

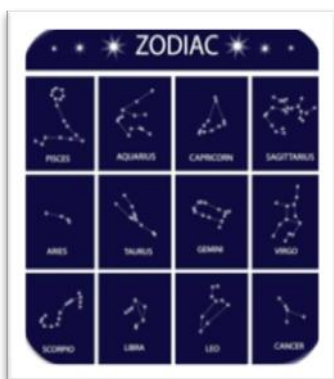
Issue: February 2017



>>> **Ayrshire Astronomical Society Newsletter**

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Forthcoming Events:

**3rd/4th March Star Camp
near Maybole**



Next Meeting:

27th February

At Prestwick Academy

Guest Speaker Mark Klimex

**'Light Sources, their emission spectra and problems
they cause for Astronomy'**

Cosmic Calendar for the next month:

26th February: **Annular Solar Eclipse**

Unfortunately only visible from South America, Africa and Antarctica – but keep an eye out for exciting images appearing on social media.

(You can re-read in the September 2016 newsletter what an annular solar eclipse is)

Moon phases March 2017:

5th March First quarter

12th March Full moon

20th March Last quarter

28th March New moon

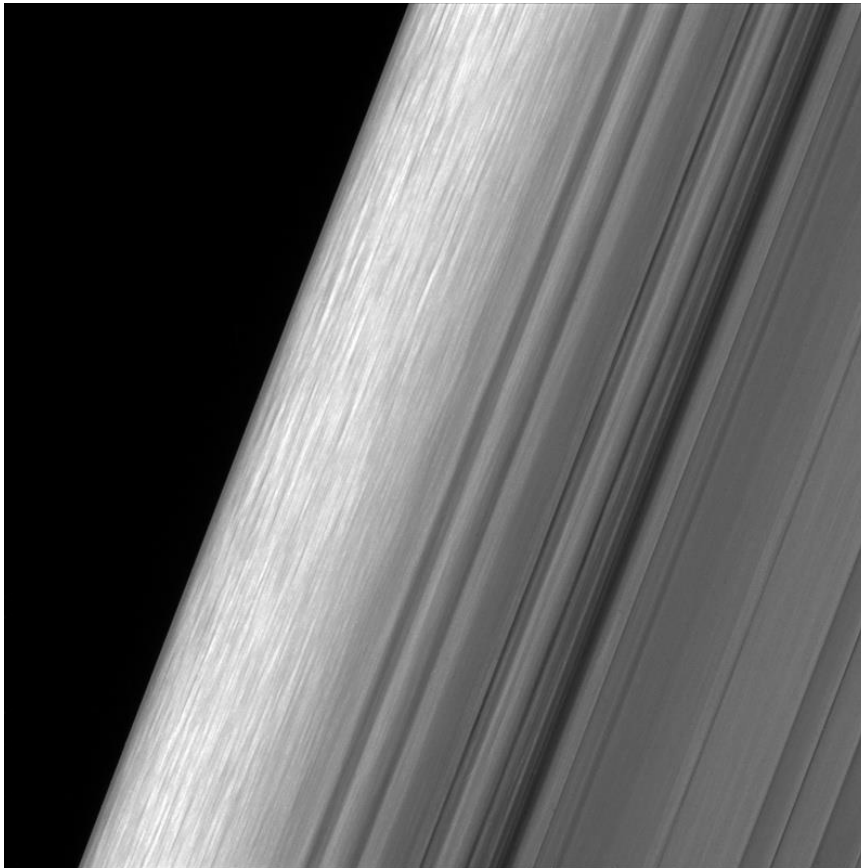
News



Penumbra Lunar Eclipse 10th February 2017

Here are images taken by taken by **Marc Charron** of the penumbral lunar eclipse. It happened at the same time as comet 45P/Honda-Mrkos-Pajdusakova made its close approach to Earth, passing by roughly 7.5 million miles. Thank you Marc, for the images.

If you have some images you would like to share, send the Newsletter editor a mail.



Saturn's Ring system

The mission of the Cassini spacecraft will end on 15th September this year. In preparation for the grand finale, the Cassini spacecraft begun performing some 'ring grazes' that are taking it closer and closer to the subject of study.

The Cassini team has now published the most detailed images yet of the outer part of Saturn's main ring system.

Events: Past and Forthcoming

31st January 2017

Netherthird School, Cumnock

Netherthird School has kindly provided us with some photographs of the event.

We have seen about 200 students that day between the ages of 5 and 11. It was great fun!



Next outreach dates

24th February, in the evening. Kingcase Church Scouts in Prestwick.

6th March, Galston School

10th March, Willowback Special Needs School, Kilmarnock.

11th March, Netherthird School, but it is a public outreach for anybody to join

If you fancy helping out, please get in contact with Graham or any of the committee members.

You are never quite prepared for the question kids can fire at you! But it is very rewarding though and seeing their faces when talking about the moon, stars and the sun, is priceless.

President's Word

Possible AAS Trip to Darvel Telephone Museum

Following some research undertaken by Alex Baillie, we are looking at arranging a daytime or early evening visit to the Darvel Telephone Museum. This is a small private museum documenting the history of telephone communication and is absolutely full of gear. It includes just about every imaginable telephone and working exchange systems and associated kit. The owner, Mr Max Flemmich, is very knowledgeable and provides a very interesting tour of the small museum. It is part talk and part hands on.

Mr Flemmich said that he could also put pot on tea and coffee if required. Entrance to the museum is free but we would expect to make a donation and pay for any refreshments. Due to the small size of the museum numbers would need to be limited to ten, but if more people are interested we could look at a couple of groups on the same day. We anticipate own car or a car sharing basis to get there.

It is a very interesting place and if you are interested, **please speak to Alex Baillie or myself, Graham, and let us know your preference for day or evening visit.**

AstroMedia.

We do not normally advertise commercial enterprises in the Newsletter or on our website. However there is the odd exception. This particular one arises from the amazing selection of working, cardboard based, astronomy and science model kits offered by AstroMedia. Examples are; the solar projector, Newtonian telescope, Astrolabe, Orrey and small solar telescope plus many more. My particular favourites, both of which I have, are the Wimshurst Machine and the Steam Engine. I also have the solar projector and the small solar scope and quite fancy some of the other models.

The kits are amazing quality and are beautiful when constructed, but they also work!!! They are not cheap, but this is reflected in the quality of the kits and the support from AstroMedia. They come with full instruction and just about everything except the glue and basic tools (modelling knife, scissors, etc) required to make them. The more complex models do require some basic modelling skills but the range is suitable for most but the really ham fisted. Have a look, there is a link on our website under "links" or type in www.astromediashop.co.uk

Oh! And the good news is that AAS members have been offered a 5% discount of each purchase. If you want the discount code please just contact me as it is strictly for AAS members only.

Small Presentations

In order to keep our meeting night interesting we could do with a few short talks or presentations to fill the gap after the main speaker and the tea break. These can be anything astronomy related (even if a bit removed) from news items picked up from the media, your own astronomical equipment, a trip you made, some images you have taken or even some kit that you have acquired but are not sure what it is.

The talks do not need to be snazzy Power Point expositions or deeply knowledgeable, and it would be an ideal spot for first time speakers. The "talk" can be just a few minutes or up to fifteen minutes or more. So! DON'T BE SHY, HAVE A GO!

Just turn up on the night and let the compere know that you have something and you will be fit in and very much appreciated.

Space and Scotland Magazine

I bumped into the Editorial crew for the magazine the other night and got an oppology for missing our last meeting at which they had intended to deliver our copies. I have been promised that all will be rectified at the February meeting so make sure you come along and grab your free copy.

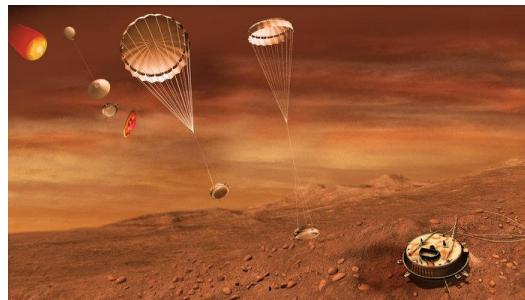
Graham

Alex's Space

Space: The Vinyl Frontier

'Silence is golden' is a song sang by 'The Tremeloes' in the 1960's. Silence, however, certainly does not apply in outer space. This may seem surprising to you considering space is mostly vacuum, therefore, should no sound. However, as demonstrated in a follow-up radio programme to 'Heavenly Harmonys' (see January newsletter) not all space is empty and a range of space environments from the inside of stars, planetary atmospheres, stellar winds and gas clouds, all are sources of sound with frequencies outside the range of the human ear. This programme transported the listener through the Solar System out into the very depths of deep space.

A few of these sounds were as they happened, such as the noise of the wind on Titan, recorded from microphones on board the Huygens Lander. Many sounds were electronic creations but no less fascinating for that. We heard the sound of the solar wind interacting with Mercury's magnetic field, the 'singing' comet encountered by Rosetta mission en-route to meet comet Churyumov-Gerasimenko. We also heard radio whistlers produced by lightning on Jupiter and the powerful signals from remote gamma-ray bursts. All in all, this was another really fascinating radio programme. Who said 'wireless' was dead?!



An artist impression of Huygens Lander descending onto Titan in January 2005

Isabelles' Solar Corner



Aurora flight November 2016

On the 25th November 2016 I treated myself to go and hunt for the Northern Lights, which I have never seen beforehand except on photographs and I started to believe that it was all a big scam!

I arrived at the Holiday Inn, Glasgow Airport, a little before 7pm to make sure that I could get a seat in the front row for the presentation. After all, it was Peter Lawrence and Nigel Bradbury leading the talk and the in-flight presentation for that night. Please note, you will not know who the astronomers are until that day. So, that was a lovely surprise. To my slight surprise though, the conference room was packed already at 6.30 and I begrudgingly headed to somewhere near the back.

The presentation lasted about an hour and they explained what we can expect to see during the flight, they also pointed out some constellations to look out for. A brief explanation of how and why northern lights happen was also part of the very interesting talk.

After a brief refreshment and me jumping the queue to get Peter's autograph, we headed over to the terminal. They handed out the boarding passes and we made our way to the gate.

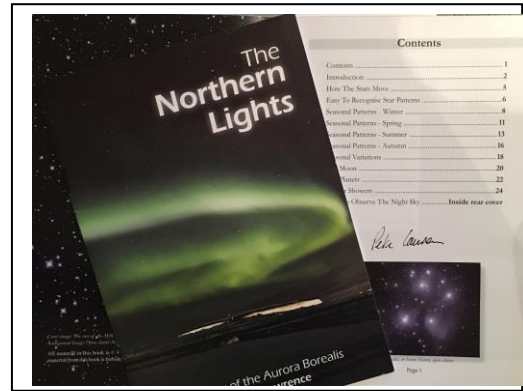
That night they booked a British Airways flight, Embraer 190 which is the perfect plane to hunt for Northern lights, because of the seating arrangements. There are two seats and one big window to share. The way the seating rows are arranged, they match perfectly up with the windows and hence you have a very good view even if you are not by the window. You will move around during the flight, so everybody has a chance to sit by the window. Unfortunately, you will not know what aircraft you will get until you can spy it out the window by the gate.

We took off with a slight delay, apparently something about air traffic restrictions... Anyway, the main thing is, we took off heading towards Sumburgh. We climbed to 40000 feet. It is only a short flight and you will see the fastest ever service of coffee on board. Arriving at Sumburgh, Air Traffic was then so kind to let us switch off navigation lights and the pilots also switched off the cabin lights. It was pitch black dark and after a couple of minutes, your eyes adjusted to it and you could see the beautiful night sky. We circled between 60N and 61N in a figure of 8. And there they were!! The Northern Lights! Albeit, not very active, we perceived them as a greyish 'curtain'. We could see tiny movements at the lower end but not much. Whenever you were on the side facing southbound, they explained some constellations. And I can tell you, if you think that you have seen the Milky Way on a dark night here, it is nothing compared to the sight you will get up at 40000 feet. It was jaw-droppingly beautiful!

Peter took photos and uploaded them on the website (below) for everybody to download or to order prints. You can take your own camera with you but it is quite difficult to get it right in a moving plane. The astronomers will help you with settings etc if needed but most of all they make sure that the flash doesn't go off!!

We circled for about an hour before heading back to Glasgow.

The price of the flight was £220. You can get information on www.auroraflights.co.uk There is only one more flight out of Glasgow on the 18th March!



Update the Solar Group

I am actively organising events and reserving dates for the coming months to do solar outreach programs. I will be following the model of the Charlie Bates Solar Astronomy Project. The founder of CBSAP has asked me to be the 'Scottish Director', which I am delighted with and happily accepted.

I will give a quick presentation at the next meeting to introduce you to CBSAP and what my plans are for 2017. I will also write an in-depth article in the March newsletter in case you are unable to attend the next meeting.

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

Answer from November: Maria Salomea Sklodovska (Marie Curie)

- * I am a mathematician, astronomer and physicist
- * My father, who has the same name as me, passed away three months before I was born.
- * I was admitted to the Trinity College, Cambridge where I eventually obtained my B.A degree.
- * Shortly after getting my degree, the university closed temporarily as a precaution against the Great Plague.
- * I never married
- * I have published several books such as *Philosophae Naturalis Principia Mathematica*. That is my most influential one.
- * After my death, my hair was examined and they found Mercury! Could have been from my alchemical pursuit. Mercury poisoning could have explained my eccentricity in my late life.

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@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.

And finally.....

