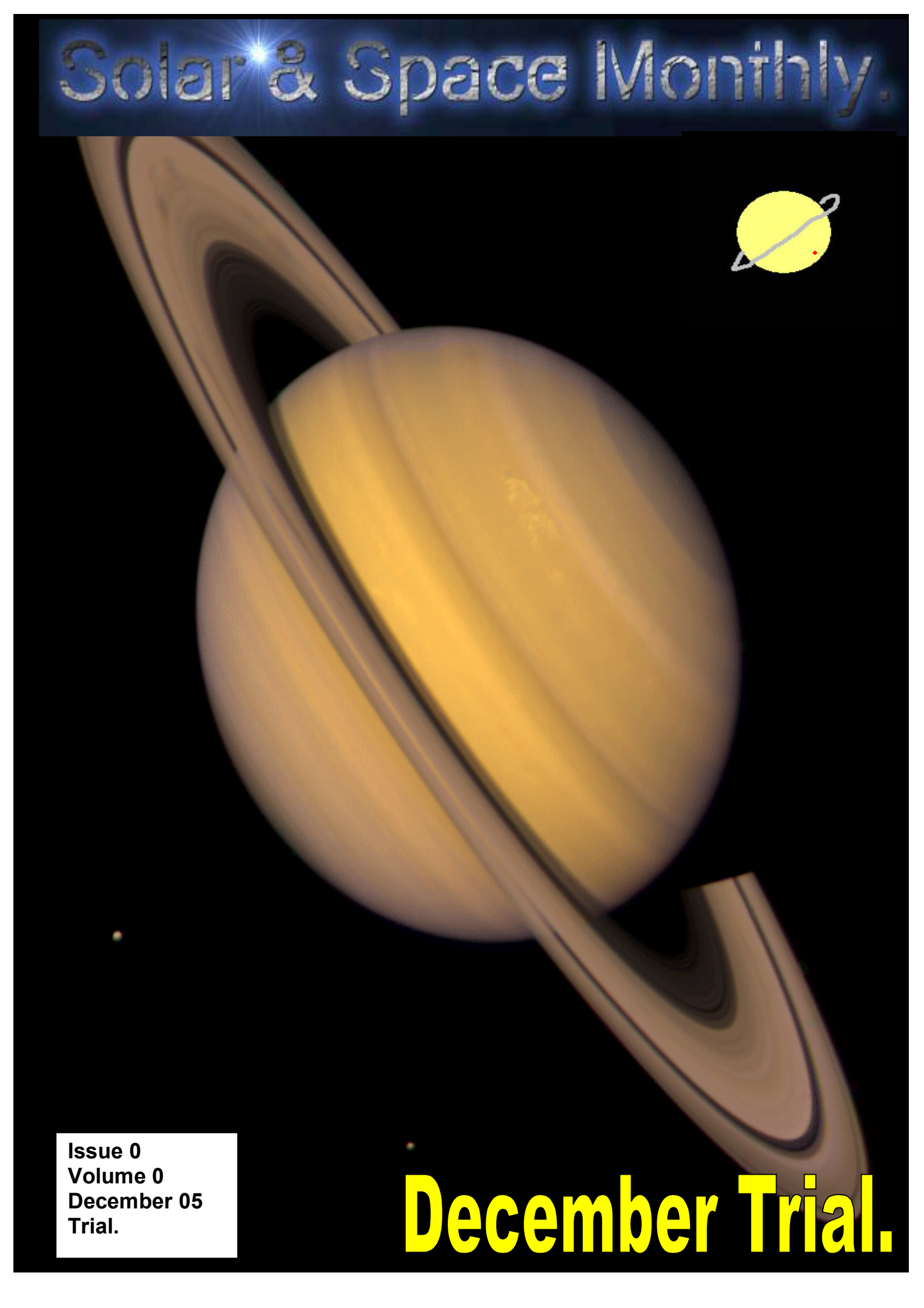
Solar & Space Monthly.



Issue 0
Volume 0
December 05
Trial.

December Trial.

Contents.

Editorial.

Hey one and all, welcome to the first issue of solar and space magazine. Now I know you want in but I need to finish this first. November was a busy month for me. Trying with faulkes to image Mars has been frustrating. But I finally did get it, go see it on the website. I also started a Venus Log. I could tell you what it is now but I may want it for future use as content. Generally the November Sky has been very rich this year. Well I'll stop now. Happy Observing.

Oliver Tunnah.

If you have any questions, articles or drawings then e-mail them to me at oliver009uk@yahoo.co.uk. You never know they might appear in the mag.

The News.

Japanese Probe Fails.

The Japanese probe Hayabusa, which was ready to land on the asteroid Itokawa failed. It got to within 17 km of the asteroid before contact was lost. The probe has been dogged with bad luck. The rover that was to be sent down also had it communications cut. However before the contact loss, lots of data was sent. 3 hours later contact was made again.

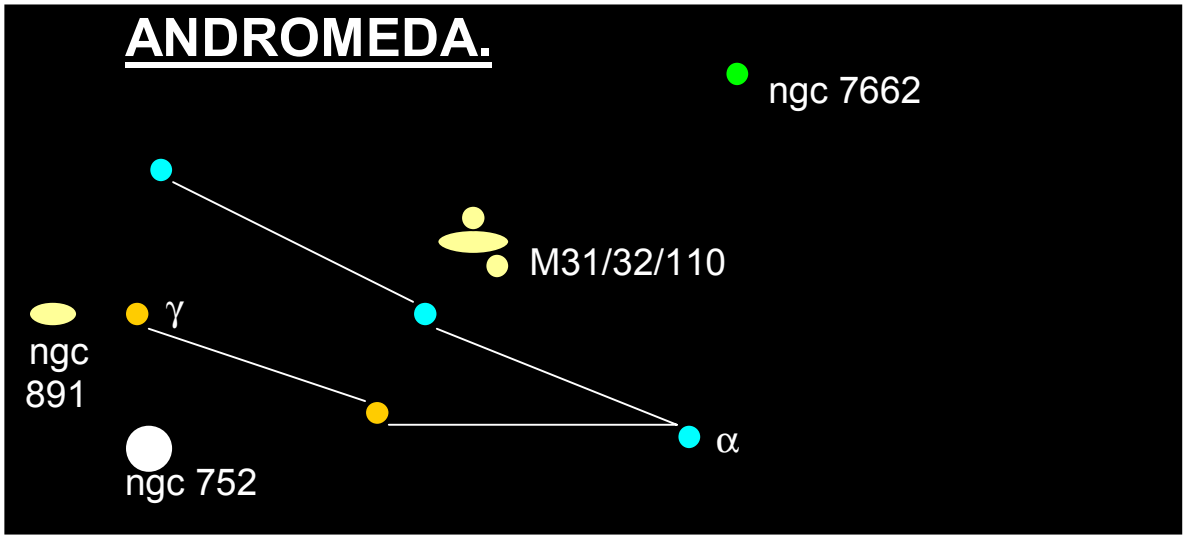
The Asteroid Itokawa.

Cool stars.

Ultra-cool white dwarfs, or white dwarfs with surface temperatures below 4,000 kelvins, are a rare breed. Only seven of these peculiar stars were known to exist, until now. Christian Wolf of the University of Oxford serendipitously discovered an eighth specimen.

White dwarfs are expired stars that no longer generate energy through nuclear reactions. Therefore, they are cool and dim. Ultra-cool white dwarfs, however, are much cooler and fainter than even the coldest regular white dwarf, making them nearly impossible to detect. Their extremely low temperatures suggest they somehow cooled faster than their normal counterparts.

Eye on the Sky.



One of the best constellations in the sky. Rich in Open clusters and galaxies. Not forgetting a member of our local group the Andromeda Galaxy. In Mythology Andromeda was the chained princess, Perseus rescued. As a result She is next to Perseus, Pegasus, Cetus, Cassiopeia and Cepheus, all related to the myth.

Points of interest.

M 31: The Andromeda Galaxy.

Easy to observe. Visible with the naked eye in dark skies, and binoculars in the city. It contains some 40 billion suns. This makes it twice the size of the Milky Way, and also the leading galaxy in our local group. Just like the Milky way has 2 satellite galaxies. (M32 and M110). Both can be seen in the same field of view.

M31.

NGC 752.
A pretty open cluster south of Gamma (γ) Andromedae. (The yellow star at the end of the bottom row of stars.)

NGC 891.
A moderately faint galaxy. Only try to find if you have a decent size telescope. If seen a good example of a edge on galaxy is to be found.

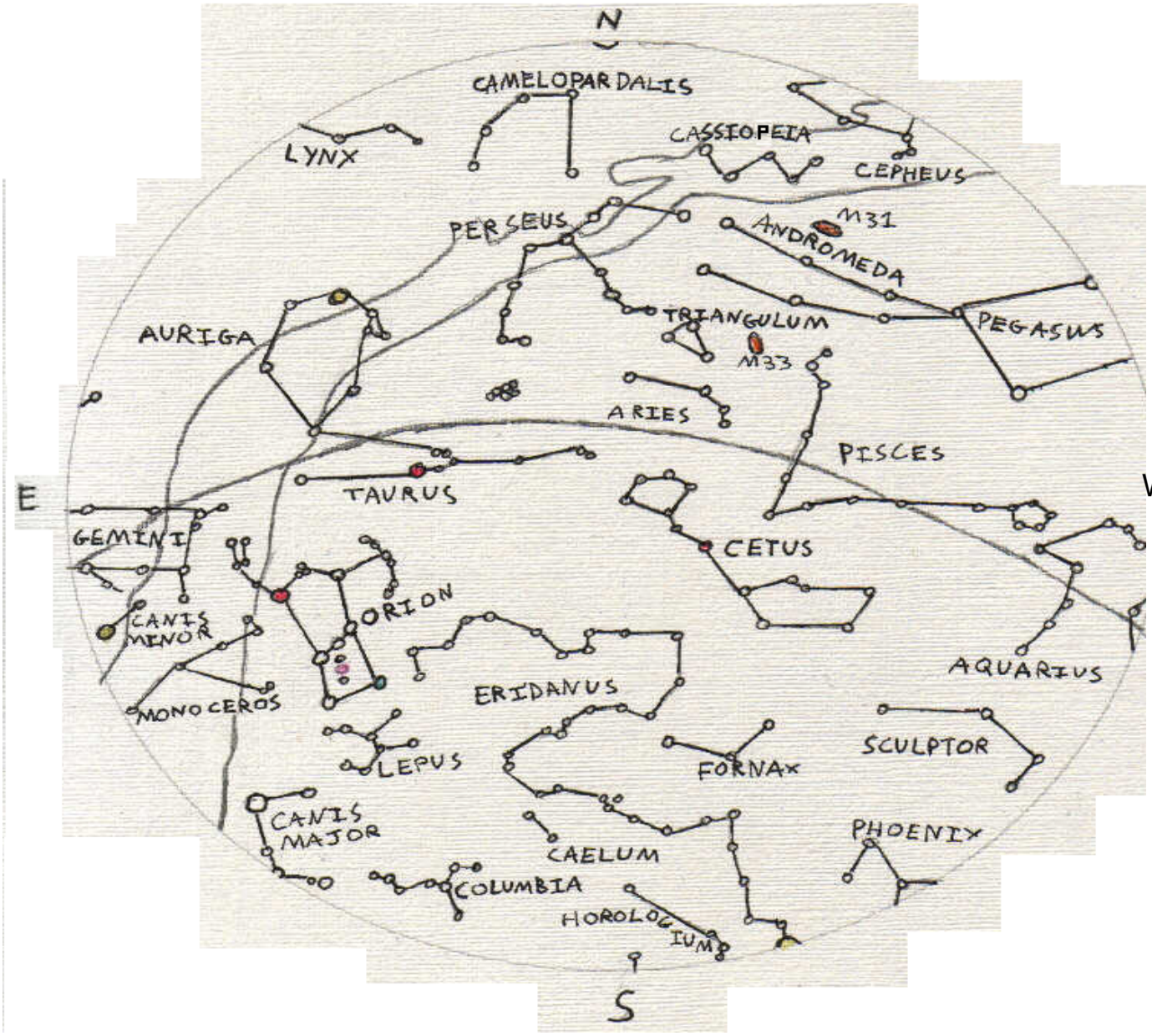
NGC 7662.
A bright planetary nebula, and pretty far north of the constellation. It needs a decent sized telescope to be seen.

NGC 7662

NGC 891

NGC 752

The Sky this Month.



Best viewed between 10pm and 12 pm.

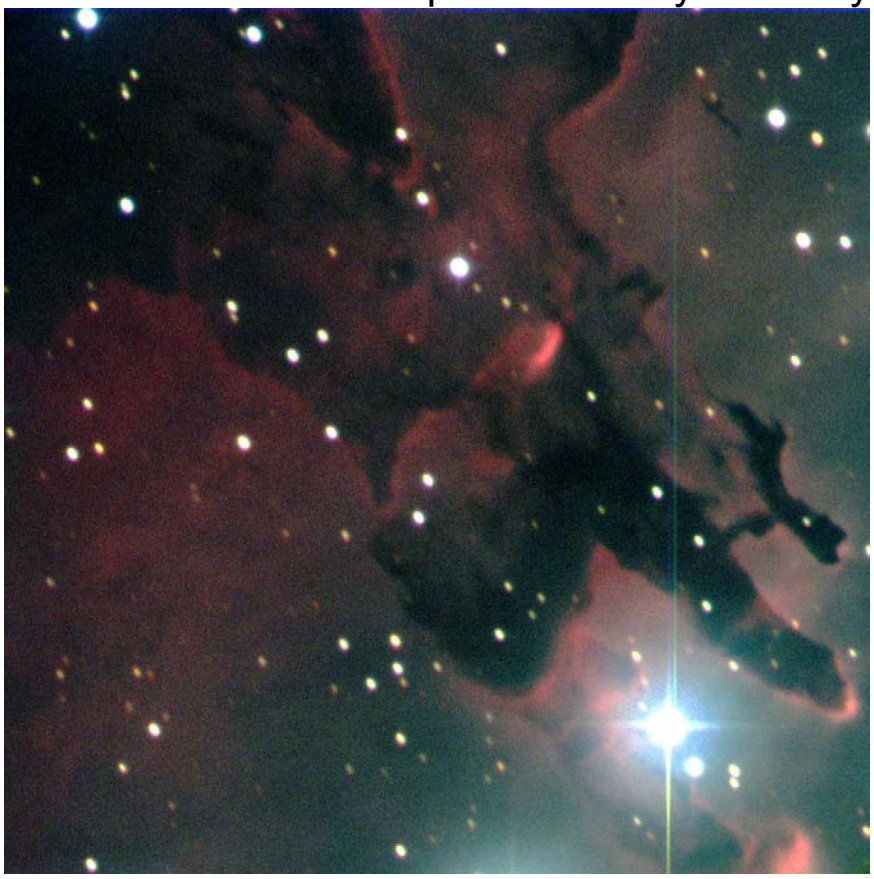
Viewable from above the Tropic of cancer.

This view is seen when looking south.

The Beautiful.

The sky is filled with nebulae. From emission to planetary, there is something for everyone.

Below are some examples to tickle your fancy.



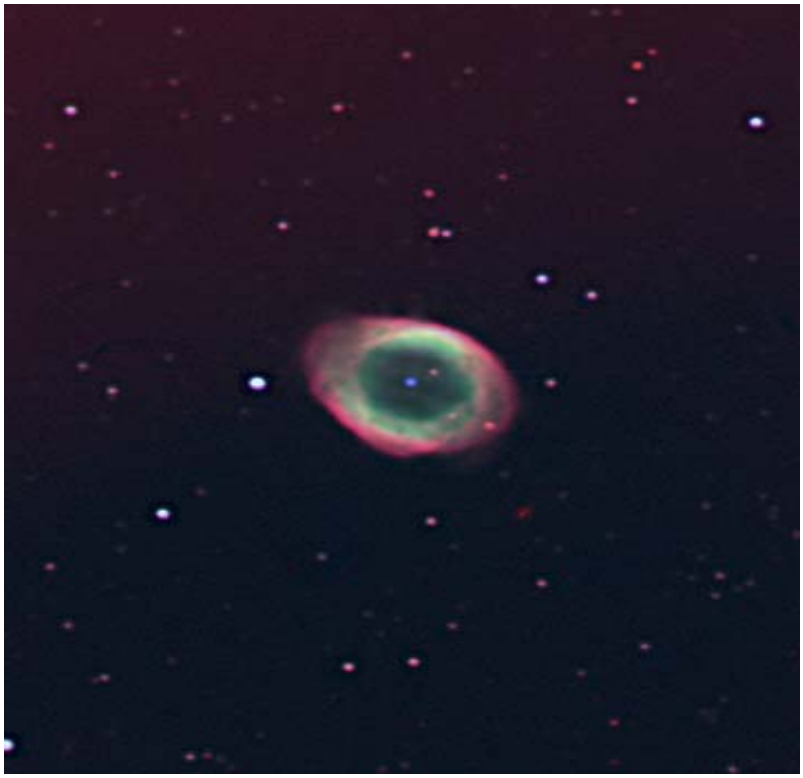
M16 The eagle nebula.
Made famous by Hubble. “These gracious pillars of creation” are a light year long. M16 is actually referring to the nebula and star cluster it contains. Nowadays all stars being born seem to be in clusters. The supreme beauty of it is awing.

M16
Constellation: Ophiuchus.
Nebula type: Emission

Picture taken by the Faulkes Telescope.

M42 The Orion/Great Nebula.
The most famous nebula of them all, perhaps so because it can be seen with the eye. The brightest part of a massive star-forming region covering the whole constellation.

M42
Constellation: Orion
Nebula type: Emission



M 57 The Ring.
The most famous planetary nebula. Easy to see through a telescope of about 4” or larger.
Bright and big, it is a fine example.

M57
Constellation: Lyra
Nebula type: Planetary

NGC 2237 and 2244. The Rosette Nebula.
Truly a spectacle, this stunning nebula and star cluster are really what astronomy is about. Looking at something so wonderful really does bring a tear to your eye.

NGC 2237/2244
Constellation: Monoceros.
Nebula type: emission.

I think that I should explain nebula types.

Emission.
Emits light from stars within the nebula. It's sort of like a huge lens. That's why they are so bright.

Planetary.
Formed when a star the size of the sun dies. It sheds its outer layers and leaves a neutron star. The layers can be left in a ring shape or circular.

Reflective.
Small bits of the nebula may still remain with the star. They reflect the blue light. Many stars in the Pleiades have reflective nebulosity around them.

Dark.
Basically dark patches in the sky. No star formation has occurred yet. No light can be emitted so they are black. Can only be found if imposed on something bright. The Horsehead Nebula is an example.

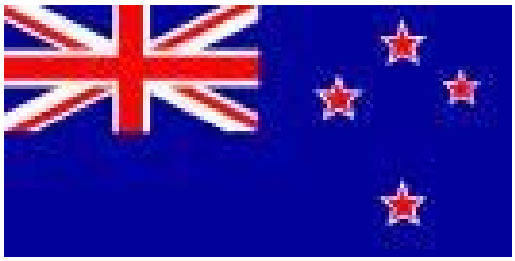
Astronomy in Geography.

I bet your thinking these two can't be mixed but no fear they can.

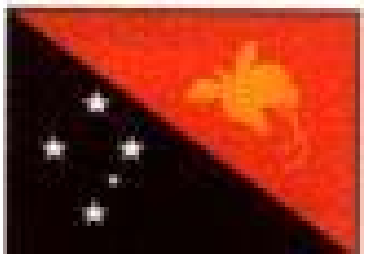
Some county flags contain images from space. Many Muslim countries have a crescent moon on them, Ok so it's taken from religion but still space.

The south pacific is brimming with Crux. Let me explain.
Crux is a constellation only seen from the southern hemisphere.

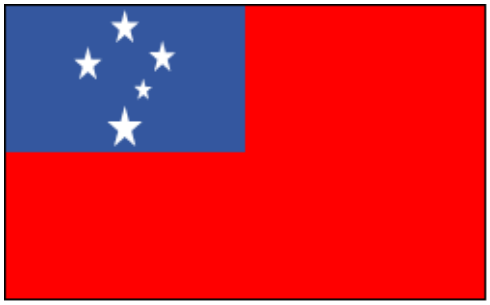
Australia contains Crux
On its east half of the flag.



New Zealand's flag is similar but retains differences. Such as red not white stars.



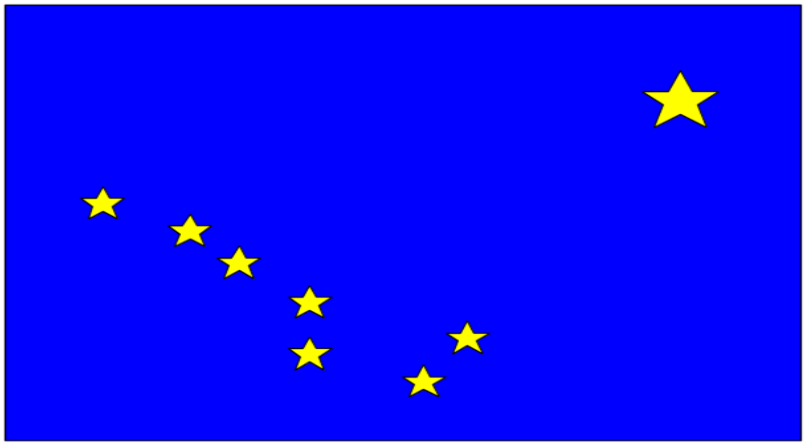
As you can see Papa New Guinea also has Crux on the flag.



Finally Western Samoa has the fourth Crux.

That’s not all!

The state flag of Alaska has the familiar 7 stars of Ursa Major or the great bear. It also has Polaris on it.



The flag of Alaska.

Of course many countries have stars on there flag. But this might be to show how many states or even Islands the country has.

For the North.

As we all know the North sees a different view than that of the south.
This month Ursa Major swings back into view. Whilst being the 3rd biggest constellation, the familiar 7 stars are the only famous ones. Look at the bigger picture, no really. Head out to country where you can see all the stars. Look for the famous 7 ones. Just south are 2 legs, and a head is to the west. (east)

If you bring binos then scan just north of the constellation. Any smudges you see might be M81 and M82.
If you have a decent sized telescope then look just bellow the imaginary line that joins the stars of the bottom of the plough. The Owl Nebula M97 might be seen.

The middle star in the handle is Mizar. With the naked eye Alcor should show it's self pretty close to Mizar. With any instrument Mizar can be split into 2 again.

Ursa Major is very famous but all of needs to be seen before judgement.

For the South.

For southern observers the sky is different. One thing that stands out are the Magellanic clouds. One big, one small, hence the names the Large and small Magellanic clouds. Both can be seen from the city, but can easily be lost within the glare. Both are irregular galaxies and about 0.1 million light years away. The Large Magellanic Cloud (LMC) is in Dorado and contains the tarantula nebula. Actually it doesn't but appears to. In 1987 a supernova erupted from this galaxy. The Small Magellanic Cloud (SMC) is less spectacular but lies just next to 47 Toucanae or NGC 104. This is without a doubt the best globular cluster in the sky. Both can be seen with the naked eye.

Both spin around the south celestial pole, which is marked by a faint star, Sigma (σ) Octanis. Magnitude 5.4 in fact. It is just visible to the naked eye.
To find it look 4 and a half times Crux's length southwards.

The LMC with the Tarantula nebula.

The SMC with NGC 104 beside.

Both clouds visible in the same view. NGC 104 is still visible.

Subscription

This is a free trail. I hope if people subscribe to run 12 issues next year. This will only cost you £12 sterling. One pound a month basically. I will try and go out of my way to get one every month. September might be affected due to an August Holiday. Also the summer holidays might affect it. But I have library at my disposal, so not all is lost.

If you want to receive the monthly e-zine then e-mail me at oliver009uk@yahoo.co.uk to confirm the order.

I will then send you my address so I can receive the money. You will then be e-mailed the e-zine every month.