

$$H_s = 20^\circ 19', 2$$

$$\varepsilon = 4', 2$$

$$\text{Dip} = \underline{-2', 5} +$$

$$H_a = 20^\circ 20', 9$$

$$+ \text{sun correct. LL/UL} = \underline{+13', 6} +$$

$$\mathbf{H_o} = \mathbf{20^\circ 34', 5}$$

**La Rochelle**

Date 26/01/2022

UT 10h 40m 19s

$$\text{index error} = + 3'$$

$$+ \text{non adjust. error} = \underline{+ 1', 2} +$$

$$\varepsilon = + 4', 2$$

$L = 46^\circ 12' \text{ N}$

$G = 004^\circ 31' \text{ W}$

Height of the eye = 2 m

lower limb  upper limb

$$\text{GHA} = 326^\circ 52', 8$$

$$+ pp = \underline{10^\circ 04', 8} \quad \text{increment)$$

$$\text{GHA} = 336^\circ 57', 6$$

$$G = \underline{004^\circ 31'} \text{ W} \quad G = \text{East} \rightarrow \text{add}$$

$$\text{LHA} = 332^\circ 26', 6 \quad G = \text{West} \rightarrow \text{subtract}$$

$LHA < 180^\circ$  ; sun in the west;  $P = LHA$   
 $LHA > 180^\circ$  ; sun in the east;  $P = 360 - LHA$

$$\mathbf{P} = \mathbf{27^\circ 33', 4}$$

$$(d \uparrow \text{ or } \downarrow = 0', 6 \downarrow)$$

$$D = 18^\circ 40', 1 \text{ S}$$

$$\text{corr. } d = \underline{0', 4}$$

$$\mathbf{D} = \mathbf{18^\circ 39', 7 \text{ S}}$$

$$H_c = \arcsin ( \sin ( L : 46^\circ 12' ) \times \sin ( D : - 18^\circ 39', 7 )$$

$$+ \cos ( L : 46^\circ 12' ) \times \cos ( D : - 18^\circ 39', 7 )$$

$$\times \cos ( P : 27^\circ 33', 4 ) )$$

$$\mathbf{H_c} = \mathbf{20^\circ 30', 8}$$

$$Z = \arccos ( ( \sin ( D : - 18^\circ 39', 7 ) - \sin ( L : 46^\circ 12' )$$

$$\times \sin ( H_c : 20^\circ 30', 8 ) ) \div ( \cos ( L : 46^\circ 12' )$$

$$\times \cos ( H_c : 20^\circ 30', 8 ) ) ) = \mathbf{152^\circ, 1}$$

sun in the east  $Z_v = Z$  /  sun in the west  $Z_v = 360 - Z$        $\mathbf{Z_v} = \mathbf{152^\circ, 1}$

$$H_o = 20^\circ 34', 5$$

$$H_c = \underline{20^\circ 30', 8} -$$

$$\text{intercept} = \mathbf{3', 7}$$

+ Intercept towards the sun

- Intercept away from the sun