

Polaris + One sight. $\rightarrow 67^{\circ}09'W$ Nav list 23 Jun 23

Polaris Lat AP = $35^{\circ}N$ Lon = $67.15^{\circ}W$ HE = 25 ft.

Sight UT = 00:35:00 $H_s = 34^{\circ}28' \rightarrow 34.466^{\circ}$

26 Jun 2023 IC = -1 $\rightarrow -0.0166^{\circ}$

Dip = $0.0162^{\circ} \times \sqrt{HE} = 0.081^{\circ}$

$R = 0.0162^{\circ} / \tan h \rightarrow -0.0264^{\circ}$

$H_o = 34.342^{\circ}$ or $34^{\circ}20.5'$

$Q = 0.62$ or $37.2'$

Lat = $34.962^{\circ}N$ or $34^{\circ}57.7'$

Q calc.

1 Jun GHA 249.22°

26 Jun 24.64

35 min 0.77

GHA 282.63°

Lon W 67.15

LHA 215.48

SHA pol 314.50

529.98

360.00

LHA pol $169.98 \Rightarrow 170^{\circ}$

$Q = -PD \cdot \cos(LHA_{pol})$

$= -0.63 \cdot \cos(170^{\circ}) = 0.62^{\circ}$

90.00°

Dec pol 89.37°

PD 0.63°