Beregning af bredde ud fra to solhøjder, tiden imellem dem og solens deklination

$$h1 := \left(23 + \frac{38}{60} + \frac{54}{3600}\right) \cdot 2\,\frac{\pi}{360} \qquad\qquad h1 = 0.413$$

$$h2 := \left(23 + \frac{26}{60} + \frac{10}{3600}\right) \cdot 2\,\frac{\pi}{360} \qquad\qquad h2 = 0.409$$

$$d := -\left(9 + \frac{53}{60}\right) \cdot 2\,\frac{\pi}{360} \qquad\qquad d = -0.172$$

$$D := \left(9 \cdot \frac{15}{60} + 19 \cdot \frac{15}{3600}\right) \cdot 2\,\frac{\pi}{360} \qquad\qquad D = 0.041$$

$$x := \frac{\pi}{2}$$

$$A2 := \text{acos}\left[\frac{\cos(x - h1) - (\cos(x - h2)\cdot\cos(D))}{\sin(x - h2)\cdot\sin(D)}\right]$$

$$A2 = 1.471$$

$$A2 \cdot \frac{360}{2\pi} = 84.268$$

$$A1 := \text{acos}\left[\frac{\cos(x - d) - (\cos(x - d)\cdot\cos(D))}{\sin(x - d)\cdot\sin(D)}\right]$$

$$A1 = 1.574$$

$$A1 \cdot \frac{360}{2\pi} = 90.203$$

y er cos(90 - bredden)

$$y := \cos(x - h2)\cdot\cos(x - d) + \sin(x - h2)\,\sin(x - d)\cdot\cos(A1 - A2)$$

$$y = 0.831 \qquad\qquad \text{acos}(y)\cdot\frac{360}{2\pi} = 33.821$$

$$ygrad := \left(\frac{\pi}{2} - \text{acos}(y)\right) \cdot \frac{360}{2\pi} \qquad ymin := (ygrad - 56)\cdot 60 \qquad ysek := (ymin - 10)\cdot 60$$

y skrevet i grader, minutter og sekunder:

$$ygrad = 56.179 \qquad\qquad ymin = 10.711 \qquad\qquad ysek = 42.646$$