STARS
Angular Measurements on the Sky

Overview

In Astronomy, and more so, in the subfield of Astrometry, you will often refer to measurements on the sky in a fashion that you are not used to.

On Earth, we talk about separations and distances in the Imperial system (inches, feet, etc) or the Metric system (meters, km, etc).

In Astronomy, you have to remember that we are viewing the night sky on the celestial sphere. Therefore, we refer to separations in spherical terms.
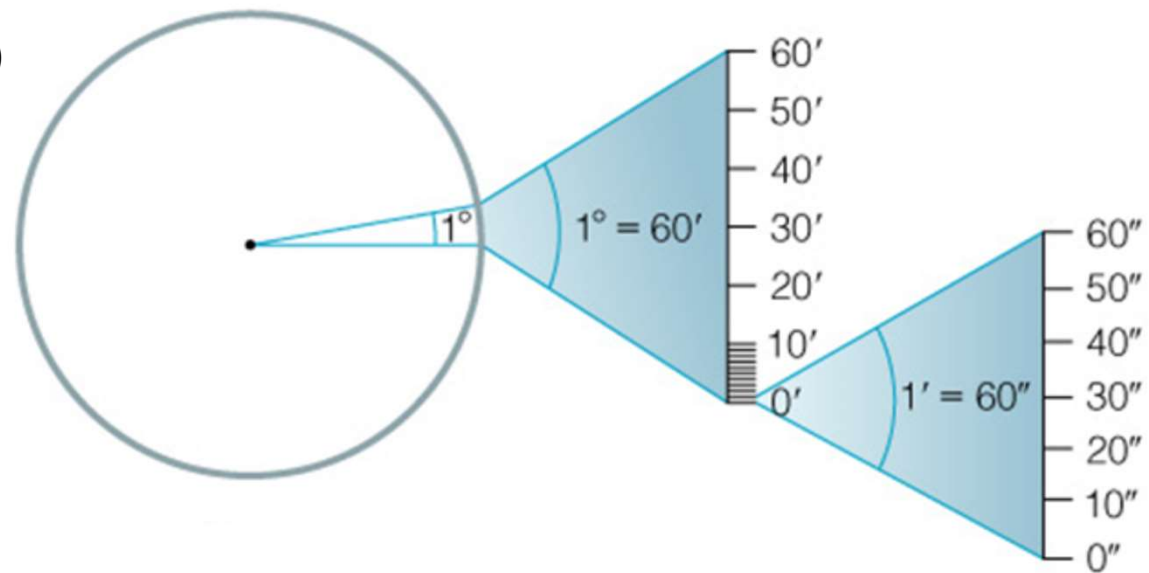
Subdivisions on the Sky

A circle equals 360 degrees

Each Degree can then be subdivided:

- 1 degree = 60 arcminutes (minutes of arc)
  - Denoted by a '
  - Usually descriptive of a CCD image dimensions

- 1 arcminute = 60 arcseconds (arcsec)
  - Denoted by a " NOTE: This symbol is NOT a quotation mark
  - Usually used to denote double star separations

1° = 60 arcmin (60') = 360 arcsec (360")

- Full circle = 360º

- 1º = 60' (arcminutes)

- 1' = 60" (arcseconds)
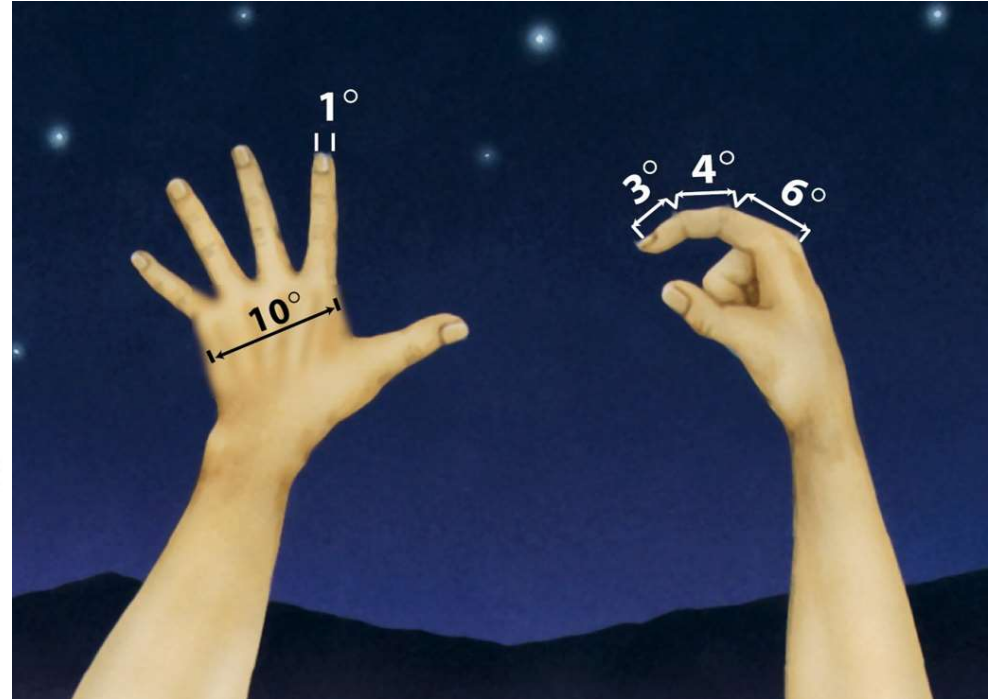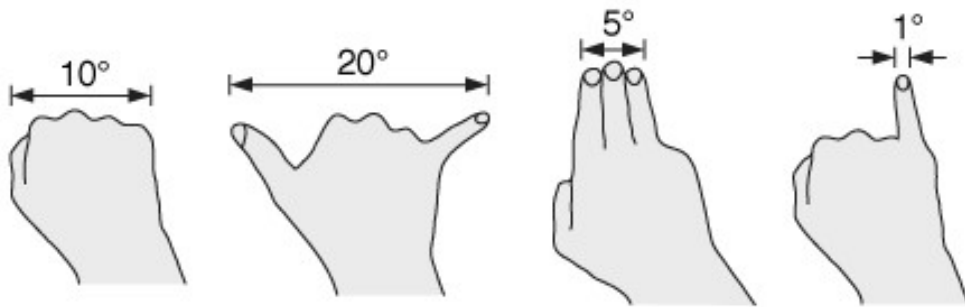
Other Dimensions on the Sky

Here are some other handy tools to use in measuring sizes and distance on the celestial sphere.

Using Identifiable Stars
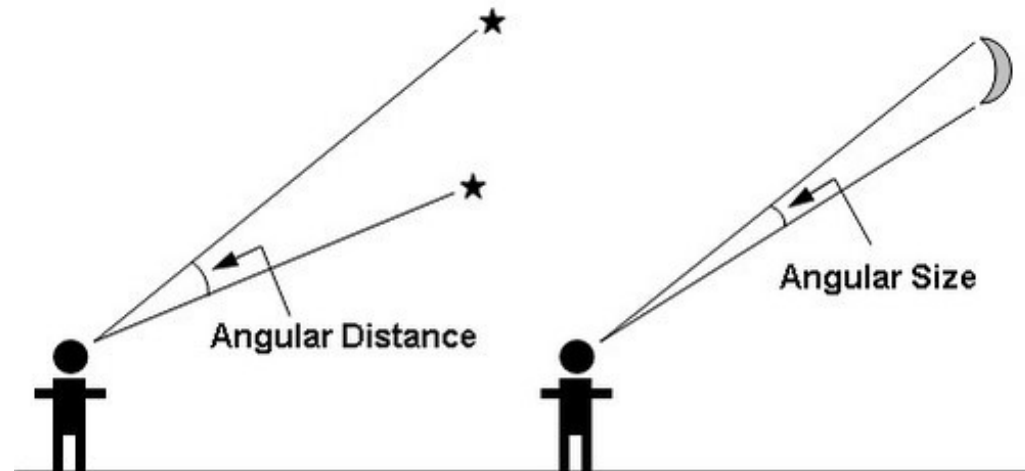
Summary

Always remember that when describing separations and distances on the night sky, the celestial sphere, we must use terms associated with spheres.

Degrees, Arcminutes, and Arcseconds are going to become very familiar to you.

Finally, remember the difference between Angular distance an Angular size.

Questions?