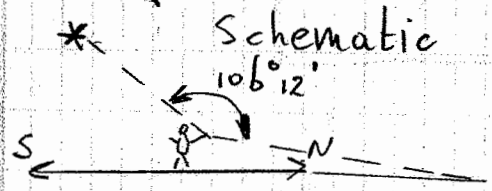


After Copella Vega behind the back 11 Jul 2023
 After \approx one hour backsight view of VEGA

at 5 Jul 2023 UT 23:30 $z_0 = HE = 25$ ft. $H_s = 106^{\circ}12' = 106,20^{\circ}$



SHA Vega 2023 $80,58^{\circ}$ Dec $38,80^{\circ}$

Dip $0,0162\sqrt{25} = 0,08$

Ha $106,12$

Back correction $8,100^{\circ}$

Ha $73,80^{\circ}$

Refr = 0. = Ho

ZD = $90^{\circ} - Ho = 16,12^{\circ}$

$N 54^{\circ} 55,2' \leftarrow$ Lat = $54,92^{\circ}$

Arcturus 2023 SHA = $145,83^{\circ}$ Dec = $19,06^{\circ}N$

Arcturus $Z_N = W$ UT 23:30:48 $H_s = 29,07^{\circ}$

Dip = $-0,08$

GHA \nearrow Refr = $0,0162/\tan 29^{\circ} = -0,003$

1 Jul $270,79^{\circ}$

5 Jul $3,94$

23 h $345,94$

30 min $7,52$

40 sec $0,20^{\circ}$

$\frac{636,39}{360}$
 GHA \nearrow $276,39$

SHA $145,83$

GHA \nearrow $276,39$

GHA $422,25$
 or $36^{\circ} -$

GHA $62,22^{\circ}$
 or act

Ho $28,987 \Rightarrow ZD = 61,01^{\circ}$

Values for ABC formula

Lat = $54,92^{\circ}$

Dec = $19,06^{\circ}N$

ZD = $61,01^{\circ}$

GHA $act = 62,22^{\circ}$

HA = $66,406^{\circ}W$

Lon = $-4,18^{\circ}E$

or $04^{\circ}10,8'$

A = $\cos ZD / \cos Dec / \cos Lat = 0,892206$

B = $\tan Dec \times \tan Lat$

$\rightarrow 0,491960$

C. $0,400245 \Rightarrow HA 66,406$

FIX $54^{\circ} 55,2' N$
 (UT 23:31) $011^{\circ} 10,8' E$