

Mean Refraction always subtract				Dip of Sea Horizon always subtract			Sun's Parallax in Altitude always add	
App. Alt	Refr	App. Alt	Refr	HE	Dip	HE	App Alt	Parallax
°	'	°	'	(ft)	(')	(m)	°	'
0 00	34.9	10 00	5.3	2	1.5	0.6	0	0.15
10	32.8	10	5.2	3	1.8	0.9	5	0.15
20	30.9	20	5.1	4	2.0	1.2	10	0.14
30	29.1	30	5.0	5	2.2	1.5	15	0.14
40	27.4	40	5.0	6	2.4	1.8	20	0.14
50	25.8	50	4.9	7	2.6	2.1	25	0.13
1 00	24.4	11 00	4.8	8	2.8	2.4	30	0.12
10	23.1	10	4.7	9	2.9	2.7	40	0.11
20	21.9	20	4.7	10	3.1	3.0	50	0.10
30	20.9	30	4.6	12	3.4	3.7	60	0.09
40	19.9	40	4.5	14	3.7	4.3	70	0.06
50	19.0	50	4.5	16	3.9	4.9	80	0.03
2 00	18.1	12 00	4.4	18	4.2	5.5	90	0.00
10	17.4	10	4.4	20	4.4	6.1		
20	16.7	20	4.3	25	4.9	7.6		
30	16.0	30	4.2	30	5.4	9.1		
40	15.4	40	4.2	35	5.8	10.7		
50	14.8	50	4.1	40	6.2	12.2		
3 00	14.2	13 00	4.1	45	6.6	13.7		
10	13.7	10	4.0	50	6.9	15.2		
20	13.3	20	4.0					
30	12.8	30	3.9					
40	12.4	40	3.9					
50	12.0	50	3.8					
4 00	11.7	14 00	3.8					
10	11.3	20	3.7					
20	11.0	40	3.6					
30	10.7	15 00	3.5					
40	10.4	30	3.4					
50	10.1	16 00	3.3					
5 00	9.8	30	3.2					
10	9.5	17 00	3.1					
20	9.3	30	3.0					
30	9.0	18 00	2.9					
40	8.8	30	2.9					
50	8.6	19 00	2.8					
6 00	8.4	20 00	2.6					
10	8.2	21 00	2.5					
20	8.0	22 00	2.4					
30	7.8	23 00	2.3					
40	7.7	24 00	2.2					
50	7.5	26 00	2.0					
7 00	7.3	28 00	1.8					
10	7.2	30 00	1.7					
20	7.0	32 00	1.5					
30	6.9	34 00	1.4					
40	6.8	36 00	1.3					
50	6.6	38 00	1.2					
8 00	6.5	40 00	1.1					
10	6.4	43 00	1.0					
20	6.3	46 00	0.9					
30	6.1	50 00	0.8					
40	6.0	55 00	0.7					
50	5.9	60 00	0.6					
9 00	5.8	65 00	0.5					
10	5.7	70 00	0.4					
20	5.6	75 00	0.3					
30	5.5	80 00	0.2					
40	5.4	85 00	0.1					