

# Eridanus Optics CC

April 2006

## Targets in Centaurus

The following three targets are selected from the Constellation 'Centaurus' to present a naked eye challenge, as well as telescopic challenges. Binoculars will improve the viewing of the naked eye object and help in the starhopping to the telescope objects.

### Naked eye targets:

In the December 2005 newsletter, it was stated that 47 Tucanae is the second best example of a globular cluster. The best example is widely regarded as Omega Centauri. This globular cluster consists of over a million stars and covers an area larger than the moon. It has a mass of about 5 million solar masses, equal to some small galaxies and ten times more than most other globular clusters. Omega Centauri was discovered in 1677 by Edmund Halley and can be seen with the naked eye from dark areas. From light polluted areas, Omega Centauri can present a challenge, but becomes easier to observe when high in the sky. Locate it first with binoculars (even 8x21 will work) and then try to see it with the naked eye. To find Omega Centauri, follow these instructions:

- Draw a line from Hadar (one of the pointers to the Southern Cross) to Epsilon Centauri.
- Extend the line by about the same amount.
- Omega Centauri will look like a small hazy patch.
- Telescopes with apertures larger than 114mm start to resolve individual stars.

### Binocular Targets:

Omega Centauri is also a good object to view in binoculars.

### Telescope Targets:

The next target is NGC 3918, a blue planetary nebula that may appear similar to Uranus in small telescopes. A planetary nebula forms when a star collapses and matter bounces off the surface. The matter then looks like a disk, similar to a planet's disk and is therefore called a 'planetary' nebula. To find NCC 3918, follow these instructions:

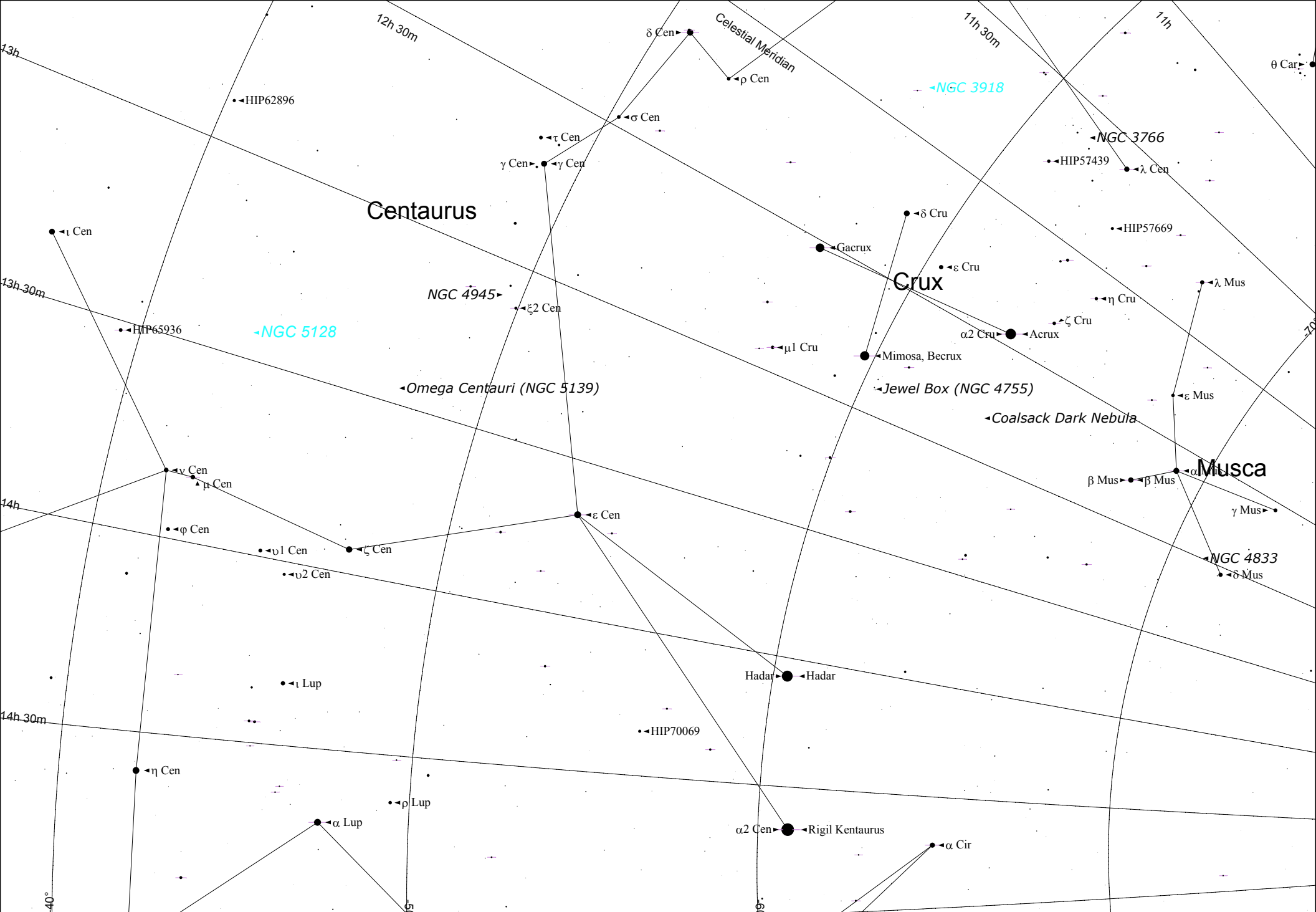
- Draw a line from Mimosa (Beta Crux) to Delta Crux
- Extend the line by about the same distance. You will find four stars arranged in a flat 'T', including HIP 58379 and HIP 57512.
- NGC 3918 is about 1/3 of the way between the central star and HIP 57512.
- You will need a telescope with moderate (50x) to high magnification. Look out for the blue star that is 'out of focus'.

The last target is for the brave. Centaurus A is a galaxy with one of the strongest radio sources in the sky. I could find it from Pretoria with a 6" telescope. A smaller telescope may work from dark sites. The reference stars in the instructions were visible in my 6x30 finderscope:

- Start at Omega Centauri. Note that you will end up further away from Epsilon Centauri. The route will follow the string of bright stars on the northern side of the line connecting Omega Centauri and Centaurus A (NGC 5128).
- Locate and move to HIP 65144
- Locate and move to HIP 64925
- Locate and move to HIP 64822. You should be able to identify HIP 64892 as well. Also note that HIP 64778 is not a good intermediate point. This is a variable red giant and I found that it was too dull for the 6x30 finderscope to locate.
- Now locate and move to HIP 65178.
- Extend the line from HIP 64822 to HIP 65178 about the same distance and look slightly more north. Look out for the three stars marked with the short lines. They are about of Magnitude 9.
- Centaurus A will look like a faint cloud inside this bracket. Try to defocus and refocus the telescope slightly, it may help you to see this object. You may also tap the side of the telescope slightly. The movement may help to make it visible.

Good luck.

Andrie



Viewing from Pretoria, South Africa Long: 28° 13' 24" Lat: -25° 43' 29"

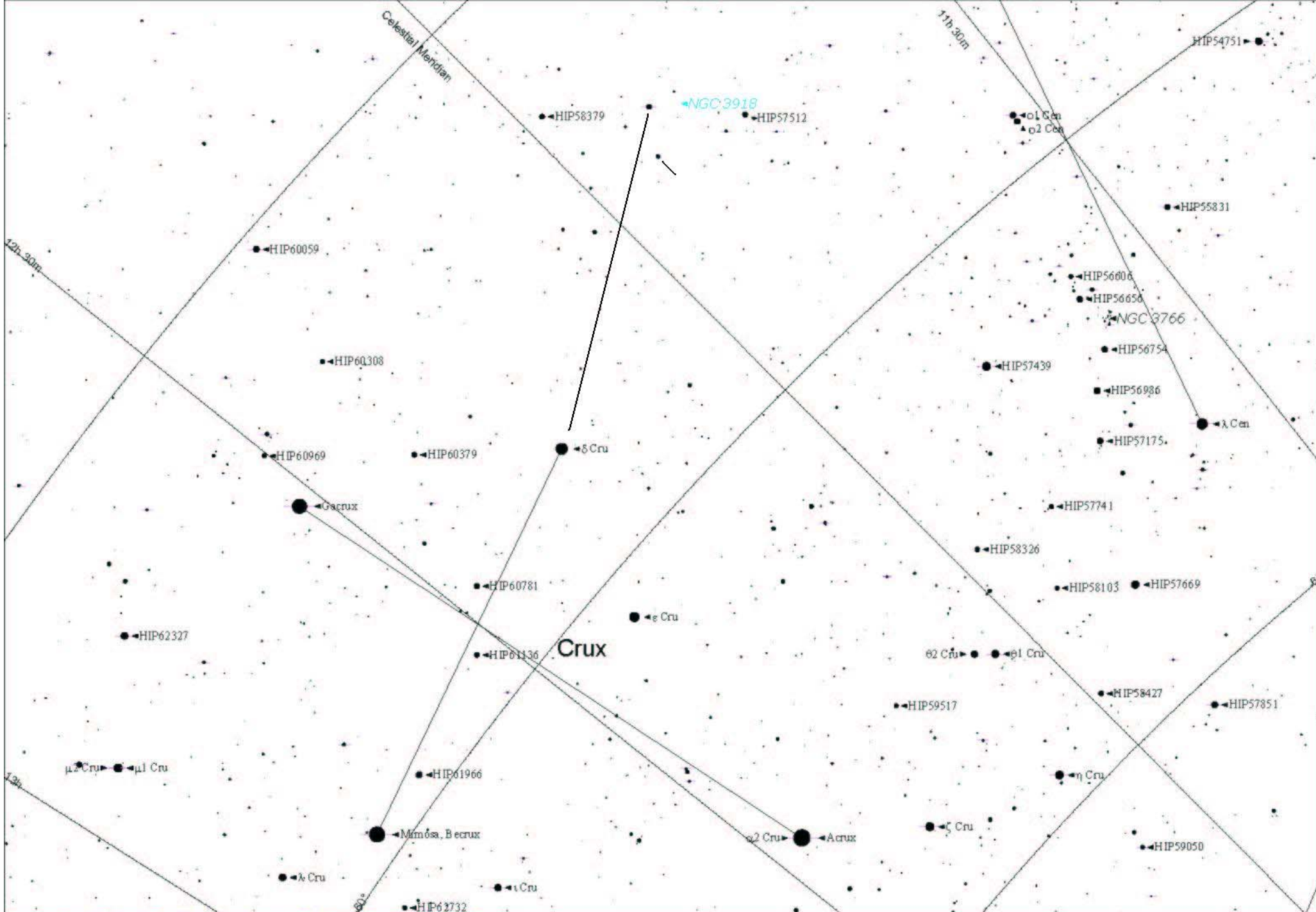
2006/04/24 08:00:00 PM (Local)

Chart centre (J2000): RA: 13h 24.372m Dec: -55° 13.049'

Looking: south east (43° above horizon)

FOV: 38°

Limiting Magnitude: 7.0



Viewing from Pretoria, South Africa Long: 28° 13' 24" Lat: -25° 43' 29"

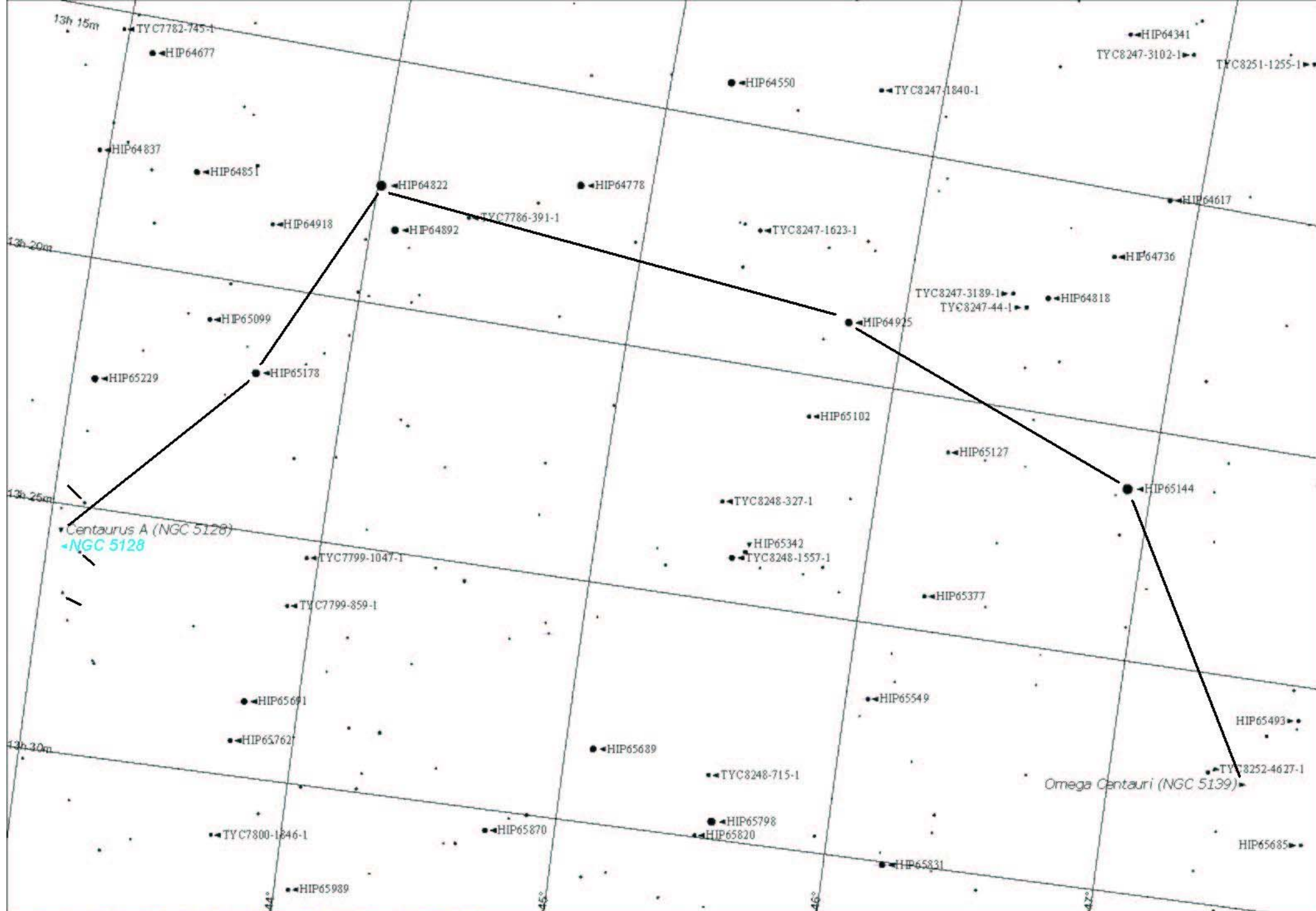
2006/04/24 08:00:00 PM (Local)

Chart centre (J2000): RA: 12h 10.315m Dec: -59° 32.997'

Looking: south east (49° above horizon)

FOV: 13°

Limiting Magnitude: 9.2



Viewing from Pretoria, South Africa Long: 28° 13' 24" Lat: -25° 43' 29"

2006/04/24 08:00:00 PM (Local)

Chart centre (J2000): RA: 13h 21.817m Dec: -45° 10.370'

Looking: south east (45° above horizon)

FOV: 4.9°

Limiting Magnitude: 11.4