



# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 8 to 12 °E									
Correction to Latitude										Correction to Longitude									
8° 0'	8° 30'	9° 0'	9° 30'	10° 0'	10° 30'	11° 0'	11° 30'	12° 0'	Longitude Latitude	8° 0'	8° 30'	9° 0'	9° 30'	10° 0'	10° 30'	11° 0'	11° 30'	12° 0'	
0	0	-0.1	0	0	0	0	0	0	10° 0'	0	0	0	-0.1	-0.1	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	9° 45'	0	0	0	-0.1	-0.1	-0.1	0	0	-0.1	
0	0	0	0	0	0	0	0	0	9° 30'	0	0	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	
0	0.1	0.1	0.1	0	0	0	0	-0.1	9° 15'	0	0	0	-0.1	-0.1	-0.1	0	0	-0.1	
0	0.1	0.1	0.1	0	0	0	0	-0.1	9° 0'	-0.1	0	0	-0.1	0	-0.1	0	0	-0.1	
0	0.1	0.1	0	0	0	0	0	0	8° 45'	-0.1	0	0	0	0	-0.1	0	0	-0.1	
0	0.1	0.1	0	0	0	0	0	0	8° 30'	-0.1	-0.1	0	0	0	0	0	0	-0.1	
0.1	0	0	0	0	0	0	0.1	0.1	8° 15'	-0.1	-0.1	0	0	0	0	0	0	-0.1	
0.1	0	0	0	0	0	0	0.1	0	8° 0'	-0.1	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	0	0	0	0	0	0	0	0	7° 30'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	-0.1	-0.1	0	7° 15'	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	-0.1	-0.1	-0.1	0	7° 0'	0	0	0	0	0	0	0	0	-0.1	
0	0	0	-0.1	-0.1	-0.1	0	0	0	6° 45'	0	0	0	0	0	0	0	-0.1	-0.1	
0	0	0	-0.1	-0.1	-0.1	0	0.1	0.1	6° 30'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	-0.1	-0.1	0	0.1	0.1	6° 15'	0	0	0	0	0	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0.1	0.1	0.1	6° 0'	0	0	0	0	0	-0.1	-0.2	-0.1	0	
0	0	0	0	0	0	0	0	0.1	5° 45'	0.1	0	0	0	0.1	-0.1	-0.2	-0.1	-0.1	
0	0	0	0	0.1	0.1	0	0	0.1	5° 30'	0.1	0.1	-0.1	0	0	-0.1	-0.2	-0.1	-0.1	
0	0.1	0	0	0.1	0.1	0.1	0	0	5° 15'	0.1	0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
0	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0	5° 0'	0.1	0	0	-0.1	0	-0.1	-0.1	-0.1	-0.1	
0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0	4° 45'	0	0	0.1	-0.1	0	0	-0.1	-0.1	0	
0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0	4° 30'	0	0	0.1	-0.2	-0.1	0	-0.1	0	0	
0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	4° 15'	0	0.1	0.1	-0.2	-0.1	0	-0.1	0	0	
0.1	0	0	0.1	0	0.2	0.1	0.1	0.1	4° 0'	0	0.1	0	-0.2	-0.1	0	0	0	-0.1	
0.1	0	0.1	0.1	0	0.1	0.1	0.1	0.1	3° 45'	0	0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	
0.1	0.1	0.2	0.1	0	0.1	0	0.1	0.1	3° 30'	0.1	0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	
0.1	0.2	0.2	0.1	0.1	0	0	0.1	0	3° 15'	0	0	-0.1	0	-0.1	-0.1	0	-0.1	-0.1	
0.1	0.2	0.2	0.1	0.1	0	0	0.1	0	3° 0'	0	0	0	0	-0.1	0	0	-0.1	0	
0.1	0.1	0.1	0.1	0.1	0	0	0.1	0	2° 45'	0	-0.1	0	0	-0.1	0	0	-0.1	0	
0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	2° 30'	0	-0.1	0	0	0	0	-0.1	0	0	
0	0	0	0	0	0	0	0.1	0.1	2° 15'	0	0	0	0	0	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0.1	2° 0'	0	0	0	0	0	0	-0.1	-0.1	0	
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	1° 30'	-0.1	0	0	-0.1	0	0	-0.1	-0.1	-0.1	
0	0	0	0.1	0.1	0	0	0	0	1° 15'	-0.1	0	0	-0.1	0	0	-0.1	-0.1	-0.1	
0	0	0.1	0.1	0.1	0	0	0	0	1° 0'	-0.1	0	0	-0.1	0	0	-0.1	0	-0.1	
0	0	0	0.1	0.1	0.1	0	0	0	0° 45'	0	0	0	-0.1	0	0	-0.1	0	-0.1	
0	0	0	0	0.1	0.1	0.1	0	0	0° 30'	0	0	0	-0.1	0	0	0	0	-0.1	
0	0	0	0	0	0.1	0.1	0.1	0.1	0° 15'	0	0	0	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0.1	0.1	0.1	0.1	0° 0'	0	-0.1	0	-0.1	-0.1	0	0	-0.1	0	



# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

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



# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 44 to 48 °E									
Correction to Latitude										Correction to Longitude									
44°	44°	45°	45°	46°	46°	47°	47°	48°	Longitude	44°	44°	45°	45°	46°	46°	47°	47°	48°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
-0.1	-0.1	-0.1	0	0	0	0	0	0	10° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	0	
0	0	0	0	0	0	0	0	0	9° 45'	-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	0.1	0.1	0.1	9° 30'	-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	0.1	0.1	0.1	9° 15'	-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	9° 0'	-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	0	0.1	0.1	8° 45'	-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	0.1	0.1	0.1	0.1	8° 30'	-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	0.1	8° 15'	-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	8° 0'	-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	0.2	7° 45'	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	0.2	7° 30'	0	-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	0.1	0.1	0.1	0.2	7° 15'	0	-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	0.1	0.1	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	6° 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	0.1	0.1	0.1	0.1	0.1	6° 30'	0	-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	6° 15'	-0.1	-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	6° 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	0.1	0.1	5° 45'	-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	5° 30'	-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	0	0	5° 15'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	-0.1	0	0	0	0	0	0	0	5° 0'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	4° 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	4° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0.1	4° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.2	
0	0	0	0	0	0	0	0.1	0.1	4° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.2	
0	0	0	0	0	0	0	0.1	0.2	3° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.2	-0.2	
0	0	0	0	0	0	0.1	0.1	0.1	3° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.2	-0.2	
0	0	0	0	0	0	0.1	0.2	0.1	3° 15'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.2	-0.2	-0.2	
0	0.1	0.1	0	0	0.1	0.2	0.1	0.1	3° 0'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.2	-0.2	-0.1	
0	0.1	0.1	0	0	0.1	0.2	0.1	0.1	2° 45'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	
0	0.1	0	0	0.1	0.2	0.2	0.1	0.1	2° 30'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	
0.1	0.1	0	0.1	0.1	0.2	0.1	0.1	0.1	2° 15'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.2	-0.1	
0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	2° 0'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	
0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0	1° 45'	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	
0.1	0.2	0.2	0.2	0.1	0.1	0.1	0	0	1° 30'	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0.1	0.2	0.2	0.1	0.1	0.1	0	0	0	1° 15'	-0.2	-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	0	0	1° 0'	-0.2	-0.2	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0.2	0.1	0.1	0.1	0	0	0	0	0	0° 45'	-0.2	-0.2	-0.1	0	-0.1	-0.1	0	-0.1	-0.1	
0.2	0.1	0	0	0	0	0	0	0	0° 30'	-0.2	-0.1	-0.1	0	-0.1	-0.1	0	-0.1	-0.1	
0.1	0	0	0	0	0	0	0	0	0° 15'	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	-0.1	
0.1	0	0	0	0	0	0	0	0	0° 0'	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	0	















# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 72 to 76 °E									
Correction to Latitude										Correction to Longitude									
72° 0'	72° 30'	73° 0'	73° 30'	74° 0'	74° 30'	75° 0'	75° 30'	76° 0'	Longitude	72° 0'	72° 30'	73° 0'	73° 30'	74° 0'	74° 30'	75° 0'	75° 30'	76° 0'	Latitude
0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	10° 0'	0	0	-0.1	-0.1	-0.1	0	0	0.1	0	
0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0	9° 45'	0	0	-0.1	-0.1	-0.1	0	0	0.1	0	
0.1	0.1	0	0	0	0.1	0.1	0	0	9° 30'	0	0	-0.1	-0.1	-0.1	0	0	0.1	0.1	
0.1	0.1	0	0	0	0	0.1	0	0	9° 15'	0	0	-0.1	-0.1	-0.1	0	0	0.1	0.1	
0	0	0	0	0	0	0	0	0.1	9° 0'	0	0	-0.1	-0.1	-0.1	0	0	0.1	0.1	
0	0	0	0	0	0	0	0.1	0.1	8° 45'	0	0	-0.1	-0.1	-0.1	0	0	0.1	0.1	
0	0	0	0	0	0	0	0.1	0.1	8° 30'	0	0	-0.1	-0.1	0	0	0	0.1	0.1	
0	0	0	0	0	0	0	0.1	0.1	8° 15'	0	0	-0.1	-0.1	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0.1	8° 0'	0	0	-0.1	-0.1	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	7° 45'	0	0	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 30'	0	0	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 15'	0	0	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	7° 0'	0	0	-0.1	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 45'	0	0	0	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 30'	0	0	0	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 15'	0	0	0	-0.1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	6° 0'	0	0	0	-0.2	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 45'	0	0	0	-0.2	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 30'	0	0	0	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 15'	0	0	0	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 0'	0	0	0	-0.1	-0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 45'	0	0.1	0	-0.1	-0.1	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	4° 30'	0	0.1	0	-0.1	-0.1	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	4° 15'	0	0.1	0	-0.1	-0.1	0	-0.1	0	0	
0	0	0	0	0	0	0	0	0	4° 0'	0	0.1	0	-0.2	-0.1	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	3° 45'	0	0.1	0	-0.2	-0.1	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	3° 30'	0	0.1	0	-0.1	-0.1	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	3° 15'	0	0.1	0	-0.1	-0.1	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	3° 0'	0	0.1	0	-0.1	-0.1	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	2° 45'	0	0.1	0.1	-0.1	-0.1	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	2° 30'	-0.1	0	0	-0.1	-0.1	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	2° 15'	-0.1	0	0	-0.1	-0.1	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	2° 0'	0	0	0	-0.1	-0.1	0	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	1° 45'	0	0	0	-0.1	0	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	1° 30'	0	0	0	-0.1	0	-0.1	-0.1	0	0	
0	0	-0.1	-0.1	0	0	0	0	0	1° 15'	0	0	0	-0.1	0	-0.1	-0.1	0	0	
0	0	-0.1	-0.1	0	0	0	0	0	1° 0'	0	0	0	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	-0.1	-0.1	0	0	0	0	0	0° 45'	0	0	0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	0° 30'	-0.1	0	0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	0° 15'	-0.1	0	0.1	-0.1	-0.1	-0.1	-0.1	0	0	
0	0	0	0	0	0	0	0	0	0° 0'	-0.1	0	0.1	-0.1	-0.1	-0.1	-0.1	0	0	



# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

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

## Correct Astronomical Position to WGS84

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





# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 96 to 100 °E									
Correction to Latitude										Correction to Longitude									
96°	96°	97°	97°	98°	98°	99°	99°	100°	Longitude	96°	96°	97°	97°	98°	98°	99°	99°	100°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	10° 0'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 45'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 30'	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	9° 15'	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 0'	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 45'	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 30'	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	8° 15'	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	
-0.1	0	0	0	0	0	-0.1	-0.1	-0.1	8° 0'	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	
0	0	0	0	-0.1	-0.1	0	-0.1	-0.1	7° 45'	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	
0	0	0	0	-0.1	-0.1	0	0	-0.1	7° 30'	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	
0	0	0	0	-0.1	-0.1	-0.1	0	-0.1	7° 15'	0.1	0.1	0.2	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	7° 0'	0.1	0.1	0.2	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	6° 45'	0.1	0.1	0.2	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	6° 30'	0.1	0.1	0.2	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	6° 15'	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	6° 0'	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	
-0.1	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	5° 45'	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	5° 30'	0	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	
-0.2	-0.2	-0.2	-0.1	-0.1	0	0	-0.1	-0.1	5° 15'	0	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	
-0.2	-0.3	-0.2	-0.1	-0.1	0	0	-0.1	-0.1	5° 0'	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	
0	-0.2	-0.2	-0.1	0	0	0	0	-0.1	4° 45'	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	
0.2	0	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	4° 30'	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	
0.2	0.2	0	-0.1	0	0	-0.1	-0.1	-0.1	4° 15'	0.4	0.3	0.2	0	0	0.1	0.2	0.2	0.1	
0.2	0.2	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 0'	0.3	0.3	0.3	0	0	0.2	0.2	0.2	0.1	
0.1	0.2	0.2	0.1	-0.1	-0.1	0	0	-0.1	3° 45'	0.3	0.3	0.4	0.1	0	0.2	0.2	0.2	0.1	
0	0.1	0.2	0.2	0	-0.1	-0.1	-0.1	-0.1	3° 30'	0.2	0.2	0.4	0.2	0.1	0.1	0.1	0.2	0.1	
-0.1	0	0.2	0.3	0	-0.2	-0.2	-0.1	-0.1	3° 15'	0.1	0.1	0.3	0.3	0.2	0.1	0.1	0.2	0.1	
-0.2	-0.1	0.1	0.2	0.1	-0.1	-0.2	-0.1	-0.1	3° 0'	0.1	0.1	0.2	0.3	0.4	0.2	0.1	0.1	0.1	
-0.1	-0.1	0	0.1	0.1	-0.1	-0.2	-0.1	-0.1	2° 45'	0.1	0	0.1	0.3	0.5	0.3	0.1	0.1	0	
0	-0.1	-0.1	0	0.1	0.1	0	-0.1	-0.1	2° 30'	0.1	0	0	0.2	0.5	0.4	0.1	0.1	0	
0.2	0	-0.1	-0.1	0	0.1	0	0	0	2° 15'	0.2	0.1	0	0.2	0.4	0.4	0.2	0.1	0	
0.2	0.1	-0.1	-0.1	0	0.1	0.1	0	0	2° 0'	0.2	0.2	0.1	0.2	0.3	0.3	0.2	0.1	0	
0.1	0.1	-0.1	-0.2	-0.1	0.1	0.1	0	0	1° 45'	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.1	0	
0	0.1	-0.1	-0.2	-0.1	0	0.1	0	0	1° 30'	0.1	0.3	0.3	0.1	0.2	0.3	0.3	0.1	0	
-0.1	0	0	-0.1	-0.1	0	0	0	0	1° 15'	0	0.3	0.3	0.2	0.1	0.2	0.3	0.2	0.1	
-0.1	0	0.1	0	-0.1	-0.1	0	0	0	1° 0'	0	0.2	0.4	0.2	0.1	0.2	0.2	0.2	0.1	
-0.1	0	0.2	0.1	0	-0.1	0	0.1	0	0° 45'	0	0.1	0.4	0.3	0.1	0.2	0.2	0.2	0.1	
-0.1	-0.1	0.1	0.1	0	0	0	0.1	0	0° 30'	0	0	0.3	0.3	0.2	0.3	0.1	0.2	0.2	
0	-0.1	0	0.1	0	0	0.1	0.1	0	0° 15'	0	0	0.2	0.4	0.2	0.2	0.1	0.2	0.2	
0	-0.1	0	0.1	0	0	0.1	0.1	0.1	0° 0'	0	0	0.2	0.4	0.3	0.2	0.1	0.2	0.2	

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										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	-0.1	-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	0.1	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	0.1	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	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	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	8° 45'	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 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	8° 15'	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	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	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	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	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	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	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	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	-0.2	-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° 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	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	-0.1	-0.1	-0.1	5° 30'	0.1	0.1	0.2	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	5° 15'	0.1	0.1	0.2	0.2	0	0.1	0.1	0	0.1	
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	5° 0'	0.1	0.1	0.2	0.2	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	4° 45'	0.1	0.1	0.2	0.2	0.1	0.1	0	0.1	0.1	
-0.1	-0.1	0	0	0	0	-0.1	-0.1	-0.1	4° 30'	0.1	0.1	0.2	0.2	0.1	0.1	0	0.1	0.1	
-0.1	-0.1	-0.1	0	0	0	0	-0.1	-0.1	4° 15'	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	-0.1	-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	0	0	0	-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	0	0	0	0	0	-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	0	0	0	0	0	-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	0	0	0	0	0	-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	0	0	0	0	0	-0.1	-0.1	2° 45'	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	2° 30'	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	-0.1	2° 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	-0.1	-0.1	-0.1	2° 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	0	0	1° 45'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	-0.1	0	0	0	1° 30'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	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° 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° 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	0° 30'	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	-0.1	0	0	0	-0.1	-0.1	-0.1	0° 15'	0.2	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	0° 0'	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	





## Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										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	0	0.2	0.2	-0.2	-0.2	0	0	0	10° 0'	0.1	0	0.1	0.1	-0.6	-0.6	0.3	0.3	0.1	
0	0	0	0.2	-0.1	-0.3	0	0	0	9° 45'	0.1	-0.1	0	0.2	-0.4	-0.7	0.2	0.3	0.1	
0.1	-0.1	-0.1	0	-0.1	-0.2	0	0	-0.1	9° 30'	0	0	-0.1	0.2	-0.2	-0.8	0.1	0.4	0.1	
0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	0	-0.1	9° 15'	0	0.1	-0.1	0.1	-0.1	-0.8	0	0.4	0.1	
0	-0.1	-0.2	-0.1	0	-0.2	-0.1	0.1	0	9° 0'	0	0.2	-0.1	0.1	-0.1	-0.8	-0.1	0.4	0.2	
-0.2	-0.2	-0.1	-0.1	0.1	-0.1	-0.1	0.1	0	8° 45'	0	0.2	-0.1	0	-0.1	-0.7	-0.2	0.4	0.2	
-0.3	-0.2	-0.1	0	0.1	-0.1	-0.1	0	0	8° 30'	0.1	0.2	-0.1	-0.1	-0.1	-0.5	-0.3	0.4	0.3	
-0.2	-0.2	-0.1	0	0.1	0	-0.1	0	0	8° 15'	0.1	0.1	-0.1	-0.2	-0.2	-0.4	-0.4	0.4	0.3	
-0.1	-0.1	-0.1	-0.1	0.1	0	-0.1	0	0	8° 0'	0.2	0	-0.2	-0.2	-0.2	-0.3	-0.4	0.3	0.3	
0.1	0	0	-0.1	0.1	0	0	0	0	7° 45'	0.2	0	-0.1	-0.3	-0.2	-0.2	-0.4	0.3	0.3	
0.1	0.1	0	0	0.1	0.1	0.1	0	0	7° 30'	0.2	0.1	-0.1	-0.3	-0.3	-0.2	-0.4	0.4	0.4	
0	0	0	0.1	0.1	0.2	0.2	0	0	7° 15'	0.3	0.1	-0.1	-0.3	-0.3	-0.2	-0.4	0.4	0.4	
-0.1	-0.1	0	0.1	0.1	0.2	0.3	0.1	0	7° 0'	0.4	0	-0.1	-0.3	-0.3	-0.3	-0.3	0.5	0.4	
-0.1	-0.1	-0.1	0	-0.1	0.1	0.3	0.1	0	6° 45'	0.4	0	-0.2	-0.3	-0.3	-0.5	-0.2	0.6	0.4	
0	0.1	0	0	-0.1	0	0.2	0.1	0	6° 30'	0.4	0	-0.2	-0.3	-0.3	-0.6	-0.2	0.6	0.4	
0.2	0.3	0.1	0.1	-0.1	0	0.1	0.1	0.1	6° 15'	0.3	0.1	-0.2	-0.3	-0.2	-0.7	-0.2	0.7	0.4	
0.2	0.5	0.3	0.1	0.1	0	0	0.2	0.1	6° 0'	0.1	0.1	-0.1	-0.2	-0.2	-0.8	-0.3	0.6	0.5	
0.1	0.4	0.4	0.1	0.1	0	-0.1	0.1	0.2	5° 45'	0	0.1	0	-0.2	-0.2	-0.7	-0.3	0.5	0.6	
0	0.2	0.2	0	0	0	-0.3	0	0.2	5° 30'	-0.1	0	0.1	0	-0.2	-0.6	-0.3	0.4	0.6	
-0.1	-0.1	0	-0.2	-0.1	-0.1	-0.4	-0.2	0.1	5° 15'	-0.2	-0.1	0.2	0.1	-0.3	-0.5	-0.3	0.2	0.5	
-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.4	-0.4	-0.1	5° 0'	-0.1	-0.2	0.2	0.1	-0.4	-0.4	-0.2	0.1	0.4	
0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.4	-0.4	-0.2	4° 45'	0	-0.1	0.1	0.1	-0.4	-0.3	-0.2	0	0.2	
0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.4	-0.3	4° 30'	0	0	0.1	0.1	-0.4	-0.2	-0.1	0	0	
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.4	4° 15'	0	0	0.2	0.1	-0.4	-0.2	-0.1	0.1	0	
0	0	0	-0.1	-0.1	0	0	-0.1	-0.2	4° 0'	0	0	0.2	0.1	-0.4	-0.2	-0.1	0.2	0	
0	0	0	0	0	0.1	0.1	0.1	0	3° 45'	0	0	0.2	0.1	-0.4	-0.2	-0.1	0.2	0	
0	0	0	0	0.1	0.2	0.2	0.2	0.2	3° 30'	0.1	0	0.1	0.1	-0.5	-0.3	0	0.2	0.1	
0	0	0	0.1	0.1	0.3	0.3	0.2	0.2	3° 15'	0.1	0	0.1	0.1	-0.5	-0.3	0	0.2	0.1	
0	0	0	0.1	0.2	0.2	0.2	0.1	0	3° 0'	0.1	0.1	0.1	0	-0.6	-0.4	0.1	0.2	0.2	
0.1	0.1	0	0.1	0.2	0.1	0.1	-0.1	-0.2	2° 45'	0.1	0.1	0.1	-0.1	-0.6	-0.4	0.1	0.3	0.2	
0.1	0.1	0	0.2	0.2	0	0	-0.2	-0.3	2° 30'	0.1	0.1	0.1	-0.2	-0.5	-0.4	0.2	0.4	0.2	
0.2	0.1	0	0.1	0.1	0	-0.1	-0.2	-0.2	2° 15'	0.1	0.2	0.1	-0.3	-0.4	-0.3	0.3	0.4	0.3	
0.1	0	0	0.1	0.1	-0.1	-0.2	-0.2	0	2° 0'	0.1	0.2	0.1	-0.3	-0.4	-0.3	0.3	0.4	0.2	
0	-0.1	0	0.1	0.1	-0.1	-0.3	-0.2	0	1° 45'	0.2	0.2	0	-0.3	-0.3	-0.2	0.3	0.3	0.2	
-0.1	-0.1	0.1	0.2	0.1	-0.1	-0.3	-0.3	-0.1	1° 30'	0.2	0.2	-0.1	-0.3	-0.3	0	0.4	0.2	0.1	
-0.1	-0.1	0.1	0.3	0.2	0	-0.2	-0.3	-0.2	1° 15'	0.2	0.1	-0.2	-0.3	-0.2	0.1	0.4	0.1	0	
0	0.1	0.3	0.4	0.3	0	-0.2	-0.3	-0.2	1° 0'	0.3	0	-0.3	-0.3	-0.1	0.2	0.5	0.1	0	
0.2	0.4	0.4	0.4	0.3	0	-0.2	-0.2	-0.2	0° 45'	0.3	-0.1	-0.3	-0.3	0	0.3	0.5	0.2	-0.1	
0.4	0.5	0.6	0.5	0.4	0.1	-0.1	-0.1	0	0° 30'	0.2	-0.1	-0.3	-0.3	0.1	0.5	0.6	0.2	-0.1	
0.5	0.6	0.6	0.5	0.4	0.2	0	0.1	0.1	0° 15'	0.1	-0.1	-0.3	-0.3	0.2	0.7	0.6	0.1	0	
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	



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 128 to 132 °E									
Correction to Latitude										Correction to Longitude									
128° 0'	128° 30'	129° 0'	129° 30'	130° 0'	130° 30'	131° 0'	131° 30'	132° 0'	Longitude	128° 0'	128° 30'	129° 0'	129° 30'	130° 0'	130° 30'	131° 0'	131° 30'	132° 0'	Latitude
0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	10° 0'	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	9° 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	9° 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	9° 15'	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	-0.1	9° 0'	0.2	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	8° 45'	0.2	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	8° 30'	0.3	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	8° 15'	0.3	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	8° 0'	0.3	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	7° 45'	0.3	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	7° 30'	0.4	0.1	0	0	0	0	0	0	0	0
0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	7° 15'	0.4	0.1	0	0	0	0	0	0	0	0
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	7° 0'	0.4	0.1	0	0	0	0	0	0	0	0
0	0	0	-0.1	0	-0.1	0	0	0	6° 45'	0.4	0.1	0	0	0	0	0	0	0	0
0	0	0	-0.1	0	-0.1	-0.1	0	0	6° 30'	0.4	0.2	0	0	0	0	0	0	0	0
0.1	0	0	-0.1	0	-0.1	-0.1	0	0	6° 15'	0.4	0.2	0.1	0	0	0	0	0	0	0
0.1	0	0	0	0	0	-0.1	-0.1	-0.1	6° 0'	0.5	0.2	0.1	0	0	0	0	0	0	0
0.2	0	0	0	0	0	-0.1	-0.1	-0.1	5° 45'	0.6	0.3	0.1	0	0	0	0	0	0	0.1
0.2	0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	5° 30'	0.6	0.3	0.1	0	0	0	0	0	0	0.1
0.1	0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	5° 15'	0.5	0.4	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	-0.1	5° 0'	0.4	0.4	0.2	0.1	0	0	0	0	0	0.1
-0.2	0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	4° 45'	0.2	0.4	0.2	0.1	0.1	0	0	0	0	0.1
-0.3	0	0	0	0	0	-0.1	-0.1	-0.1	4° 30'	0	0.3	0.3	0.1	0.1	0	0	0	0	0.1
-0.4	-0.1	0	0	0	0	-0.1	-0.1	0	4° 15'	0	0.1	0.3	0.1	0.1	0	0	0	0	0.1
-0.2	-0.1	0	0	0	0	-0.1	0	0	4° 0'	0	0	0.2	0.1	0.1	0	0	0	0	0.1
0	-0.1	0	0	0	0	0	-0.1	-0.1	3° 45'	0	0	0.2	0.2	0	0.1	0	0	0	0.1
0.2	0	0	0	-0.1	0	0	-0.1	-0.1	3° 30'	0.1	0	0.2	0.2	0	0	0	0	0	0.1
0.2	0	-0.1	0	-0.1	0	0	-0.1	-0.1	3° 15'	0.1	0.1	0.2	0.2	0.1	0	0	0	0	0
0	-0.1	-0.1	0	0	0	0	-0.1	0	3° 0'	0.2	0.2	0.1	0.2	0.1	0	0	0	0	0
-0.2	-0.2	-0.1	0	0	0	0	0	0	2° 45'	0.2	0.2	0.1	0.2	0.1	0	0	0	0	0
-0.3	-0.2	-0.1	0	0	0	0	0	0	2° 30'	0.2	0.2	0	0.1	0.1	0	0	0	0	0
-0.2	-0.1	0	0	0	0	0	0	0	2° 15'	0.3	0.1	-0.1	0.1	0.1	0	0	0	0	0
0	0	0.1	0	0	0	0	0	0	2° 0'	0.2	0	-0.1	0.1	0.1	0.1	0	0	0	0
0	0	0	0	0	0	0	0	0	1° 45'	0.2	0	-0.1	0.1	0.1	0.1	0	0	0	0
-0.1	0	-0.1	-0.1	0	0	0	0	0	1° 30'	0.1	0	0	0.1	0.1	0.1	0	0	0	0
-0.2	-0.1	-0.2	-0.2	-0.1	0	0	0	0	1° 15'	0	0.1	0	0.1	0.1	0.1	0.1	0	0	0
-0.2	-0.1	-0.2	-0.2	-0.1	0	0	0	0	1° 0'	0	0	0.1	0	0	0	0.1	0	0	0
-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0° 45'	-0.1	0	0.1	0	0	0	0.1	0	0	0
0	-0.1	0	-0.1	-0.1	-0.1	-0.1	0	0.1	0° 30'	-0.1	0	0.1	0	0	0	0	0	0	0
0.1	0	0.1	0	-0.1	-0.1	-0.1	0	0.1	0° 15'	0	0	0.1	0	0	0	0	0	-0.1	0
0.2	0.1	0.1	0.1	0	-0.1	0	0	0	0° 0'	0	0	0.1	0.1	0.1	0	-0.1	-0.1	0	0

# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

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



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 144 to 148 °E									
Correction to Latitude										Correction to Longitude									
144° 0'	144° 30'	145° 0'	145° 30'	146° 0'	146° 30'	147° 0'	147° 30'	148° 0'	Longitude	144° 0'	144° 30'	145° 0'	145° 30'	146° 0'	146° 30'	147° 0'	147° 30'	148° 0'	Latitude
-0.1	0	0	0	-0.1	-0.1	0	-0.1	-0.2	10° 0'	0.1	0.1	0	0	-0.1	-0.1	-0.1	0	0.1	10° 0'
0	0	0	-0.1	-0.1	-0.1	0	-0.1	-0.2	9° 45'	0	0.1	0	0	-0.1	-0.1	-0.1	0.1	0.1	9° 45'
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	9° 30'	0	0	0	0	0	-0.1	-0.1	0.1	0	9° 30'
-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	9° 15'	0	0	0.1	0	0	-0.1	-0.1	0.1	0	9° 15'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	9° 0'	0	0	0	0	0	-0.1	-0.1	0.1	0	9° 0'
-0.2	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.2	-0.2	8° 45'	0	0	0	0	0	0	-0.1	0	0	8° 45'
-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	8° 30'	0	0	0.1	0	-0.1	0	0	0	0.1	8° 30'
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	8° 15'	-0.1	0	0.1	0	-0.1	0	0	0	0.1	8° 15'
-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	8° 0'	-0.1	0	0.1	0	-0.1	0	0	0	0.1	8° 0'
-0.1	-0.1	0	0.1	0	-0.1	0	0	0	7° 45'	-0.1	0	0	0	0	0	0	0	0	7° 45'
-0.1	-0.1	0	0	0	0	0	0	0	7° 30'	-0.1	0	0	0	0	0	-0.1	0	0	7° 30'
-0.1	-0.1	0	0	0	0	0	0	0	7° 15'	0	0	-0.1	0	0	0	-0.1	0	0	7° 15'
0	0	-0.1	0	0	0	0	0	0	7° 0'	0	0	-0.1	0	0	0	-0.1	0	0	7° 0'
0	0	-0.1	0	0	0	0	0	0	6° 45'	0	0	-0.1	0	0	0	-0.1	0	0	6° 45'
0	0	-0.1	0	0	0	0	-0.1	0	6° 30'	0	0	-0.1	0	0	0	0	0	0	6° 30'
0	0	-0.1	-0.1	-0.1	0	0	-0.1	0	6° 15'	0	0	0	-0.1	0	0	0	0	0	6° 15'
0	0	0	-0.1	-0.1	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	5° 45'	0	0	0	0	0	0	0	0	0	5° 45'
0	0	0	0	0	0	0	0	-0.1	5° 30'	0	0	0	0	0	0	0	0	0	5° 30'
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° 0'	0	0	0	0	0	0	0	0	0	5° 0'
0	0	0	0	0	0	0	-0.1	0	4° 45'	0	0	0	0	0	0	0	0	0	4° 45'
0	0	0	0	0	0	0	-0.1	0	4° 30'	0	0	0	0	0	0	0	0	0	4° 30'
0	0	0	0	0	0	0	0	0	4° 15'	0	0	0	0	0	0	0	0	0	4° 15'
0	0	0	0	0	-0.1	0	0	0	4° 0'	0	0	0	0	0	0	0	0	0	4° 0'
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	0	0	0	0	0	0	3° 45'
0	0	0	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	-0.1	0	0	3° 15'	0	0	0	0	0	0	0	0	0	3° 15'
0	0	0	0	0	0	-0.1	0	0	3° 0'	0	0	0	0	0	0	0	0	0	3° 0'
0	0	0	0	0	0	0	0	0	2° 45'	0	0	0	0	0	0	0	0	0	2° 45'
0	0	0	0	0	0	0	0	0	2° 30'	0	0	0	0	0	0	0	0	0	2° 30'
-0.1	0	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	-0.1	2° 0'	0	0	0	0	0	0	0	0	0	2° 0'
-0.1	-0.1	-0.1	0	0	0	0	0	-0.1	1° 45'	0	0	0	0	0	0	0	0	0	1° 45'
-0.1	-0.1	-0.1	0	0	0	0	0	-0.1	1° 30'	0	0	0	0	0	0	0	0	0	1° 30'
-0.1	-0.1	-0.1	-0.1	0	0	0	0	-0.1	1° 15'	0	0	0	0	0	0	0	0	0	1° 15'
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	1° 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	0° 45'	0	0	0	0	0	0	0	0	0	0° 45'
-0.1	-0.1	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	0.1	0° 15'	0	0	0	0	0	-0.1	0	0	0	0° 15'
0	0	0	0	0	0	0	0	0	0° 0'	0	-0.1	0	0	0	-0.1	0	0	0	0° 0'

# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

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





# Correct Astronomical Position to WGS84

Latitude 20 to 10 °N
Longitude 160 to 164 °E

Correction to Latitude
Correction to Longitude

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

# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

Latitude 20 to 10 °N										Longitude 168 to 172 °E									
Correction to Latitude										Correction to Longitude									
168° 0'	168° 30'	169° 0'	169° 30'	170° 0'	170° 30'	171° 0'	171° 30'	172° 0'	Longitude	168° 0'	168° 30'	169° 0'	169° 30'	170° 0'	170° 30'	171° 0'	171° 30'	172° 0'	Latitude
-0.1	0	-0.1	-0.1	-0.1	0	0	0	0	10° 0'	0	0.1	0.1	-0.1	-0.1	0	-0.1	0	0	10° 0'
-0.1	0	0	0	-0.2	-0.1	0	0	0	9° 45'	-0.1	0.1	0.1	0	-0.1	-0.1	-0.1	0	0	9° 45'
-0.2	0	0.1	0	-0.1	-0.1	-0.1	-0.1	0	9° 30'	-0.2	0	0.1	0.1	-0.1	-0.2	-0.1	-0.1	0	9° 30'
-0.1	0	0.1	0.1	0	-0.1	-0.2	-0.1	0	9° 15'	-0.2	-0.1	0.1	0.2	-0.1	-0.1	-0.1	-0.1	0	9° 15'
0	-0.1	0	0.1	0.1	0	-0.2	-0.2	0	9° 0'	-0.2	-0.1	0	0.1	0	-0.1	0	-0.2	-0.1	9° 0'
0	-0.1	0	0.1	0.2	0.1	-0.1	-0.1	0	8° 45'	-0.1	-0.1	0	0.1	0	0.1	0.1	-0.2	-0.1	8° 45'
0	-0.1	-0.1	0	0.1	0	0	0.1	0	8° 30'	-0.1	-0.1	-0.1	0	-0.1	0.2	0.1	-0.2	-0.1	8° 30'
0	-0.1	-0.1	-0.1	0	0	0.1	0.1	0	8° 15'	0	-0.1	-0.1	0	-0.1	0.1	0	-0.2	-0.1	8° 15'
0	-0.1	-0.1	-0.1	-0.1	0	0.1	0	-0.1	8° 0'	0	-0.1	-0.1	0	-0.1	0.1	0	-0.1	0	8° 0'
0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	7° 45'	0.1	0	-0.1	0	-0.1	0	0	-0.1	-0.1	7° 45'
0.1	0	0	0	0	0	0	-0.2	-0.1	7° 30'	0.2	0.1	-0.1	-0.1	-0.1	0	0.1	0	-0.1	7° 30'
0	0.1	0.1	0.1	0	0	0	0	-0.1	7° 15'	0.1	0.1	-0.1	-0.1	-0.1	0	0.1	0	-0.1	7° 15'
0	0.2	0.1	0	0	0	0.1	0.1	0	7° 0'	0	0.1	-0.1	0	0	0	0.1	0	-0.1	7° 0'
0	0.1	0.1	-0.1	0	0	0.1	0.1	0	6° 45'	-0.1	0	0	0	-0.1	-0.1	0	0	-0.1	6° 45'
-0.1	0	-0.1	-0.2	-0.1	0	0	0	-0.1	6° 30'	-0.1	0	0.1	0	-0.1	-0.1	0	0.1	-0.1	6° 30'
-0.1	-0.1	-0.1	-0.2	-0.1	0	0	0	-0.1	6° 15'	-0.1	0	0.1	0	-0.2	-0.1	0	0.1	-0.1	6° 15'
-0.1	-0.1	-0.1	0	0	-0.1	0	0.1	0	6° 0'	-0.1	-0.1	0.2	0	-0.2	-0.1	0	0.1	0	6° 0'
-0.1	-0.1	0	0.1	0	-0.1	-0.1	0.1	0.1	5° 45'	-0.1	-0.1	0.1	0	-0.2	-0.1	-0.1	0.1	0	5° 45'
0	0	0	0.1	0	-0.1	-0.1	0	0.1	5° 30'	-0.1	-0.1	0.1	0	-0.1	0	-0.1	0	0.1	5° 30'
0	0	0	0.1	0	-0.1	-0.1	0	0.1	5° 15'	-0.1	-0.1	0	0	0	0	-0.1	0	0	5° 15'
0	-0.1	-0.1	0	0	0	0	0	0	5° 0'	-0.1	0	0	0	0	0	-0.1	-0.1	0	5° 0'
0	-0.1	-0.1	0	0	0	0	0	0	4° 45'	0	0	-0.1	0	0	0	-0.1	-0.1	0.1	4° 45'
-0.1	0	0	-0.1	0	0	0	0	0	4° 30'	0	0	-0.1	-0.1	0	0	-0.1	-0.1	0.1	4° 30'
-0.1	0	0	-0.1	0	0	-0.1	-0.1	0	4° 15'	0	0	-0.1	-0.1	0	0	-0.1	-0.1	0	4° 15'
0	0	0	0	0	0	0	-0.1	0	4° 0'	0	0	0	-0.1	0	0	-0.1	-0.1	0	4° 0'
0	0	0	0	0	0	0	0	0	3° 45'	0	-0.1	0	0	-0.1	0	0	-0.1	0	3° 45'
0	0	0	0	-0.1	0	0	0	-0.1	3° 30'	0	-0.1	0	0	-0.1	0	0	-0.1	0	3° 30'
0	0	0	0	-0.1	-0.1	0	-0.1	0	3° 15'	0	0	0	0	0	0	0	-0.1	0	3° 15'
0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	3° 0'	0	-0.1	0	0	0	0	0	-0.1	0	3° 0'
-0.1	0	0	0	0	-0.1	-0.1	0	0	2° 45'	0	-0.1	0	0	0	0	0	-0.1	-0.1	2° 45'
-0.1	-0.1	0	0	0	-0.1	0	0	0	2° 30'	0	-0.1	0	0	0	0	-0.1	-0.1	-0.1	2° 30'
-0.1	-0.1	-0.1	0	0	0	0	0	0	2° 15'	0	-0.1	-0.1	0	0	0	-0.1	-0.1	-0.1	2° 15'
-0.1	-0.1	0	0	0	0	0	0	0	2° 0'	0	-0.1	-0.1	0	0	0	-0.1	-0.1	0	2° 0'
0	-0.1	0	0	0	0	0	0	0	1° 45'	0	-0.1	-0.1	0	0	0	-0.1	-0.1	0	1° 45'
0	0	0	0	0	0	0	0	0	1° 30'	0	-0.1	-0.1	0	0	0	-0.1	-0.1	0	1° 30'
0	0	0	0	0	0	-0.1	-0.1	0	1° 15'	0	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	0	1° 15'
0	0	0	0	0	-0.1	-0.1	0	0	1° 0'	0	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	0	1° 0'
0	0	0	0	0	0	0	0	0	0° 45'	0	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	0° 45'
0	0	0	-0.1	0	0	0	0	0	0° 30'	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	0° 30'
0	0	0	0	0	0	0	0	0	0° 15'	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	0° 15'
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'

# Correct Astronomical Position to WGS84

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











# Correct Astronomical Position to WGS84

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











# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 144 to 140 °W									
Correction to Latitude										Correction to Longitude									
144°	143°	143°	142°	142°	141°	141°	140°	140°	Longitude	144°	143°	143°	142°	142°	141°	141°	140°	140°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	10° 0'	0	-0.1	0	0	0	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	9° 45'	0	-0.1	0	0	0	0	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	9° 30'	0	-0.1	0	0	-0.1	-0.1	0	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	9° 15'	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	9° 0'	0	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	8° 45'	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	8° 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	8° 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	8° 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	7° 45'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	
0	0	0	0	0	0	0	0	0	7° 30'	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	-0.1	7° 15'	0	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	-0.1	7° 0'	0	0	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.1	0	0	0	-0.1	6° 45'	0	0	0	-0.1	-0.1	-0.1	-0.1	0	-0.1	
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	6° 30'	0	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	6° 15'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	0	
-0.1	0	0	0	0	-0.1	-0.1	-0.1	-0.1	6° 0'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	-0.1	-0.1	-0.1	5° 45'	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	-0.1	-0.1	5° 30'	0	0	0	0	0	-0.1	0	-0.1	-0.1	
0	0	0	0	0	0	-0.1	-0.1	-0.1	5° 15'	0	0	0	0	0	-0.1	0	0	0	
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 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	4° 45'	0	0	0	0	0	0	0	0	-0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	4° 30'	0	0	0	0	0	0	0	0	-0.1	
-0.1	-0.1	-0.1	0	0	0	0	0	0	4° 15'	0	0	0	0	0	0	0	-0.1	-0.1	
-0.1	0	0	0	0	0	0	0	0	4° 0'	0	0	0	-0.1	0	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	3° 45'	0	0	0	-0.1	0	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	3° 30'	0	0	0	-0.1	0	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	3° 15'	0	0	0	-0.1	0	0	0	-0.1	0	
0	0	0	0	0	0	0	0	0	3° 0'	0	0	-0.1	0	0	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	2° 45'	0	0	0	0	0	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	2° 30'	0	0	0	0	0	0	0	0	-0.1	
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° 0'	0	0	0	-0.1	-0.1	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	1° 45'	0	0	0	-0.1	-0.1	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	1° 30'	0	0	0	0	-0.1	-0.1	0	0	0	
0	0	0	0	0	0	0	0	0	1° 15'	0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	1° 0'	0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	0° 45'	0	0	0	0	0	-0.1	-0.1	0	-0.1	
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	0° 15'	0	0	0	0	0	0	0	0	-0.1	
0	0	0	0	0	0	0	0	0	0° 0'	0	0	-0.1	0	0	0	0	0	0	

# Correct Astronomical Position to WGS84

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



























# Correct Astronomical Position to WGS84

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



# Correct Astronomical Position to WGS84

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

## Correct Astronomical Position to WGS84

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

## Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										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'	
-0.2	-0.2	-0.1	0	0.2	0.2	0.1	0.1	0	10° 0'	0	-0.1	-0.1	0	0.2	0.1	-0.2	-0.4	-0.2	
-0.2	-0.2	-0.1	-0.1	0	0	0.1	0.1	0	9° 45'	0	-0.1	-0.2	-0.1	0.2	0.1	-0.2	-0.4	-0.2	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	9° 30'	0	-0.1	-0.2	0	0.1	0.1	-0.2	-0.3	-0.2	
-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	0	9° 15'	0	-0.1	-0.2	0	0.1	0	-0.3	-0.3	-0.2	
-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	9° 0'	-0.1	-0.2	-0.1	0	0.1	0	-0.3	-0.3	-0.1	
-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.2	-0.4	8° 45'	-0.1	-0.2	-0.1	0.1	0	0.1	-0.3	-0.3	0	
-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.4	8° 30'	-0.1	-0.2	-0.1	0.1	0	0.1	-0.3	-0.2	0.1	
-0.2	-0.3	-0.3	-0.3	-0.1	0	-0.2	-0.3	-0.3	8° 15'	-0.1	-0.2	-0.1	0	-0.1	0.2	-0.3	-0.2	0.2	
-0.3	-0.3	-0.3	-0.3	-0.1	0.1	-0.2	-0.4	-0.1	8° 0'	-0.1	-0.2	-0.1	0	-0.2	0.2	-0.1	-0.2	0.1	
-0.4	-0.4	-0.3	-0.2	-0.1	0.1	-0.2	-0.4	0	7° 45'	-0.1	-0.2	-0.1	-0.1	-0.3	0.2	0.1	-0.2	-0.1	
-0.4	-0.4	-0.3	-0.1	-0.1	-0.1	-0.2	-0.4	0	7° 30'	-0.1	-0.2	-0.2	-0.1	-0.3	0.3	0.2	-0.3	-0.4	
-0.4	-0.4	-0.3	-0.1	-0.1	-0.2	-0.2	-0.4	-0.2	7° 15'	0	-0.3	-0.3	-0.2	-0.3	0.3	0.3	-0.3	-0.5	
-0.3	-0.3	-0.3	-0.1	-0.1	-0.3	-0.2	-0.3	-0.3	7° 0'	0	-0.3	-0.3	-0.3	-0.2	0.3	0.3	-0.3	-0.6	
-0.2	-0.2	-0.3	-0.1	-0.2	-0.4	-0.2	-0.3	-0.3	6° 45'	0	-0.2	-0.4	-0.4	-0.1	0.3	0.3	-0.2	-0.7	
-0.1	-0.1	-0.2	-0.1	-0.3	-0.4	-0.3	-0.2	-0.1	6° 30'	0	-0.2	-0.4	-0.4	0	0.3	0.2	-0.2	-0.7	
-0.1	-0.1	-0.1	-0.1	-0.4	-0.4	-0.3	0	0.1	6° 15'	0	-0.2	-0.4	-0.4	0.1	0.3	0.1	-0.3	-0.7	
0	-0.1	0	-0.1	-0.4	-0.4	-0.2	0.2	0.2	6° 0'	0	-0.2	-0.4	-0.3	0.2	0.2	0	-0.5	-0.7	
0	-0.1	-0.1	-0.1	-0.3	-0.2	0.1	0.3	0.2	5° 45'	0	-0.1	-0.4	-0.1	0.3	0.1	-0.2	-0.6	-0.5	
0	-0.1	-0.1	-0.1	-0.3	0	0.3	0.4	0.1	5° 30'	0	-0.1	-0.4	-0.1	0.3	0	-0.3	-0.6	-0.4	
-0.1	-0.1	-0.1	-0.1	-0.2	0.1	0.4	0.3	0	5° 15'	0	0	-0.4	0	0.2	-0.2	-0.4	-0.5	-0.2	
-0.1	-0.1	0	-0.1	-0.1	0.2	0.4	0.1	-0.1	5° 0'	0	0	-0.5	0	0.1	-0.3	-0.4	-0.4	-0.2	
-0.1	0	0.1	0	0	0.2	0.2	0	-0.1	4° 45'	0	-0.1	-0.5	0.1	0	-0.4	-0.3	-0.2	-0.1	
0	0.2	0.2	-0.1	0.1	0.2	0.1	0	-0.1	4° 30'	0	-0.2	-0.4	0.2	-0.1	-0.5	-0.3	-0.1	-0.1	
0.1	0.3	0.2	-0.1	0.2	0.2	-0.1	-0.1	-0.1	4° 15'	0	-0.3	-0.3	0.2	-0.2	-0.4	-0.2	-0.1	-0.1	
0.1	0.3	0.1	0	0.2	0.1	-0.2	-0.2	-0.1	4° 0'	-0.2	-0.3	-0.1	0.2	-0.3	-0.3	-0.1	-0.1	-0.1	
0	0.2	0	0	0.2	0	-0.2	-0.2	-0.2	3° 45'	-0.2	-0.3	0	0.1	-0.3	-0.1	-0.1	-0.2	-0.1	
-0.1	0	0	0.1	0.1	-0.1	-0.2	-0.2	-0.2	3° 30'	-0.3	-0.4	0.1	0	-0.3	0	-0.1	-0.2	-0.1	
0	0	-0.1	0	-0.1	-0.2	-0.2	-0.2	-0.2	3° 15'	-0.3	-0.4	0	-0.1	-0.2	0	-0.1	-0.1	-0.1	
0	0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	3° 0'	-0.3	-0.3	0.1	0	-0.1	0	-0.1	-0.1	-0.2	
0.1	0	-0.1	-0.1	-0.2	-0.2	-0.1	-0.2	-0.2	2° 45'	-0.4	-0.3	0.1	0	0	-0.1	-0.1	-0.1	-0.2	
0.1	0	0	0	-0.1	-0.1	-0.1	-0.2	-0.2	2° 30'	-0.4	-0.2	0.1	0	0	-0.1	-0.1	-0.1	-0.2	
0	-0.1	0	0	0	-0.1	-0.1	-0.1	-0.2	2° 15'	-0.3	-0.1	0	0	0	-0.1	0	-0.1	-0.1	
0.1	0	0	0	0	-0.1	-0.1	-0.1	-0.2	2° 0'	-0.3	-0.1	0	0	0.1	0	0	-0.1	-0.1	
0.1	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.2	1° 45'	-0.2	-0.1	0	0	0.1	0	0	-0.1	-0.1	
0.2	0.1	0	0	-0.1	-0.1	0	0	-0.1	1° 30'	-0.2	-0.1	0	0.1	0.1	0	0	0	-0.1	
0.2	0	0	0	0	0	0	0	0	1° 15'	-0.1	0	0	0.1	0.1	0	0	0	-0.1	
0.1	0	0	0	0	0	0.1	0	0	1° 0'	0	0	0	0.1	0.1	-0.1	0	0	0	
0	0	0	0	0	0	0.1	0.1	0	0° 45'	0.1	0	0	0.1	0.1	-0.1	-0.1	0	0	
0	0	0	0	0.1	0.1	0.1	0.1	0.1	0° 30'	0.1	0	0	0.1	0.1	-0.1	-0.1	0	0	
0	0	0	0	0.1	0.1	0.1	0.1	0.1	0° 15'	0.1	0	0	0.1	0.1	-0.1	-0.1	0	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	



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 72 to 68 °W									
Correction to Latitude										Correction to Longitude									
72°	71°	71°	70°	70°	69°	69°	68°	68°	Longitude	72°	71°	71°	70°	70°	69°	69°	68°	68°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	-0.2	-0.2	-0.1	0	0	-0.1	10° 0'	-0.2	-0.1	0.1	0.1	0	-0.1	-0.1	-0.1	0	
0	0	-0.1	-0.2	-0.2	0	0	0	-0.1	9° 45'	-0.2	-0.1	0.1	0.2	0	-0.2	-0.1	0	0	
0	0	-0.3	-0.3	-0.1	0	0	-0.1	-0.1	9° 30'	-0.2	-0.1	0.3	0.2	-0.2	-0.2	-0.1	0	0	
0	-0.2	-0.5	-0.3	0.1	0	-0.1	-0.1	-0.1	9° 15'	-0.2	0.1	0.3	0.1	-0.2	-0.2	0	0	0	
-0.2	-0.4	-0.5	-0.1	0.1	0	-0.1	-0.1	-0.1	9° 0'	-0.1	0.3	0.3	-0.2	-0.3	-0.1	0	0	-0.1	
-0.4	-0.5	-0.3	0.1	0.1	-0.1	-0.1	-0.1	-0.1	8° 45'	0	0.3	0.1	-0.4	-0.2	0	0	-0.1	-0.1	
-0.4	-0.4	0.1	0.2	0	-0.1	0	0	-0.1	8° 30'	0.1	0.2	-0.1	-0.4	-0.1	0	0	0	-0.1	
-0.3	-0.1	0.3	0.2	-0.1	-0.1	0	0	0	8° 15'	0.2	0	-0.3	-0.3	0	0	0	0	-0.1	
-0.1	0.2	0.3	0	-0.1	0	0	0	0	8° 0'	0.1	-0.2	-0.3	-0.1	0	0	0	0	0	
0	0.3	0.1	-0.1	-0.1	0	-0.1	0	0	7° 45'	-0.1	-0.2	-0.2	0	0	0	0	0	0	
0	0.1	-0.1	-0.1	0	0	-0.1	-0.1	0	7° 30'	-0.4	-0.2	-0.1	0	-0.1	0	0	-0.1	-0.1	
-0.2	0	-0.1	0	0	-0.1	0	-0.1	0	7° 15'	-0.5	-0.1	0	-0.1	-0.1	0	0	0	-0.1	
-0.3	-0.1	0	0	-0.1	-0.1	0	0	0	7° 0'	-0.6	-0.2	-0.1	-0.1	0	0	0	0	-0.1	
-0.3	-0.1	0	-0.1	-0.1	-0.1	0	0	0	6° 45'	-0.7	-0.3	-0.1	-0.1	0	-0.1	0	0	-0.1	
-0.1	0	0	-0.1	-0.1	-0.1	0	0	0	6° 30'	-0.7	-0.3	-0.1	0	0	-0.1	0	-0.1	-0.1	
0.1	0	-0.1	-0.1	-0.1	-0.1	0	0	0	6° 15'	-0.7	-0.3	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	
0.2	0	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	6° 0'	-0.7	-0.2	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	
0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 45'	-0.5	-0.2	0	0	-0.1	-0.1	-0.1	-0.1	0	
0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 30'	-0.4	-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	5° 15'	-0.2	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 0'	-0.2	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 45'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	
-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 30'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	
-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	4° 15'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	0	
-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	4° 0'	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3° 45'	-0.1	-0.1	0	-0.1	-0.2	-0.1	0	-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	-0.2	-0.1	0	-0.1	-0.1	
-0.2	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1	-0.2	-0.2	3° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	3° 0'	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	2° 45'	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.2	-0.2	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	2° 30'	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	2° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.2	-0.2	-0.2	-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	-0.2	
-0.1	-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	-0.2	
0	0	-0.1	-0.1	-0.1	-0.1	0	0	0	1° 15'	-0.1	-0.1	-0.1	-0.1	-0.1	-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	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	
0	0	0	-0.1	0	0	0	0	0	0° 45'	0	-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	0° 30'	0	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.2	
0.1	0.1	0.1	0	0	0	0	0	0	0° 15'	0	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.2	
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	-0.2	



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 64 to 60 °W									
Correction to Latitude										Correction to Longitude									
64°	63°	63°	62°	62°	61°	61°	60°	60°	Longitude	64°	63°	63°	62°	62°	61°	61°	60°	60°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0.2	0.2	0.1	0.1	0	-0.1	-0.1	-0.2	-0.2	10° 0'	-0.2	-0.3	-0.3	-0.2	0	0.1	0.1	0	0	
0.1	0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	9° 45'	-0.2	-0.3	-0.2	-0.1	0	0.1	0.1	0.1	0	
-0.1	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	9° 30'	-0.2	-0.2	-0.2	-0.1	0	0.1	0.1	0.1	0	
-0.2	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	9° 15'	-0.2	-0.2	-0.1	-0.1	0	0.1	0.1	0.1	0	
-0.2	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	9° 0'	-0.2	-0.1	-0.1	-0.1	0	0	0	0	0	
-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	8° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	
-0.2	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	8° 30'	-0.1	-0.1	-0.1	0	0	0	0	0	0	
-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	8° 15'	-0.1	-0.1	-0.1	0	0	-0.1	0	0	0	
-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0	0	8° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	
-0.2	-0.2	-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	0	0	
-0.2	-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	0	0	
-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 15'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0	0	0	
-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	7° 0'	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0	-0.1	0	
-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	6° 45'	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0	-0.1	0	
-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	6° 30'	-0.2	-0.1	-0.1	-0.1	-0.1	-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	6° 15'	-0.2	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	
-0.1	0	0	-0.2	-0.3	-0.4	-0.3	-0.3	-0.2	6° 0'	-0.1	-0.2	0	0	0	-0.1	-0.1	-0.1	-0.1	
-0.1	0	0	-0.1	-0.2	-0.3	-0.3	-0.2	-0.2	5° 45'	-0.1	-0.2	0	0.1	0	-0.1	-0.1	-0.1	-0.2	
-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	5° 30'	-0.2	-0.2	0.1	0.1	0.1	-0.1	-0.1	-0.1	-0.2	
-0.1	-0.1	-0.1	0	0	0	0	-0.1	-0.1	5° 15'	-0.2	-0.2	0	0.1	0.1	0	-0.1	-0.1	-0.2	
-0.1	-0.2	-0.2	0	0	0.1	0	-0.1	-0.1	5° 0'	-0.2	-0.2	0	0.1	0	0	-0.1	-0.1	-0.2	
-0.1	-0.2	-0.1	0	0	0.1	0	0	-0.1	4° 45'	-0.1	-0.2	-0.1	0	0	0	0	-0.1	-0.2	
0	-0.1	-0.1	0	0	0.1	0.1	0	0	4° 30'	-0.1	-0.1	-0.1	0	0	0	0	-0.1	-0.2	
0	0	-0.1	0	0	0	0.1	0.1	0	4° 15'	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	-0.2	
0	-0.1	-0.1	-0.1	0	0	0	0.1	0	4° 0'	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	
-0.1	-0.1	-0.1	0	0	-0.1	0	0	0	3° 45'	-0.1	-0.1	-0.1	-0.1	0	0	0	-0.1	-0.1	
-0.1	-0.1	0	0	0	-0.1	0	0	0	3° 30'	-0.1	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	
-0.1	-0.1	0	0	-0.1	-0.1	0	-0.1	-0.1	3° 15'	-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	-0.1	-0.1	-0.1	3° 0'	-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	-0.1	2° 45'	-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	-0.1	2° 30'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	-0.1	-0.1	-0.1	0	-0.1	2° 15'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	-0.1	-0.1	0	0	0	2° 0'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	0	1° 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	1° 30'	-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	1° 15'	-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	1° 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	-0.1	0° 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	0° 30'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	-0.1	0° 15'	-0.1	-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	
0	0	0	0	0	0	0	0	-0.1	0° 0'	-0.1	-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 56 to 52 °W									
Correction to Latitude										Correction to Longitude									
56°	55°	55°	54°	54°	53°	53°	52°	52°	Longitude	56°	55°	55°	54°	54°	53°	53°	52°	52°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
-0.1	0	0	0	0	0	0	0	0	10° 0'	0	0	0	0	0	0	0	0	0	0
-0.1	0	0	0	0	0	0	0	0	9° 45'	0	0	0	0	0	0	0	0	0	0
-0.1	-0.1	0	-0.1	-0.1	0	0	0	0	9° 30'	-0.1	0	0	0	0	0	0	0	0	0
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	9° 15'	-0.1	0	0	0.1	0	0	0	0	0	0
-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	0	0	9° 0'	-0.1	-0.1	0	0.1	0	-0.1	0	0	0	0
-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	-0.1	0	0	8° 45'	-0.1	-0.1	0	0.1	0	-0.1	-0.1	0	0	0
-0.2	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	-0.1	0	8° 30'	-0.1	-0.1	0	0.1	0	-0.1	-0.1	-0.1	0	0
-0.2	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	-0.1	0	8° 15'	-0.1	-0.1	0	0.1	0	-0.1	-0.1	-0.1	0	0
-0.2	-0.1	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	8° 0'	-0.1	-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	-0.1	-0.1	-0.1	7° 45'	-0.1	-0.1	0	0	0	0	-0.1	-0.2	-0.1	0
-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 30'	-0.1	-0.1	0	0	0	0	-0.1	-0.2	-0.1	0
-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	7° 15'	0	0	0	0	0	0	-0.1	-0.2	-0.1	0
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	7° 0'	0	0	0	0	0	0	-0.1	-0.2	-0.1	0
0	0	0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	6° 45'	0	0	0	0	0	0	-0.1	-0.2	-0.1	0
0	0	0	0	0	0	-0.1	-0.1	-0.2	6° 30'	0	0	0	0	0	0	0	-0.1	-0.1	0
0	0	0	0	0	0	0	-0.1	-0.2	6° 15'	-0.1	0	0	0	0	0	0	-0.1	-0.1	0
0.1	0.1	0	0	0	0	0.1	0	-0.1	6° 0'	-0.1	0	0	0	0	0	0	0	0	0
0.1	0.1	0.1	0	0	0	0.1	0.1	0	5° 45'	-0.1	0	0	0	0	0	0	0	0	0
0	0.1	0.1	0.1	0.1	0	0	0.1	0.1	5° 30'	-0.1	0	0.1	0	0	0	-0.1	0	0.1	0
0	0	0.1	0.1	0.1	0	0	0	0	5° 15'	-0.2	0	0	0	0	0	-0.1	0	0	0
0	0	0	0.1	0.1	0	0	0	0	5° 0'	-0.2	0	0	0	0	0	-0.1	0	0	0
0	0	0	0	0	0	0	-0.1	0	4° 45'	-0.1	0	0	0	0	0	0	0	0	0
0	-0.1	0	0	0	0	0	-0.1	-0.1	4° 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	4° 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	-0.1	4° 0'	-0.1	0	0	0	0	0	0	0	0	-0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3° 45'	-0.1	0	0	0	0	0	0	0	0	-0.1
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3° 30'	-0.1	0	0	0	0	0	0	0	0	-0.1
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	3° 15'	-0.1	0	0	0	0	0	0	0	0	-0.1
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	3° 0'	-0.1	0	0	0	0	0	0	0	0	0
-0.1	-0.1	-0.1	-0.1	-0.1	0	0	0	0	2° 45'	-0.1	0	0	0	0	0	0	0	0	0
-0.1	-0.1	-0.1	0	0	0	0	0	-0.1	2° 30'	-0.1	-0.1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	-0.1	-0.1	-0.1	2° 15'	-0.1	-0.1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	-0.1	-0.1	-0.1	2° 0'	-0.1	-0.1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	-0.1	1° 45'	-0.1	-0.1	0	0	0	0	0	0	0	0.1
0	0	0	0	0	0	0	-0.1	-0.1	1° 30'	-0.1	-0.1	0	0	0	0	0	0	0	0.1
0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	1° 15'	0	-0.1	0	0	0	0	0	0	0	0.1
0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	1° 0'	0	0	0	0	0	0	0	0	0	0.1
0	0	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0° 45'	0	0	0	0	0	0	0	0	0	0
-0.1	-0.1	0	0	-0.1	-0.1	-0.1	-0.1	-0.1	0° 30'	0	0	0	0	0	0	0.1	0	0	0
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	0° 15'	0	0	-0.1	0	0	0	0.1	0	0	0
-0.1	-0.1	-0.1	0	-0.1	-0.1	-0.1	0	-0.1	0° 0'	-0.1	-0.1	-0.1	0	0	0	0	0	0	0

# Correct Astronomical Position to WGS84

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

# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 48 to 44 °W									
Correction to Latitude										Correction to Longitude									
48°	47°	47°	46°	46°	45°	45°	44°	44°	Longitude	48°	47°	47°	46°	46°	45°	45°	44°	44°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	10° 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	9° 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	9° 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	9° 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	9° 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	8° 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	8° 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	8° 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	8° 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	7° 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	7° 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	7° 15'	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	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	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	0	0	0	0	0	6° 30'	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	6° 15'	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	6° 0'	0	0	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	-0.1	0	0	0	0	0	5° 45'	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	0	0	5° 30'	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	0	0	5° 15'	0	0	0	0	0.1	0	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	0	0	0	0	0	0	5° 0'	0	0	0	0	0.1	0	0.1	0.1	0.1	0.1
-0.1	-0.1	-0.1	0	0	0	-0.1	0	0	4° 45'	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	4° 30'	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	4° 15'	0	0	0	0	0	0.1	0.1	0	0.1	0.1
-0.1	-0.1	-0.1	0	0	0	0	0	0	4° 0'	0	0	-0.1	0	0	0.1	0.1	0	0.1	0.1
-0.1	-0.1	0	0	0	0	0	0	0	3° 45'	0	0	-0.1	0	0	0.1	0.1	0	0.1	0.1
0	0	0	0	0	0	0	0	0	3° 30'	0	0	-0.1	0	0	0.1	0.1	0	0	0
0	0	0	0	0	0	0	0	0	3° 15'	0	0	-0.1	0	0	0.1	0.1	0.1	0.1	0
0	0	0	0	0	0	0	0	0	3° 0'	0	-0.1	-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	2° 45'	0	-0.1	-0.1	0	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	2° 30'	0	-0.1	-0.1	0	0.1	0.1	0.1	0.1	0.1	0.1
0	-0.1	-0.1	0	0	0	0	0	0	2° 15'	0	-0.1	-0.1	0	0.1	0.1	0.1	0.1	0.1	0.1
0	-0.1	-0.2	-0.1	0	0	0	0	0	2° 0'	0	0	-0.1	-0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	-0.1	-0.2	-0.2	-0.1	0	0	0	0	1° 45'	0	0	-0.1	-0.1	0	0.1	0.1	0.1	0.1	0.1
0	0	-0.1	-0.2	-0.2	-0.1	0	0	0	1° 30'	0	0	-0.1	-0.1	0	0	0.1	0.1	0.1	0.1
0	0	-0.1	-0.2	-0.2	-0.2	-0.1	0	0	1° 15'	0	0	0	-0.1	-0.1	0	0.1	0.1	0.1	0.1
0	0	0	-0.1	-0.2	-0.2	-0.1	-0.1	0	1° 0'	0	0	0	0	-0.1	-0.1	0	0.1	0	0
0	0	0	0	-0.1	-0.2	-0.2	-0.1	0	0° 45'	0	0	0	0	0	-0.1	0	0	0	0
0	0	0	0	0	-0.1	-0.2	-0.2	-0.1	0° 30'	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	-0.1	-0.1	-0.1	-0.1	0° 15'	0	0	0	0	0.1	0	0	-0.1	-0.1	-0.1
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	-0.1

## Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 44 to 40 °W									
Correction to Latitude										Correction to Longitude									
44°	43°	43°	42°	42°	41°	41°	40°	40°	Longitude	44°	43°	43°	42°	42°	41°	41°	40°	40°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	10° 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	9° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0
0	0	0	0	0	0	0	0	0	9° 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	9° 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	9° 0'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0.1	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	0.1	0.1
0	0	0.1	0.1	0.1	0.1	0	0.1	0	8° 30'	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	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	0	0	0	0	0.1	0.1	0.1	0	8° 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	0.1	0.1	7° 45'	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	7° 30'	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	7° 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	7° 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	6° 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	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	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	0	0	0	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	0	0	0	0	0	0	0	0	5° 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	5° 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	5° 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	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	0	0	0	0	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	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	0	0	0	0	0	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	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	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	3° 30'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	-0.1	0	0	0	0	0	0	0	3° 15'	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0	0	0	0	0	0	0	0	0	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	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	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° 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° 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° 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° 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° 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'	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° 45'	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° 30'	0	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° 15'	-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	0° 0'	-0.1	0	0.1	0	0.1	0.1	0.1	0.1	0.1	0



# Correct Astronomical Position to WGS84

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



# Correct Astronomical Position to WGS84

Latitude 0 to 10 °N										Longitude 32 to 28 °W									
Correction to Latitude										Correction to Longitude									
32°	31°	31°	30°	30°	29°	29°	28°	28°	Longitude	32°	31°	31°	30°	30°	29°	29°	28°	28°	
0'	30'	0'	30'	0'	30'	0'	30'	0'	Latitude	0'	30'	0'	30'	0'	30'	0'	30'	0'	
0	0	0	0	0	0	0	0	0	10° 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	9° 45'	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	9° 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	9° 15'	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	9° 0'	0.1	0	0.1	0.1	0	0.1	0.1	0.1	0.1	
0	0	0	0	0	0	0	0	0	8° 45'	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	
0	0	0	0	-0.1	-0.1	0	0	0	8° 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	0	0	8° 15'	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	8° 0'	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1	
-0.1	-0.1	0	0	0	0	0	0	0	7° 45'	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	0	0	0	7° 30'	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 15'	0.1	0	0.1	0	0	0	0	0	0.1	
-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7° 0'	0.1	0	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	6° 45'	0.1	0.1	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	6° 30'	0.1	0.1	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	6° 15'	0.1	0.1	0	0	0	0	0	0	0.1	
0	0	0	0	0	0	0	0	0	6° 0'	0	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 45'	0	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 30'	0	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 15'	0	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5° 0'	0	0.1	0.1	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	4° 30'	0	0	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 15'	0	0	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	4° 0'	0.1	0	0	0	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 45'	0.1	0	0	0	0.1	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 30'	0.1	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 15'	0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	3° 0'	0.1	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 45'	0.1	0.1	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 30'	0.1	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 15'	0.1	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	2° 0'	0.1	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0.1	0	0	1° 45'	0.1	0.1	0.1	0	0	0	0	0	0	
0	0	0	0	0	0	0	0.1	0.1	1° 30'	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	1° 15'	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	1° 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	0	0	0° 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	0° 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	0° 15'	0.1	0.1	0.1	0.1	0	0.1	0.1	0	0	
0	0	0	0	0	0	0	0	0	0° 0'	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	

# Correct Astronomical Position to WGS84

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



# Correct Astronomical Position to WGS84

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









