

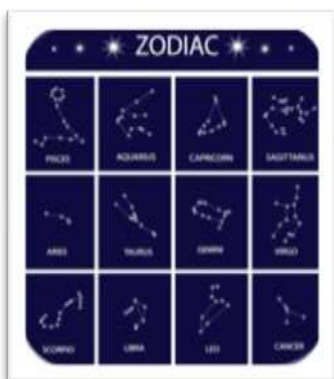
Issue: October 2016



>>> **Ayrshire Astronomical Society Newsletter**

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**Forthcoming Events**

**19<sup>th</sup> May 2017**

Prof Brian Cox tours the UK with his live show to explore the wonders of the universe. He is at the SSE Hydro on the 19<sup>th</sup> May 2017.

**Next Meeting:**

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**24<sup>th</sup> October**

**At Prestwick Academy**

**Guest Speaker Prof. Danny Gorman**

Professor Danny Gorman will talk about the life and work of the Scottish scientist James Clerk Maxwell (1831 -1879). Maxwell has published many papers but is best known for creating an understanding of electromagnetism - bringing together electricity, magnetism and light.

**Mid October to Mid November Night Sky**

The Moon this month:

1<sup>st</sup>/30<sup>th</sup> New Moon / 9<sup>th</sup> First Quarter / 16<sup>th</sup> Full moon / 22<sup>nd</sup> Last quarter

21<sup>st</sup> October: Ceres at opposition

The dwarf planet Ceres is in opposition in Cetus and is visible all night in binoculars or telescopes.

22<sup>nd</sup> October: Orionid Meteor Showers

The annual Orionid Meteor Shower, derived from the material left by repeated passages of Comet Halley, runs from October 4<sup>th</sup> to November 14<sup>th</sup>. The peak, however, is at 1am on October 22, when the sky overhead is moving directly into the densest region of the particle field. The meteors can appear anywhere in the sky, but will be moving in a direction away from the constellation of Orion.

14<sup>th</sup> November: Supermoon

The Perigee Full Moon (Supermoon is more catchy) will be as close as 221'524 miles from the Earth. The closest it has been this century and will not get that close again until 25<sup>th</sup> November 2034.

## News



October 2016: The Mars Opportunity Rover will go into a gully created a long time ago by a fluid that could have been water. The Rover is in the Bitterroot Valley on the Western side of the Endeavour Crater. Scientists may find that the sulphate-rich rocks they have seen outside the crater are not the same inside.

The Rover's 12 year mission has marked a large number of firsts, among which the gully exploration is the most ambitious.



### Antares Rocket Rollout

On 13<sup>th</sup> October, the Antares Rocket was rolled from the Horizontal Integration Facility to launch Pad 0A in Virginia. It will deliver 5100 pounds of science and research, crew supplies and vehicle hardware to the ISS.

### Tiangong 1 (meaning Heavenly Palace)

The Chinese Space Agency has confirmed that their module, orbiting the Earth at 380km high and travelling 27500km per hour, is out of control, meaning that they have no way of safely guiding the 8.5 – tonne module back to Earth.

It will re-enter the atmosphere at some point late 2017. It is expected that most parts will burn during re-entry and no real risk to people exist. Apparently you are more likely to be struck by lightning than the debris of Tiangong 1.



## Events

### Meeting 26<sup>th</sup> October 2016

The first meeting of the season was successful and created a lot of interest and a good turnout from members and will hopefully see plenty of new members joining the society. There was a diversity of themes on display such as imaging, how to set up scopes, books and magazines and the solar corner.



## Presidents' Word

### **Joint Meeting AAS and KESS**

Don't forget that on Tuesday the 25<sup>th</sup> of October, that is the day after the AAS meeting, AAS and KESS are having a joint meeting at the new Kilmarnock Campus of the Ayrshire College. This is on Hill Street, Kilmarnock at the site of the former Johnny Walker factory. The subject is The Hunt for Gravitational Waves and the speaker is Professor Martin Hendry one of the leading figures in this field. All AAS members are invited along and the event is free to members so make sure you come along as it promises to be a very interesting session. The talk will take place in the lecture theatre and will commence at 7:30 so please arrive before then to get seated.

### **Christmas Meal**

Feedback from last year at the Tree House was that the meal there was poor value and a bit on the skimpy side, so this year, we are changing venue, and Derrick made a provisional booking at No. 22 Bar and Grill in Ayr for the Christmas meal. Situated at 22 Beresford Terrace, we will have our own room at the restaurant and therefore more space than privacy than before which should allow us more chance to socialise. We also anticipate a more substantial seasonal meal! The event will be held on the Monday the 12<sup>th</sup> December, so put the date in your diary and let Derrick know that you wish to come along. We have some flexibility on numbers so if you wish to bring a spouse or partner feel free, but please let Derrick know as soon as possible so that he can manage the booking effectively. It has always been a good night out so even if you are shy or have not been before come along this year and get Christmas off to a good start.

### **Another Date for your Diary**

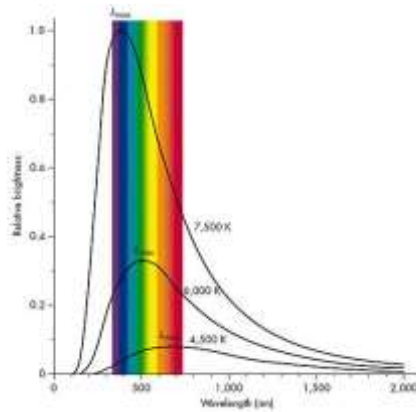
Continuing the Space theme on the 8<sup>th</sup> November, KESS has invited Professor Colin McInnes to give a talk entitled: "Setting Sail for Orbit; The physics, engineering and applications of solar sail spacecraft". Some of you may remember several years ago that Professor McInnes talked on solar sails at one of our meetings, well, for the KESS presentation, he has been asked to talk more on the practical engineering side of the venture rather than the concept. This should widen the talk somewhat and deal with some of the practical problems associated with actually realising a serious solar sail driven spacecraft. The meeting will be at the usual venue of the Kilmarnock campus of Ayrshire College commencing at 7:30 in the lecture theatre. Since this is not a joint meeting with AAS, there may be a small cover charge for non members of KESS, or at least you will be expected to buy a couple of raffle tickets to support their schools outreach programme.

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## Alex's Space

Have you ever wondered why there are no green stars to be seen in the night sky? The reason is the colour of a star is determined by its temperature. A cool star with a surface temperature of about 3500 degrees emits most of its radiation in the red end of the visible light spectrum. Whereas a hot star with a surface temperature much higher, greater than 20000 degrees, gives out much of its light in the blue part of the spectrum. You might expect there to be stars that shine in green light and you would be right. However, stars emit over a broad range of wavelengths, so 'green' stars also put out lots of blue and yellow light but the mixture of these colours is perceived as white by our visual system. Stars such as Vega and Sirius would be green if our vision would allow to process it.



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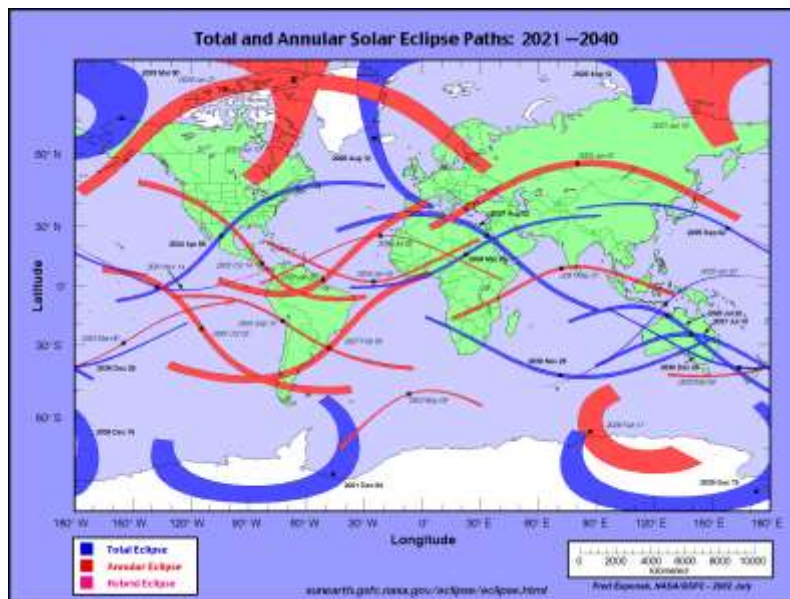
## Isabelles' Solar Corner

### Great US solar eclipse 2017

If you like travelling and chasing solar eclipses, next year will be a good opportunity to do so. On the 21<sup>st</sup> August 2017 will be the great US solar eclipse, where the path of totality will cross the States East to West.



It is an interesting fact that the path is cutting through a number of large cities such as Kansas City, St. Louis or Atlanta. You will have to be in a particular part of the city to see the total solar eclipse. Here is a map of future solar eclipses from 2021 to 2040. Happy planning ☺



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**NEW!! Fancy a little quiz? Here are some clues about a scientific person. Can you guess who it is?**

I was born in Pisa many centuries ago.

I have never been married, however, I have two daughters and a son. Virginia, Livia and Vincenzo.

My views of the heliocentric model of the Sun, Earth and the planets was in conflict with the beliefs of the Roman Church. They even put me under house arrest for the last eight years of my life.

I was initially studying medicine at the University of Pisa until one day I noticed a swinging chandelier. It got me thinking and upon returning home, I created two pendulums of equal length. I swung one with a large sweep and the other with a small sweep and noticed that they kept time together.

In 1592 I moved to the University of Padua where I taught geometry, mechanics and astronomy until 1610.

I actually thought that Saturn was not a round planet, but then discovered that these were rings I was seeing.

In 1610 I published my first scientific paper based on observations through a telescope. It's called Sidereus Nuncius (Starry Messenger)

I also found the first group of object to orbit another planet. Io, Ganymede, Europa and Callisto.

I died in 1642 in Arcetri in Italy and buried in the Basilica of Santa Croce in Florence

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**AAS 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@ayrastros.com](mailto:library@ayrastros.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.

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**Miscellaneous**

Adrian Stapleton is selling his Skywatcher telescope, mount and various accessories for 270 pounds. Please contact Adrian directly for more information on 07917775090



**And finally.....**

