

## Sky Watcher

### Trips / Events

Ideas for trips and events always welcome!

[events@weymouthastronomy.co.uk](mailto:events@weymouthastronomy.co.uk)

**Society Meetings cancelled until further notice—Please check their websites for the latest schedule**

In the meantime, the British Astronomical Association has moved their meetings to an online format. Live streamed on release and 'catch-up' on Youtube available. These webinars are Open to All.

<https://britastro.org/>

**BAA live webinars, 7pm every Wednesday**

<https://www.youtube.com/user/britishastronomical>

If you are interested in giving a talk or workshop, let the organisers know. They like to offer new titles in their programme line-up.

### WAC Upcoming Events:

	Watch website for online options.
9 July	Bill Coombes—The ISS
14 Aug	No Meeting—Summer Break
10 Sept	Open Evening



Hope you all have enjoyed the lovely summer weather recently. Perhaps there was a break in the clouds to catch the Partial Annular Solar Eclipse visible on the 10th June. In case you aren't familiar with this unusual eclipse, it differs from a Total Solar Eclipse due to the distance from the Earth that the Moon orbits in its elliptical path. This causes the Moon to be closer to the Earth during some passages thus not fully covering the solar disk allowing a ring of sunlight to shine around the lunar limbs. The UK was in the path of the partial coverage of the solar disk on this particular occasion so only witnessed a 'bite' out of the solar surface. A couple of images are on page 2.

Until next time~SL Karl



### Astrophotography with your Smartphone

by David Prosper

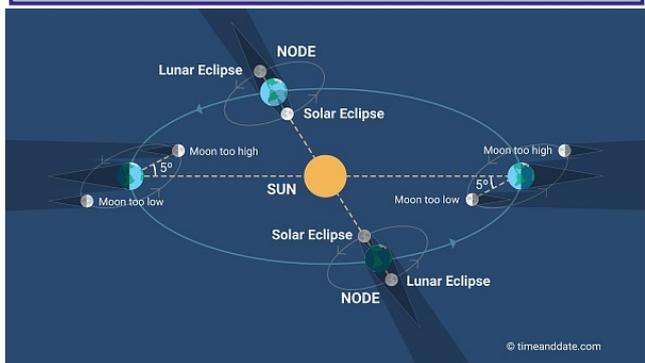
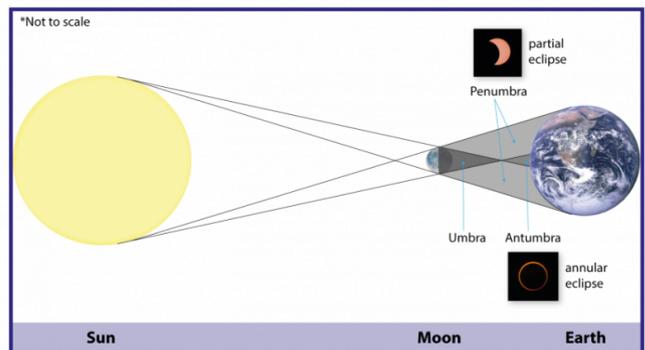
Have you ever wanted to take night time photos like you've seen online, with the Milky Way stretched across the sky, a blood-red Moon during a total eclipse, or a colorful nebula? Many astrophotos take hours of time, expensive equipment, and travel, which can intimidate beginners to astrophotography. However, anyone with a camera can take astrophotos; even if you have a just smartphone, you can do astrophotography. Seriously!

Don't expect Hubble-level images starting out! However, you can take surprisingly impressive shots by practicing several basic techniques: steadiness, locked focus, long exposure, and processing. First, steady your smartphone to keep your subjects sharp. This is especially important in low light conditions. A small tripod is ideal, but an improvised stand, like a rock or block of wood, works in a pinch. Most camera apps offer timer options to delay taking a photo by a few seconds, which reduces the vibration of your fingers when taking a shot. Next, lock your focus.

Smartphones use autofocus, which is not ideal for low-light photos, especially if the camera readjusts focus mid-session. Tap the phone's screen to focus on a distant bright star or streetlight, then check for options to fine-tune and lock it. Adjusting your camera's exposure time is also essential. The longer your camera is open, the more light it gathers - essential for low-light astrophotography. Start by setting your exposure time to a few seconds. With those options set, take a test photo of your target! If your phone's camera app doesn't offer these options, you can download apps that do. While some phones offer an "astrophotography" setting, this is still rare as of 2021. Finally, process your photos using an app on your phone or computer to bring out additional detail! Post-processing is the secret of all astrophotography.

You now have your own first astrophotos! Wondering what you can do next? Practice: take lots of photos using different settings, especially before deciding on any equipment upgrades. Luckily, there are many amazing

Annular Solar Eclipse



**Astrophotography (more!)**

resources for budding astrophotographers. NASA has a free eBook with extensive tips for smartphone astrophotography at [bit.ly/smartastrophoto](https://bit.ly/smartastrophoto), and you can also join the Smartphone Astrophotography project at [bit.ly/smartphoneastroproject](https://bit.ly/smartphoneastroproject). Members of astronomy clubs often offer tips or even lessons on astrophotography; you can find a club near you by searching the “Clubs and Events” map on the Night Sky Network’s website at [nightsky.jpl.nasa.gov](https://nightsky.jpl.nasa.gov). May you have clear skies!



*A small tripod for a smartphone. They are relatively inexpensive – the author found this at a local dollar store!*



*The Moon is large and bright, making it a great target for beginners. The author took both of these photos using an iPhone 6s. The crescent moon at sunset (left) was taken with a phone propped on the roof rack of a car; the closeup shot of lunar craters (right) was taken through the eyepiece of a friend’s Celestron C8 telescope.*

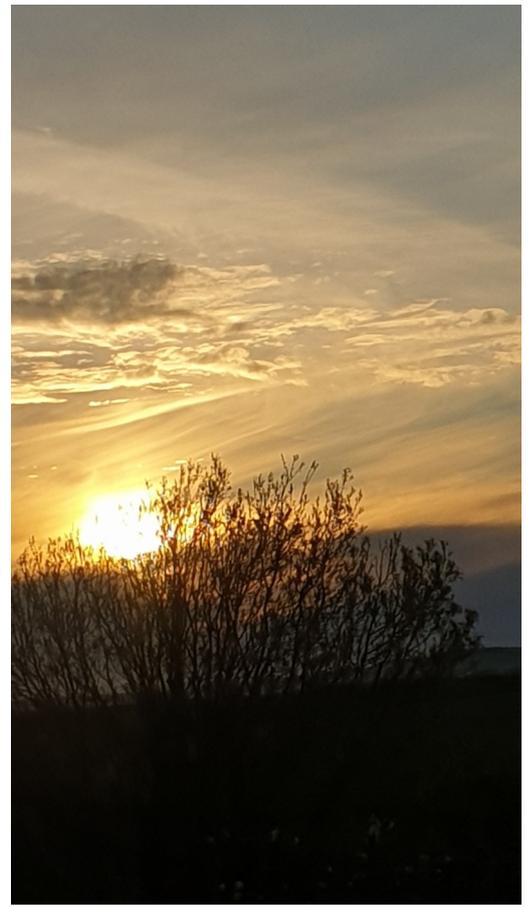
**10 June 2021 Solar Annular Eclipse**

These images were taken from Aberdeen using a 4” refactor, Baader Herschel Wedge and astroimaging camera. The images are single frame only due to the fast movement of the low clouds. Interesting to notice the mountain profile from the moon as its limb moves across the solar disk.—  
SLKARL



**Imaging Corner**

27 May 2021—Nigel was messing about with the camera on his phone and by chance captured a sun dog in one of them around the time the sun was beginning to set. The phone model is Samsung Galaxy S9.



26 May 2021—Last month's Lunar Eclipse was visible from the US. Matt Karl was able to take a few photos using his Google Pixel smartphone. The light ones are with "night sight" holding still for a 5 second exposure.

