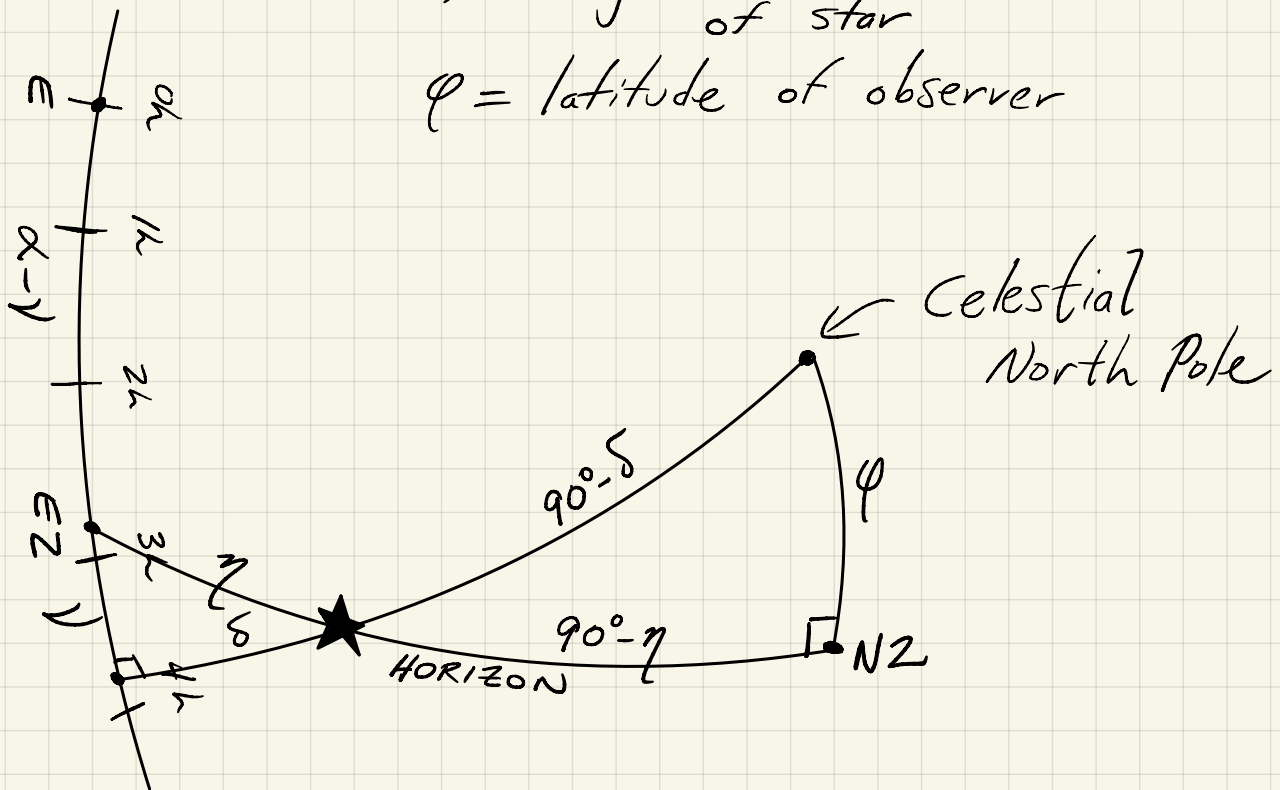


$\alpha, \delta =$ right ascension and declination
of star

$\varphi =$ latitude of observer



E = The east point on the horizon
when and where η rises

EZ = The east point on the horizon when \star rises

NZ = The north point on the horizon when \star rises

$\eta =$ "Rising amplitude" or "ortive amplitude"

II.5 tells us $\eta = \sin^{-1} \frac{\sin \delta}{\cos \varphi}$

$\nu =$ "Ascensional difference" or "Equation of Daylight" (if the object is the Sun?)

II.5 tells us $\nu = \cos^{-1} \frac{\cos \eta}{\cos \delta}$

or

$$\nu = \cos^{-1} \frac{\sqrt{1 - \left(\frac{\sin \delta}{\cos \varphi}\right)^2}}{\cos \delta}$$

The larger ν is, the sooner the star rises.