

The ABCs of Stargazing



How would you describe to a friend the size of a sky object, its distance from a particular star, its brightness, or its location on the celestial dome?

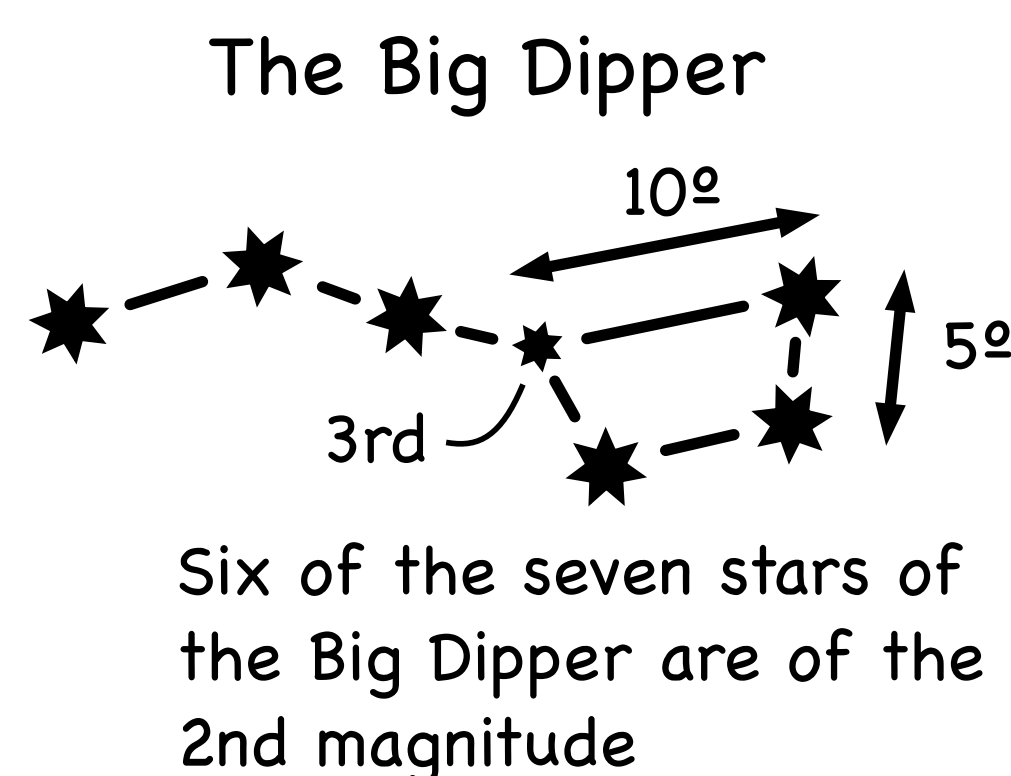
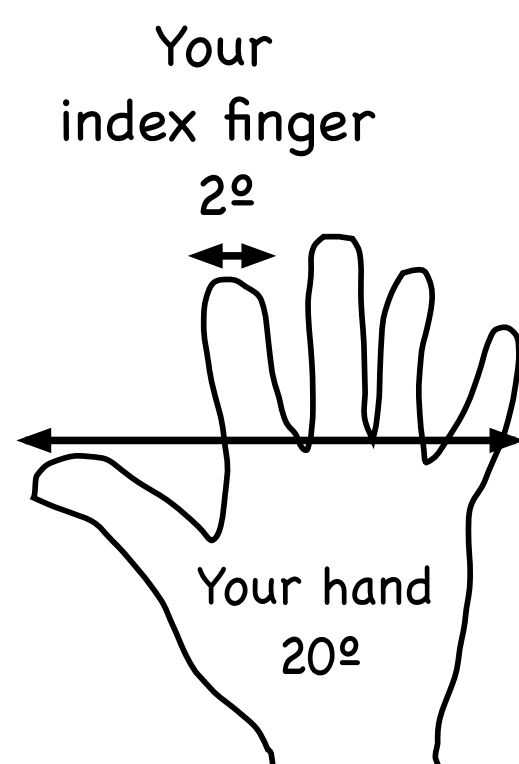
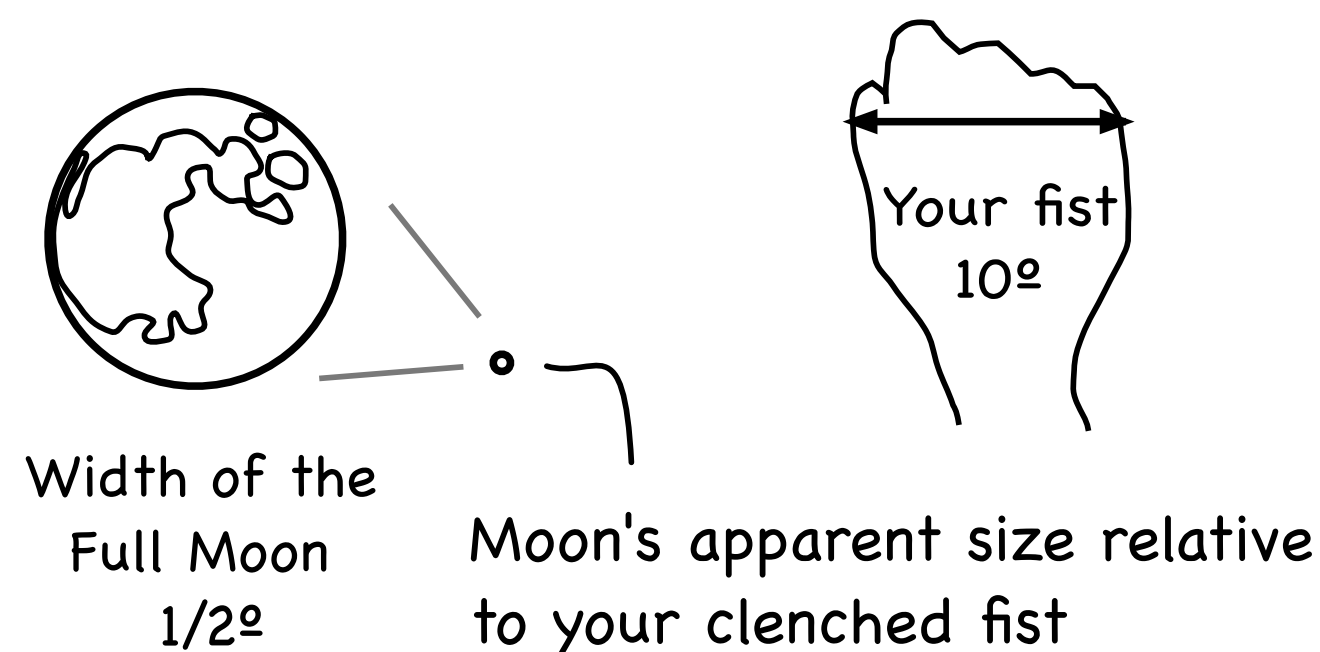
The ABCs of stargazing allow you to do just that!



"A" is for angular size and distance

Be sure to remember these handy references when discussing size or distance in the sky:

- The moon spans $1/2^\circ$. It would take 360 "full moons" to span the sky from horizon to horizon!
- The apparent width of the tip of your index finger on your extended arm is 2° .
- The width of the bowl of the Big Dipper is 5° and the bowl's length is 10° .
- Your clenched fist on your fully extended arm is 10° from side to side.
- Your outstretched hand on your extended arm is 20° from the tip of the pinky to the tip of the thumb.



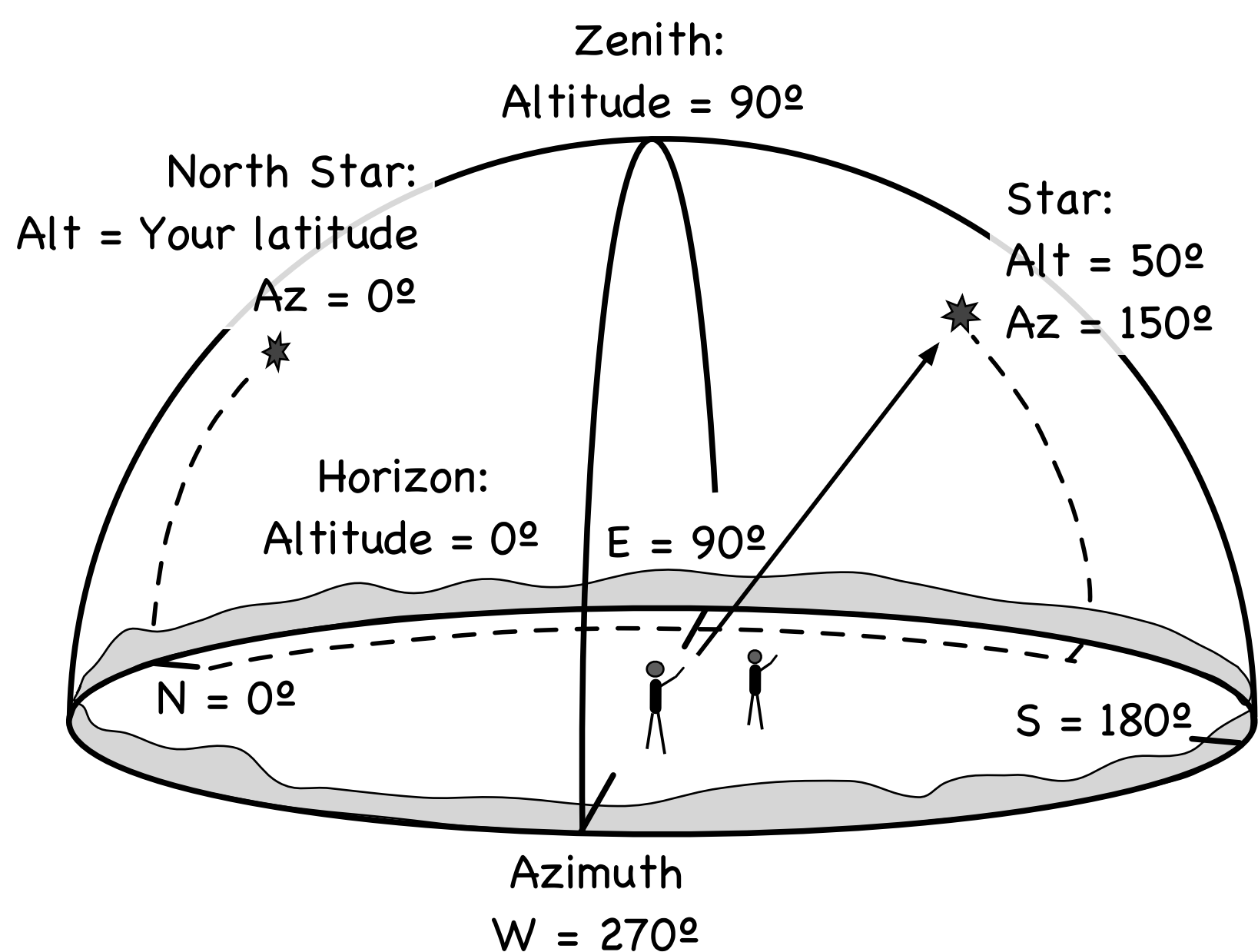
"B" is for brightness

Skywatchers use the "magnitude" scale to describe an object's brightness. Don't be confused by the reverse nature of the scale:

The brighter the object, the smaller the magnitude. Objects with negative magnitudes are very bright, indeed!

Mag.	Object
-26	Sun (never look directly at the sun)
-12	Full moon
-4	Venus
-2.5	Jupiter at its brightest
-1.5	Sirius, the brightest star in the night sky
0	Arcturus, Vega, Capella, Saturn
+1	Pollux, Regulus, Altair
+2	Six stars of the Big Dipper, the North Star
+3	The star at the base of the Dipper's handle
+6	The faintest star seen with the unaided eye

Polaris, the North Star, always has an azimuth of 0° and has an altitude above the northern horizon matching the latitude of the observer.



"C" is for coordinates

Stargazers often use the simple, but descriptive altitude-azimuth (alt-az) system to locate objects in the sky.

Azimuth coordinate:	Altitude coordinate:
North is 0°	Horizon is 0°
East is 90°	Zenith is 90°
South is 180°	
West is 270°	

