

Speaker: - KIRK PATON, PHOTOGRAPHER Specialising in Landscape and Astronomical Photography

Subject : - "ASTROPHOTOGRAPHY"

We welcomed Kirk this month, to be our Speaker for the night and who shares a Passion for Photographing Landscapes that include Astronomical Photography.

Kirk (alias Kirsty) starts the evening off with an introduction of herself and nostalgically recalls how as a young child she was smitten with The Night Sky - She remembers spending many a cold dark night together with her Father, sitting outside in their garden, just gazing up, under the darkness.

An avid fan of the T.V. series "Star Trek" also gave her Inspiration..

" THE STARS WON'T ALWAYS BE THERE" - she was told.

Kirsty wanted to know more!

Today she travels miles and miles to achieve her goal and most of the time she does! The Planned Intention is to Capture a Moment in Time Forever - This is done using her skills as a Photographer and with Very Careful Planning. The desired results are Wonderful Images which also combine Astrophotography with Landscape Photography.

ORION

With the changing Seasons, many objects in the Night Sky will have moved around, together with Natural Transformations in our surroundings and Kirsty will wait patiently for the perfect picture. The Composition is a knack, explains Kirsty and cannot be taught.

When she was of a young age Kirsty recollects that she was able to look up and admire The Moon and Stars, The Planets and other Wondrous Objects, including The Orion Constellation ... but now she camps out in the dark and photographs Orion, having waited for the Precise Moment - above a Beautiful Scene on the ground such as a Reflecting River, Sea, Trees or Mountain back-drop, even People! - She showed us one of her photographs that depicted that Vision.

EQUIPMENT

Astro photographic equipment and devices are more accessible now. Some can be ordered through the internet, on websites, e-bay, magazines etc. and it is easy to purchase second-hand items. There are various astro events that take place in the day-time, where stall holders display their goods for selection, as well as specialised shops.

Kirsty shared her earlier experiences with us - The time when she used a shoe-box as a substitute tripod! ..She didn't actually own one at the time. The 'box' was used with her first camera - a DSLR (digital single lens reflex camera) using a wide-angle lens for the purpose of Landscape Photography and still had excellent results. She doesn't always suggest using a DSLR camera for Astrophotography, as the more up-to-date mirrorless cameras such as The Cannon 60 produce excellent low light pictures. They are priced at approximately £1,000 as new.

The 'Samyang' 24 mm lens is recommended by Kirsty. With the use of a remote shutter release, the finished results will be sharper photos instead of blurry images!...and at a realistic price. The 'Samyang Optics Co. Ltd' based in Korea, exports many Canon Products and accessories which are then supplied by 'Intro 2020' in the U.K. Their Photographic Equipment is built to last and even have weather sealants built in for added protection. The products can also be found under the brand name of 'Rokinon'.

Kirsty herself uses a 'Mach 3' Camera together with a Sturdy Carbon Tripod by 'Benro' - a change from her earlier days !.. and still achieving Magnificent Images. She carries a Large Sturdy Bag around with her too, into which she can place lots of things for her Travels, that can include an Overnight Stay - the Objective being to attain her Desired Photograph, after careful pre-planning. She uses a Backpack which has room for her Interchangeable Lenses - An Internal Camera Unit (ICU) that protects the individual lenses with separate compartments and dividers for other camera equipment. It has heavy duty padding and velcro fastenings for fast easy access.

THE SPEED OF LIGHT

Levels of Sensitivity to the Speed of Light that enter the camera are known as 'ISO's' The Higher ISO increases the Light Sensitivity of the camera and the Lower ISO allows less light to enter.

SETTINGS

The Auto Setting on the camera is usually set to the base ISO of approx.150 which is a low speed ISO and will create a very good result most of the time. Depending on the environment and weather conditions when the auto

setting might not be appropriate, you can use a higher or lower setting. The settings range from 100 ISO to 25600 - They double in increase at each setting as they get higher.

There will be more grain or 'noise' on the photo if using a higher ISO. (Noise results in distortions of colour and brightness.) It is advisable to use a low setting for the best quality image if possible. In certain low-light conditions it is a good idea to lower the ISO and use a longer exposure time to achieve the desired effect. Kirsty guides us and explains that ISO 6400 is best for Astrophotography at an aperture of F 2.8 and for 20 seconds exposure time. She warns us of 'Star Trails' on the finished result, should exposure time be exceeded. There needs to be the correct balance in order to create the picture one is hoping for.

PLANNING

It is important to plan the object of your choice well in advance. The conditions need to be suitable and there are many helpful apps available nowadays which you can use. When photographing the Night Sky it is best to position yourself well away from Light Pollution. By using Google and 'YouTube' plus many different apps to guide you through photographic technology ...they can also help you find a suitable location.

Kirsty continued to share her experiences with us! - When rolling stock came into her photograph. ...She was in the middle of taking her 'Epic' Astrophotograph, having done a little pre-planning and during a long exposure under The Night Sky. At 2.a.m. cows wandered into her shot!.. However, there is now an app that can 'overcome' such predicaments!

WALES

Heading West to Wales is one of Kirsty's favourable places to take photos with approx. 80% of Dark Light and less of Pollution. (Astronomical Twilight never ends in midsummer in the South East of England where Kirsty lives in Kent.) This is due to the slight light pollution from the position of the Sun. She uses 'A Planner' with a monthly subscription charge of £10. that helps her differentiate between the amount of Blue Light = Daylight and Dark Blue = Darkness for an improved result. This information is displayed on the panel.

During her presentation Kirsty demonstrated on how to Capture a Great Picture of 'The Milky Way'. - The Zenith highlighted on the panel at pin-point as it corresponds to the panel which has turned Dark Blue (Darkness) This is the optimum moment to shoot! She shows us her own Captivating Image..'The Milky Way' standing out in the Night Sky and Towering down over a Reservoir of it's own Reflected Stars. It was Beautiful.

'PHOTOPILLS'

...and Augmented Reality

Modern Technology has now produced an app called 'Photopills' which can help you find where different Celestial Objects are to be found in the sky. It is so useful when planning a subject and Kirsty used it in advance, to find out where The Milky Way could be viewed on a certain day, the time - and also the conditions on the day. Kirsty used a 'Sigma Camera' to also take lovely Pictures of an Eclipse of The Moon. She used the Moon Phase Setting beforehand. It lets you know what time the Moon will Rise and Set and whereabouts it is, in relation to our Planet.

She also took an Artistic Shot of the Moon as the background to a Memorable, Romantic Event. Her two friends had just become engaged to be married and Kirsty had set the scene already. She used the app and waited for the Full Moon to start Rising - then immediately took a picture of her friends standing directly in front of it, - kissing! ..The Moon appeared Huge and Very Bright as if it was touching them and made for a Spectacular and Romantic Photograph!

Augmented Reality (AR) is very popular now and can create a two dimensional effect. This Technology superimposes a computer - generated image on the user's view of the World in reality. (There is also a night-time AR view.) It helps to further people's creative imagination. They are part of The Photopills app - It is easy to locate The Milky Way, partly known as 'The Galactic Centre' with this app. and can enhance reality by adding or subtracting details to the picture. Again it will inform you of the exact time and place to take the best photograph and when the subject is low in the Sky, closer to the Observer - for example The Milky Way. ...By adding another subject - such as a Lighthouse in the forefront, the photo can be timed (having used an Observer's Pin first) so that the mass of stars look like they are about to shower the Lighthouse with Stars...

This app will also let you know which few days the Moon will not be in the vicinity of your target - as the surroundings need to be as dark as possible. Another app called 'Solarium' also tells you where the Moon and Stars will be. 'Google Earth' can let you know what the Weather is like! Good Visibility is very important when taking Landscape and Astronomical photos. The T.P.E. app. is not as detailed as Photopills.

KIRSTY'S PORTFOLIO

We looked at Kirsty's Wonderful Photographs on the screen. We saw Venus and The Crescent Moon Together and that Inspiring Shot of The Milky Way and The Couple In Love standing in front of The Huge Shining Moon. We viewed Eclipses in Totality from beginning to end and were shown more lovely Images - many taken from Wales. The Dark contrast in Light in that area definitely achieving good results.

At the same time the Sun needs to be low in the sky, which it is during mild or colder Seasons and so the Sky will be Darker. Kirsty advises to wrap up warm when photographing in the Wintertime. She recalls the times she's slept in her car in a sleeping bag or camps out to get the best possible shot that she has already imagined and pre-planned. - One occasion was near 'The Brecon Beacons' in Wales and she achieved what she set out to do!.. She has stayed up all night for her 'targets' such as Meteor Showers and after travelling far and wide, as well as overseas, she managed to successfully catch 150 Meteors in one night, in Las Palma, Grand Canaria!

"Starstack" is free to use and allows you to take 20 second Images with a 2 second interval between shots. This allows several shots to be obtained to produce a good result. It can be slightly tricky as if the timing is wrong and you go over the time limit, the Sensor Can Burn Out! "Microsoft Ice" is also a free service and will stitch the Images for you. It is very important that the Tripod is kept level when photographing.

PROCESSING

It is a matter of personal taste, if one would rather have hot or cold photos, Kirsty explains. "Photoshop" is a bit difficult to use. -"Lightroom" charges £9 per month. Kirsty mainly follows the 20 second exposure time and takes 4 or 5 images and then puts them through a process with a little bit of editing, if necessary. She mentioned that Pixels look worse with certain lenses so it is advisable to shop around for a Good Quality Lens. She told us that "Photopills" can be found on "YouTube" which teaches us how to use the various techniques. Greater Creativity has never been easier and Enthusiastic Kirsty is addicted to 'her hobby'! She says : - "It is your Imagination Coming To Life at the Back of your Camera!"

Kirsty added that she holds various Tutorial Workshops to guide people along the way with their Photography.

We bade farewell to Kirsty, (alias Kirk!) as this Vibrant and Talented Young Lady headed back to Kent and told us to 'Enjoy Our Time Under The Stars!' - Kirsty is already Looking Towards Her Next Exciting Expedition to take more photos ...which will be "The Lunar Eclipse" in 2022!

We wish her well with her Ambition and Look Forward to seeing them!

By **Wendy Knaap**

Forthcoming meetings

May 15th 2019 Dr Chris Pearson – “A Decade to the Day of the Launch of the Herschel Observatory”

June 19th 2019 Steve Scott (Mission Director of Gee- Archaeological Survey) – “Pyramids, Temples and Sun Worship in Ancient Egypt”

July 17th 2019 William Joyce F.R.A.S. – “Astrobiology”

October 16th 2019 AGM and other contributions

November 20th 2019 Andrew Norman of the ESA – “Rockets, the Space Race and Space Material”

April 15th 2020 David Pulley of the Local Group (Bexhill) – How do we Know they are all Planets?”

November 18th 2020 Andy Thomas – “The Christmas Star and the Three Wise Men”