# **Altrincham and District Astronomy Society**

Meeting number 621 held on 3<sup>rd</sup> October 2025 at 8pm

Location: Timperley Village Club

Apologies: None

Members Present (in person): 20

#### **CHAIRMAN'S WELCOME**

The Chairman welcomed three new attendees and reminded everyone about the planned Open Day the following weekend.

#### **PRESENTATION**

The presentation for the evening was given by Chris Suddick and was entitled "An Introduction to Astronomy – Part 2". Part 1 had been given the previous year and had covered telescopes; co-ordinate systems; units of measurement and comets and meteors. Part 2 was to cover "What is a day?"; star classification; stellar magnitude; astronomical nomenclature and occultations and transits.

The presentation began by explaining the difference between a Civil Day and a Sideral Day using a diagram to demonstrate how they compared to one another. A sideral day ran from noon-noon i.e. from when the sun was directly overhead to when it was next overhead. A sideral day was four minutes shorter than a civil day and this difference explained why, over a period of time, the same stars were seen to rise earlier and earlier each night. The sideral day was useful to astronomers because it helped explain stars' movements from one night to the next.

The next topic was star classification and the use of the mnemonic "Oh, Be, A, Fine, Girl, Kiss, Me" OBAFGKM to classify stars according to their colour and temperature; O being hot blue stars, B slightly cooler blue-white stars, through to yellow stars and down to red stars. Each class was then subdivided into ten: it was explained that our star was classified as G10 and that the most common class of star was M, the red dwarf: there being more M class stars than all the other stars put together. The meeting was then shown the Russel-Herzsprung diagram where luminosity was plotted against temperature to show how stars compared to one another in terms of brightness and temperature and how it helped astronomers understand stars' life cycles.

After star classification the presentation moved onto magnitude, first explaining what apparent magnitude was. Magnitude as a concept was originated by the Greeks and consisted of a sliding scale where 1 was the brightest down to 6 the dimmest. Each magnitude lower representing a star that was 2.5 times dimmer that the preceding magnitude. The meeting was then shown a diagram comparing various objects with their magnitude on a logarithmic scale ranging from -26.7 for the sun, through the full moon at -12.7 down to Hubble, which could see objects with apparent magnitudes of just +31. The naked eye limit was generally accepted to be 6. Absolute magnitude was how bright a star would be if it was moved to a standard distance of 10 parsecs. Absolute magnitude was not used much by amateur astronomers.

Nomenclature was the next topic explained. First of all there was the Messier catalogue, which was a list of objects compiled by Messier given "M" numbers e.g. M1 was the Crab Nebula and M42 the Orion Nebula. There were 110 Messier objects in total. Then there was the New General Catalogue, that listed over 1,000 galaxies, assigning them NGC numbers. Many of these were faint objects and hard to find in amateur telescopes. Meteor showers made use of a suffix to show where the central point of origination would be e.g. the Perseids could all be traced back to a central point in Perseus. There was an anomaly with the Quadrantids, which referenced a now defunct constellation.

Comets were all named according to the formula x/year An where;

x = p for periodic; c non-periodic; d disappeared and I interstellar

year = year of discovery

A = half month of discovery A to Y where A is the first half of January and Y the second half of December

n = a simple sequential number

And this was illustrated with a current example C/2025 R2

Finaly it was explained what occultations and transits were. Occultations where when a larger body of apparent size passed in front of a smaller one and the meeting was shown photos of the moon occulting Venus and Saturn. A transit was where a smaller body passed in front of a larger one and here photos were shown of Venus transiting the Sun and Jupiter's moons and their shadows transiting Jupiter. An eclipse occurred when two objects of the same apparent size passed in front of/behind each other, as in the total eclipse of the sun.

There then followed a discussion on how a day's length had and would change with time along with the earth moon distance and how this would impact on eclipses.

### **ITEMS OF BUSINESS**

### 1) Open Day

The Open Day was to take place on Saturday 11<sup>th</sup> in Timperley Village Club from 11:00 to 16:00 but it was requested that members turn up around 9:30-10:00 to help set the rooms up; the downstairs room would only take around 10 minutes but upstairs would take a lot longer as tables, posters etc. needed to be arranged. It was still possible the Society might get the loan of a planetarium from the Scouts, which could hold up to 20 people in it and this would need to be erected upstairs. Mention was made of the need to complete risk assessments for the day, the need for a first aid post and as children would be involved, someone with DBS clearance was required. It was confirmed that the Society's insurance covered the Open Day.

Fifteen minute talks would be given in the downstairs room at hourly intervals; the talks being; Chris Suddick – covering well known astronomical objects; Colin Henshaw covering the solar system and Gary Gilbert covering simple astrophotography. Upstairs there would be a telescope corner (and members were invited to bring along their own telescopes to display); quizzes and competitions for the children (Peter Baugh had managed to get a cardboard replica of Buzz Aldrin that could be offered as a prize, along with planispheres); video and PowerPoint displays .(it was hoped to get a video of Yuri Gagarin and maybe have a laptop set up to show the position of the space station in real time). The upstairs kitchen would be used for tea and coffees.

Leafletting for the event had already been completed locally and it was planned to contact the "Messenger Evening News" to get something published in their newspaper. Leaflets would also be handed out together with the programme of the day's events to people as they entered; members would need to be on hand to manage entry into the building as it was not possible to leave the building open for the public and to point people in the right direction when they entered and to register people's interest/e-mails.

It was confirmed that the mayor would be attending and that a car park space should be reserved for her.

## 2) Any Other Business

- a) Jedd informed the meeting that John Anderson from High Legh Community Observatory had passed away recently: John had been well known to the ADAS. It was agreed to ask Jedd to pass on the Society's condolences to the family.
- b) Chris Suddick reported that he had been contacted by email by Ray Gavin asking for help with setting up/assembling a new telescope he had purchased (Willams GT81 on an EQ3 mount). Ray lived in Hale. It was suggested that perhaps Ray could be encouraged to bring his new telescope to the Open Day, where there would be members present who could support him.

### **Next meeting**

Next meeting 7<sup>th</sup> November 2025