

# Altrincham and District Astronomy Society

Meeting number **607** held on 3<sup>rd</sup> May at 8pm

At Timperley Village Club

**Apologies:** N/A

**Members Present (in person):** 13

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## **Presentation:**

The meeting's presentation was given by Alan Murta and was entitled "Imaging Planets". The presentation covered the main challenges faced by amateur astronomers, the equipment used, preparation, image (video) capture, processing and then finished with examples of some results.

The biggest challenge was to overcome the blurriness caused by turbulence and the very small size of the imaging targets. Huge advances in digital cameras since the 1960s/70s and the development of high speed computers and algorithms to aid processing had done much to overcome this. The advances made by amateurs had then been illustrated by comparing amateur images of the current day with what had been achievable by professionals back in 1960s/70s. For equipment it was stated that an effective focal length of >1m was required along with a telescope with an aperture of at least 6". It was explained that reflectors were preferable to refractors, why this was so and how the focal length could be extended. Alan then went on to describe his own set up and the usefulness of a finderscope. Alan's imaging equipment consisted of a USB video (astronomical) camera; a filter wheel and filters; an Atmospheric Dispersion Corrector (ADC) (and Alan described what this was); tele extenders to boost magnification by increasing the effective focal length and a motorised focuser (and it was explained why this was useful).

The following preparation was recommended;

- Use of Stellarium to choose your targets
- Checking for weather to avoid e.g. high winds
- Checking the jet stream forecast, what it was and why it was important
- Letting the telescope cool down to minimise internal air currents
- Collimation, how to do it and how often it was needed
- Ensuring that the equipment could handle the data generated (many Gigabytes). A Solid State Device (SSD) should be used

Alan then showed the meeting a video of Saturn and he explained that images could only be taken in short bursts because the planet rotated so fast. He followed this up by running through a typical image processing session and outlining the processing software used;

- Software;
  - Fire capture – free
  - Auto Stakkart – free
  - Registax – free
  - WinJUPOS – free
  - Photoshop – purchase
- "Lucky imaging", using the best frames. Thousands of frames would be taken in one session and software used to find and stack the best frames (around 10%). The stacking got rid of the noise and it was explained how this worked
- The impact of sharpening. This was demonstrated using images of Saturn, Jupiter and Mars.

Finally the presentation ended with examples of some of Alan's images, followed by a question and answer session.

**Items of Business:**

1. *Observers Group*
  - a. The Secretary reported that the Group had been inactive because of inclement weather and that now, because of the lateness of the sunset, members may have to go into their back gardens instead. He said he would however continue to notify the Group of upcoming clear nights.
  - b. The Secretary suggested that members should learn where Corona borealis was (next to Boötes) because it may become the location of a supernova in the near future. A short talk would be given on this topic in the next meeting.
  
2. *Events;*
  - a. ADAS had been invited to help out at The Willows primary school in Timperley on 9<sup>th</sup> and 23<sup>rd</sup> May with their science lessons as the children had been learning all about the Solar System and astronomy. The Chairman and Secretary would be going.
  - b. A request was made for support to man a stall at the Sale Lions Father's Day Fete and Family Fun Day on 16<sup>th</sup> June in Worthington Park, Sale.
  - c. On 23<sup>rd</sup> June the Chairman was organising an open day for the Trafford Arts Society based in Sale and ADAS would have a stall there with a telescope demonstration. It was to be held in Stanley Square Mall, 11:00 to 16:00.
  
3. *General;*
  - a. There was currently a series of talks on BBC Radio 4 on Kepler, which members might find very interesting
  - b. Peter Higgs (of Higgs Boson fame) had died recently.

**Next meeting**

June 07 2024 – There was to be a short presentation given by the Secretary followed by one covering general astrophotography.