.1	0.2	0	0	-0.1	
-0.2	-0.1	-0.1	-0.2	-0.1	0.1	0.1	0.1	0	9° 0'	-0.1	0	-0.1	-0.3	0	0.2	0.1	0	-0.1	
-0.3	-0.2	0	-0.1	-0.1	0	0	0	0	9° 15'	-0.1	-0.1	-0.1	-0.2	-0.1	0.2	0.1	0	0	
-0.1	-0.2	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	9° 30'	0.1	-0.2	-0.2	-0.2	-0.2	0.2	0.1	0	0	
0.2	0.1	0	-0.1	-0.2	0	0	-0.1	0	9° 45'	0.1	-0.2	-0.2	-0.2	-0.2	0.2	0.1	0	0	
0.4	0.3	0.1	-0.2	-0.3	-0.2	0	0	0	10° 0'	0.1	0	-0.1	-0.1	-0.2	0.1	0.2	0	-0.1	

# Correct Astronomical Position to WGS84

Latitude 20 to 10 °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	0	0	0	0	0	-0.1	0	0	0° 0'	0	0	-0.1	0	0	0	0	-0.1	-0.1	0° 0'
0	0	0	0	0	0	-0.1	0	0	0° 15'	0	0	-0.1	0	0	0	0	-0.1	-0.1	0° 15'
0	0	0	0	0	0	0	0	0	0° 30'	0	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	0° 30'
0	0	0	0	0	0	0	0	0	0° 45'	-0.1	0	0	-0.1	0	0	-0.1	-0.1	-0.1	0° 45'
0	0	0	0	0	0	0	0	-0.1	1° 0'	-0.1	0	0	-0.1	0	0	-0.1	-0.1	-0.1	1° 0'
0	0	0	0	0	0	0	0	0	1° 15'	-0.1	0	0	-0.1	0	0	0	0	-0.1	1° 15'
-0.1	0	0	0	0	0	0	0	0	1° 30'	-0.1	-0.1	0	0	0	0	0	0	0	1° 30'
-0.1	0	0	0	0	0	0	0	0	1° 45'	-0.1	-0.1	0	0	0	0	0	0	0	1° 45'
0	0	-0.1	-0.1	0	-0.1	0	0	0	2° 0'	-0.1	-0.1	0	-0.1	0	0	0	0	0	2° 0'
0	0	-0.1	0	0	0	0	0	-0.1	2° 15'	-0.1	-0.1	0	-0.1	0	0	-0.1	0	0	2° 15'
0	0	0	0	0	0	0	0	0	2° 30'	-0.1	0	0	-0.1	0	0	-0.1	0	0	2° 30'
0	0	0	0	-0.1	0	0	0	0	2° 45'	-0.1	0	0	-0.1	0	0	0	0	0	2° 45'
0	-0.1	0	-0.1	-0.1	0	-0.1	-0.1	0	3° 0'	-0.1	0	0	-0.1	0	-0.1	0	0	0	3° 0'
-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	3° 15'	0	0	-0.1	0	0	-0.1	0	0	0	3° 15'
-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	0	3° 30'	0	0	-0.1	0	0	-0.1	0	0	-0.1	3° 30'
-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	-0.1	3° 45'	0	-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	3° 45'
-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	4° 0'	0	-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	4° 0'
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	4° 15'	0	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	4° 15'
0	-0.1	-0.1	-0.1	0	0	0	0	0	4° 30'	-0.1	-0.1	-0.1	0	0	0	0	-0.1	-0.1	4° 30'
0	0	-0.1	-0.1	0	0	0	0	0	4° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	4° 45'
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	5° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	5° 0'
-0.1	0	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	5° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	5° 15'
-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	5° 30'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	5° 45'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	6° 0'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	6° 15'
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 30'	-0.1	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	6° 30'
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 45'	-0.1	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	6° 45'
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 0'	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 0'
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 15'	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	7° 15'
-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	7° 30'	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	7° 30'
-0.1	-0.1	-0.1	0	0	0	0	-0.1	-0.1	7° 45'	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	7° 45'
-0.2	-0.2	-0.1	0	0.1	0.1	0	-0.1	-0.1	8° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	8° 0'
-0.2	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	8° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	8° 15'
-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	8° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	8° 30'
0	0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	8° 45'	-0.1	-0.1	-0.1	0	0	-0.1	0	0	-0.1	8° 45'
0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	9° 0'	-0.1	-0.1	0	0	0	-0.1	0	0	-0.1	9° 0'
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 15'	0	-0.1	0	0	0	-0.1	0	0	-0.1	9° 15'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 30'	0	0	0	0	0	0	0	0	-0.1	9° 30'
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 45'	0	0	0	0	0	0	0	0	-0.1	9° 45'
0	0.1	0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	10° 0'	-0.1	-0.1	0	0	0	0	0	0	-0.1	10° 0'

# Correct Astronomical Position to WGS84

Latitude 20 to 10 °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	0	0	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	0	0	-0.1	0	0	0	0	0	0° 15'	-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	0° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	
0	0	0	-0.1	-0.1	0	0	0	-0.1	0° 45'	-0.1	-0.1	0	-0.1	-0.1	0	0	-0.1	-0.1	
-0.1	0	0	0	0	0	0	0	-0.1	1° 0'	-0.1	-0.1	0	-0.1	-0.1	0	0	0	-0.1	
0	-0.1	0	0	0	0	0	0	-0.1	1° 15'	-0.1	-0.1	0	-0.1	-0.1	0	0	0	-0.1	
0	-0.1	-0.1	0	0	0	0	0	-0.1	1° 30'	0	-0.1	-0.1	-0.1	-0.1	0	0	0	0	
0	-0.1	-0.1	0	0	0	0	0	-0.1	1° 45'	0	0	-0.1	-0.1	-0.1	0	0	0	0	
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	2° 0'	0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	
-0.1	0	-0.1	-0.1	-0.1	-0.1	0	0	0	2° 15'	0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	2° 30'	0	0	0	-0.1	-0.1	-0.1	0	0	0	
0	0	0	-0.1	-0.1	0	0	0	0	2° 45'	0	0	0	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	3° 0'	0	0	0	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	3° 15'	0	0	0	0	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	3° 30'	-0.1	0	0	0	-0.1	-0.1	0	0	0	
-0.1	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	3° 45'	-0.1	0	0	0	-0.1	-0.1	0	0	0	
-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 0'	-0.1	0	0	-0.1	-0.1	-0.1	0	0	-0.1	
0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	4° 15'	-0.1	0	0	-0.1	-0.1	-0.1	0	0	-0.1	
0	0	0	0	0	-0.1	-0.1	0	0	4° 30'	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	
0	0	0	0	0	0	0	0	0	4° 45'	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	5° 0'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	0	0	0	0	0	0	0	-0.1	5° 15'	0	0	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	
-0.1	0	0	0	0	0	0	-0.1	-0.1	5° 30'	0	0	-0.1	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	5° 45'	0	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	6° 0'	0	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	0	-0.1	0	-0.1	-0.1	0	6° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	
-0.1	-0.1	-0.1	0	-0.1	0	0	0	0	6° 30'	-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	0	0	0	-0.1	6° 45'	-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	0	0	0	7° 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	0	0	0	0	0	7° 15'	-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	-0.1	-0.1	7° 30'	-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	-0.1	-0.1	-0.1	7° 45'	-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	-0.1	-0.1	-0.1	8° 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	-0.1	-0.1	-0.1	-0.1	-0.1	8° 15'	-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	-0.1	8° 30'	-0.1	-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	8° 45'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	
-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 0'	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	9° 15'	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	9° 30'	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.2	-0.1	0	-0.1	-0.1	-0.2	-0.2	9° 45'	0	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.2	-0.2	-0.1	0	-0.1	-0.2	-0.2	10° 0'	0	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	

# Correct Astronomical Position to WGS84

Latitude 20 to 10 °S										Longitude 172 to 176 °E									
Correction to Latitude										Correction to Longitude									
172°	172°	173°	173°	174°	174°	175°	175°	176°	Longitude	172°	172°	173°	173°	174°	174°	175°	175°	176°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0.1	0.2	0	0	0	0	0	0° 0'	-0.1	0	0.1	0	-0.1	-0.1	0	0	0	
0	0	0.1	0.2	0	-0.1	0	0	0	0° 15'	-0.1	0	0	0	0	-0.1	0	0	0	
-0.1	-0.1	0	0	-0.1	-0.2	-0.1	0	0	0° 30'	-0.1	-0.1	-0.1	0.1	0.1	-0.1	-0.1	0	0	
-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	0° 45'	-0.1	-0.1	-0.1	0.1	0.1	-0.1	-0.2	0	0	
-0.1	-0.1	-0.1	0	0.1	0	-0.1	-0.1	-0.1	1° 0'	-0.1	-0.1	-0.1	0	0.1	0	-0.2	0	0	
-0.1	-0.1	0	0	0.1	0.1	-0.1	-0.1	-0.1	1° 15'	-0.1	-0.1	-0.1	0	0.1	0.1	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	0	0.1	0	-0.1	0	1° 30'	0	-0.1	-0.1	-0.1	0	0.1	-0.1	0	0	
-0.1	-0.1	-0.1	-0.1	-0.1	0.1	0.1	0	0	1° 45'	0	-0.1	-0.1	-0.1	0	0.1	0	0	-0.1	
0	0	-0.1	-0.1	-0.1	0	0.1	0	0	2° 0'	0	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	
0	0	-0.1	-0.1	-0.1	0	0	0	0	2° 15'	0	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	
0	0	-0.1	-0.1	-0.1	0	0	0.1	0	2° 30'	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0.1	2° 45'	0	0	0	-0.1	-0.1	-0.1	0	0	0	
0	0	0	0	-0.1	-0.1	0	0	0	3° 0'	0	0	0	-0.1	-0.1	-0.1	0	0	0	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	3° 15'	0	0	0	0	-0.1	-0.1	0	0	0	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	3° 30'	0	-0.1	0	0	-0.1	-0.1	0	0	-0.1	
-0.1	0	0	0	0	0	0	-0.1	-0.1	3° 45'	0	-0.1	0	0	-0.1	0	0	0	-0.1	
-0.1	0	0	0	0	0	0	0	0	4° 0'	-0.1	-0.1	0	-0.1	-0.1	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	4° 15'	-0.1	-0.1	0	-0.1	0	0	0	0	-0.1	
0	0	0	-0.1	-0.1	-0.1	-0.1	0	0	4° 30'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	4° 45'	-0.1	-0.1	0	0	0	-0.1	0	-0.1	0	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 0'	-0.1	0	0	0	0	0	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	5° 15'	0	0	0	0	0	0	-0.1	-0.1	0	
-0.1	-0.1	-0.1	0	0	0	0	-0.1	-0.1	5° 30'	0	0	0	0	0	0	0	0	0	
-0.1	-0.1	-0.1	0	0	0	0	0	-0.1	5° 45'	0	0	-0.1	-0.1	0	0	0	0	0	
-0.1	0	-0.1	0	-0.1	-0.1	-0.1	0	0	6° 0'	0	0	-0.1	-0.1	0	0	-0.1	0	0	
0	0	0	-0.1	-0.1	-0.1	-0.1	0	0	6° 15'	-0.1	0	-0.1	-0.1	0	0	-0.1	0	0	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	6° 30'	-0.1	0	0	0	0	0	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	6° 45'	-0.1	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	7° 0'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 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	7° 30'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	7° 45'	0	0	0	0	0	0	-0.1	0	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	0	-0.1	8° 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	-0.1	-0.1	8° 15'	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	8° 30'	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	8° 45'	0	0	0	0	0	0	0	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	9° 0'	-0.1	0	0	0	0	-0.1	0	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	9° 15'	-0.1	0	0	0	0	-0.1	0	0	0	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	0	9° 30'	-0.1	-0.1	0	0	0	-0.1	0	-0.1	0	
-0.2	-0.1	-0.1	-0.1	-0.1	0	-0.1	0	0	9° 45'	-0.1	-0.1	0	-0.1	0	0	0	-0.1	0	
-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0	0	0	10° 0'	-0.1	-0.1	0	-0.1	-0.1	0	0	-0.1	0	

# Correct Astronomical Position to WGS84

Latitude 20 to 10 °S										Longitude 176 to 180 °E									
Correction to Latitude										Correction to Longitude									
176°	176°	177°	177°	178°	178°	179°	179°	180°	Longitude	176°	176°	177°	177°	178°	178°	179°	179°	180°	
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	0° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 30'	0	0	0	0	0	-0.1	0	0	0	
-0.1	-0.1	0	0	0	0	0	0	0	0° 45'	0	-0.1	0	0	0	-0.1	0	0	0	
-0.1	-0.1	0	0	0	0	0	0	0	1° 0'	0	-0.1	-0.1	0	0	-0.1	0	0	0	
-0.1	0	0	0	0	0	0	0	0	1° 15'	0	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 30'	0	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	-0.1	0	0	0	0	1° 45'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	0	0	0	-0.1	0	0	0	0	2° 0'	-0.1	-0.1	0	0	0	0	0	0	0	
0	-0.1	-0.1	0	0	0	0	0	0	2° 15'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0	-0.1	-0.1	0	0	0	0	0	0	2° 30'	0	0	-0.1	0	0	0	0	0	0	
0.1	0	0	0	0	-0.1	-0.1	0	0	2° 45'	0	0	-0.1	0	0	0	0	0	0	
0	0.1	0	-0.1	0	-0.1	-0.1	0	0	3° 0'	0	0	-0.1	0	0	0	0	0	0	
-0.1	0	0	-0.1	0	0	0	0	0	3° 15'	0	0	0	0	0	0	0	0	0	
-0.1	0	0	-0.1	0	0	0	0	0	3° 30'	-0.1	0	0	0	0	0	0	-0.1	-0.1	
-0.1	-0.1	0	0	0	0	0	0	0	3° 45'	-0.1	-0.1	0	0	0	0	0	-0.1	-0.1	
-0.1	-0.1	0	0	-0.1	0	0	0	0	4° 0'	-0.1	-0.1	0	0	0	0	0	-0.1	-0.1	
0	-0.1	-0.1	0	0	0	0	0	0	4° 15'	-0.1	-0.1	0	0	0	0	0	-0.1	-0.1	
0	-0.1	-0.1	0	0	0	0	0	0	4° 30'	-0.1	0	0	0	-0.1	-0.1	0	-0.1	0	
0	-0.1	-0.1	0	0	0	0	0	0	4° 45'	0	0	-0.1	0	-0.1	-0.1	0	-0.1	0	
-0.1	0	0	0	0	0	0	0	0	5° 0'	0	0	-0.1	0	-0.1	-0.1	0	0	0	
-0.1	0	0	0	0	0	0	0	0	5° 15'	0	-0.1	-0.1	0	-0.1	-0.1	0	0	-0.1	
-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	5° 30'	0	-0.1	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	5° 45'	0	-0.1	0	-0.1	-0.1	0	0	0	-0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	6° 0'	0	-0.1	0	-0.1	-0.1	0	0	0	-0.1	
0	0	0	0	-0.1	-0.1	0	0	0	6° 15'	0	-0.1	0	-0.1	-0.1	0	0	0	-0.1	
0	0	0	0	0	-0.1	-0.1	0	0	6° 30'	0	0	0	-0.1	-0.1	-0.1	0	0	-0.1	
0	0	0	0	0	-0.1	-0.1	-0.1	0	6° 45'	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	-0.1	-0.1	-0.1	7° 0'	-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	7° 15'	-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	-0.1	7° 30'	-0.1	0	0	-0.1	0	0	-0.1	-0.1	-0.1	
-0.1	-0.1	0	-0.1	-0.1	0	0	0	-0.1	7° 45'	-0.1	0	0	-0.1	0	0	-0.1	-0.1	-0.1	
-0.1	-0.1	0	-0.1	-0.1	0	0	-0.1	-0.1	8° 0'	-0.1	0	0	-0.1	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	8° 15'	0	-0.1	0	-0.1	0	-0.1	0	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	8° 30'	0	-0.1	0	-0.1	0	-0.1	0	-0.1	-0.1	
-0.1	-0.1	0	0	0	0	0	-0.1	-0.1	8° 45'	0	-0.1	0	-0.1	0	0	0	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	0	0	-0.1	-0.1	9° 0'	-0.1	-0.1	0	-0.1	0	0	0	0	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	9° 15'	0	-0.1	-0.1	-0.1	0	-0.1	0	0	-0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	9° 30'	0	-0.1	-0.1	-0.1	0	-0.1	0	0	-0.1	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 45'	0	-0.1	-0.1	-0.1	0	0	0	0	-0.1	
0	0	-0.1	-0.1	0	0	-0.1	-0.2	-0.2	10° 0'	0	-0.1	0	0	0	0	0	0	-0.1	

# Correct Astronomical Position to WGS84

Latitude 20 to 10 °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	0	0	0	0	0	0° 0'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	0° 15'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	0° 30'	0	0	0	0	0	-0.1	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	0° 45'	0	0	0	0	0	-0.1	0	0.1	0	-0.1
0	0	0	0	0	0	0	0	0	1° 0'	0	0	0	0	0	-0.1	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	1° 15'	0	0	0	0	0	-0.1	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	1° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 30'	0	-0.1	-0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 45'	0	-0.1	-0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 0'	0	-0.1	-0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 15'	0	0	-0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 30'	-0.1	0	-0.1	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	3° 45'	-0.1	-0.1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 0'	-0.1	-0.1	-0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 15'	-0.1	-0.1	-0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 30'	0	-0.1	-0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 45'	0	-0.1	-0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 0'	0	0	-0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 15'	-0.1	0	-0.1	0	0	0	0	0	0	0
-0.1	0	0	0	0	0	0	0	0	5° 30'	-0.1	0	0	0	0	0	0	0	0	0
-0.1	0	0	0	0	0	0	0	0	5° 45'	-0.1	-0.1	0	0	0	0	0	0	0	0
-0.1	-0.1	0	0	0	0	0	0	0	6° 0'	-0.1	-0.1	0	0	0	0	0	0	0	0
0	-0.1	0	0	0	0	0	0	0	6° 15'	-0.1	-0.1	-0.1	0	0	0	-0.1	0	0	0
0	0	0	0	0	0	0	0	0	6° 30'	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	0	0	0
0	0	0	-0.1	-0.1	0	0	0	0	6° 45'	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	0	0	0
-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 0'	-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	-0.1	-0.1	-0.1	7° 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	-0.1	7° 30'	-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	-0.1	7° 45'	-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	-0.1	8° 0'	-0.1	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	-0.1	8° 15'	-0.1	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	-0.1	8° 30'	-0.1	0	-0.1	0	0	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	8° 45'	-0.1	-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	-0.1	9° 0'	-0.1	-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	-0.1	9° 15'	-0.1	-0.1	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	-0.1	9° 30'	-0.1	-0.1	0	0	0	-0.1	0	0	0	-0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 45'	-0.1	-0.1	0	-0.1	-0.1	0	0	0	0	0
-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	10° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0

# Correct Astronomical Position to WGS84

Latitude 20 to 10 °S										Longitude 176 to 172 °W									
Correction to Latitude										Correction to Longitude									
176°	175°	175°	174°	174°	173°	173°	172°	172°	Longitude	176°	175°	175°	174°	174°	173°	173°	172°	172°	
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	0° 0'	-0.1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0° 15'	-0.1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0° 30'	-0.1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0° 45'	-0.1	-0.1	0	0	0	0	0	0	0	0
0	0	-0.1	0	0	0	0	0	0	1° 0'	-0.1	-0.1	0	0	0	0	0	0	0	0
0	-0.1	-0.1	-0.1	0	0	0	0	0	1° 15'	-0.1	0	0	0	0	0	0	0	0	0
0	-0.1	-0.1	-0.1	0	0	0	0	0	1° 30'	0	0	0	-0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1° 45'	0	0.1	0	-0.1	0	0	0	0	0	0
0	0	0.1	0.1	0	0	0	0	0	2° 0'	0	0	0	-0.1	0	0	0	0	0	0
0	0	0.1	0.1	0	0	0	0	-0.1	2° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	-0.1	2° 30'	0	0	-0.1	0	0	0	0	0	0	0
0	0	0	-0.1	0	0	0	0	0	2° 45'	0	0	-0.1	0	0	0	0	0	0	0.1
0	0	0	-0.1	0	0	0	0	0	3° 0'	0	0	0	0	0	0	0	0	0	0.1
0	0	0	0	0	0	0	0	0	3° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 30'	-0.1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0.1	0	0	0	4° 15'	0	0	0	-0.1	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	4° 30'	0	0	0	-0.1	-0.1	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	4° 45'	0	0	0	0	-0.1	0	0	0	0	-0.1
0	0	0	0	0	0	0	0.1	0.1	5° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 30'	0	0	0	0	0	-0.1	0	0	0	0
0	0	0	0	0	0	0	0	-0.1	5° 45'	0	0	0	0	0	-0.1	0	0	0	0
0	0	0	0	0	0	0	0	0	6° 0'	0	0	0	0	0	-0.1	0	0	0	0
0	0	0	0	0	0	0	0	0	6° 15'	0	0	0	0	0	-0.1	0	0	0	0
0	0	0	0	0	0	0	0	0	6° 30'	0	0	0	0	0	0	0	0	0	0
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	6° 45'	0	0	0	0	0	0	0	0	0	0
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	7° 0'	0	0	0	0	0	-0.1	0	0	0	0
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	7° 15'	0	0	0	0	0	-0.1	0	0	0	0
-0.1	-0.1	0	0	0	0	-0.1	-0.1	0	7° 30'	0	0	0	0	0	-0.1	0	0	0	0
-0.1	-0.1	0	0	0	0	-0.1	-0.1	0	7° 45'	0	0	0	0	0	0	0	0	0	0
-0.1	0	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	8° 0'	0	0	0	0	0	0	0	0	-0.1	0
-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 15'	0	0	0	0	0	0	0.1	-0.1	-0.1	0
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	8° 30'	-0.1	0	0	0	0	0	0.1	-0.1	-0.1	0
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	8° 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	-0.1	9° 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	-0.1	9° 15'	-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	0	9° 30'	-0.1	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	9° 45'	0	0	0	0	0	0	-0.1	-0.1	0	0
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	10° 0'	0	0	0	0	0	0	-0.1	-0.1	-0.1	0

# Correct Astronomical Position to WGS84

Latitude 20 to 10 °S										Longitude 172 to 168 °W									
Correction to Latitude										Correction to Longitude									
172° 0'	171° 30'	171° 0'	170° 30'	170° 0'	169° 30'	169° 0'	168° 30'	168° 0'	Longitude	172° 0'	171° 30'	171° 0'	170° 30'	170° 0'	169° 30'	169° 0'	168° 30'	168° 0'	Latitude
0	0	0	0	0	0	0	0	0	0° 0'	0	0	0	0	0	0	0	0	0	0° 0'
0	0	-0.1	0	0	0	0	0	0	0° 15'	0	0	0	0	0	0	0	0	0	0° 15'
0	0	0	0	0	0	0	0	0	0° 30'	0	0	0	0	0	0	0	0	0	0° 30'
0	0	0	0	0	0	0	0	0	0° 45'	0	0	0	0	0	0	0	0	0	0° 45'
0	0	0	0	0	0	0	0	0	1° 0'	0	0	0	0	0	0	0	0	0	1° 0'
0	0	0	0	0	0	0	-0.1	0	1° 15'	0	0	0	0	0	0	0	0	0	1° 15'
0	0	0	0	0	0	-0.1	-0.1	0	1° 30'	0	0	0	0	0	0	0	0	0	1° 30'
0	0	0	0	0	0	-0.1	-0.1	0	1° 45'	0	0	0	0	0	0	0	0	0	1° 45'
0	0	0	0	0	0	0	0	0	2° 0'	0	0	0	0	0	0	0	0	0	2° 0'
-0.1	-0.1	0	0	0	0	0	0	0	2° 15'	0	0	0	0	0	0	0	0	0	2° 15'
-0.1	-0.1	-0.1	0	0	0	0	0	0	2° 30'	0	-0.1	-0.1	0	0	0	0	0	0	2° 30'
0	-0.1	-0.1	0	0	0	0	0	0	2° 45'	0.1	-0.1	-0.1	0	0	0	0	0	0	2° 45'
0	0	-0.1	0	0	0	0	0	0	3° 0'	0.1	0	-0.1	0	0	0	0	0	0	3° 0'
0	0.1	0	-0.1	0	0	0	0	0	3° 15'	0	0	0	-0.1	0	0	0	0	0	3° 15'
0	0	0	0	0	0	0	0	0	3° 30'	0	0	0	-0.1	0	0	0	0	0	3° 30'
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	-0.1	0	0	0	0	0	3° 45'
0	0	0	0	0	0	0	0	0	4° 0'	0	0	0	-0.1	0	0	0	0	0	4° 0'
0	0	0	0	0	0	0	0	0	4° 15'	-0.1	0	0	-0.1	0	0	0	0	0	4° 15'
0	0	0	0	0	0	0	0	0	4° 30'	-0.1	0	0	0	0	0	0	0	0	4° 30'
0	0	0	0	0	0	0	0	0	4° 45'	-0.1	0	0	0	0	0	0	0	0	4° 45'
0.1	0	0	0	0	0	0	0	0	5° 0'	0	0	0	0	0	0	0	0	0	5° 0'
0	0	0	0	0	0	0	0	0	5° 15'	0	0	0	0	0	0	0	0	0	5° 15'
0	0	0	0	0	0	0	0	0	5° 30'	0	0	0	0	0	0	0	0	0	5° 30'
-0.1	0	0	0	0	0	0	0	0	5° 45'	0	0	0	0	0	0	0	0	0	5° 45'
0	0	0	0	0	0	0	0	0	6° 0'	0	0	0	0	0	0	0	0	0	6° 0'
0	0	0	0	0	0	0	0	0	6° 15'	0	0	0	0	0	0	0	0	0	6° 15'
0	0	-0.1	0	0	0	0	0	0	6° 30'	0	0	0	0	0	0	0	0	0	6° 30'
0	0	-0.1	-0.1	0	0	0	0	0	6° 45'	0	0	0	0	0	0	0	0	0	6° 45'
0	0	0	0	0	0	0	0	0	7° 0'	0	0	0	0	-0.1	0	0	0	0	7° 0'
0	0	0	0	0	0	0	0	0	7° 15'	0	0	0	0	-0.1	0	0	0	0	7° 15'
0	0	0	0	0	-0.1	0	0	0	7° 30'	0	0	0	0	-0.1	0	0	0	0	7° 30'
0	0	0	0	0	-0.1	-0.1	0	0	7° 45'	0	0	0	0	0	0	0	0	0	7° 45'
-0.1	0	0	0	0	0	0	0	0	8° 0'	0	0	0	0	0	0	0	0	0	8° 0'
-0.1	0	0	0	-0.1	0	0	0	0	8° 15'	-0.1	0	0	0	0	0	0	0	0	8° 15'
-0.1	-0.1	0	0	0	0	0	0	0	8° 30'	-0.1	0	0	0	0	0	0	0	0	8° 30'
-0.1	-0.1	-0.1	0	0	0	0	0	0	8° 45'	-0.1	0	0	0	0	0	-0.1	0	0	8° 45'
-0.1	-0.1	-0.1	0	0	0	0	0	0	9° 0'	0	0	-0.1	0	0	0	-0.1	0	0	9° 0'
-0.1	-0.1	0	0	0	0	0	0	0	9° 15'	0	0	-0.1	0	0	0	-0.1	-0.1	0	9° 15'
0	0	0	0	-0.1	0	0	0	0	9° 30'	0	0	-0.1	0	0	0	0	-0.1	0	9° 30'
0	0	0	0	0	0	0	0	0	9° 45'	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	0	9° 45'
-0.1	0	0	0	0	0	0	0	0	10° 0'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	0	10° 0'



# Correct Astronomical Position to WGS84

Latitude 20 to 10 °S										Longitude 168 to 164 °W									
Correction to Latitude										Correction to Longitude									
168°	167°	167°	166°	166°	165°	165°	164°	164°	Longitude	168°	167°	167°	166°	166°	165°	165°	164°	164°	
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	0° 0'	0	0	0	0	0	0	0.1	0	0	
0	0	0	0	0	0	0	0.1	0	0° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 30'	0	0	0	0	0	0	0	0	0	
0	0	-0.1	-0.1	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	1° 0'	0	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	-0.1	-0.1	-0.1	3° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	-0.1	-0.1	3° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 45'	0	0	0	0	0	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	6° 0'	0	0	0	0	0	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	6° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 0'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	7° 15'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	7° 30'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	7° 45'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	8° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0.1	8° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	8° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	8° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	9° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	9° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	9° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	9° 45'	0	0	0	0	-0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	10° 0'	0	0	0	0	-0.1	0	0	0	0	0

# Correct Astronomical Position to WGS84

Latitude 20 to 10 °S										Longitude 164 to 160 °W									
Correction to Latitude										Correction to Longitude									
164°	163°	163°	162°	162°	161°	161°	160°	160°	Longitude	164°	163°	163°	162°	162°	161°	161°	160°	160°	
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	0° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 30'	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	1° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 0'	0	0	-0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 15'	0	0	0	0	0	0	0	0	0	
0	0.1	0.1	0	0	0	0	0	0	5° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0.1	0.1	0	0	0	0	6° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0.1	0	0	0	0	0	6° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 0'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 15'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 30'	-0.1	0	0	0	0	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	7° 45'	-0.1	0	-0.1	0	0	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	8° 0'	0	0	-0.1	0	0	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	8° 15'	0	0	-0.1	0	0	-0.1	0	0	0	
0	0	0	0	0.1	0.1	0	0	0	8° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0.1	0	0	0	8° 45'	0	0	0	-0.1	0	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	9° 0'	0	0	0	-0.1	-0.1	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	9° 15'	0	0	0	0	-0.1	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	9° 30'	0	0	0	0	-0.1	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	9° 45'	0	0	0	0	-0.1	0	0	0	-0.1	
0	0	0	0	0	0	0	-0.1	0	10° 0'	0	0	0	0	-0.1	0	-0.1	0	-0.1	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 160 to 156 °W									
Correction to Latitude										Correction to Longitude									
160°	159°	159°	158°	158°	157°	157°	156°	156°	Longitude	160°	159°	159°	158°	158°	157°	157°	156°	156°	
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	0° 0'	0	0	0	0	0	0	0	0	0	0
0	0.1	0	0	0	0	0	0	0	0° 15'	0	0	0	0	0	0	0	0	0	0
0	0.1	0	0	0	0	0	0	0	0° 30'	0	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	1° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0.1	0	0	4° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 30'	0	0	0	0	0	0	0	0	0	0
0	0.1	0	0	0	0	0	0	0	5° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0.1	6° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0.1	6° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	6° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	6° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	7° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	7° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0.1	0	0	0	0.1	7° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0.1	0	0	0	0.1	0.1	7° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.1	0.1	8° 0'	0	-0.1	0	0	0	0	0	0	0	0
0	0	0	0	-0.1	0	0	0	0	8° 15'	0	-0.1	-0.1	0	0	0	0	0	0	0
0	0	0	-0.1	-0.1	-0.1	0	0	0	8° 30'	0	-0.1	0	0.1	0	-0.1	0	0	0	0
0	0	0	0	-0.1	0	0	0	0	8° 45'	-0.1	-0.1	0	0.1	0	-0.2	0	0	0	0
0	0	0	0	0.1	0	0	0	0	9° 0'	-0.1	-0.1	0	0.1	0	-0.2	0	0	0	0
0	0	0	0.1	0.2	0.1	0	0	0	9° 15'	-0.1	-0.1	0	0.1	0	-0.1	0	0	0	0
0	0	0	0.1	0.2	0.1	0	0	0	9° 30'	-0.1	0	0	0	0	-0.1	0	0	0	0
0	0	0	0	0.1	0.1	0	0	0	9° 45'	-0.1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	10° 0'	-0.1	0	0	-0.1	0	0	0	0	0	0



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 152 to 148 °W									
Correction to Latitude										Correction to Longitude									
152°	151°	151°	150°	150°	149°	149°	148°	148°	Longitude	152°	151°	151°	150°	150°	149°	149°	148°	148°	
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	0° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0° 30'	0	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	1° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 0'	0	0	0	0	0	0	0	0	0	0
0.1	0	0	0	0.1	0	0.1	0	0	4° 15'	0	0	0	0	0	0	0	0	0	0
0.1	0	0	0.1	0.1	0	0	0.1	0.1	4° 30'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0	0	0	0	0	0.1	0.1	4° 45'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0	0	0	0	0	0.1	0.1	5° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0.1	0.1	0.1	0	5° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0.1	0.1	0.1	0.1	0	5° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0.1	0.1	0	0	5° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0.1	6° 0'	0	0	0	0	0	0	0	0	0	0
0	0.1	0	0	0	0	0	0	0.1	6° 15'	0	0	0	0	0	0	0	0	0	0
0	0.1	0.1	0	0.1	0	0.1	0.1	0.1	6° 30'	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	6° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0.1	0.1	0.1	0.1	0	0	0	7° 0'	0	-0.1	0	0	0	0	0	0	0	0
0	0	0	0.1	0	0	0	0	0	7° 15'	0	-0.1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	7° 30'	0	-0.1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	7° 45'	0	0	-0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	8° 0'	0	0	-0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	8° 15'	0	0	-0.1	-0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	8° 30'	0	0	-0.1	-0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	8° 45'	0	0	0	-0.1	0	0	0	0	0	0
0	0	0.1	0	0	0	0	0	0	9° 0'	0	0	0	-0.1	0	0	0	0	0	0
0	0	0.1	0	0	0	0	0	0	9° 15'	0	0	0	0	-0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	9° 30'	0	0	0	0	-0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	9° 45'	0	0	0	0	-0.1	0	0	0	0	0
0.1	0.1	0	0	0	0	0	0	0	10° 0'	0	0	0	0	-0.1	0	0	0	0	0





# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 140 to 136 °W									
Correction to Latitude										Correction to Longitude									
140°	139°	139°	138°	138°	137°	137°	136°	136°	Longitude	140°	139°	139°	138°	138°	137°	137°	136°	136°	
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	0° 0'	0	0	0	0	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	0° 15'	0	0	0	0	0	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	0° 30'	0	0	0	0	0	0	-0.1	-0.1	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	1° 0'	0	0	0	0	0	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	1° 15'	0	0	0	0	0	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	1° 30'	0	0	0	0	0	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	1° 45'	0	0	0	0	0	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	2° 0'	0	0	0	0	-0.1	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	2° 15'	0	0	0	0	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 30'	0	0	0	0	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 0'	0	0	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	7° 15'	0	0	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	7° 30'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 45'	-0.1	-0.1	0	0	0	0	0	0	0	
0.1	0	0	0	0	0	0	0	0	8° 0'	-0.1	-0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	8° 15'	-0.1	-0.1	0	0	0	0	0	0	0	
-0.1	-0.1	0	0	0	0	0	0	0	8° 30'	0	-0.1	-0.1	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	8° 45'	0	-0.1	-0.1	0	0	0	0	0	0	
0.1	0	-0.1	0	0	0	0	0	0	9° 0'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
0.2	0	-0.1	-0.1	0	0	0	0	0	9° 15'	0	-0.1	-0.1	-0.1	0	0	0	0	0	
0.2	0	-0.1	-0.1	0	0	0	0	0	9° 30'	0	0	0	-0.1	-0.1	0	0	0	0	
0.1	0.1	0	-0.1	0	0	0	0	0	9° 45'	0.1	0.1	0	-0.1	-0.1	0	0	0	0	
0.1	0.1	0.1	0	0	0	0	0	0	10° 0'	0	0.1	0	-0.1	-0.1	-0.1	0	0	0	































# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 84 to 80 °W									
Correction to Latitude										Correction to Longitude									
84°	83°	83°	82°	82°	81°	81°	80°	80°	Longitude	84°	83°	83°	82°	82°	81°	81°	80°	80°	Longitude
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude
0	0	0	0	-0.1	0	0	-0.1	0	0° 0'	0.1	0.1	0.1	0.1	0.1	-0.1	0	0.2	0.2	0° 0'
0	0	0	0	0	0	0	-0.1	0	0° 15'	0.1	0.1	0.1	0.1	0.1	-0.1	0.1	0.2	0.2	0° 15'
0	0	0	0	0	0.1	0	-0.1	0	0° 30'	0.1	0.1	0.1	0.1	0	-0.1	0.1	0.2	0.2	0° 30'
0	0	0	0	0.1	0.1	0	-0.1	0	0° 45'	0.1	0.1	0.1	0.1	0	0	0.2	0.2	0.1	0° 45'
0	0	0	0	0.1	0	-0.1	-0.2	0	1° 0'	0.1	0.1	0.1	0.1	0	0	0.3	0.2	0.1	1° 0'
0	0	0	0	0.1	0	-0.1	-0.2	0	1° 15'	0.1	0.1	0.1	0.1	0	0	0.3	0.2	0	1° 15'
0	0	0.1	0.1	0.1	0	0	-0.1	0	1° 30'	0.1	0.1	0.1	0	0	0.1	0.4	0.2	0	1° 30'
0	0	0.1	0.1	0.1	0.1	0	0.1	0	1° 45'	0.1	0.1	0.1	0	0	0.1	0.4	0.3	0	1° 45'
0	0	0.1	0	0.1	0.1	0.1	0.2	0	2° 0'	0.1	0.1	0.1	0.1	0	0.1	0.4	0.2	0.1	2° 0'
0	0	0	0	0.1	0.1	0.1	0.3	0	2° 15'	0.1	0.1	0.1	0.1	0	0.1	0.3	0.2	0.1	2° 15'
0	0	0	0	0.1	0.1	0.2	0.3	0	2° 30'	0.1	0.1	0.1	0	-0.1	0.1	0.2	0.1	0.2	2° 30'
0	0	0	0.1	0.1	0.1	0.2	0.2	0	2° 45'	0.1	0.1	0.1	0	-0.1	0.1	0.2	0.1	0.2	2° 45'
0	0	0	0.1	0.1	0.1	0.2	0.1	0	3° 0'	0.1	0.1	0.1	0	-0.1	0.1	0.1	0.1	0.3	3° 0'
0	0	0.1	0.1	0.1	0.1	0.1	0	0	3° 15'	0.1	0.1	0.1	0	-0.1	0.1	0.1	0.2	0.3	3° 15'
0	0	0.1	0.1	0.1	0	-0.1	-0.2	0	3° 30'	0.1	0.1	0	-0.1	-0.1	0.1	0.2	0.3	0.3	3° 30'
0	0.1	0.1	0.1	0.1	0	-0.3	-0.3	0	3° 45'	0.1	0	0	-0.1	0	0.2	0.2	0.3	0.2	3° 45'
0	0.1	0	0	0.1	0	-0.3	-0.3	0	4° 0'	0.1	0	0	-0.1	0	0.3	0.3	0.2	0.2	4° 0'
0	0	0	0	0.1	-0.1	-0.2	-0.2	0	4° 15'	0	0.1	0	-0.1	0	0.4	0.4	0.2	0.1	4° 15'
0	0	0	0.1	0.1	-0.1	-0.1	0	0	4° 30'	0	0.1	0	-0.1	0	0.5	0.4	0.2	0.1	4° 30'
0	0	0	0.1	0.1	0	0	0.1	0	4° 45'	0.1	0.1	0	-0.1	0	0.5	0.3	0.2	0.2	4° 45'
0	0	0	0	0.1	0	0.1	0.2	0	5° 0'	0.1	0	0	-0.1	0.1	0.5	0.3	0.1	0.3	5° 0'
0	0	0	0	0	0.1	0.1	0.1	0	5° 15'	0.1	0	0	-0.1	0	0.5	0.2	0.1	0.3	5° 15'
0	0	0	0	0	0.1	0.1	0.1	0	5° 30'	0.1	0	0	-0.1	0	0.5	0.3	0	0.3	5° 30'
0	0	0	0	0	0.1	0.1	0	0	5° 45'	0.1	0	0	-0.1	0	0.5	0.3	0	0.2	5° 45'
0	0	0	0	0	0.1	0.1	0	0	6° 0'	0.1	0	0	-0.1	0	0.4	0.4	0	0.1	6° 0'
0	0	0	0	0	0.1	0.1	0	0	6° 15'	0.1	0	0	-0.1	-0.1	0.4	0.4	0	0.1	6° 15'
0	0	0	0	0	0.1	0.2	0.1	0	6° 30'	0	0	0	-0.1	-0.1	0.3	0.4	0	0.1	6° 30'
0	0	0	0	0	0.1	0.2	0.1	0	6° 45'	0	0	0	-0.1	-0.1	0.2	0.4	0.1	0	6° 45'
0	0	0	0	-0.1	0.1	0.2	0.1	0	7° 0'	0.1	0	0	0	-0.1	0.1	0.4	0.2	0.1	7° 0'
0	0	0	0	-0.1	0	0.2	0.2	0	7° 15'	0.1	0	0	0	-0.1	0	0.4	0.2	0.1	7° 15'
0	0	0	0	-0.1	0	0.1	0.2	0	7° 30'	0.1	0.1	0	0	-0.1	0	0.3	0.3	0.2	7° 30'
0	0	0	0	0	0	0.1	0.1	0	7° 45'	0.1	0.1	0	0	-0.1	-0.1	0.3	0.3	0.2	7° 45'
0	0	0	0	0	0	0	0.1	0	8° 0'	0.1	0.1	0	0	-0.1	-0.1	0.2	0.4	0.3	8° 0'
0	0	0	0	0	-0.1	0	0.1	0	8° 15'	0.1	0	0.1	0	-0.1	-0.1	0.2	0.4	0.3	8° 15'
0	0	0	0	0	-0.1	0	0.2	0	8° 30'	0.1	0	0.1	0	0	-0.1	0.1	0.4	0.3	8° 30'
0	0	0	0	0	-0.1	0	0.2	0	8° 45'	0.1	0.1	0.1	0	0	-0.1	0	0.3	0.4	8° 45'
0	0	0	0	0	0	0	0.1	0	9° 0'	0.1	0.1	0.1	0	0	-0.1	-0.1	0.3	0.4	9° 0'
0	0	0	0	0	0	-0.1	0.1	0	9° 15'	0.1	0.1	0.1	0	0	-0.1	-0.1	0.2	0.4	9° 15'
0	0	0	0	0	0	-0.1	0	0	9° 30'	0.1	0.1	0.1	0	0	0	-0.1	0.1	0.4	9° 30'
0	0	0	0	0	0	-0.1	0	0	9° 45'	0.1	0.1	0	0.1	0	0	-0.1	0	0.3	9° 45'
0	0	0	0	0	0	-0.1	-0.1	0	10° 0'	0.1	0.1	0	0.1	0	0	-0.1	-0.1	0.2	10° 0'

## Correct Astronomical Position to WGS84

Latitude 0 to 10 °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	-0.1	0	0.1	0.1	0	0	0° 0'	0.2	0.2	0.2	0.1	-0.2	-0.3	-0.1	0	0.1	
-0.1	0	0	-0.1	0	0	0.1	0.1	0	0° 15'	0.2	0.2	0.3	0.1	-0.2	-0.3	-0.1	0	0.1	
0	0	-0.1	-0.1	0	0.1	0.1	0.1	0	0° 30'	0.2	0.2	0.3	0.1	-0.3	-0.3	-0.1	0	0.1	
0	0.1	-0.1	-0.1	0.1	0.1	0.1	0	0	0° 45'	0.1	0.2	0.4	0	-0.3	-0.3	-0.1	0.1	0.1	
-0.1	0	0	0	0.2	0.1	0	0	0	1° 0'	0.1	0.2	0.4	0	-0.4	-0.3	0	0.1	0.1	
-0.2	-0.1	0	0	0.1	0.1	0	0	0.1	1° 15'	0	0.2	0.4	-0.1	-0.4	-0.2	0	0.1	0.1	
-0.2	-0.1	0	0	0	0.1	0	0	0	1° 30'	0	0.1	0.4	-0.1	-0.4	-0.2	0	0.1	0.1	
0	0	0	-0.1	-0.2	0	0.1	0.1	0	1° 45'	0	0.1	0.4	0	-0.5	-0.2	0	0.1	0.1	
0.3	0.1	0	-0.1	-0.1	0	0.1	0.1	0	2° 0'	0.1	0.1	0.4	0	-0.6	-0.3	0	0.1	0.1	
0.4	0.1	0	0.1	0.1	0.1	0.1	0.1	0	2° 15'	0.1	0.2	0.4	0.1	-0.6	-0.3	0	0.1	0.1	
0.3	0	0	0.3	0.3	0.2	0.1	0.1	0.1	2° 30'	0.2	0.4	0.3	0	-0.5	-0.3	0	0.1	0.1	
0.1	0	0.1	0.4	0.3	0.2	0.2	0.1	0.1	2° 45'	0.2	0.5	0.2	-0.1	-0.5	-0.2	0.1	0.1	0.2	
0	0	0.2	0.3	0.2	0.2	0.2	0.1	0.1	3° 0'	0.3	0.5	0.1	-0.2	-0.4	-0.2	0.1	0.1	0.1	
-0.1	0	0.2	0.2	0.1	0.1	0.1	0	0.1	3° 15'	0.3	0.4	0	-0.2	-0.4	-0.2	0.2	0.1	0.1	
-0.2	0	0.2	0.2	0.1	0	0	0	0.1	3° 30'	0.3	0.3	0	-0.1	-0.3	-0.2	0.1	0.1	0.1	
-0.3	-0.1	0.1	0.1	0.1	-0.1	-0.1	0	0.1	3° 45'	0.2	0.2	0	-0.1	-0.3	-0.2	0.1	0.1	0.1	
-0.2	-0.1	0.1	0.2	0.1	0	0	0	0	4° 0'	0.2	0	-0.1	-0.1	-0.2	-0.1	0	0	0.1	
-0.1	0	0.1	0.2	0.1	0	0	0	0	4° 15'	0.1	0	-0.2	-0.1	-0.1	0	0	0.1	0.1	
0	-0.1	0	0.1	0.1	0	0	0	0	4° 30'	0.1	-0.1	-0.2	-0.1	-0.1	0	0	0.1	0.1	
0.1	-0.1	-0.2	0	0	-0.1	0	0	0	4° 45'	0.2	0	-0.3	-0.2	0	0	0	0.1	0.1	
0.2	-0.1	-0.2	0	-0.1	-0.2	-0.1	0	0	5° 0'	0.3	0.1	-0.4	-0.2	0.1	-0.1	0	0	0.1	
0.3	0.1	0	-0.1	-0.2	-0.2	-0.1	0	0	5° 15'	0.3	0.2	-0.4	-0.2	0.1	-0.1	-0.1	0	0.1	
0.2	0.3	0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	5° 30'	0.3	0.3	-0.3	-0.2	0.1	-0.1	-0.1	0	0.1	
0.2	0.3	0.1	-0.2	-0.3	-0.2	-0.1	-0.1	0	5° 45'	0.2	0.3	-0.2	0	0.1	-0.2	-0.1	0	0	
0.1	0.2	0	-0.3	-0.3	-0.1	-0.1	0	0	6° 0'	0.1	0.3	0	0.1	0.1	-0.2	-0.1	-0.1	0	
0	0.1	0	-0.2	-0.1	0	0	0.1	0	6° 15'	0.1	0.3	0.1	0.1	0	-0.2	-0.2	-0.1	0	
0	0.1	0	-0.1	0	0	0.1	0.1	0	6° 30'	0.1	0.3	0.2	0.1	-0.1	-0.3	-0.2	0	0.1	
0	0.1	0	0	0.1	0	0.1	0.2	0	6° 45'	0	0.3	0.3	0.1	-0.1	-0.3	-0.2	0	0.1	
0	0	0	0	0	0	0.1	0.1	0.1	7° 0'	0.1	0.3	0.3	0.1	-0.1	-0.3	-0.3	0.1	0.2	
0	0	0.1	0	0	0	0	0.1	0.1	7° 15'	0.1	0.3	0.3	0.1	-0.1	-0.3	-0.4	0.1	0.2	
0	0	0.1	0	0	0	-0.1	0	0	7° 30'	0.2	0.2	0.3	0.1	-0.1	-0.3	-0.4	0	0.2	
0	0	0.1	0	0	0	-0.1	-0.1	-0.1	7° 45'	0.2	0.2	0.3	0.2	-0.1	-0.2	-0.3	0	0.2	
0	0	0	0.1	0.1	0.1	-0.1	-0.2	-0.1	8° 0'	0.3	0.2	0.3	0.2	-0.1	-0.2	-0.3	0	0.1	
0	0	0	0.1	0.1	0.1	-0.1	-0.2	-0.1	8° 15'	0.3	0.1	0.2	0.2	-0.1	-0.1	-0.2	0	0.1	
0.1	0	0	0.1	0.1	-0.1	-0.1	-0.2	-0.1	8° 30'	0.3	0.2	0.2	0.1	-0.1	-0.1	-0.1	0	0.1	
0.2	0.1	0	0.1	-0.1	-0.3	-0.3	-0.4	-0.3	8° 45'	0.4	0.2	0.1	0.1	0	0	-0.1	0	0	
0.2	0.1	0.1	0	-0.2	-0.3	-0.4	-0.5	-0.3	9° 0'	0.4	0.2	0.1	0.2	0.2	0	0	0	-0.1	
0.2	0.2	0.1	0	-0.2	-0.2	-0.3	-0.4	-0.3	9° 15'	0.4	0.3	0.2	0.2	0.3	0	0	0	-0.1	
0.2	0.2	0.1	0	0	-0.1	-0.1	-0.2	-0.3	9° 30'	0.4	0.3	0.2	0.3	0.3	0	0.1	0	-0.1	
0.2	0.3	0.2	0.1	0.1	0.1	0	-0.1	-0.3	9° 45'	0.3	0.3	0.3	0.3	0.3	0	0.1	0.1	0	
0.1	0.3	0.2	0.1	0.2	0.1	-0.1	-0.1	-0.3	10° 0'	0.2	0.3	0.3	0.4	0.3	0.1	0.1	0.1	0.1	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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	0	0.1	0.1	0° 0'	0.1	0.1	0	0	0	-0.1	-0.1	0	0	
0	0	0	0	0.1	0	0	0	0.1	0° 15'	0.1	0.1	0	0	0	0	-0.1	0	0	
0	0.1	0	0	0	0	0	0	0	0° 30'	0.1	0	0	0	0	0	-0.1	0	0	
0	0.1	0	0	0	0	0	0	0	0° 45'	0.1	0	0	0	0	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	1° 0'	0.1	0	0	0	0	0	-0.1	-0.1	-0.1	
0.1	0	0	0	0	0	0	0	0	1° 15'	0.1	0.1	0	0	0	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	1° 30'	0.1	0.1	0	0	0	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	1° 45'	0.1	0.1	0	0	0	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	2° 0'	0.1	0.1	0.1	0	0	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	2° 15'	0.1	0.1	0.1	0	0	0	0	-0.1	-0.1	
0.1	0	0	0	0	0	0	0	-0.1	2° 30'	0.1	0.1	0.1	0	0	0	0	-0.1	0	
0.1	0	0	0	0	-0.1	0	0	-0.1	2° 45'	0.2	0.1	0.1	0.1	0	0	0	0	0	
0.1	0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	3° 0'	0.1	0.1	0.1	0.1	0	0	0	0	0	
0.1	0.1	0.1	0	0	-0.1	-0.1	-0.1	-0.1	3° 15'	0.1	0.1	0.1	0.1	0.1	0	0	0	0	
0.1	0.1	0.1	0.1	0	0	-0.1	-0.1	-0.1	3° 30'	0.1	0.1	0.1	0.1	0.1	0	0	0	0	
0.1	0.1	0.1	0.1	0	0	0	0	0	3° 45'	0.1	0.1	0.1	0.1	0.1	0	0	0	0	
0	0	0.1	0	0	0	0	0	0	4° 0'	0.1	0.1	0.1	0.1	0.1	0	0	0	0	
0	0	0.1	0	0	0.1	0	0	0	4° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	
0	0.1	0	0.1	0	0	0	0	0	4° 30'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	
0	0	0	0.1	0	0	0	0	0	4° 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	5° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	
0	0	0	0	0	0.1	0	0	-0.1	5° 15'	0.1	0.1	0.1	0.1	0.1	0	0.1	0	0	
-0.1	0	0	0	0	0.1	0	0	0	5° 30'	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	5° 45'	0	0.1	0.1	0.1	0.1	0	0.1	0.1	0	
0	0	-0.1	0	0	0	0	0	0	6° 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	-0.1	0	0	0	6° 15'	0	0.1	0.1	0.1	0	0	0.1	0.1	0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	6° 30'	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	
0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	6° 45'	0.1	0.1	0.1	0.1	0.1	0	0	0.1	0.1	
0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	0	7° 0'	0.2	0.1	0.1	0.1	0.1	0	0.1	0.1	0	
0.1	0.1	0.1	0	0	0	-0.1	-0.1	0	7° 15'	0.2	0.1	0.1	0.2	0.1	0	0.1	0	0	
0	0	0.1	0.1	0	-0.1	0	0	0	7° 30'	0.2	0.1	0.1	0.2	0.1	0	0.1	0	0	
-0.1	0	0	0	0	-0.1	0	0	0	7° 45'	0.2	0.1	0.1	0.2	0.2	0	0	0	0	
-0.1	0	0	0	0	-0.1	0	0	0	8° 0'	0.1	0.1	0.1	0.2	0.2	0.1	0	0	0	
-0.1	-0.1	-0.1	0	0	-0.1	-0.1	0	0	8° 15'	0.1	0.1	0.1	0.2	0.2	0.1	0	0	0	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	8° 30'	0.1	0.1	0.1	0.1	0.2	0.1	0	0	0	
-0.3	-0.2	-0.2	-0.1	0	0	-0.1	-0.1	-0.1	8° 45'	0	0.1	0.1	0.1	0.2	0.1	0	0	0	
-0.3	-0.3	-0.2	-0.1	0	0	0	0	0	9° 0'	-0.1	0.1	0	0	0.2	0.2	0	0	0	
-0.3	-0.3	-0.2	-0.1	-0.1	0	0	0	-0.1	9° 15'	-0.1	0.1	0	0	0.2	0.2	0	0	0	
-0.3	-0.4	-0.2	-0.1	-0.1	0	0	-0.1	-0.1	9° 30'	-0.1	0	-0.1	-0.1	0.1	0.1	0	0	0.1	
-0.3	-0.4	-0.2	-0.2	-0.1	0	0	-0.1	0	9° 45'	0	0	-0.2	-0.1	0.1	0.1	0	0	0	
-0.3	-0.4	-0.3	-0.2	-0.2	-0.1	0	0	0	10° 0'	0.1	-0.1	-0.2	-0.1	0	0.1	0	0	0	



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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'	
0.1	0.1	0.1	0.1	0	-0.1	0	0	0	0° 0'	0	-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	-0.1	0	0	0	0° 15'	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0.1	0	0	0	-0.1	0	0	0	0° 30'	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	-0.1	-0.1	-0.1	0° 45'	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	1° 0'	-0.1	0	0	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	-0.1	-0.1	-0.1	1° 15'	-0.1	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	1° 30'	-0.1	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	1° 45'	-0.1	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	2° 0'	-0.1	-0.1	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	2° 15'	-0.1	-0.1	0	0	0	0	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	0	-0.1	0	0	0	0	2° 30'	0	-0.1	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	2° 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	-0.1	0	0	3° 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	-0.1	-0.1	-0.1	3° 15'	0	0	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	3° 30'	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	3° 45'	0	0	0	-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	4° 0'	0	0	0	-0.1	-0.1	0	-0.1	-0.1	-0.1	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	4° 15'	0	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	4° 30'	0	0	0	-0.1	0	0	-0.1	-0.1	-0.1	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 45'	0	0	0	-0.1	0	0	-0.1	-0.1	-0.1	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 0'	0	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	5° 15'	0	0	0	-0.1	0	0	-0.1	-0.1	-0.1	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 30'	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	5° 45'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	6° 0'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	-0.1	0	0	6° 15'	0.1	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	6° 30'	0.1	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	6° 45'	0.1	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	7° 0'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	7° 15'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	7° 30'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	-0.1	0	-0.1	0	0	0	0	7° 45'	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	0	-0.1	0	0	-0.1	8° 0'	0	0.1	0	-0.1	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	-0.1	-0.1	-0.1	0	0	-0.1	8° 15'	0	0.1	0	-0.1	0	-0.1	-0.1	-0.1	0	
-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 30'	0	0.1	0	-0.1	0	-0.1	-0.1	-0.1	0	
-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	8° 45'	0	0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	9° 0'	0	0	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	9° 15'	0	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	9° 30'	0.1	0	0	0	0	0	0	-0.1	-0.1	
0	0	0	-0.1	0	0	0	0	0	9° 45'	0	0	0	0	0	0	0	-0.1	-0.1	
0	0	0	-0.1	-0.1	0	0	0	-0.1	10° 0'	0	0	0.1	0	-0.1	0	0	-0.1	-0.1	





# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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'	
-0.1	-0.1	0	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	-0.1	-0.1	-0.1	-0.1
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	0° 15'	-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	-0.1	0° 30'	-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	0	0° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	1° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1
0	0	0	0	0	0	0	-0.1	-0.1	1° 15'	-0.1	-0.1	-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	1° 30'	-0.1	-0.1	-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	1° 45'	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	0	0	-0.1
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	2° 0'	-0.1	-0.1	-0.1	0	-0.1	0	0	0	0	-0.2
0	0	0	0	0	-0.1	-0.1	0	-0.1	2° 15'	-0.1	-0.1	0	0	0	0	0	0	-0.1	-0.1
0	0	0	0	0	-0.1	-0.1	0	0	2° 30'	-0.1	-0.1	0	0	0	0	0	0	-0.1	-0.1
0	0	0	0	-0.1	-0.1	0	0	0	2° 45'	-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	0	0
0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0.1	0.1	3° 0'	-0.1	-0.1	-0.1	0	0.1	0	-0.1	-0.1	0	0
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0.1	3° 15'	-0.1	-0.1	-0.1	0	0.1	0	-0.1	-0.1	0	0
-0.1	-0.1	-0.2	-0.2	-0.1	0	0.1	0	0.1	3° 30'	-0.1	-0.1	0	0	0	-0.1	-0.2	-0.1	0	0
-0.2	-0.2	-0.2	-0.1	0	0.1	0.1	0	0	3° 45'	-0.1	-0.1	0	0	0	-0.1	-0.2	-0.1	-0.1	-0.1
-0.2	-0.2	-0.1	-0.1	0.1	0.1	0.1	0	0	4° 0'	-0.1	0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1
-0.1	0	0	0	0.1	0.1	0	0	0	4° 15'	-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	0	0	0	4° 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	0	-0.1	-0.1	-0.1	4° 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	-0.1	-0.1	-0.1	-0.1	-0.1	5° 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	-0.1	-0.1	-0.1	-0.1	-0.1	5° 15'	-0.1	-0.1	-0.1	-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	5° 30'	-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	0	0	0	5° 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	-0.1	-0.1	0	0	0	0	6° 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	0	0	0	6° 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	6° 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	6° 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	7° 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	-0.1	7° 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	-0.1	7° 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	7° 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	8° 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	0	8° 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	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 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	0	-0.1	-0.1	-0.1	-0.2	-0.1	8° 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	-0.2	-0.1	9° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.2	-0.2
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.2	-0.1	9° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.2	-0.2
-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	9° 30'	-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	0	0	-0.1	-0.1	-0.1	-0.1	9° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0.1	-0.1	-0.2	-0.2
-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	-0.1	10° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0.1	-0.1	-0.2	-0.2



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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'	
-0.1	0	0	0	0	-0.1	-0.1	0	0	0° 0'	0	0	0	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	-0.1	-0.1	0	0	0° 15'	0	0	0	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0° 30'	0	0	0	-0.1	0	0	0	0	0	
0	0	0	0	0	0	-0.1	0	0	0° 45'	0	0	0	-0.1	0	0	0	0	0	
0	0	0	0	-0.1	0	-0.1	-0.1	0	1° 0'	0	0	0	-0.1	0	0	0	0	0	
0	0	0	0	0	0	-0.1	-0.1	0	1° 15'	0	0	0	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 45'	0	0	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0	2° 0'	0	0	0	0	0	0	0	0	0	
-0.1	-0.1	0	0	0	0	0	0.1	0.1	2° 15'	0	0	0	0	0	0	0	0	0	
-0.1	0	0	0	0	0	0	0	0.1	2° 30'	0	0	0	0	0	0	0	-0.1	0	0
0	0	0	0	0	0	0	0	0	2° 45'	0	0	0	0	-0.1	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	3° 0'	0	0	0	0	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 15'	0	0	0	0	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 30'	0	0	0	0	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	0	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 0'	0	0	0	0	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 15'	0	0	0	0	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 30'	0	0	0	-0.1	-0.1	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	4° 45'	0	0	0	0	-0.1	0	0	0	0	
0	0	0	0	0	-0.1	0	0	0	5° 0'	0	0	0	0	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 15'	0	0	0	0	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	-0.1	-0.1	5° 45'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	-0.1	-0.1	-0.1	6° 0'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	-0.1	-0.1	-0.1	6° 15'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	6° 30'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	6° 45'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	7° 0'	0	0	0	0	0	0	0	0	0	-0.1
0	0	0	0	0	0	0	0	0	7° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	7° 30'	0	0	0	0	-0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	7° 45'	0	0	0	0	-0.1	0	0	0	0	0
-0.1	-0.1	0	0	0	0	0	0	0	8° 0'	0	0	0	0	-0.1	0	0	0	0	0
-0.1	-0.1	-0.1	0	0	0	0	0	0	8° 15'	0	0	0	-0.1	-0.1	0	0	0	0	0
-0.1	-0.1	-0.1	0	0	0	0	0	0	8° 30'	0	0	0	-0.1	-0.1	0	0	0	0	0
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 45'	0	0	0	-0.1	-0.1	0	0	0	0	0
-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	9° 0'	0	0	-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	0	9° 15'	0	0	-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	9° 30'	0	0	-0.1	-0.1	-0.1	0	0	0	0	0
-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	9° 45'	0	0	-0.1	-0.1	-0.1	0	0	0	0	0
-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	10° 0'	0	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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	-0.1	-0.1	-0.1	0° 0'	0	0	0	0	0.1	0.1	0	0	-0.1	
0	0	0	-0.1	-0.1	0	0	0	-0.1	0° 15'	0	0	0	0	0.1	0	0	0	-0.1	
0	-0.1	0	0	-0.1	0	0	0	-0.1	0° 30'	0	0	0	0.1	0.1	0	0	0	0	
0	-0.1	0	0	0	0	0	0	0	0° 45'	0	0	0	0.1	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	1° 0'	0	0	0	0.1	0.1	0.1	0	0	0	
0	0	0	0	0	0.1	0.1	0	0	1° 15'	0	0	0	0	0	0.1	0.1	0	0	
0	0	0	0	0.1	0.1	0.1	0.1	0	1° 30'	0	0	0	0	0	0	0.1	0.1	0	
0	0	0	0	0.1	0.2	0.2	0.1	0	1° 45'	0	0	0	0	0	0	0.1	0.1	0	
0.1	0	0	0	0.1	0.1	0.1	0.2	0.1	2° 0'	0	0	0	0	-0.1	0	0.1	0.1	0.1	
0.1	0.1	0	0	0	0.1	0	0.1	0.1	2° 15'	0	0	0	0	-0.1	0	0.1	0.1	0.1	
0	0	0.1	0	0	0	0	0	0	2° 30'	0	0	0	0	-0.1	0	0.1	0.1	0.1	
0	0	0.1	0.1	0	0	0	0	0	2° 45'	0	0	0	0	-0.1	0	0.1	0.1	0.1	
0	0	0.1	0.1	0	0	0	0	0	3° 0'	0	0	0	0	0	0	0.1	0.1	0.1	
0	0	0	0.1	0	0	0	0	0	3° 15'	0	0	-0.1	0	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	3° 30'	0	0	-0.1	0	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	3° 45'	0	-0.1	-0.1	0	0	0	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	4° 0'	0	-0.1	-0.1	0	0	0	0.1	0.1	0.1	
0	0	0	0	0	-0.1	0	0	0	4° 15'	0	-0.1	-0.1	0	0	0	0.1	0.1	0.1	
0	0	0	0	0	-0.1	0	0	0	4° 30'	0	-0.1	-0.1	0	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	4° 45'	0	-0.1	-0.1	0	0.1	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0	5° 0'	0	-0.1	-0.1	0	0	0	0	0.1	0	
0	0	0	0	0	0	0	0	0	5° 15'	0	0	0	0	0	0	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	5° 30'	0	0	0	0	0	0	0.1	0	0	
-0.1	0	0	0	-0.1	-0.1	0	0	0	5° 45'	0	0	0	0	0	0	0.1	0	0	
-0.1	0	0	-0.1	-0.1	-0.1	0	0	0	6° 0'	0	0	0	0	0	0	0.1	0	0	
-0.1	0	-0.1	-0.1	0	-0.1	0	0	0	6° 15'	-0.1	0	0	0	0	0	0.1	0	0	
0	0	0	0	0	0	0	0	0	6° 30'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0.1	0	6° 45'	-0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0.1	7° 0'	-0.1	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	7° 15'	0	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	7° 30'	0	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	7° 45'	0	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	8° 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	-0.1	8° 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	8° 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	-0.2	8° 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	-0.2	9° 0'	0	0	0	0	0.1	0	0	0	0.1	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	9° 15'	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	-0.1	-0.1	9° 30'	0	0	0	0	0.1	0	0	0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	9° 45'	0	0	0	0	0.1	0	0	0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	10° 0'	0	0	0	0	0.1	0	0	0.1	0	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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'	
-0.1	-0.1	0	0	0	0	0	0	0	0° 0'	-0.1	0	0.1	0	0.1	0.1	0.1	0.1	0	
-0.1	-0.1	0	-0.1	-0.1	0	0	0	0	0° 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	0	0	0	0° 30'	0	-0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	
0	-0.1	-0.1	0	0	0	0	0	0	0° 45'	0	0	0	0.1	0	0	0.1	0.1	0	
0	-0.1	-0.1	0	0	0	-0.1	0	0	1° 0'	0	0	0	0.1	0	0.1	0.1	0.1	0	
0	-0.1	-0.1	-0.1	0	-0.1	-0.1	0	0	1° 15'	0	0	-0.1	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° 30'	0	0	0	0	0.1	0.1	0.1	0	0	
0	0	0	-0.1	-0.2	-0.1	-0.1	-0.1	0	1° 45'	0	0.1	0	0	0	0.1	0.1	0	0	
0.1	0.1	0.1	0	-0.1	-0.1	-0.1	-0.1	0	2° 0'	0.1	0.1	0.1	0	0	0.1	0.1	0	0	
0.1	0.1	0.1	0.1	0	0	0	-0.1	0	2° 15'	0.1	0	0.1	0.1	0	0.1	0.1	0	0	
0	0	0.1	0.1	0.1	0	0	0	0	2° 30'	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0	
0	-0.1	0	0	0	0	0	0	0	2° 45'	0.1	0	0	0.1	0.1	0.1	0.2	0.1	0.1	
0	-0.1	-0.1	-0.1	0	-0.1	0	0	0	3° 0'	0.1	0	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	0	0	3° 15'	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	3° 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	3° 45'	0.1	0.1	0	0	0.1	0.1	0.1	0	0.1	
0	0	0	0	0	0	0	0	0	4° 0'	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	4° 15'	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	4° 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	4° 45'	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	5° 0'	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	5° 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	5° 30'	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	5° 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	6° 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	6° 15'	0	0	0	0.1	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	6° 30'	0	0	0	0.1	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	6° 45'	0	0	0	0.1	0.1	0.1	0.1	0.1	0	
0	0	0	0	0	0	0	0	0	7° 0'	0.1	0.1	0	0.1	0.1	0.1	0.2	0.1	0	
0	0	0	-0.1	0	0	0	0	0	7° 15'	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0	
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	7° 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	-0.1	0	0	7° 45'	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	0	0	8° 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	-0.1	0	0	0	0	8° 15'	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	0	0	0	8° 30'	0	0.1	0.1	0.1	0.1	0.1	0	0	0	
-0.2	-0.2	-0.1	-0.1	0	0.1	0.1	0.1	0	8° 45'	0	0.1	0.1	0.1	0	0	0	0	0.1	
-0.2	-0.2	-0.1	0	0.1	0.1	0.1	0.1	0	9° 0'	0.1	0.1	0.1	0	0	0	0	0	0.1	
-0.2	-0.1	0	0.1	0.1	0.1	0.1	0	0	9° 15'	0.1	0	0	0	0	0	0.1	0.1	0.1	
-0.1	0	0.1	0.1	0.1	0	0	0	0	9° 30'	0	-0.1	0	0	0	0	0.1	0.1	0.1	
0	0	0	0.1	0	0	0	0	0	9° 45'	0	-0.1	0	0	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	-0.1	0	0	10° 0'	0	-0.1	0	0	0	0.1	0.1	0.1	0.1	



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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	0° 0'	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	0° 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	0° 30'	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	0	0° 45'	0	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	1° 0'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	1° 15'	0	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	
-0.1	0	0	-0.1	-0.1	0	0	0	0.1	1° 30'	0	0.1	0.1	0.1	0	0	0	0.1	0	
-0.1	0	0	0	0	0.1	0.1	0.1	0.1	1° 45'	0	0	0.1	0.1	0	0	0	0	0	
-0.1	-0.1	0	0.1	0	0.1	0.1	0.1	0	2° 0'	0	0	0.1	0.1	0	0	0	0	0	
-0.1	-0.1	-0.1	0	0	0	0	0	0	2° 15'	0	0	0	0.1	0	0	0	0	0.1	
-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2° 30'	0	0	0	0.1	0	0	0.1	0.1	0.1	
-0.1	-0.1	-0.2	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1	2° 45'	0.1	0	-0.1	0	0	0	0	0	0.1	
0	-0.1	-0.2	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1	3° 0'	0.1	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	3° 15'	0.1	0.1	0	0	0	0	0	0	0	
0	0	0	-0.1	-0.1	0	0	0	-0.1	3° 30'	0.1	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	-0.1	3° 45'	0.1	0.1	0.1	0	0	0	0	0.1	0.1	
0	0	0	0	0	-0.1	-0.1	0	0	4° 0'	0.1	0.1	0.1	0	0	0	0	0	0.1	0.1
0	0	0	0	0	-0.1	-0.1	0	0	4° 15'	0.1	0.1	0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	-0.1	-0.1	0	4° 30'	0.1	0.1	0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	-0.1	-0.1	-0.1	4° 45'	0.1	0.1	0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	-0.1	-0.1	5° 0'	0.1	0.1	0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	-0.1	5° 15'	0.1	0.1	0.1	0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 30'	0.1	0	0.1	0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 45'	0.1	0	0.1	0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	6° 0'	0.1	0	0.1	0.1	0	0	0.1	0.1	0	0
0	0	0	0	0	0	0	0	0	6° 15'	0	0	0.1	0.1	0	0	0.1	0.1	0	0
0	0	0	0	0	0	0	0	0	6° 30'	0	0	0.1	0.1	0	0	0.1	0.1	0	0
0	0	0	0	0	0	0	0	0	6° 45'	0	0	0.1	0.1	0	0.1	0.1	0.1	0	0
0	0	0	0	0	0	0	0	0	7° 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	0	7° 15'	0	0	0	0.1	0.1	0.1	0.1	0.1	0	0
0	0	0	0	0	0	0	0	0	7° 30'	0	0	0	0.1	0.1	0.1	0	0	0	0
0	0	0	0	0	0	0	0	0.1	7° 45'	0	0	0	0.1	0.1	0.1	0	0	0	0
0	0	0	0	0	0.1	0	0	0	8° 0'	0	0	0	0.1	0.1	0.1	0	0	0	0
0	0	0	0	0.1	0.1	0	0	0	8° 15'	0	0	0.1	0.1	0	0.1	0	0	0	0
0	0	0	0.1	0.1	0.1	0	0	0.1	8° 30'	0	0	0.1	0	0	0.1	0.1	0	0	0
0	0	0	0.1	0	0	0	0	0.1	8° 45'	0.1	0	0	0	0	0.1	0.1	0	0	0
0	0	0.1	0.1	0	0	0	0	0.1	9° 0'	0.1	0	0	0.1	0.1	0.1	0.1	0	0	0
0	0	0.1	0.1	0	0	0.1	0	0.1	9° 15'	0.1	0	0	0.1	0.1	0	0.1	0	0	0
0	0	0.1	0.1	0	0	0.1	0.1	0.1	9° 30'	0.1	0	-0.1	0.1	0.1	0	0.1	0	0	0
0	0	0	0	0	0	0	0.1	0.1	9° 45'	0.1	0	-0.1	0.1	0.1	0	0	0	0	0
0	0	0	0	0	0	0	0.1	0.1	10° 0'	0.1	0	-0.1	0.1	0.1	0	0	0	0	0

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °S										Longitude 36 to 32 °W									
Correction to Latitude										Correction to Longitude									
36°	35°	35°	34°	34°	33°	33°	32°	32°	32°	Longitude	36°	35°	35°	34°	34°	33°	33°	32°	32°
0'	30'	0'	30'	0'	30'	0'	30'	0'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'
0	0	0	0	0	0	0	0	0	0	0° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	0	0° 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	0	0° 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	0	0° 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	0.1	0.1	1° 0'	0.1	0.1	0.1	0.1	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	1° 15'	0.1	0	0.1	0.1	0	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	1° 30'	0	0	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	0.1	1° 45'	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	2° 0'	0	0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	2° 15'	0.1	0.1	0	0	0	0	0	0	0
-0.1	0	0	0	0	0	0	0	0	0	2° 30'	0.1	0.1	0	0	0	0.1	0	0	0
-0.1	0	0	0	0	0	0	0	0	0	2° 45'	0.1	0	0	0	0	0.1	0	0	0
-0.1	-0.1	-0.1	0	0	0	0	0	0	0	3° 0'	0	0	0	0	0	0	0	0	0
-0.1	-0.1	-0.1	0	0	-0.1	0	0	0	0	3° 15'	0	0.1	0	0	0.1	0	0	0	0
-0.1	-0.1	0	0	-0.1	-0.1	0	0	0	0	3° 30'	0	0.1	0	0	0.1	0	0	0	0
-0.1	0	0	0	0	0	0	0	0	0	3° 45'	0.1	0	-0.1	0	0.1	0	0	0	0
0	0	0.1	0	0	0.1	0.1	0.1	0.1	0.1	4° 0'	0.1	0	-0.1	0	0.1	0	0	0	0
0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	4° 15'	0	0	-0.1	0.1	0.1	0	0	0	0
0	-0.1	-0.1	0	0.1	0.1	0.1	0.1	0	0	4° 30'	0	0	-0.1	0	0.1	0	0	0	0
-0.1	-0.1	-0.1	-0.1	0	0.1	0	0	0	0	4° 45'	0	0	-0.1	0	0	0	0	0	0
-0.1	-0.1	-0.1	0	0	0	0	0	0	0	5° 0'	0	0	-0.1	-0.1	0	0	0	0	0
-0.1	0	0	0	0	0	0	0	0	0	5° 15'	0	0	-0.1	-0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	5° 30'	0	0	-0.1	-0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	5° 45'	0	0	-0.1	-0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	6° 0'	0	0	-0.1	-0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	6° 15'	0	0	-0.1	-0.1	0	0	0	0	0
0	0	0	0	0	0	0.1	0	0	0	6° 30'	0	0	-0.1	-0.2	-0.1	0	0	0	0
0	0	0	0	0	0	0.1	0.1	0.1	0.1	6° 45'	0	0	0	-0.2	-0.1	0	0	0	0
0	0	0	0	0.1	0.1	0	0.1	0.1	0.1	7° 0'	0	0	-0.1	-0.2	-0.1	0	0	0	0
0	0	0	0	0.1	0.1	0	0	0	0	7° 15'	0	0	-0.1	-0.2	-0.1	0	0	0	0
0	0	0	0	0	0	0	0	0	0	7° 30'	0	0	-0.1	-0.2	-0.1	0	0	0	0
0.1	0.1	0.1	0	0	0	0	0	0	0	7° 45'	0	0	-0.1	-0.2	-0.1	0	0	0	0
0	0.1	0.1	0	0	0	0.1	0	0	0	8° 0'	0	0	0	-0.2	-0.1	0	0	0	0
0	0	0	0.1	0	0	0	0	0	0	8° 15'	0	0	0	-0.1	-0.1	0	0	0	0
0.1	0	0.1	0.1	0.1	0	0	0	0	0	8° 30'	0	0	-0.1	-0.1	-0.1	0	0	0	0
0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	8° 45'	0	0	-0.1	-0.1	-0.1	0	0	0	0
0.1	0.1	0.1	0.1	0	0	0	0	0	0	9° 0'	0	0	-0.1	-0.1	0	0	0	0	0
0.1	0.1	0.2	0.1	0	0	0	0	0	0	9° 15'	0	0	-0.1	-0.1	0	0	0	0	0
0.1	0.1	0.1	0.1	0	0	0	0	0	0	9° 30'	0	-0.1	-0.1	0	0	0	0	0	0
0.1	0.1	0.1	0	0	0	0	0	0	0	9° 45'	0	-0.1	-0.1	0	0	0	0	0	0
0.1	0.1	0	0	0	0	0	0	0	0	10° 0'	0	-0.1	0	0	0	0	0	0	0









# Correct Astronomical Position to WGS84

Latitude 0 to 10 °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	0° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0° 30'	0	0	0	0	0	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
0.1	0.1	0.1	0.1	0	0	-0.1	0	0	1° 0'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0.1	0	0	0	0	0	0	1° 15'	0	0	0	0	0.1	0.1	0	0	0	0
0.1	0.1	0	0	0	0	0	0	0	1° 30'	0	0	0	0	0.1	0.1	0	0	0	0
0.1	0	0	0	0	0	0	0	0	1° 45'	0	0	0	0	0.1	0.1	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 0'	0	0.1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	2° 30'	0	0	0	0	0	0	0	0	0	0
0.1	0	0	0	0	0	0	0	0	2° 45'	0	0	0	0	0	0	0.1	0	0	0
0	0	0	0	0	0	0	0	0	3° 0'	0.1	0	0	0	0	0	0.1	0	0	0
0	0	0	0	0	0	0	0	0	3° 15'	0.1	0	0	0	0	0	0.1	0	0	0
0	0	0	0	0	0	0	0	0	3° 30'	0.1	0	0	0	0	0	0.1	0	0	0
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	0	0	0	0.1	0	0	0
0	0	0	0	0	0	0	0	0	4° 0'	0.1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	4° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	5° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	6° 0'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	6° 15'	0	0	0	0	0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0.1	6° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0.1	0.1	0.1	0.1	0	0	0.1	6° 45'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0.1	0.1	0.1	0	0	0	0	7° 0'	0	0	0	0	0	0	0	0	0	0
0.1	0.1	0	0	0	0	0	0	0	7° 15'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	7° 30'	0	0	0	0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	7° 45'	0	0	0	0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	8° 0'	0	0	0.1	0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	8° 15'	0	0	0.1	0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	8° 30'	0	0	0	0.1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	8° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	9° 0'	0	0	0	0	0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	9° 15'	0	0	0	0	0.1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	9° 30'	0	0	0.1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	9° 45'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	10° 0'	0	0	0	0	0.1	0	0	0	0	0







