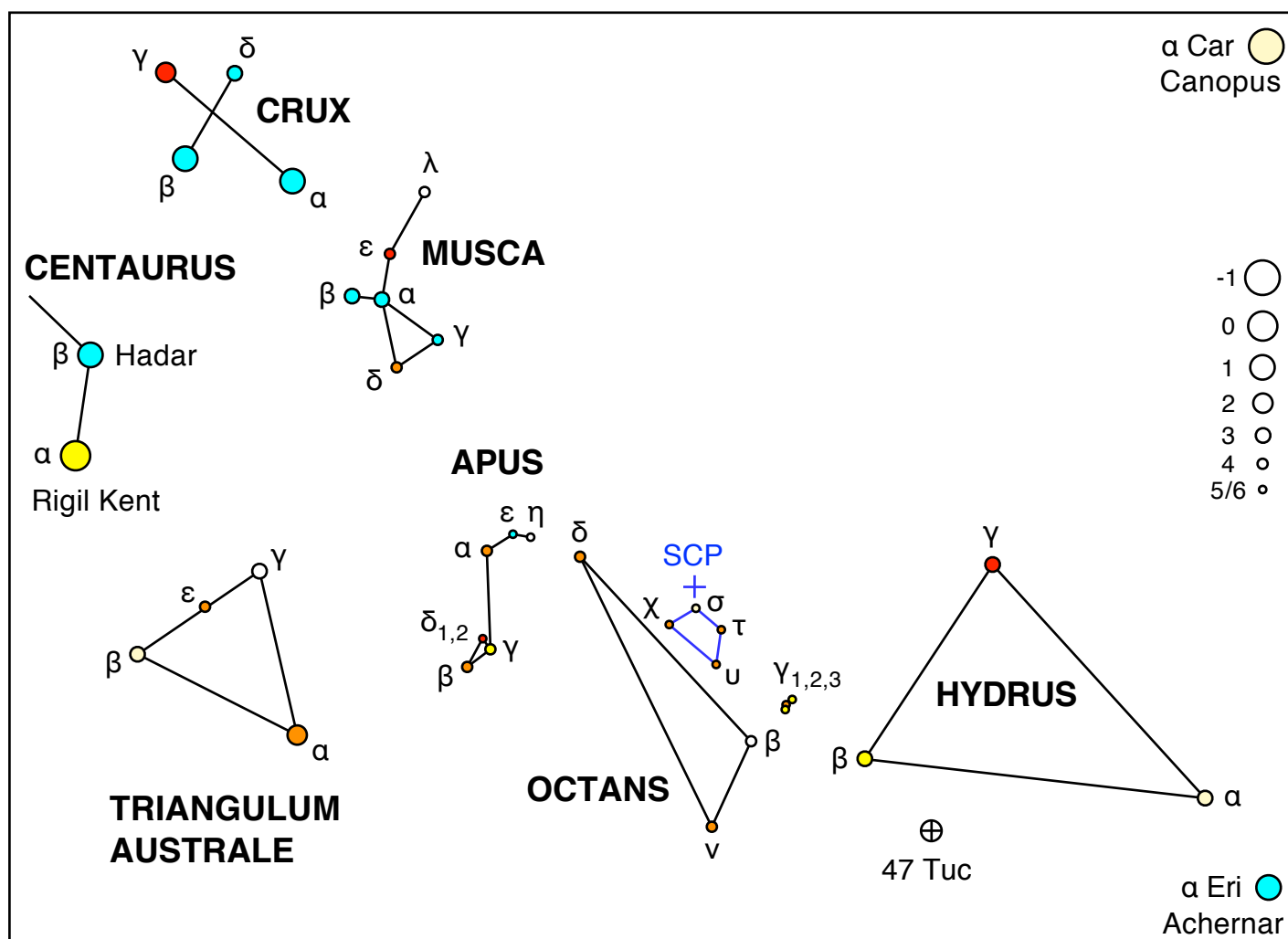


Zooming in on the South Celestial Pole (by Rob Horvat)

I will describe two approaches to finding an accurate enough position for the South Celestial Pole, one from Triangulum Australe & Apus and one from 47 Tuc & Hydrus, depending on visibility of the constellations at the time of year. Either way, you will need a good finderscope (e.g. 8x50mm) to get you into the location. Binoculars are of great assistance in getting your general directions.



Approach 1

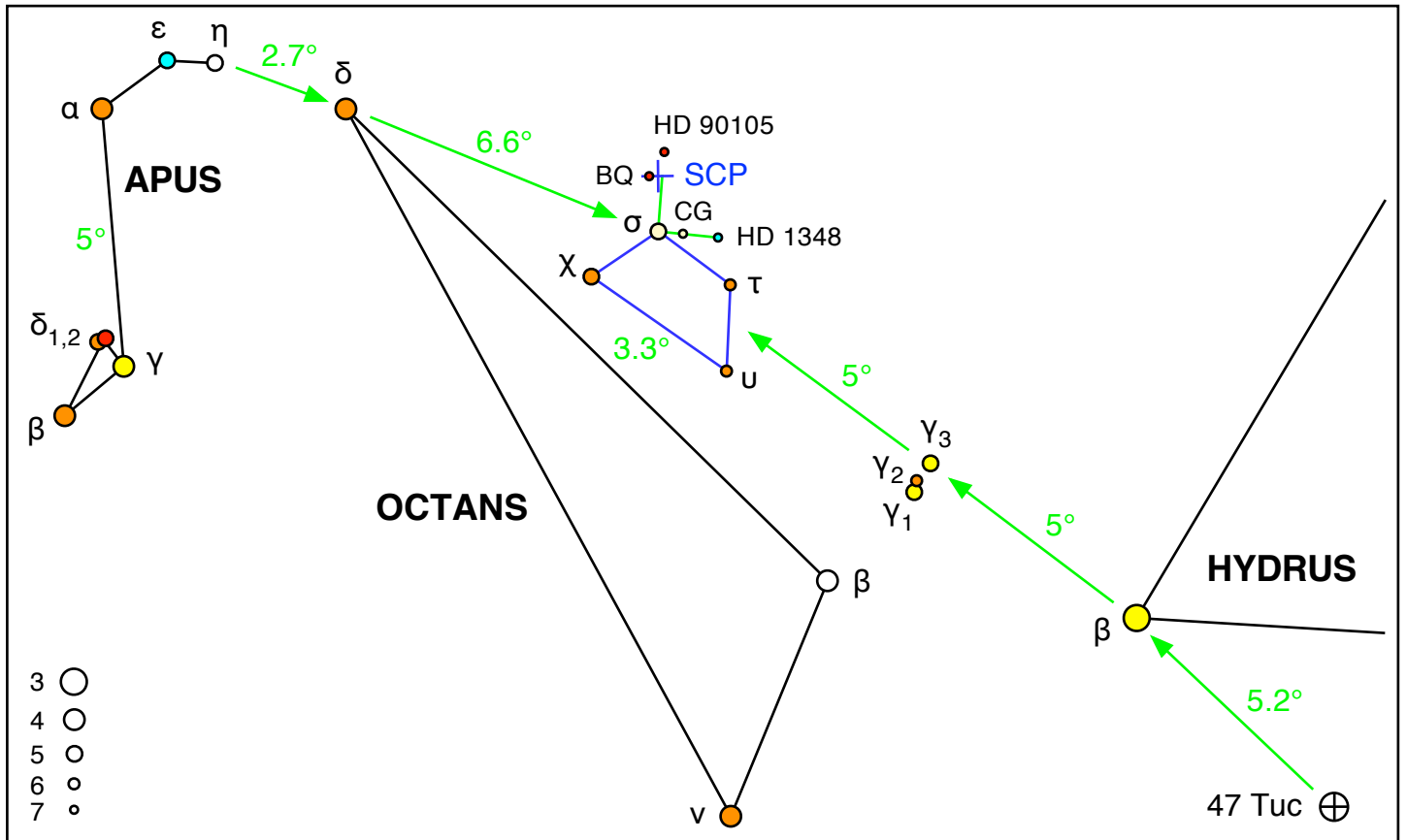
Use Crux and the pointers (α and β Centauri) to locate the constellation Triangulum Australe and then Apus. The narrowish right triangle of stars β , $\delta_{1,2}$ and γ Apodis are easily identified with binoculars. $\delta_{1,2}$ is a very wide double star. The red δ_1 and orange δ_2 components have magnitudes 4.7 and 5.3, separated by 103 arcseconds. The stars α and γ Apodis are 5 degrees apart. Note that the field of view of an 8x50mm finderscope is around 5.5 degrees.

Continue the arc of stars α , ϵ , η in Apodis to find δ Octantis about 2.7 degrees from η . Almost in line with η Apodis and δ Octantis, locate about 6.6 degrees away σ Octantis and the trapezium constructed from the four stars σ , τ , u and χ Octantis. They are the brightest four stars in this region. For reference, I will call this the **South Pole Trapezium**. The side u to χ is about 3.3 degrees, which is a bit more than half an 8x50mm finderscope's field of view.

Approach 2

Perhaps easier, is to start from 47 Tuc, pass through β Hydri and find the trio $\gamma_{1,2,3}$ Octantis about the same distance (5 degrees) further on. Continuing another 5 degrees in the same direction will show the **South Pole Trapezium** again.

Sigma (σ) Octantis (magnitude 5.4) is nearly 1.1 degrees from the South Celestial Pole. We can get closer to the SCP than this.



Sigma (σ) Octantis is in line with nearby CG Octantis (magnitude 6.6) and HD 1348 (magnitude 7.3). From σ to CG Octantis is 0.5 degrees and from CG to HD 1348 is 0.7 degrees, a total of 1.2 degrees.

Around the SCP are two magnitude 7 red giants, BQ and HD 90105. BQ is only 11 arcminutes from the SCP. Both BQ and the SCP are 1.1 degrees from sigma.

The SCP is almost in line with sigma and the white magnitude 8 star HD 99685. Using BQ, HD 99685 and the adjacent magnitude 9 star HD 98784, you can check your location using an eyepiece in your telescope.

