

1 July Members Night meeting report

July 3, 2022

We had our second member night on 1 July and had some great presentations from ASE members:

UK Astro Shows

Ian Smith put together some info about these:

There are (at least) 3 astronomy shows in the UK coming up:
If there is sufficient interest in attending any of these, then the ASE may help with a group attendance. So if this appeals, do express your interest.

A WhatsApp group can be created to take this forward if there is sufficient interest.

Radim Stano gave us his presentation of the **Sky in July**.

Ron Morley told us about his experiences of **observing from South Africa** when he lived there.

Nigel Goodman shared his visit to the **Grassholme Observatory** in Teesdale.

Mark Phillips gave a short presentation on **Observing the Sun SAFELY** for beginners.

Hugh Somerville gave us an **update on the ISS**.

Fran Goodman showed us how to take some amazing **night sky images without a telescope**.

Mark presented the images and result from the **Image of the Quarter Competition, Apr – Jun 2022**:

The **Image of the Quarter competition was won by Mike McGovern** with his excellent 26 panel mosaic of the Moon with a white background, which made for a very creative image, showing details not normally visible. Congratulations to Mike.

You can see [all the entries plus the narratives in this PDF](#). And the winning image in the banner.

John Murrell FRAS

July 6, 2022

Sadly I have to report the passing of one of our members, John Murrell, on 25 June 2022, after a short illness. John lived in Surrey but he was our first real “International Member”, as he liked to call himself, joining us during lockdown in April 2020 and has been online with us at just about every meeting since.

John was a very valued member of our Society and made a deep and long-lasting impression. He often contributed to the discussions at both our main and IOG meetings, giving us several presentations too. He always had something intelligent and worthwhile to contribute and was clearly very knowledgeable about all things astronomy-related. His assistance in researching our Tulley and Banks instruments was invaluable in the insights he offered.

John was planning to give us the Sky in July talk but never managed to complete it. I chatted to John via email a few times shortly before he passed.

Even though we only knew John for a short period of time, he journeyed with us through Covid lockdown and he will be sadly missed.

Mark Phillips
President

15 July meeting report

July 17, 2022

We had a very thought-provoking talk from Grant from First Light Optics on Friday, telling us all about the Ikarus observatory hosted in Spain.

He covered the first two iterations of the project and then let is in on some of their plans for the future. All very relevant for us as this is something we are considering too.

Would you like to help keep the JWST safe?

July 24, 2022

Over the past 6 months, 4 members of the Astronomical society of Edinburgh (ASE) have deployed meteor cameras as part of the [UK meteor network \(UKMON\)](#) and [Global Meteor Network \(GMN\)](#). These cameras capture meteors using low-cost barebones security camera connected to specialist software running on a Raspberry Pi. We now have a [page on our website](#) dedicated to displaying the latest data from these cameras and providing pointers for more information and in-depth data.

There are currently only 9 UKMON meteor cameras in Scotland, out of the 163 cameras across the UK. In 2021 alone UKMON cameras recorded and matched 87,239 meteors contributing 27,173 orbital



Winchcombe meteorite in the Natural History Museum London

trajectories to the global archive. More cameras mean more matched data, and the more data allows the team to work out the orbits of the meteoroids that caused the meteor, and sometimes their approximate size and mass – and whether they made it to the ground. See [“UK Meteor Network played a crucial part in a successful recovery of the historic Winchcombe meteorite”](#), by Dr. A. King, Natural History Museum London

As new showers are identified these can be used to predict spacecraft impact risk. You will have read that James Webb Space Telescope suffered a [recent impact from a micrometeoroid](#) that damaged one of the mirrors. Most of the risk comes from sporadics – random meteors which cannot be forecast, as they are not part of a known shower.

However, at short time scales (hours to days), meteor shower outbursts can play a significant role. As they have a strong directionality, satellites can simply turn their “hard” side towards the radiant for a few hours to “weather the storm”.

UKMON and GMN cameras will be the ones observing these outbursts, improving prediction models, and ultimately allowing all participants in space, including the JWST, to go about their business and stay safe. If you are interested in finding out more about the UKMON and GMN or setting up a camera, [visit our meteor camera page](#).

In September, the ASE will be hosting a talk by Denis Vida, one of the key members of the GMN on “[Revolutionizing meteor physics by building a global-scale scientific instrument](#).” So join us for that.

References:

<https://globalmeteornetwork.groups.io/g/main/topic/92527676#6570>

Pat Devine

Her Majesty Queen Elizabeth II

September 8, 2022

With the death of Her Majesty Queen Elizabeth II on 8 September 2022, a page of history has turned right before our eyes. This Society was founded in October 1924, just 18 months before Queen Elizabeth was born in April 1926. This fact alone helps us to appreciate how long the Queen has been part of our national life.

We are honoured that the Astronomer Royal for Scotland is one of our honorary Presidents. So, it is fitting in the circumstances that we mark this sombre occasion by acknowledging the decades of duty and service Queen Elizabeth gave to the people of Scotland, the United Kingdom and across the Commonwealth.

On behalf of the Society, we offer our sincere condolences to His Majesty The King, and the members of the Royal Family.

Council of the Astronomical Society of Edinburgh

Meeting Report 9 September 2022

September 10, 2022

Who would have thought that amateurs could be discovering and imaging new planetary nebulae in today's world where there are huge ground based telescopes as well as the likes of Hubble and Webb in space? Well Peter Goodhew showed how amateurs can do exactly that with some amazing beautiful images.

Sarah Bulman also gave us a Sky in September presentation.

This was also a moment for sombre reflection after the passing of Queen Elizabeth II and Mark read out a [statement from the ASE Council](#).

You can watch both talks on our YouTube channel.

Review of the book – “Fire and Ice Volcanoes of the Solar system” by Natalie Starkey

September 19, 2022

By Radim Stano

After seeing the fantastic talk – [“Fire & Ice: The Volcanoes of the Solar System”](#) given by Natalie Starkey, we had some time ago I knew I just needed to know more about volcanoes and the order to get her book was placed soon after the talk! If you have missed the talk, follow the link above and see it for yourself. It is definitely worth the time.

The book guided me through the interior of the Earth, simply explaining the inner working and composition of our planet with a lot of comparisons easing the understanding. Step by step it painted the picture of the creation of the solar system with all the complicated implications it has had on planets and moons. I got to know more, not only about volcanoes but about everything that makes the planet active, like plate tectonics, deep ocean ridges and vents, and various volcanic types or geysers. It was an excursion to the past and future of the planetary body. All the things found on Earth were compared to the other planets and moons, diving deep into the long process of warming and cooling planets, moons and their causes, predictions and magnetic fields. And as this book is primarily about volcanoes, it taught me about various magma types, the composition of the magma, geology, the biggest volcanoes and more interestingly about cryovolcanoes, where the magma is made of ice! And it did not omit my favourite topic of life in space and had a look at the creation of a habitable environment and how the volcanoes may have helped life on Earth and other places in the Solar system.

Of course there's much more in the book, which is nicely written and well-structured, taking you through various topics like an excursion. It is very readable in understandable English. I recommend this book to the wide audience of our Society 😊

Some useful details:

Author	Natalie Starkey
Title	Fire and Ice: The Volcanoes of the Solar System
ISBN	978-1472960368
Bookbinding	Hardcover with dust cover
Pages	320
Price	Circa 13 GBP
Where to get it	Amazon UK Blackwells WHSmith

7 October 2022 Meeting Report

October 8, 2022

Vice President Andrew Farrow ran the meeting in the absence of the President. The main event was a fascinating talk by Dr Gemma Richardson of the British Geological Survey on the effects of space weather on ground-based technology.

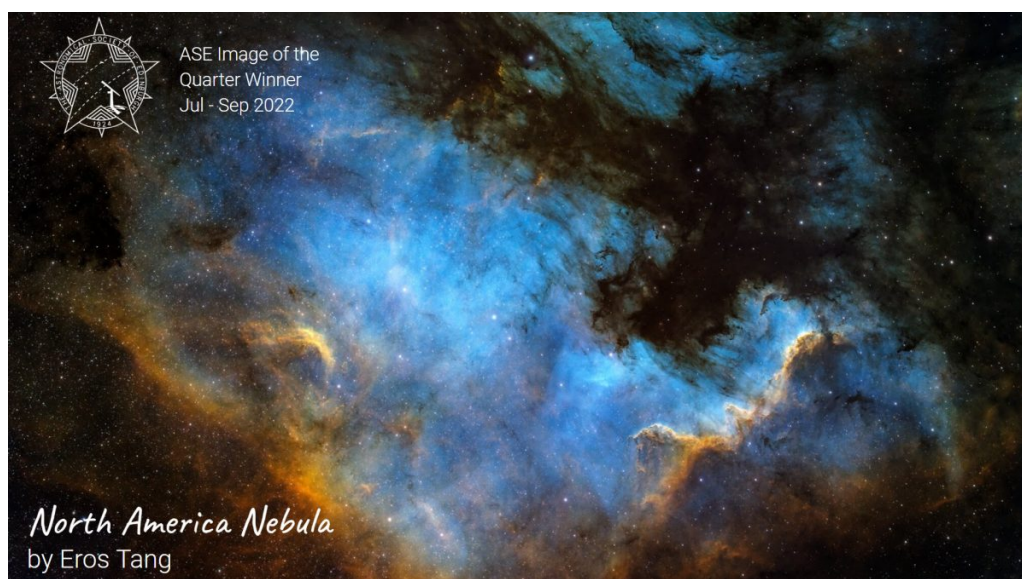
You can see the talk on our YouTube channel if you missed it.

Alan Pickup also gave us a talk on the Sky in October. You can see his [Sky in October post](#) on this website.

Neil Martin revealed the entries and results of our Image of the Quarter Competition for July – September 2022. The winner was Eros Tan with his excellent image of NGC 7000 the North America Nebula. Congratulations to Eros.



You can see [all the entries and results as a PDF](#).



Adrian Weatherhead, 22 September 1943 – 9 October 2022

October 17, 2022

We sadly have to report the passing of one of our long-standing members, Adrian Weatherhead aged 79. Adrian was a member of our Society for 25 years and also a former member of the ASE Council on several occasions, most recently in 2001/2.

Adrian is best known for his running prowess having been a Scotland, GB and NI international, and a sub-4 minute miler. On track he was a 1500m runner and won the Scottish indoor title in 1973 and 1976 as well as national outdoor champion in 1979.

Here's a [very nice tribute to Adrian from Peter Hoffmann](#).

We offer our sincere condolences to his family and friends.

The Council of the Astronomical Society of Edinburgh

Partial Solar Eclipse 25 October 2022

October 24, 2022

We plan to go ahead with our live stream of the partial solar eclipse tomorrow. Looks like there should be some gaps in the clouds. Or you can join us on Calton Hill and look (SAFELY!) through our solar telescopes and eclipse glasses. Timings in the graphic above.

We'll be using the historic Cooke telescope for the first time in about 14 years. Unfortunately you won't be able to access the telescope tomorrow.



Partial Solar Eclipse from Calton Hill

<https://youtube.com/watch?v=GcGERwGMscl>



Partial Solar Eclipse 25 October 2022

October 25, 2022

That was a very successful event. Live streaming went well and hundreds of visitors looked through our telescopes outside. We got clouded out at the end but we got through maximum so that was a real success considering we thought we would be totally clouded out a couple of days before. The partial eclipse was totally eclipsed for a short time by the Nelson Monument. Really great to get the Cooke back into use again after such a long time.

Vice President Andrew Farrow was heavily involved in this whole process. Here's some thoughts from him on the event:

A few thoughts on the revival of the Cooke telescope on Calton hill and the partial eclipse event.

It was a joy to see the Cooke telescope back in action on Tuesday morning providing a view of the partial eclipse to a wide and appreciative audience as the images were broadcast on our YouTube channel.

To see members coming back up the stairs to greet, what is to many, an old friend which had inspired them many years before was a delight. Although the opportunity for members spending time in the dome was short on this occasion it was the first step on the road to utilise this iconic telescope once again to promote and inspire interest in astronomy. For me and those that had the opportunity to handle some of the dome guide ropes and feel history in their hands was a real privilege.

The day was a culmination of the many Society discussions and subsequent meetings with the very accommodating and supportive Collective management team and City Museum department. All this enabled the restoration and preparation work to be completed by Jim Anderson. I cannot thank Jim enough although I know it was a labour of love on his part.

Once again the technological skills of our President, Mark, enabled a large and international audience to see the eclipse of the sun (and the short eclipse of Nelson's monument of the view!). The occasion also provided Mark with a number of media appearances fulfilling our mission to inform and educate the public on astronomy which he did with aplomb.

The opportunity for the public on Calton hill to see the eclipse provided by a large contingent of members with dedicated solar and solar adapted scopes as well as solar glasses was extremely well delivered. The people I talked to enjoyed the experience and sounded very grateful. Thank you to all.

However this is just the beginning of the journey to bring the Cooke back into action. I hope you are looking forward as I am, to see this fine instrument back inspiring a new generation.

Andrew Farrow

Here are some pictures from the event and you can see the video of the livestream down below.

Main image: Will Joy

Other images: Andrew Farrow, Ramsay McIver, Mark Phillips, Ian Smith



YouTube video player 1

<https://youtube.com/watch?v=GcGERwGMscl>



4 November 2022 meeting report

November 6, 2022

That was a really interesting story of Pluto from Prof Ian Robson and we had quite a lot of visitors in the AUC too. Sadly Ian couldn't be there in person because of rail strikes but it was no less interesting. There's clearly still a lot of affection for Pluto as a planet and you can understand why there was (and still is) such an outcry about it being demoted. But given the number of other, larger-than-Pluto bodies in our solar system, it probably makes sense. Or maybe you disagree?

You can see the video of the meeting on our YouTube channel, along with the Sky in November from me.

John Rostron

November 7, 2022

John Rostron, who passed away on 24 October aged 94, was a familiar sight at ASE meetings in the last century. He had been President, a Council member and a Trustee of the Astronomical Society of Edinburgh Trust, although most long-standing members will probably remember him as Society Treasurer for many years. A chemistry teacher at Ross High School in Tranent, John's interests were wide-ranging, particularly in relation to the natural world, which sometimes spilled over into his distinctive book-keeping for the Society! Although he had been a keen cyclist in his younger years often arriving at meetings in all weathers, sadly his declining health meant that he relinquished his membership in 2017. John's grandfather, Arthur Rostron, was Captain of the RMS Carpathia and knighted for his pivotal role in rescuing survivors of the Titanic in 1912.

We send our condolences to his family and friends.

A service will be held at St Marks Episcopal Church, on Monday, November 14, at 11.15 am, thereafter to Seafield Crematorium, at 12 noon. (Here's the [announcement in The Scotsman](#)).

Jim Nisbet

Meeting Report 18

November 2022

November 20, 2022

To begin the meeting our President Mark Phillips updated us on the upcoming Society programme. Mark also mentioned that our membership now stands at 180, the highest it has ever been in our history. He also pointed out that our on-line talks now attract a truly international audience.

In keeping with this trend our guest speaker was Patrick Barth, a PhD student from the University of St Andrews, who spoke to us about “ What makes a planet habitable”.

Patrick began with the basics of what is necessary for life as we know it on our own Earth, in particular liquid water, but he quickly expanded this to other factors such as stellar effects (the type of star and the age of the star), the planetary system involved (the number of orbiting bodies, the presence of moons) and the various properties of a given planet (its atmosphere, size and mass, rotation, presence of a magnetic field).

Fascinatingly we still do not know how the right conditions for life actually give rise to life itself, even on our own Earth, the only habitable planet we currently know of. There followed a quick tour of the Solar System, including Mars, Venus and the moons of the outer planets and a discussion of the chances of finding life or the signs of past life, in these places.

Only in the last 25 years we have discovered that other stars also have planetary systems and we now know of thousands of these Exoplanets. The possibility of life therefore in the wider universe has greatly increased. We were taken through a detailed explanation of the factors influencing the chance of life on exoplanets and the part that will be played by telescopes like JWST and future missions in the search for these “biosignatures”.

Patrick’s delivery and slides were exceptionally clear and helped to make sense of this relatively new and complex science.

Nigel Goodman

2 December 2022 Meeting Report

December 4, 2022

We had a really interesting and challenging talk from Dr Indranil Banik of the University of St Andrews on **Going beyond Einstein to understand the Universe**. I think it's fair to say that it is one of the more difficult and in-depth of our talks but we love being stretched and challenged.

Galaxies spin much faster than expected so our standard models add invisible dark matter to provide that extra gravity. However, this talk is about how just containing their visible mass and following a modified gravity law known as Milgromian dynamics or MOND is perhaps a better option. Decide for yourself!

Alan Pickup also gave us a very comprehensive talk on the Sky in December. And you can see Alan's [Sky Diary for December](#) on our website.

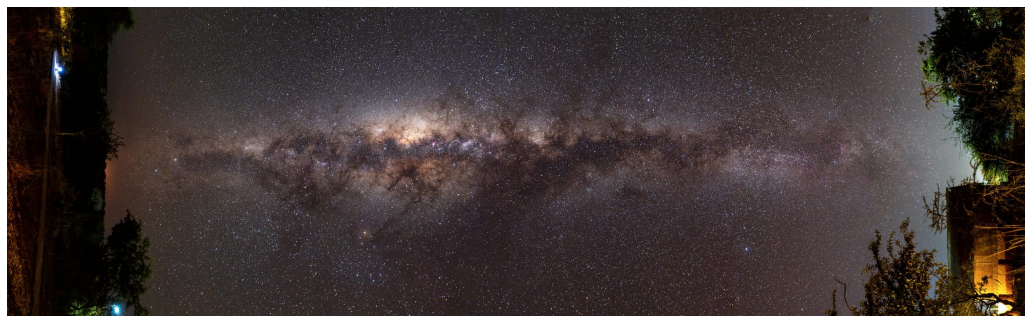
I also presented the results of our Image of the Year Competition 2022 which was won by Ramsay McIver for his excellent [Maasai Mara Milky Way Mosaic](#).

Image of the Year 2022 results

December 4, 2022

Congratulations to **Ramsay McIver** who won with his excellent [Maasai Mara Milky Way Mosaic](#). And to **Eros Tang** and **Andrew Farrow** who took 2nd and 3rd places.

An 8 panel mosaic shot with a Canon EOS Ra and a 16-35mm f2.8 lens. The picture was taken in landscape mode at 35mm, 20 seconds @ F2.8 ISO 6400. 25th July 20:40 local time Maasai Mara, Kenya. Stitched and finished in Photoshop/Lightroom.



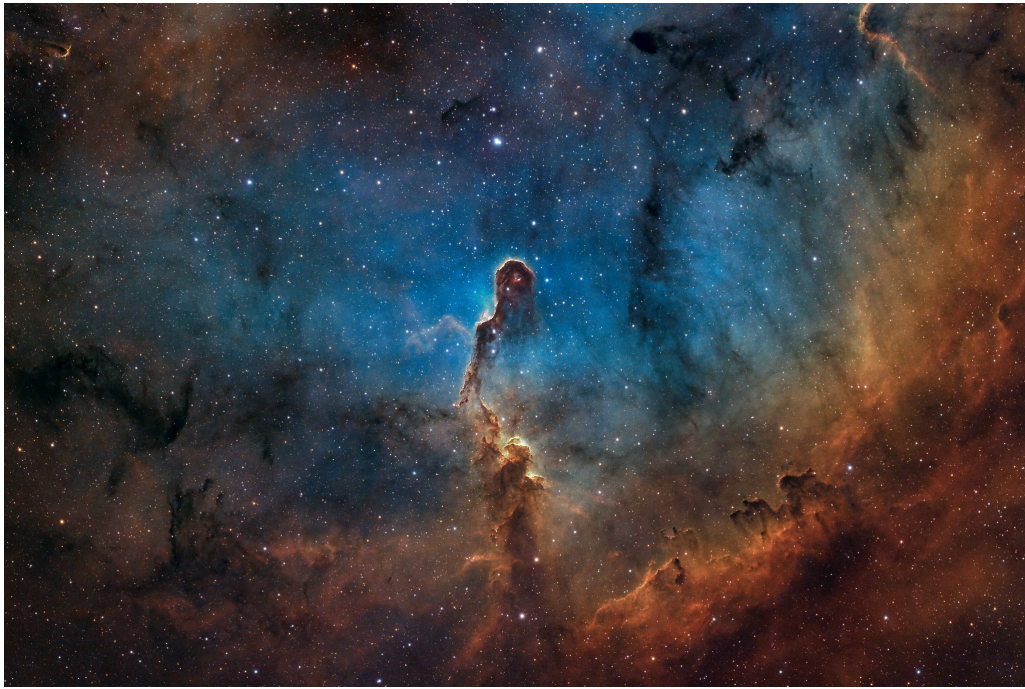
You can see all the [entries and narratives in this PDF](#).

Eros Tang took 2nd place with his beautiful [Elephant's Trunk Nebula](#).

45x300sec HA, 67x300sec SII, 64x300sec OIII

Equipment WO Star 71, ZWO ASI2600MM

Processing APP, Photoshop



Andrew Farrow took 3rd place with his atmospheric [Meteor over Callander](#).

Taken on 21.4.22 using a Nikon D7000 camera. 18mm lens f/3.5 for 78 secs at ISO 1250

An iOptron Pro mount not well aligned but allowed a longish exposure



Occultation of Mars

December 11, 2022

There was a fascinating event early in the morning of 8 December 2022. The full Moon occulted Mars, which was at opposition – a rare event indeed. Various ASE members braved the freezing early morning air to grab some amazing images. Mike McGovern took the image in the banner of this post.

The occultation started at 04:56 GMT as seen from Edinburgh and Mars re-appeared 1 hour later.

A bit of Mars occultation history:

Aristotle, a student of Plato, observed an occultation of Mars by the Moon on 4 May 357 BCE. From this he concluded that Mars must lie further from the Earth than the Moon. He noted that other such occultations of stars and planets had been observed by the Egyptians and Babylonians. Aristotle used this observational evidence to support the Greek sequencing of the planets.

[Wikipedia](#)

Got a taste for occultations now? Well if you have nothing better to do on 1 January there is an **occultation of Uranus by the Moon** in the late evening. From [in-the-sky.org](https://www.in-the-sky.org/):

On this occasion, the occultation will be visible from Edinburgh. It will begin with the disappearance of Uranus behind the Moon at 22:18 GMT in the south-western sky at an altitude of 43.8 degrees. Its reappearance will be visible at 23:07 GMT at an altitude of 38.6 degrees.

At the time of the occultation, the Moon will be 9 days past new moon and will be 78% illuminated. Uranus will disappear behind the unilluminated side of the Moon and reappear from behind the illuminated side of the Moon.



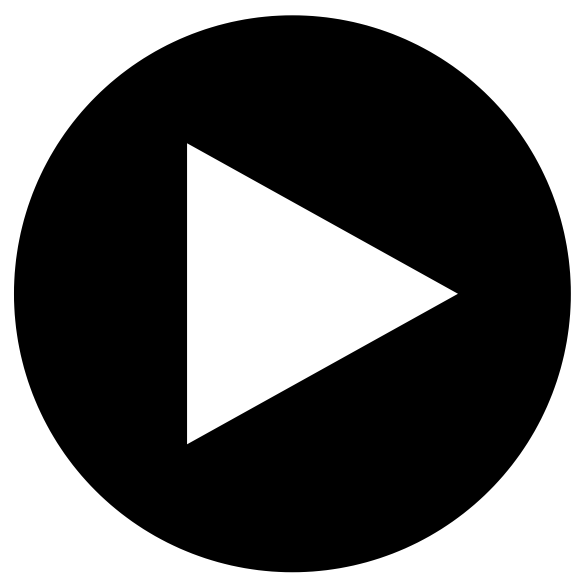
Mark Phillips



Will Joy



hugh somerville



8 DECEMBER 2022

OCCULTATION OF MARS

at opposition by the Full Moon
as seen from Edinburgh UK
Mark Phillips // forthimage.co.uk

Begins 04:54 GMT

Ends 05:54 GMT

Meeting Report Friday 16th December 2022

December 18, 2022

As usual, our President Mark Phillips updated us on the upcoming Society programme. Mark also reminded us of the numerous ways of getting in touch with, and becoming part of the Society. This now includes the latest of our Telescope Help Shops, which we will run on 25 February next year.

Our final guest speaker was Dr Jenifer Millard, who spoke to us about *"Exploring the invisible Cosmos through island universes"*. Dr Millard is a science communicator, presenter and lecturer based in South Wales, who amply justified her reputation for clear explanations and exciting delivery.

Jeni began with the basics of what we know about galaxies – the "island universes" of the title.

It is only in the last 100 years that the true nature of galaxies has been revealed and we realized that our own galaxy was not the entire universe. Jeni covered the broad history of this story and the contributions of people like Leonard and Thomas Digges, Galileo Galilei, Caroline and William Herschel and many others. She then reminded us of the types of galaxy and their role in star creation.

However, it has only been since we developed the ability to "see" in the infrared part of the electromagnetic spectrum that we have been able to truly investigate galaxies, including our own ! The long wavelength of Infrared light allows us to peer through the obscuring Cosmic Dust and see the hidden structures in galaxies Cosmic dust, which is less than 1% of material in the Universe, still absorbs more than half the starlight !

Jeni's enthusiasm for her topic was very obvious when she explored some of the early images from the JWST space telescope. Refreshingly, her summary of our current knowledge in this relatively new field of science , demonstrated a central truth about science – it is what we don't know, rather than the sum of what we do know, that drives us forward to discover more.

An excellent finale to our programme of talks for 2022!

Nigel Goodman

A special thank you to Nigel and his team for organising such an amazing array of speakers throughout the year. It's no easy task!

MP