

For August's meeting we tried a mega-presentation by four members on the subject of "Astrophotography on a Budget". It overran rather spectacularly but a huge amount of information was passed during the evening which would have been impossible for one person to have had the necessary experience or indeed the stamina to give a presentation of that detail.

Firstly, Terry showed how a completely un-driven camera on a tripod could be used to capture diverse subjects ranging from constellations, the Milky Way, planetary alignments in the sky, meteors, noctilucent clouds and satellite passes could be captured with a standard zoom lens. Adding a cheap telephoto lens allows imaging the moon and – possibly busting the budget a bit – solar eclipses. The main thing is to remember the "rule of 500", ie $500 / \text{focal length} \rightarrow$ maximum exposure time before trailing.

Bud described how he'd got into imaging because of eyesight problems. He described his first camera – a Philips TouCam – which allowed surprisingly good images of the moon and planets. He showed his later planetary cameras which are still considerably cheaper than the usual deep-sky CCD cameras. He also gave descriptions of free software like FireCapture and Registax that can be used to convert the movies captured into high resolution images and showed some examples.

Gordon described how he uses the iTelescope network to capture images with large telescopes from distant locations like Australia and Chile. Individual images may seem expensive but compared with the capital cost of the equipment (typically about £30,000) and the cost of renting a remote site, the costs seem much more reasonable. He showed how observing plans can be set up and scheduled and how the results are returned to the user. Gordon showed some superb images of mainly southern objects which would have been impossible from the UK.

Stuart has been using a camera-phone for imaging bright subjects like the sun, moon and planets through his telescope. The cameras on phones are improving incredibly quickly to the point that most phones are now marketed on the quality of their cameras. He described how a phone camera can be mounted onto the telescope eyepiece for afocal projection imaging. He had a number of adaptors that allow the camera to be accurately aligned with the optical axis and noted how the distance of the camera from the eyepiece is critical and should be at the eye-relief distance (ie the distance from the eyepiece where the best image is provided for the human eye). He also noted that capturing software apps are also improving quickly and now even de-rotate images if one is using an alt-az mount. All very new to most of us but it's quite likely that we'll all be using cameras on sacrificial phones before long!

Upcoming Events

Next Meeting

Sept 20th Gadgets & Gizmos + Observing session

Oct 18th Kate Earl Prehistoric Astronomy

Planets

Venus just gone through inferior conjunction and will appear in the morning sky in the next few days. Should be easily visible at about 6am by the end of the month

Mars very faint and low west (I haven't seen it for weeks)

Saturn at opposition on August 27th. Near full moon but that will be low. Look out for the Seeliger effect. Altitude still less than 30 degrees

Jupiter rises about by 23:00 and is 50 degrees altitude by 05:30

Uranus (near Jupiter) and Neptune (near Saturn) visible in telescopes

Other phenomena

Properly dark by 11pm now

Mainly cloudy for Perseid meteors 12th-13th August but a number of members did see a few over the weekend