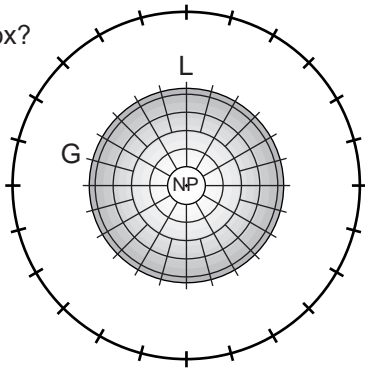


# AST101: Longitude Worksheet #2

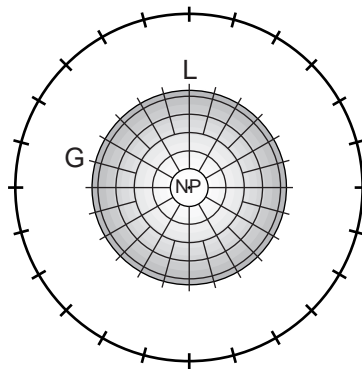
L = local position, G = Greenwich, ☉ = Sun, VE = Vernal Equinox = 0hr RA

Where's Vernal Equinox?

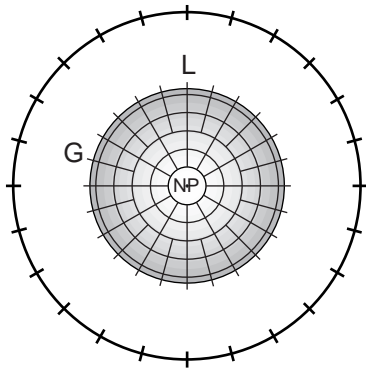
1) Sirius in local transit (RA=7h)



2) LST = 20h



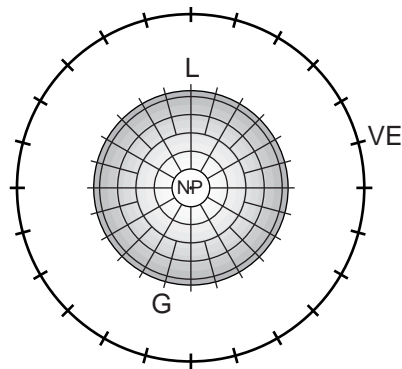
3) GST = 13h



1) LST =

2) GST =

3) Long. =

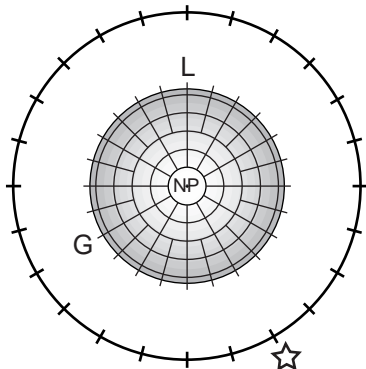


RA of Altair = 20h

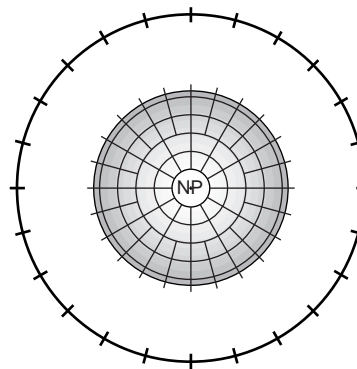
1) LST =

2) GST =

3) Long. =



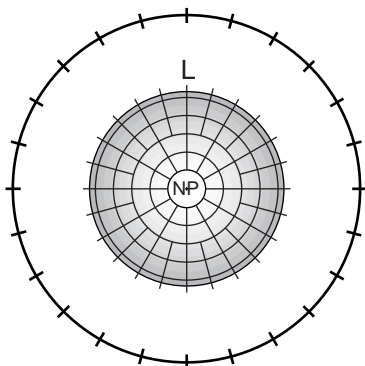
LST = 4h,  
GST = 17h  
1) Long. =



1) LMT = 2 pm.  
Where is the Sun?

2) Date = June 21.  
Where is VE?

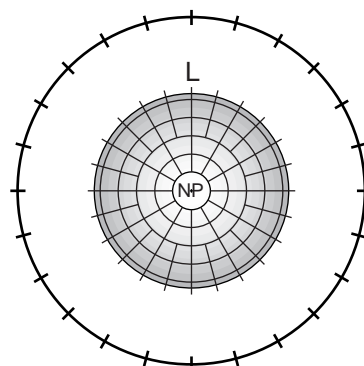
3) LST = ?



1) Long. = 75°E.  
Where is Greenwich?

2) GST = 14h.  
Where is VE?

3) Date = Sept. 23.  
Where is Sun?



## **Definitions of Time**

**Local Mean Solar Time (LMT)** = Mean sun's position relative to the meridian

**Greenwich Mean Time (GMT)** = Local Mean Solar Time for Greenwich

**Universal Time (UT)** = Same as Greenwich Mean Time

**Local Sidereal Time (LST)** = Right Ascension on the meridian

= Object with known RA on meridian

= Position of Vernal Equinox relative to meridian (Hour Angle)

= Position of object with known RA relative to meridian

**Greenwich Sidereal Time (GST)** = Local Sidereal Time for Greenwich, England