

133 ~ 79
44 ~ 60

$\frac{139}{46.3}$ $\log 77 = 24.0$
 $\frac{33.2}{9.2}$

$E = 12^\circ 14' 89 \quad \delta = 19^\circ 52.3$

$\frac{90}{109^\circ 52.3}$

$P = 709^\circ 52.3 \text{ arch } 0.02666$

9' 44 ~ 46.3

Lat = $54^\circ 45.2$ " 0.23875

alt 2 ~ 18.0

HL = $12^\circ 12.7 \text{ arch}$
2; $176^\circ 49.6$

9' 46 ~ 64.3

$88^\circ 24.8 \cos 8.44231$

1' 42 ~ 53.5
23' 59 ~ 60.0

9' 46 ~ 40.8
23.5

$76^\circ 12.7 \sin 9.98730$

22' 17 ~ 6.5
-22' 14 ~ 8.9

9' 46 ~ 57.6

$\sin^2 \approx 8.69502$

10' 25 ~ 57.6

alt @ 16 ~ 16.8

long @ $4^\circ 4.2$

dip @ 3.7

Obs long @ $4^\circ 7.9$

Obs lat N. $54^\circ 54.9$ long @ $4^\circ 7.9$ 21/11-37

$\frac{31}{30} \frac{19^\circ 52.3}{89^\circ 60.0} 36$
 $\frac{31}{20.4} \frac{70^\circ 7.7}{117.4} 11$
 $\frac{20.4}{25.78} \frac{12}{1.2}$
dep @ 2.2
 $12^\circ 1.2$
3:8
7:1

alt 12' 12.1

alt 15' 0.0
3:8
7:9

alt 15' 11.7
89' 60.0

N. $74^\circ 48.3$

S $19^\circ 53.4$

N. $54^\circ 54.9$

S 9.7

N. $54^\circ 45.2$

100.1

N. $54^\circ 50'$

62.5