Eridanus Optics CC

June 2006

Constellation: Hydra (The Female Water Snake)

Introduction

Although Hydra is the largest constellation in the sky, it is not very prominent. The head forms the most prominent feature and is found on the western side of the constellation. The snake follows its 'head' through the sky, starting east of Monoceros, ending over 100º to the east at Centaurus and Lupus. The constellation thus spans close to $^{2}/_{3}$ of the visible sky from West to East. (See Map 1)

In Greek mythology, Hydra was the multi-headed monster slain by Hercules as one of his twelve tasks. It is also linked in legends to Corvus (the Crow) and Crater (the Cup), two constellations found on the back of Hydra.

Naked eye objects

A few naked eye objects are visible. Only Alfard (The Solitary One) is brighter than Magnitude 3. The name is a reference to this star being the only bright object in the area. Alfard is about 20º South of Regulus (Leo). (At an arm's length from your eye, if you spread your hand wide, the distance between the tip of your little finger and the end of your thumb can be taken as 20º.)

From dark sky sites, the head can be seen as well as several other stars along the body of the snake. To locate the head, start at Alfard and find the trinity of stars to the North (right). Further down (West), you'll find Theta Hydrae and Omega Hydrae, followed by the head. (See Map 2). I could see only two stars of the head from Pretoria without optical aid.

Nearby Corvus can also be seen. To find Corvus, extend the main axis of the Southern Cross northward (about 30º). (A clenched fist at arm's length is about 10º). The four bright stars are the main stars of Corvus. (See Map 1)

Binocular object

From sites with light pollution, binoculars can be used to view the head of the snake. (See the instructions above to locate the head).

Telescope objects

The telescopic objects can be challenging to locate due to the size of the constellation and the scarcity of prominent features. It is necessary in some cases to use features from neighbouring constellations to locate the objects listed below. It includes a planetary nebula, a globular cluster and a 'face-on' galaxy.

The planetary nebula (NGC 3242) can be found close to Mu Hydrae and counts among the three brightest objects of this type. (See Map 3 to follow the instructions below). This 9th magnitude planetary nebula is often referred to as the 'Ghost of Jupiter' due to its similarity in telescopic appearance to Jupiter. Two stars to the East (above) of Alfard (approximately 10º and 20º East of Alfard) should be visible to the naked eye. These are Lamda Hydrae and Nu Hydrae. Halfway between them and slightly to the South (left) is Mu Hydrae. Mu Hydrae forms one corner of a diamond asterism extending to the South. Both corners of the short axis consist of two stars each. Locate the upper pair which is the pair with the closer separation. South-West (to the lower left) is TYC6065-860-1 followed by TYC6065-589-1 and TYC6068-1180-1. NGC 3242 is between TYC6065-589-1 and TYC6068-1180-1.

M68 (NGC 4590) is an 8th magnitude globular cluster situated on the border with Corvus. (See Map 4 to follow the instructions below). Extend the line from Algerab to Kraz (Both part of Corvus) to HIP61621. Note that a short distance away are three stars that form a near perfect line. M68 lies a short distance to the North-East (right and up).

M83, the Southern pinwheel galaxy, is on the border with Centaurus. (See Map 5 to follow the instructions below). Start at the triangular asterism in Centaurus consisting of 1 Centauri, 2 Centauri and 3 Centauri. From 4 Centauri, follow the uneven line of stars to HIP66563. M83 forms a triangle with HIP66563 and HIP66539.

References

Astronomical Society Of Southern Africa: Sky Guide Africa South (Edited by Auke Slotegraaf)
David Ellyard & Wil Tirion: The Southern Sky Guide
Ian Ridpath & Wil Tirion: Collins Gem – Stars
Milton D Heifetz & Wil Tirion: A Walk through the Southern Sky (A Guide to Stars and Constellations and their Legends)

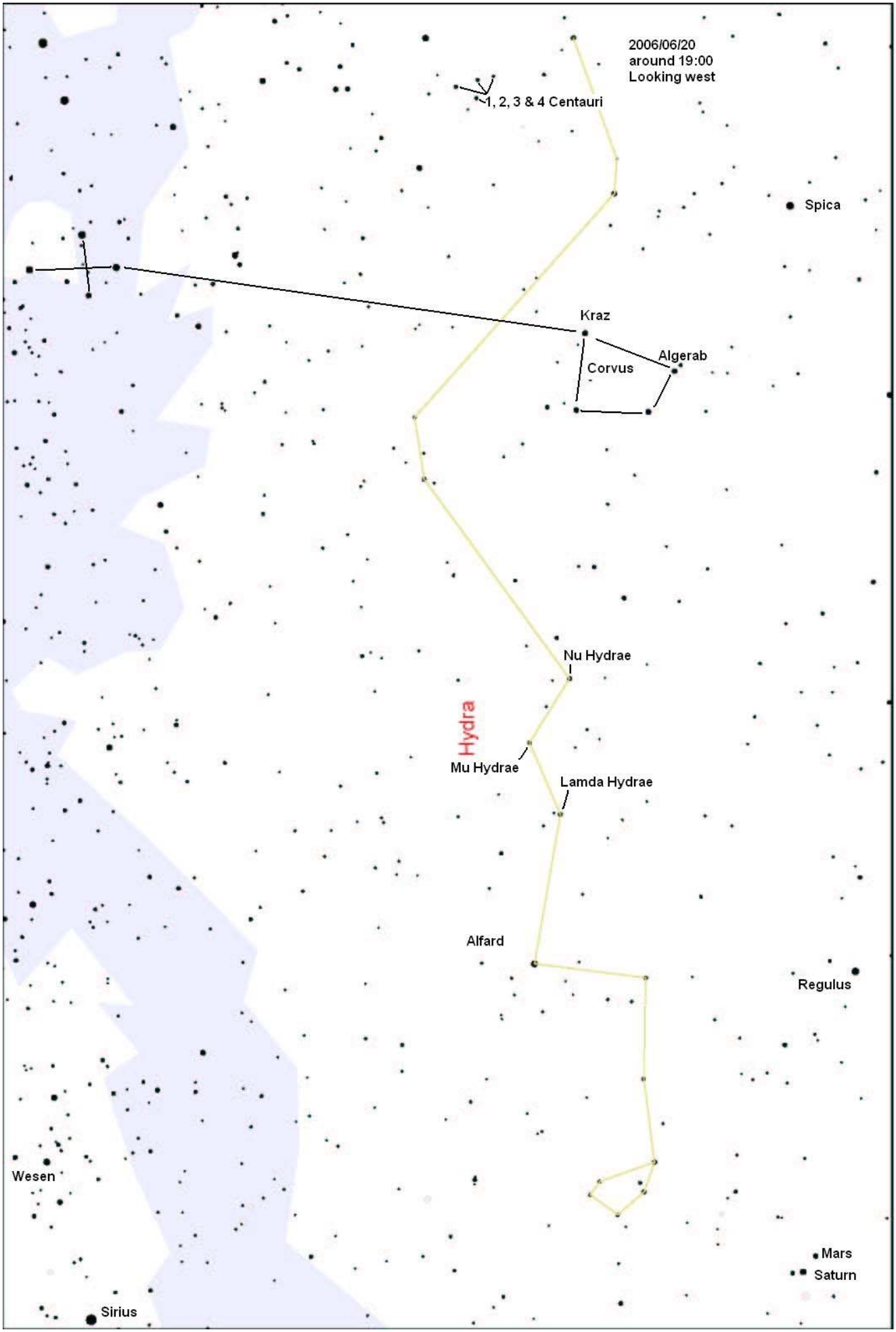
Maps Created with:
Starry Night (Orion Special Edition) and
Starry Night Bundle edition

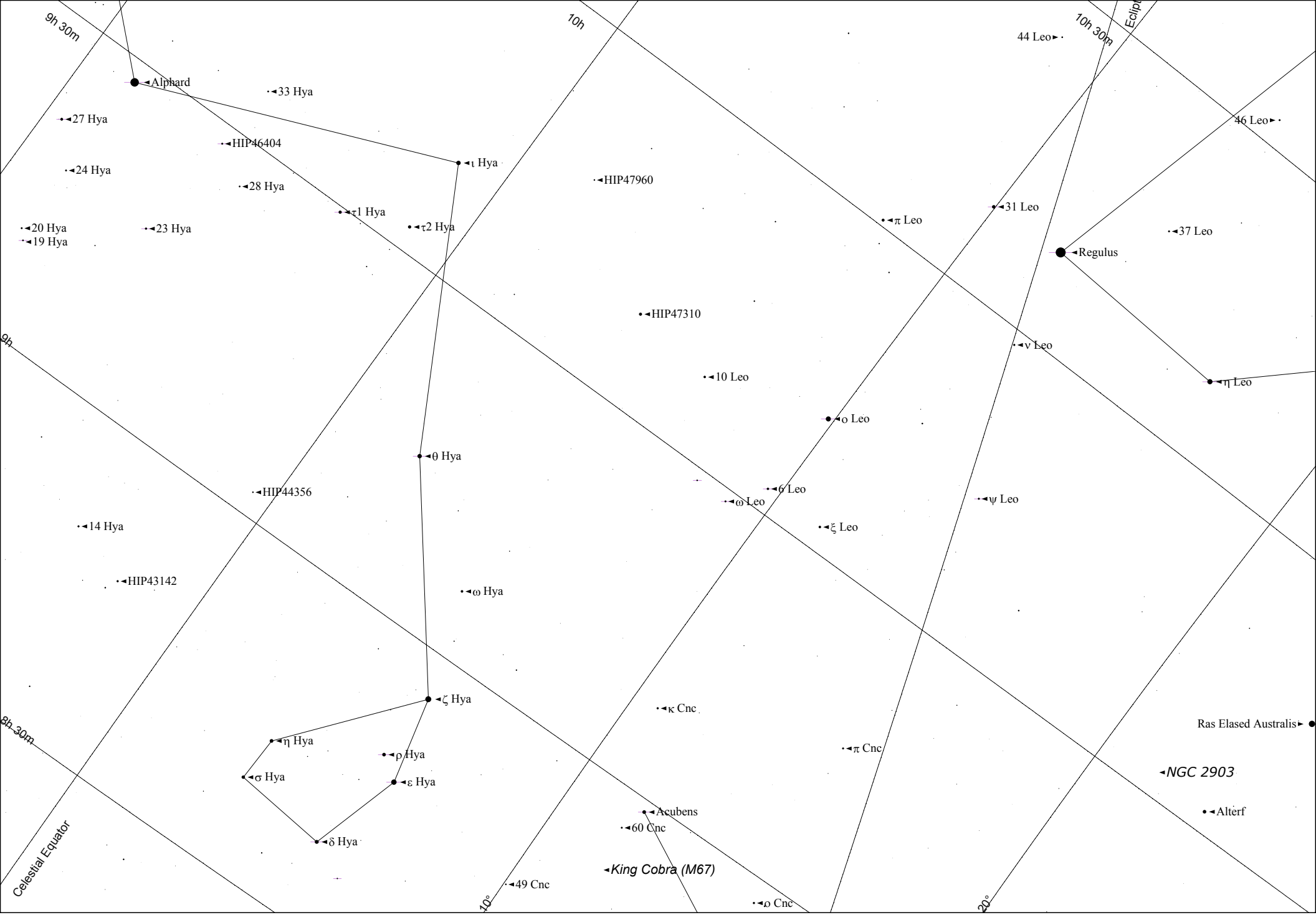
Good luck

Quiz Question:

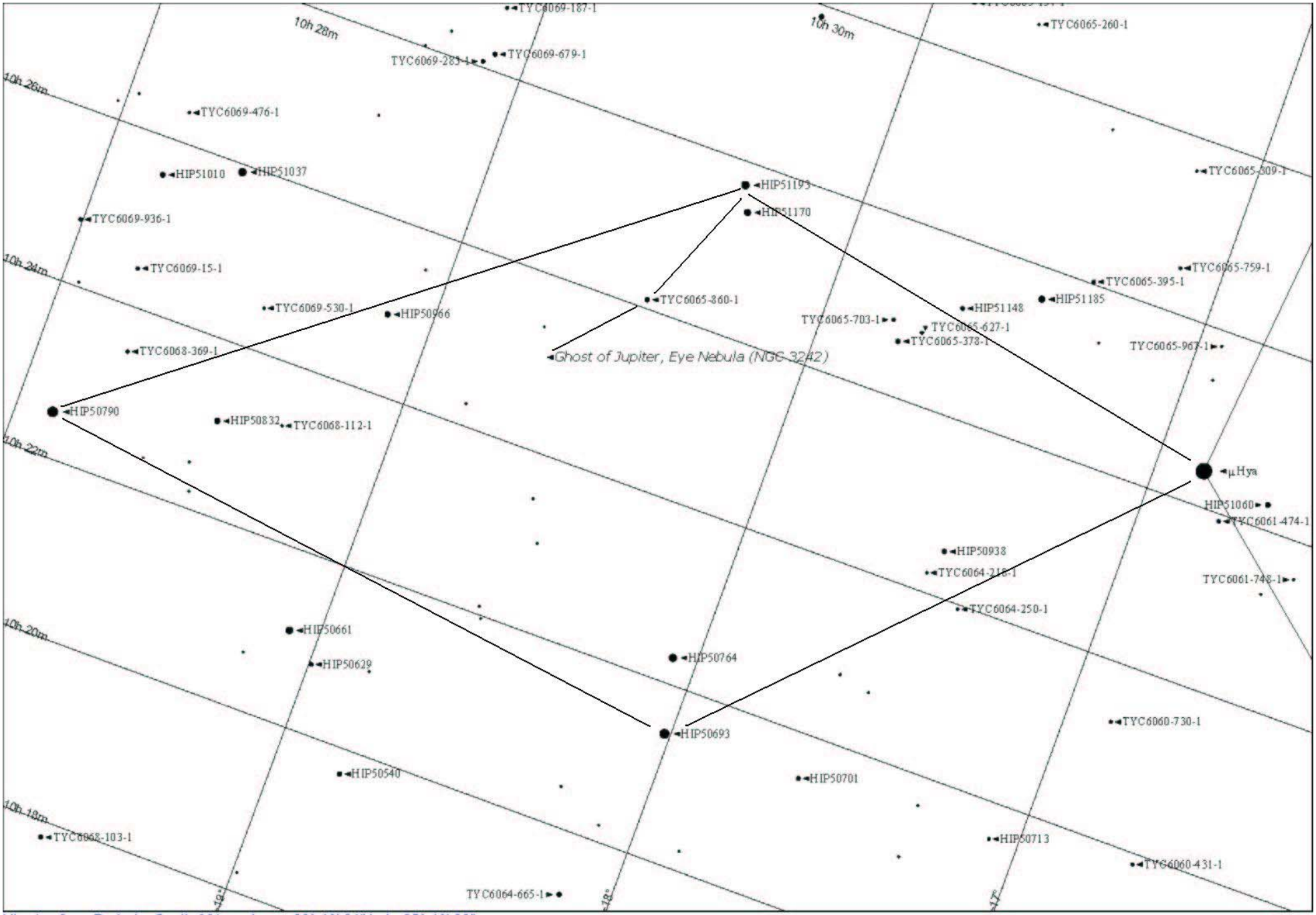
Ref. 380: Venus and Earth are about the same size. However, viewed from Venus, Earth at its best would appear about six times brighter than Venus ever appears to the Earth. This result occurs despite the fact that Earth is farther away from the Sun and the visible light reflectivity of Venus is greater than that of Earth! How can you explain the apparent paradox?

From: Christopher P Jargodzki and Franklin Potter: Mad About Physics (Braintwisters, Paradoxes, and Curiosities.


2006/06/20
around 19:00
Looking west
1, 2, 3 & 4 Centauri
Spica
Kraz
Algerab
Corvus
Nu Hydrae
Hydra
Mu Hydrae
Lamda Hydrae
Alfard
Regulus
Wesen
Mars
Saturn
Sirius



Viewing from Pretoria, South Africa Long: 28° 13' 24" Lat: -25° 43' 29"
2006/06/20 07:00:00 PM (Local)
Chart centre (J2000): RA: 9h 28.117m Dec: 7° 3.568'
Looking: north west (31° above horizon)
FOV: 32°
Limiting Magnitude: 7.3



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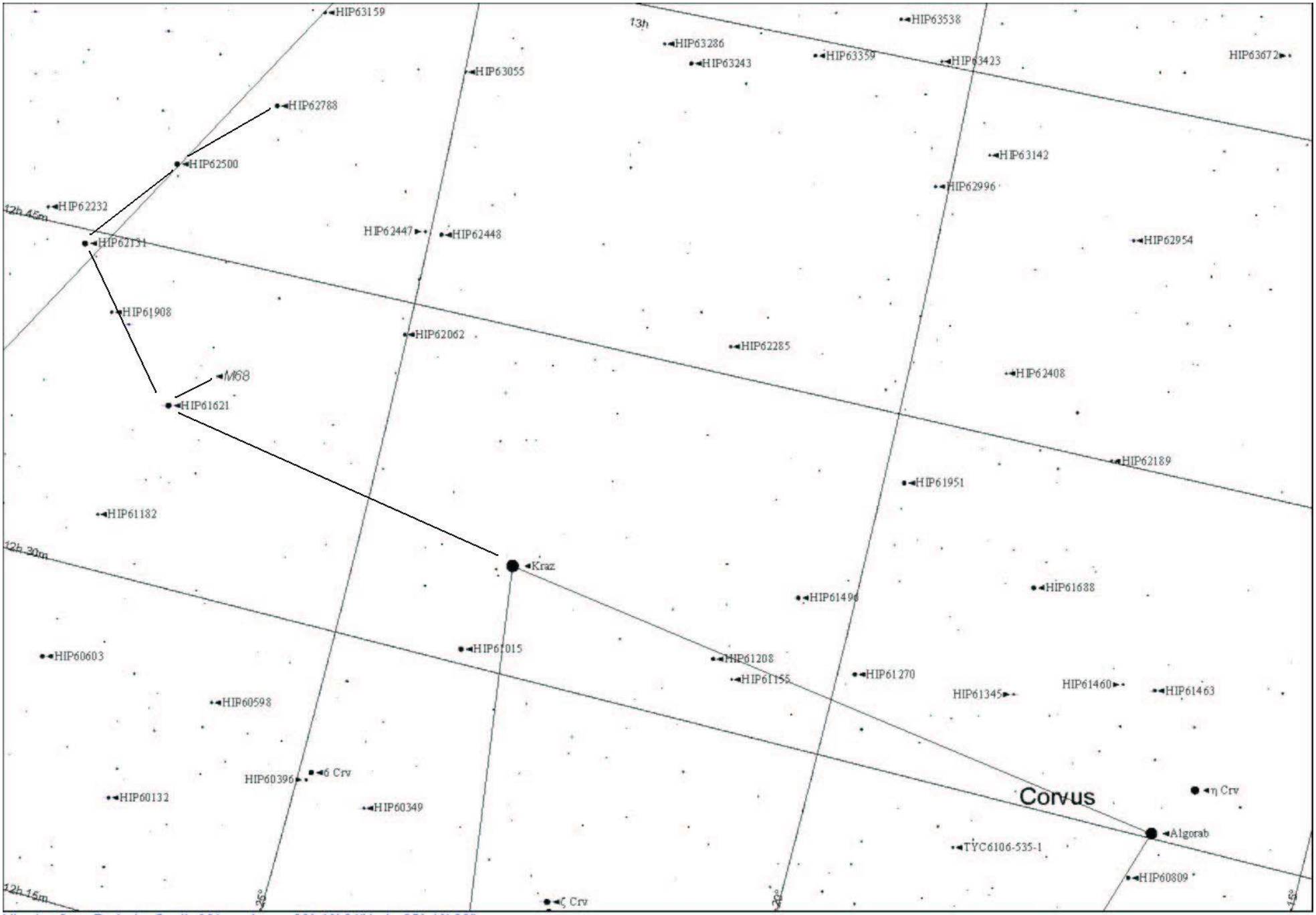
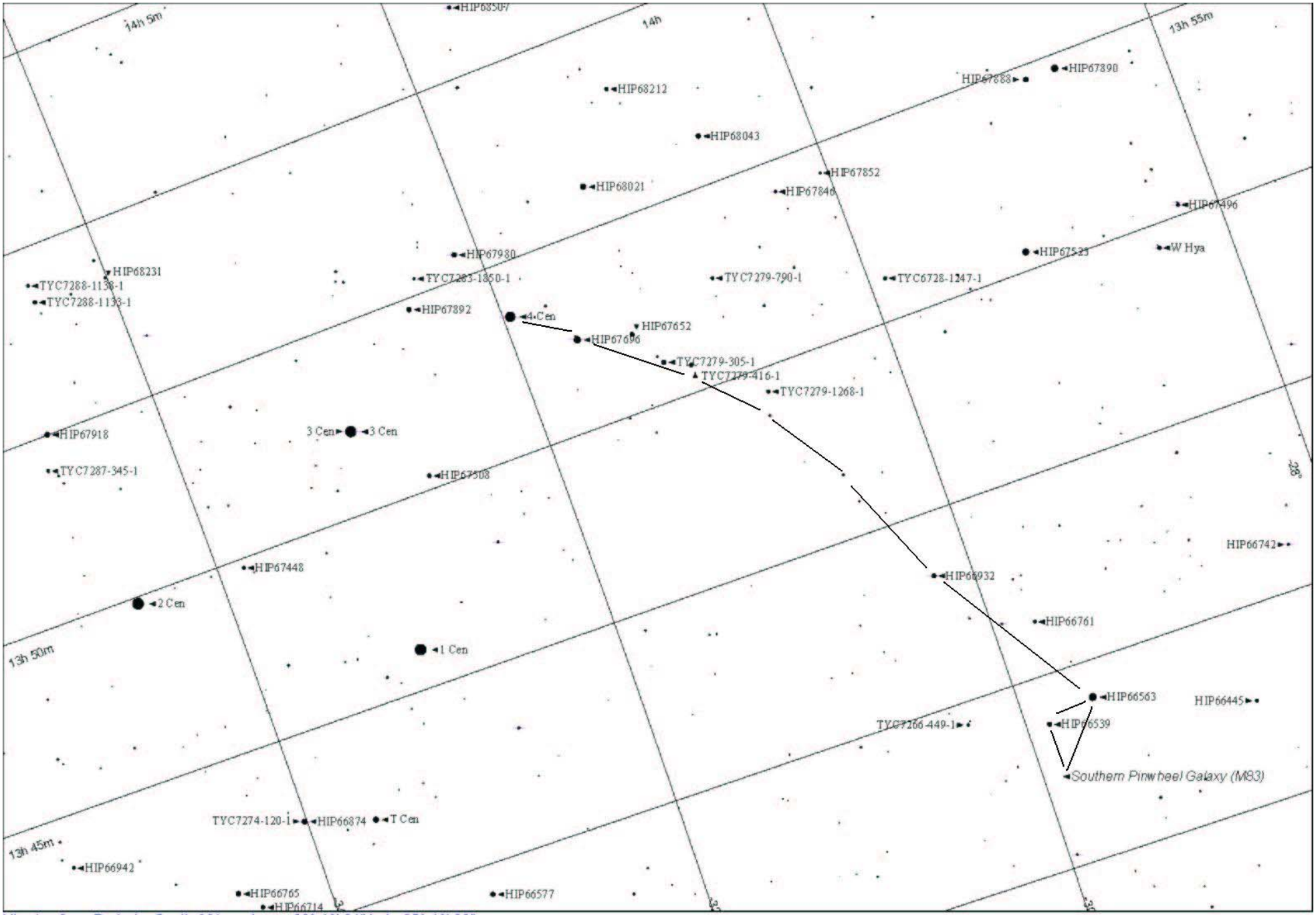
2006/06/20 09:00:00 PM (Local)
Chart centre (J2000): RA: 10h 24.117m Dec: -18° 15.684'
Looking: west (28° above horizon)
FOV: 3.6°
Limiting Magnitude: 12.1



Viewing from Pretoria, South Africa Long: 28° 13' 24" Lat: -25° 43' 29"
2006/06/20 09:00:00 PM (Local)
Chart centre (J2000): RA: 12h 40.494m Dec: -22° 13.905'
Looking: west (60° above horizon)
FOV: 13°
Limiting Magnitude: 9.2



Viewing from Pretoria, South Africa Long: 28° 13' 24" Lat: -25° 43' 29"
2006/06/20 09:00:00 PM (Local)
Chart centre (J2000): RA: 13h 48.376m Dec: -31° 25.303'
Looking: south west (75° above horizon)
FOV: 7.4°
Limiting Magnitude: 10.5