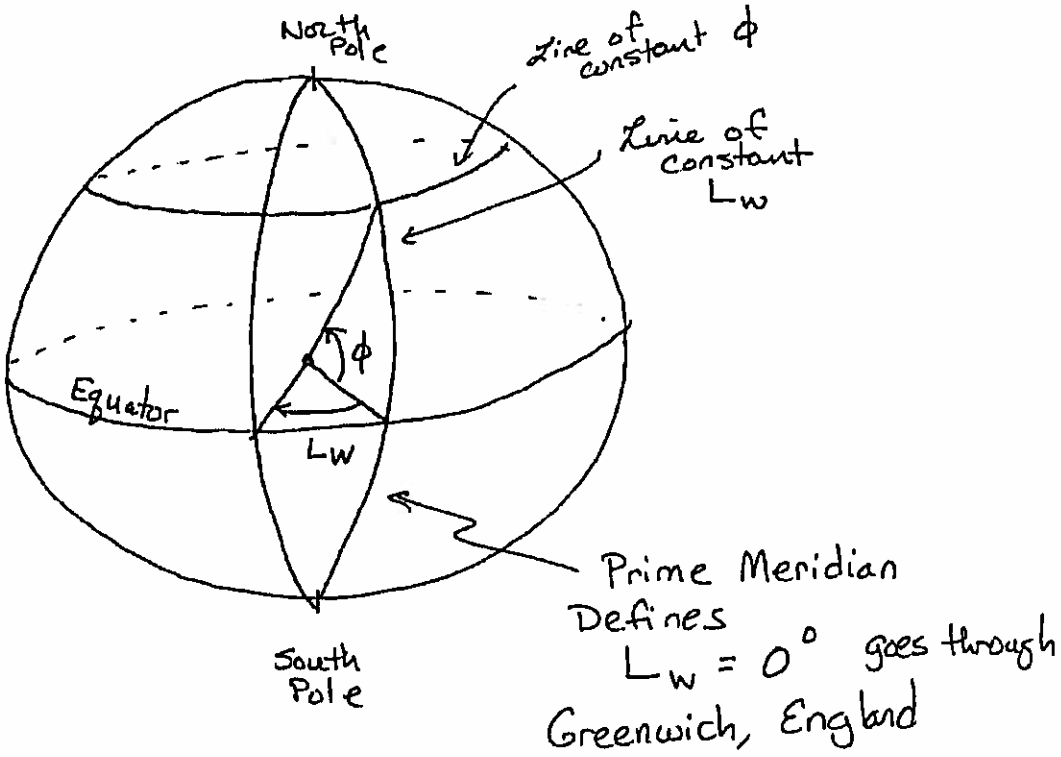
Coordinate Systems

On the surface of the Earth, we use longitude latitude

(L_W, ϕ)



Positions are given in $^\circ, ', ''$

i.e. Reykjavik, Iceland

longitude $L_W = 21^\circ\ 56'\ 00''$

latitude $\phi = +64^\circ\ 08'\ 00''$

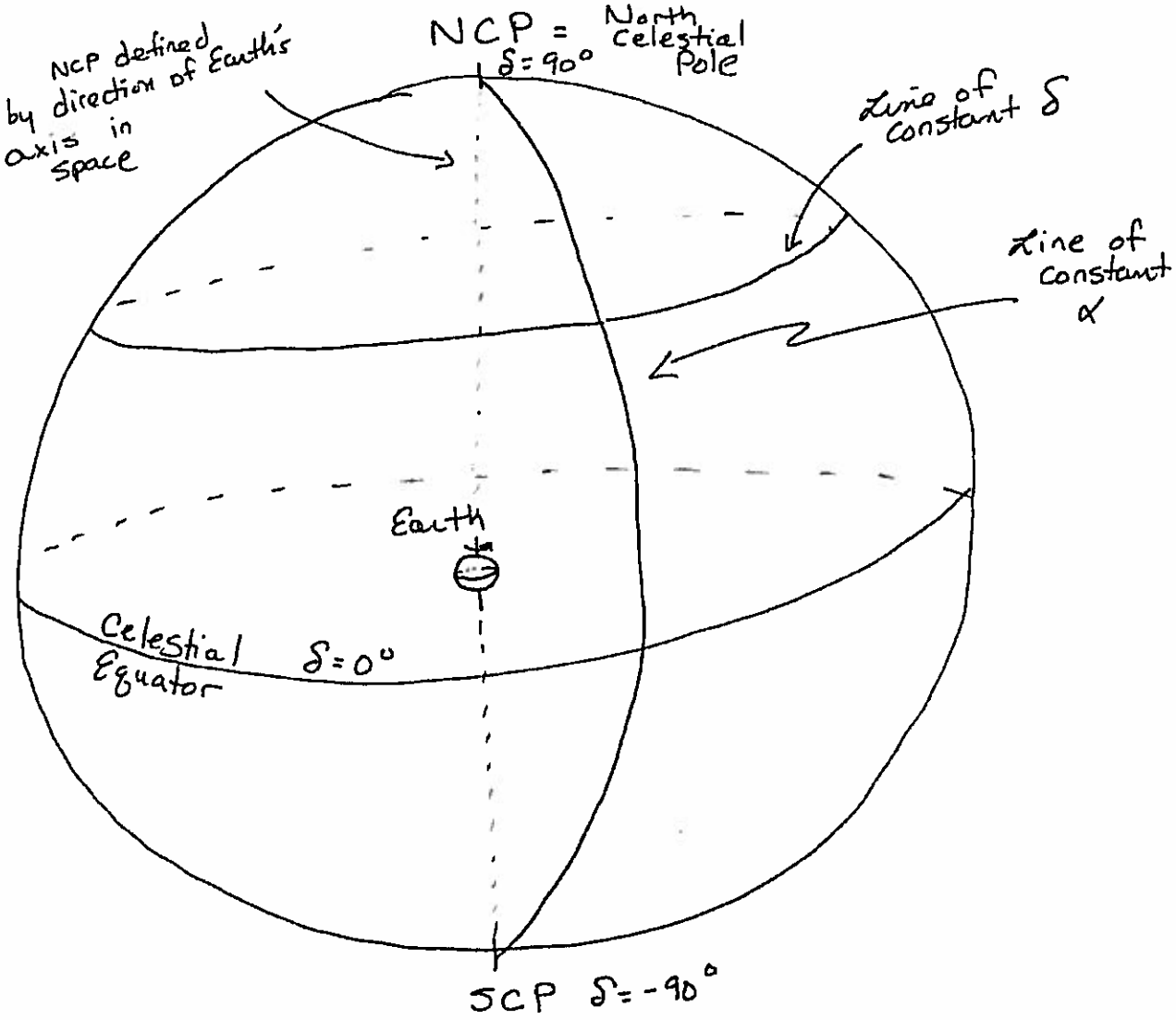
↑

sign important

Equitorial System

Right Ascension, Declination

(α, δ)



$\alpha = 0$ is defined by the point where the Sun crosses the celestial equator (The Vernal Equinox) γ

α has units of h, m, s

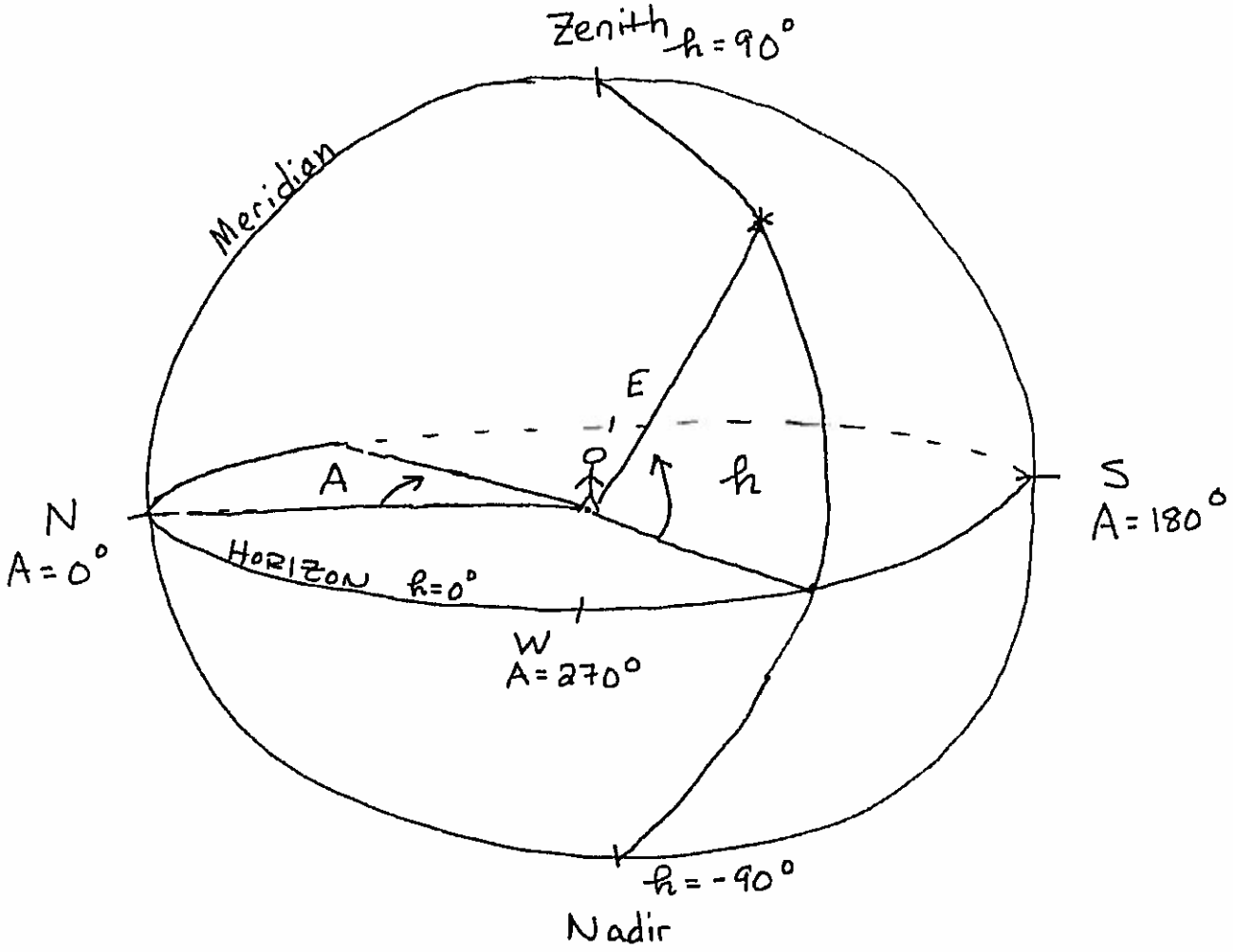
δ has units of $^{\circ}, ', ''$

Horizon System

(Alt - Az)

Azimuth, Elevation or Altitude

(A, h)



This is the coordinate system for an observer on the surface of the Earth.

LST = Local Sidereal Time

= α that is currently overhead along the meridian