

Issue October 2018



**Ayrshire Astronomical Society Newsletter**

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**DON'T FORGET**

Joint lecture with KESS, Tuesday, 23<sup>rd</sup> October. Details on page 2 / 3

**22<sup>nd</sup> October  
7pm at  
Prestwick Academy**

**Speaker:  
Chris O'Kane**

**The Pharaoh, The Stars and the God  
called Horaiki**

**Moon phases for October 2018**



## President's Word

I hope you all have had a good and productive month enjoying the various fields of astronomy.

Things seem to be on the up in general, with some nice displays of aurora and also some clear nights where images of the Milky Way and deep sky objects have featured in the various astronomical groups on social media.

Outreach has started for this astronomical season with several AAS (STEM) members travelling down to the Eurostronomia event being held at Wellington School. The school took its turn to host the event with pupils and teachers from Sweden, Romania, Netherlands, Slovenia, Germany, Portugal and India attending. Alongside the SDSO Planetarium, our members set up various telescopes, displays and talks that were very well received. Even though the weather can only be described as atrocious, several pupils were able to witness a very nice prominence on the Sun through the society's Coronado 60 telescope. So all in all, a very successful event not only for the students but the Society as well.

By now, many if not all of you will have heard that Russia's workhorse Soyuz rocket suffered a serious anomaly just minutes after launching two astronauts toward the ISS, forcing the spaceflyers' crew craft to make an emergency landing in Kazakhstan.

The two astronauts, NASA's Nick Hague and cosmonaut Alexey Ovchinin, happily made a safe landing but this has set the ISS crewing missions back an indeterminate period, due to all Soyuz missions being grounded, which could result in the ISS being unmanned for the first time in nearly 2 decades. Fortunately, the current ISS crew do have enough supplies aboard to last them until their scheduled return to Earth in December. Watch this space!

I look forward to seeing you all at October's meeting and hearing of your astronomical exploits.

Clear Skies

Roger Harman



Double Cluster

Photo taken by Marc Charron

12<sup>th</sup> October

## News and Events

### Joint lecture with KESS 23<sup>rd</sup> October 2018, 7.30pm

Speaker is Prof Colin Cunningham about the Extremely Large Telescope – Engineering Challenges and Science Prospects.



The address is  
**Assembly Hall, Grange  
Academy, Beech Avenue,  
Kilmarnock, KA1 2EN at 7.30pm**

A very interesting talk and it hopefully many AAS members will be able to attend!

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Thank you David for an interesting talk about the Lunar XPrize on our first meeting of the season last month.

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### Wellington School 19<sup>th</sup> September

As mentioned by Roger, the AAS participated at the Eurostronomia event at Wellington School in September. Thank you Roger, Stephen, Graham, John and Alex for participating and creating a fun program for the kids.



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### Falcon 9 launch 8<sup>th</sup> October 2018





Most of you will have seen the wonderful spectacle the Falcon 9 launch provided last week.

The rocket launched just after sunset. As it reached about 60 to 90 miles above Earth, the sun rays can spotlight the rocket in the otherwise darkened night sky. The Sun will also shine through the frozen chemicals from the rocket's exhaust and creates a spectacular display of colours. The light is refracted at different wavelength creating different colours.

## Marc's article

### A Very Brief History of Astronomical Catalogues

Astronomical catalogues and maps go back a long way, the oldest surviving one might be a drawing of Orion on a mammoth tusk found in Germany in 1979, going back over thirty-two thousand years. Moving up the historical record, a 6000 year old chart was found in a Neolithic tomb in China. Closer to home the oldest known reasonably accurate map is the ceiling chart in the tomb Senenmut, an Egyptian architect and minister in the 15th century BCE. In it the sky broken into two parts, one for the north the other for the south. But by far the most famous map in antiquity was the Almagest by Ptolemy in 150 ACE, containing 1022 stars. It is also a cosmological document postulating that the Earth is a sphere fixed at the centre of a spherical universe. This was to hold sway until Copernicus.

After the fall of the classical world in the West, the charting of the stars moved to Arabic world, where al-Sufi translated and synthesized the Almagest with Arabic knowledge to produce the Book of the Fixed Stars (c. 964). Other parts of the world also produced star charts, notably in China, where one of the first graphical representations of the stars appeared in the Dunhuang Star Map in the Tang Dynasty (618-907). Later, in the West, the first printed star chart was made by the famous artist Albrecht Dürer in 1515.

But it took the invention of the telescope for things to get really interesting. As I wrote in my last piece, Charles Messier was one of the first to catalogue non-stellar objects. He was looking for things that didn't move which could be mistaken for comets. He wasn't really interested in the object themselves, as the telescopes available to him were insufficient to reveal any significant detail. In 1786, he was effectively put out of business by William Herschel who produced his Catalogue of Nebulae containing about a thousand objects, well in excess of Messier's hundred or so. With Herschel's larger optics, he was able to show that some of Messier's nebulae were in fact star clusters and interesting in their own right. By 1820 Herschel's catalogue contained 5000 objects. After his death in 1822 his son, John, continued charting new objects and by 1864 published a General Catalogue of Nebula and Clusters containing over five thousand objects and just to show he was no slouch he also published the General Catalogue of 10.300 Multiple and Double Stars, which continued the work of his father.

In 1878 John Louis Emil Dreyer published a supplement to the General Catalogue, which became the New General Catalogue (NGC), we know and love today with its 7,480 deep sky objects (DSOs). It was later extended to with two Index Catalogues (IC) the last having an additional 5,386 objects. As late as 2009 these catalogues were reconciled by Wolfgang Steinicke to create the Revised New General Catalogue and Index Catalogue. For most amateur astronomers, however, the Messier, NGC and IC catalogues are more than sufficient for finding a myriad of deep sky objects. The professionals, on the other hand, have many more. The Wikipedia entry on astronomical catalogues lists about 280, for all kinds of objects with emissions from gamma rays to radio waves. Even in Stellarium, the planetarium software that I use, there is a choice of 24 different DSO catalogues to choose from. I have only ticked M, NGC and IC boxes. The rest, at least for the moment, remain blank. Which would you choose?

## Alex's article

### Our Solar System

- MERCURY** is named after the Roman messenger God, his Greek name is Hermes.
- VENUS** is named after the Roman Goddess of Love and Beauty, her Greek name is Aphrodite.
- MARS** is named after the Roman God of war, his Greek equivalent is Ares.
- JUPITER** being the largest planet, was the leader of the Roman Gods his Greek name is Zeus
- SATURN** being the second largest planet was named after Jupiter's father, his name in Greek is Cronos.
- URANUS** Greek name is Ouranos, Roman name Caelus.
- NEPTUNE** The Roman God of the seas, in Greek it is Poseidon.
- PLUTO** is named after the Greek God of the underworld, Roman name is Pater.

\*\*\*\*\*

The dark winter nights are here, and if it is dark and clear, wrap up well and go outside with a comfy chair, relax and just gaze up at the starry heavens, it costs nothing to make friends with the Universe.

See you next month  
Alex Baillie

## Library

Open for business!

**THE LIBRARY IS A RESOURCE FOR MEMBERS -PLEASE SUPPORT IT AND MAKE USE OF IT**

The Library list is also available on the website under "links" and can be downloaded



The library is now full up - if you would like to obtain a list or borrow an item

– contact Alex at the next meeting or give him a call on 01563 520887.

Unfortunately Alex does not have email, however messages via [library@ayraastro.com](mailto:library@ayraastro.com) will reach him the old fashioned way after a short delay but please contact him directly if at all possible.

THE LIBRARY IS WAITING FOR YOUR CALL!! There are a lot of interesting items to borrow

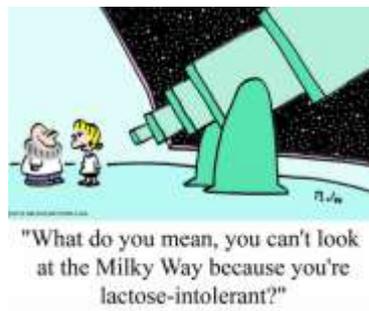
## Member's photos



### Moon set over Heads of Ayr

Photo taken by Marc Charron 12<sup>th</sup>  
October

And finally ....



Two Blondes in Las Vegas were sitting on a bench talking... and one Blonde says to the other.... 'Which do you think is farther away... Florida or the Moon?'

The other Blonde turns and says 'Helllllooooooo, can you see Florida?'