After a wait punctuated by Sky at Night filming and even Covid 19, Professor Chris Lintott visited CADAS for the September 2025 meeting and the wait was well worth it! Chris spoke on the subject of Our Accidental Universe (which happens to be the title of his latest book). It's usually thought that science proceeds by theories proven (or disproven!) by well thought out experiments. However, Chris gave many examples of where accidental (or at least unlooked for) discoveries have been made, usually associated with lots of hard work!

His first example was the discovery of the water plumes of Enceladus. On its first pass by that moon of Saturn, the Galileo probe's instruments were all off except for the magnetometer controlled by Michelle Dougherty (now Astronomer Royal) and her team who were using it as a control expecting no "interesting" data. However, there **were** interesting data and she persuaded the Galileo team to pass Enceladus again with all instruments on. This pass showed the beautiful plumes emanating from the moon, proving that there was a subsurface ocean and that Enceladus was far from being the dead world it was supposed to be.

Another example was the first Hubble Deep Field which was a 10 day exposure of a single nearly empty piece of sky. This had been planned but the timing was to give the Hubble team a few days rest after the long campaign of rectifying the optics on the HST. Probably, without that rest period, the HST would have continued to image known objects which had been on the observing list for years with a huge waiting list because of the problems with the optics. The result of this Deep Field was to show thousands of galaxies reaching back in time to nearly the start of the universe. This started a whole new area of deep space exploration leading to the JWST and other ground based telescopes.

Chris gave many other examples of accidental discovery including the whole field of Radio Astronomy but concluded with a look at some of the first images from the Vera Rubin Observatory "discovery machine" now starting operations in Chile. This telescope, even before the start of formal operations, is already making discoveries. Interstellar comet 3I/ATLAS was discovered in July 2025 (by one of the ATLAS stations also in Chile) but was seen in earlier test images taken by the Rubin Observatory. Chris's team at Oxford have already issued a paper on 3I/ATLAS citing the Rubin image. Probably the first time a telescope is cited before it has even started operations!

After a number of questions, we had our break followed by the usual club proceedings.

Terry did his usual "things to come" in the sky followed by a few images from both the UK and Australia including a (suitably accidental) image of a very old moon below Mercury on the morning of 25^{h} August. This was followed by Bud's latest lunar images from the 16" "ladder scope". In good seeing, the scope performs very well but it does need very good conditions to show its best. However, Bud's images were spectacular and very detailed. Ian had a short, almost nostalgic, video of the painting of the dome for Patrick More's 15" telescope and was followed by a number of Ken's (as always) superb colour images of deep space objects.

Next month's meeting will be our observing session preceded by a short "Gadgets and Gizmos" show and tell session. It should be getting properly dark by 19:30 so we may set up and start as soon as Saturn shows itself above the trees!

Upcoming Events

Planets

Mercury is near the Sun and isn't observable from our latitudes.

Venus is very close to Regulus in the early morning sky (about 05:30BST) at the moment. The thin crescent moon will be nearby on the morning of 19th September which should be pretty. It'll start getting closer to the sun but will be low in the morning sky until the end of November.

Mars is too close to the sun for observation and will be for the rest of the year.

Jupiter now rises at around 01:00BST and is nicely visible in the morning sky. It'll be rising by about 23:00 by the next meeting. It's in Gemini so is about 50 degrees altitude when it's due south.

Saturn will be at opposition on 21st September and at its brightest (mag 0.6). The rings are actually closing up again after the "equinox" in March but will start opening up again next year.

Uranus is just below the Pleiades in the morning sky. It should be visible in binoculars.

Neptune and Saturn are quite far apart now but will start getting closer again for another conjunction in February 2026.

Comet 3I ATLAS is in Libra and pretty well impossible from our latitudes. Perihelion is at the end of October but it will appear in the morning sky mid-November. It'll be at about magnitude 14 which is fainter than Pluto!

New comet C/2025 R2 SWAN has appeared from behind the sun. It is currently very close to Spica and Mars and not observable from here. It **is** visible, but low down, from Australia.

Autumn Equinox on 22nd September at 19:19BST.

Upcoming Meetings

Oct 15 Gadgets and Gizmos followed by Observing Session
Nov 19 Heather Johnston *The rise and fall of the giant planet occurrence rate*
Dec 17 Arthur Davis lecture and Christmas Social

Events

Redstart School Thursday 29th January 2026

Manor Court Friday 23rd January 2026

Tintinhull Youth Club Tuesday 25th November 18:30-20:00

Holy Trinity Scout group in Yeovil need an astronomer to help with their Astronomy Badge qualification. Tuesday and/or Thursday evenings. One or two sessions.