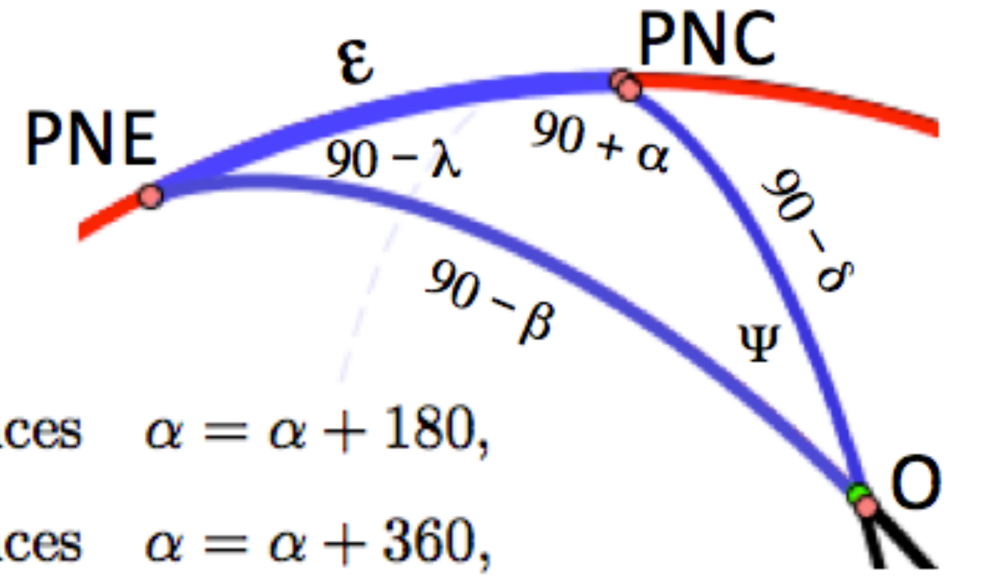
Eclípticas a Ecuatoriales

$$\delta = \operatorname{sen}^{-1}(\operatorname{sen}\beta\cos\epsilon + \cos\beta\operatorname{sen}\epsilon\operatorname{sen}\lambda)$$

$$\alpha = \tan^{-1}\left(\frac{-\operatorname{sen}\beta\operatorname{sen}\epsilon + \cos\beta\cos\epsilon\operatorname{sen}\lambda}{\cos\lambda\cos\beta}\right)$$

$$\alpha = \tan^{-1}\left(\frac{p}{q}\right)$$



$$\text{Si} \quad p \cdot q < 0 \quad y \quad q < 0 \quad \text{entonces} \quad \alpha = \alpha + 180,$$

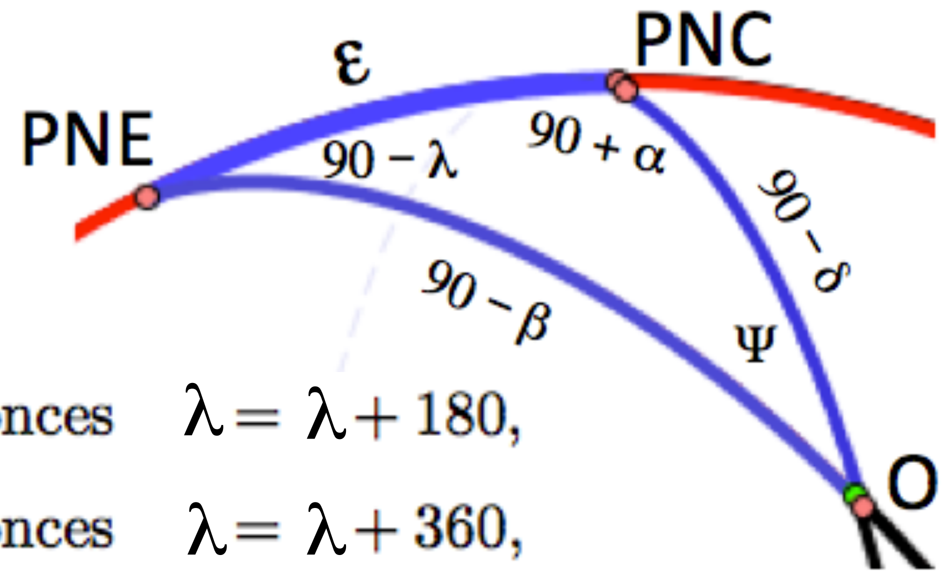
$$\text{Si} \quad p \cdot q < 0 \quad y \quad q > 0 \quad \text{entonces} \quad \alpha = \alpha + 360,$$

$$\text{Si} \quad p + q < 0 \quad \text{entonces} \quad \alpha = \alpha + 180.$$

Ecuatoriales a Eclípticas

$$\beta = \operatorname{sen}^{-1}(\operatorname{sen}\delta\cos\epsilon - \cos\delta\operatorname{sen}\epsilon\operatorname{sen}\alpha)$$

$$\lambda = \tan^{-1}\left(\frac{\operatorname{sen}\delta\operatorname{sen}\epsilon + \cos\delta\cos\epsilon\operatorname{sen}\alpha}{\cos\alpha\cos\delta}\right)$$



$$\lambda = \tan^{-1}\left(\frac{p}{q}\right)$$

Si $p \cdot q < 0$ y $q < 0$ entonces $\lambda = \lambda + 180$,

Si $p \cdot q < 0$ y $q > 0$ entonces $\lambda = \lambda + 360$,

Si $p + q < 0$ entonces $\lambda = \lambda + 180$.

Galácticas a Ecuatoriales

$$\delta = \operatorname{sen}^{-1}\left(\operatorname{sen}\delta_{Pg}\operatorname{sen} b + \cos\delta_{Pg}\cos b\cos(l_N - l)\right)$$

$$\alpha = \alpha_{Pg} + \tan^{-1}\left(\frac{\cos b \operatorname{sen}(l_N - l)}{\operatorname{sen} b\cos\delta_{Pg} - \cos b\operatorname{sen}\delta_{Pg}\cos(l_N - l)}\right)$$

$$\alpha' = \tan^{-1}\left(\frac{p}{q}\right)$$

$$\text{Si} \quad \mathrm{p}\cdot\mathrm{q} < 0 \quad \text{y} \quad \mathrm{q} < 0 \quad \text{entonces} \quad \alpha' = \alpha' + 180,$$

$$\text{Si} \quad \mathrm{p}\cdot\mathrm{q} < 0 \quad \text{y} \quad \mathrm{q} > 0 \quad \text{entonces} \quad \alpha' = \alpha' + 360,$$

$$\text{Si} \quad \mathrm{p}+\mathrm{q} < 0 \quad \text{entonces} \quad \alpha' = \alpha' + 180.$$

NOTA: Es importante anotar que α' no es el mismo α. Es el resultado de la tangente inversa. Una vez se hace la corrección en el a' se debe proceder a sumar α_{Pg}. Si el ángulo resultante queda mayor que 360º (24 h) se debe restar de este último.

Ecuatoriales a Galácticas

$$b = \operatorname{sen}^{-1}\left(\operatorname{sen}\delta_{Pg}\operatorname{sen}\delta + \cos\delta_{Pg}\cos\delta\cos(\alpha - \alpha_{Pg})\right)$$

$$l = l_N - \tan^{-1}\left(\frac{\cos\delta\operatorname{sen}(\alpha - \alpha_{Pg})}{\operatorname{sen}\delta\cos\delta_{Pg} - \cos\delta\operatorname{sen}\delta_{Pg}\cos(\alpha - \alpha_{Pg})}\right)$$

$$\text{l'} \quad \tan^{-1}\left(\frac{p}{q}\right)$$

$$\text{Si} \quad \mathrm{p}\cdot\mathrm{q} < 0 \quad \text{y} \quad \mathrm{q} < 0 \quad \text{entonces} \quad \text{l'} = \text{l'} + 180,$$

$$\text{Si} \quad \mathrm{p}\cdot\mathrm{q} < 0 \quad \text{y} \quad \mathrm{q} > 0 \quad \text{entonces} \quad \text{l'} = \text{l'} + 360,$$

$$\text{Si} \quad \mathrm{p} + \mathrm{q} < 0 \quad \text{entonces} \quad \text{l'} = \text{l'} + 180.$$