OCTOBER MEETING

Dover's Sky at Night

A talk by Ben Harding
The South East Kent Astronomy Society (SEKAS)

Reported by Alan Lee

Ben's talk on 16th October covered a slightly wider range than just Dover, as it included the whole of the universe in space and time. However, he did pin it down to things you can actually see from in and around the town.

He explained that, unlike a terrestrial map, the night sky moves, so that Jupiter might be "there" at 7pm, while at 11pm it was "over there", and in March it wasn't anywhere at all! He demonstrated, using a programme called *Stellarium*, what was visible during the evenings through the winter months, showing how planets moved and how constellations rose and set over hours and weeks.

Ben used photos taken from various sites around Dover to illustrate how light pollution seriously reduced our ability to see faint stars. A photograph using long exposure, revealing the Milky Way and tens of thousands of stars, was compared with a short exposure that mimicked our eyes. This showed a brown haze and just a few dozen of the brightest stars.

Ben advised that some of the best places he'd found to observe the night sky were Broadlees car park behind Dover Castle, the sunken gardens on the sea front in front of the Gateway flats, and the Channel tunnel road opposite Farthingloe Farm. But in reality, while anywhere you can get away from direct lights is better, nowhere escapes the glow caused by just too many lights.

Ben then told us about the likelihood of being able to observe shooting stars. The best chance, in 2023, would be the late evening and night of the 14th and 15th of December. It has been estimated that there might be as many as 150 meteors per hour, two or three every minute, visible on that night. His colleague, John Male, also present, explained that shooting stars were

Andromeda taken with a Dwarf II device

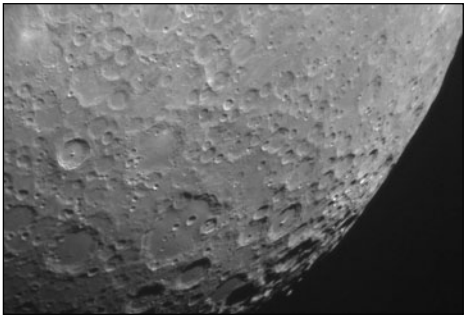
Andromeda taken with a hand held camera

the dust residue of comets that burned up as they entered our atmosphere, smashing into it at 100,000 Km per hour!

A few of the easier to see wonders of the night sky, including Perseus, Cassiopeia, Taurus and, in particular, Orion, were shown by Ben. He explained that while some things could be seen with the naked eye, even simple 10 x 50 binoculars would show much more detail. You could also use a camera, even a phone camera, to capture images. Using an exposure of five to ten seconds long would show much more detail than we could see with our eyes. When taking a long exposure, you must make sure that your camera or phone camera is resting on a solid surface, to avoid any unnecessary vibrations, which could lead to a slightly blurred image.

Ben then showed some wonderful Moon shots that he had taken over the years. Some had been taken with a camera and a long lens, while for others he had used much more technical equipment.

However, to see the real delights in the night sky you needed a telescope, or even a full observatory set up. Even a medium size, and relatively inexpensive, telescope will open up wonderous views of planets unable to be seen with the naked eye.



Moon Shot by Ben Harding

We were then shown a series of pictures taken by SEKAS members. All of them showed some amazing detail and really looked like something that the American institute, The National Aeronautics and Space Administration [NASA] would have imaged.

On display for the audience to look at were a couple of telescopes and a selection of books and magazines, to show what was available. Ben also showed a tiny device called a Dwarf II Smart Telescope, which is a full observatory measuring 204mm x 62mm x 130mm (8 x 2.4 x 5.1in), about the size of a hardback book. It weighs 2.4lb, just over 1Kg. It can locate, follow, photograph and process astronomy images and can be controlled by a mobile phone. We were then shown a number of pictures this tiny unit can produce. A very clever and useful piece of equipment.

There were several questions raised by the audience, including ones about the joy and wonder of observing, and the potential of finding life elsewhere. Ben explained, in detail, that while we may never visit other stars, from here on Earth we can detect and analyse the atmosphere of distant planets.

During his final summary Ben stated that we could potentially detect signs of life, e.g. oxygen, phosgene or, sadly, industrial pollutants from on Earth. As Ben finished his final summary, he emphasised that, so far, the total number of planets showing these signs is one, this one that we're sitting on.

South East Kent Astronomical Society have monthly meetings held on the 2nd Saturday of every month at Alkham Village Hall, Dover. Meetings usually start at 7.30pm but please check their website for any changes to the schedule and information on other events.