

THE HISTORY OF EAST RIDING ASTRONOMERS

The purpose of our club is to help and encourage people to learn about and enjoy the night sky. We are an observing club and delight in showing people how to use binoculars and telescopes.

Early Days

East Riding Astronomers (ERA) members had previously been part of the Blackburn Leisure Astronomical Society (BLAS) based in Brough. ERA began its life as an independent club in January 2000. Our first meeting was at the Quaker Meeting Hall in Beverley before moving to Woodmansey Village Hall in 2018.



The TS20 (far left) and smaller telescopes on display.



Tony and Mike working on the TS20 in 2019.

ERA was set up to build and use a 20" telescope made from glass blanks brought back from New Zealand. By 2019 the telescope was ready for restoration and improvement, with work led by club founders Tony Scaife and Mike Fratson.

The Covid pandemic interrupted the work and sadly Tony passed away in early 2021. The work on the telescope was finished in 2021 and the restored and improved telescope is named the Tony Scaife 20" (TS20) in Tony's memory.

Recent History

Starting in 2020 and continuing today, the club meets three Mondays a month on Zoom. Our face-to-face meetings restarted in September 2021 and continue at Woodmansey Village Hall on the first Monday of each month. In August 2021 we held a market stall event in Beverley to meet the public and most recently we were part of the Woodmansey Village Hall Gala event in early July.

Our next meetings are 1 August, 5 September, 3 October, 7 November and 5 of December 2022 - come and visit us at 7pm in Woodmansey Village Hall.



Terry, Helen and Lorraine on our market event stall.

WHAT WE DO

We are a group of people that are fascinated by the wonders on display over our heads. The universe may be infinite but our range of interests is more modest. Here are some of the things we observe.



Star cluster the Pleiades, also known as the Seven Sisters*

Double Stars

Many of the points of light in the sky are in fact 'twins'. Some of these pairs can be visually attractive - the star Albireo (below) is a striking combination of a blue star and a yellow star. This double star can be observed in late September.



A photograph of Albireo*



A dramatic photograph of the full Moon*

Wide Field Observing

We enjoy looking at whole constellations of star clusters (asterisms), such as Orion with its nebula, the Plough or the Owl asterism. This can be done with the naked eye or with binoculars. We also observe celestial oddities such as eclipses, comets, planetary combinations, the passage of the International Space Station and other satellites.



Planets

The planets have fascinated mankind forever. From Galileo onwards, telescopes have enabled us to see details such as Saturn's rings, Jupiter's bands and the polar caps on Mars.



Saturn photographed in July 2021*

The Moon

The Moon has been a major focus of interest for some astronomers such as the late Patrick Moore. There are many interesting features on the Moon's surface including craters, mountains and rift valleys. Some features come and go during the lunar month. October 1 2022 is International Observe the Moon Night.



The light from the Andromeda galaxy which left that galaxy 2,400,000 years ago!

Galaxies and Nebulae

Galaxies and Nebula can be challenging to find and to observe as they can appear in a telescope eyepiece as just grey fuzzy patches. This area of interest is where astrophotography can help show the colours and details.

*Photographs which have been taken by our members

STARTING OUT IN ASTRONOMY

One family's story of nights out with the stars.

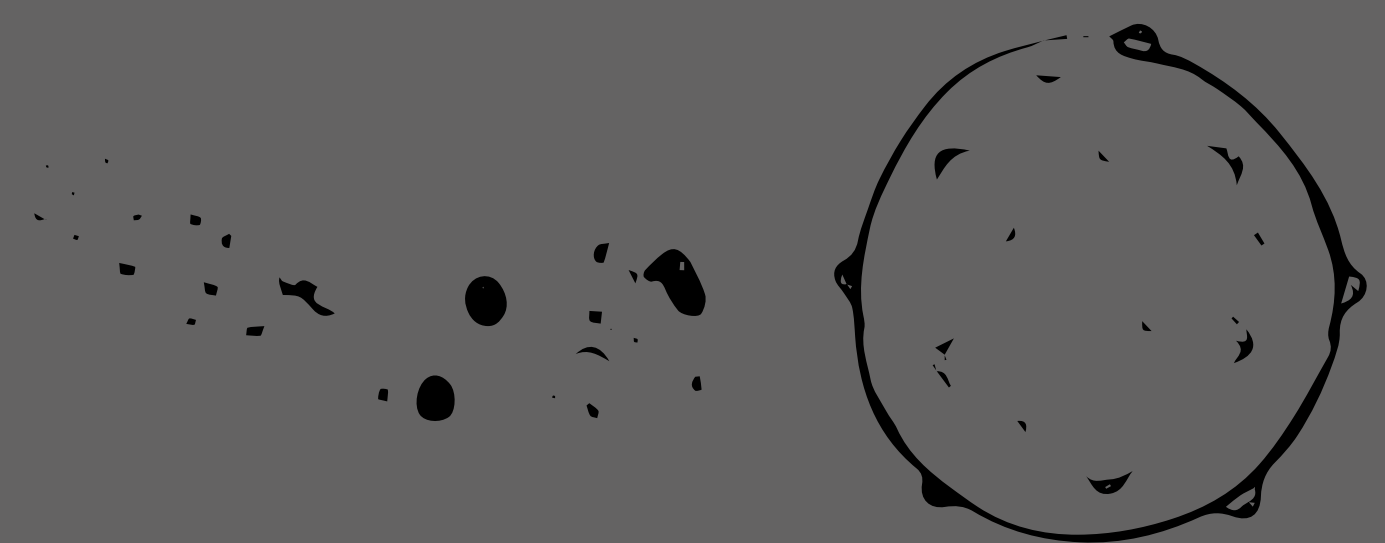
During the first Covid pandemic lockdown in early 2020 we started going into the garden to watch for meteors and changes in the Moon's phases. By December we were convinced that stargazing was for us.

We did our research, read a huge amount online, checked all the equipment reviews and carefully drew up our plans. We ordered our equipment, waited for delivery but when it finally arrived, we began to realise that we had made a few mistakes.

- We didn't ask anyone who was not trying to sell us the equipment for advice.
- We didn't decide which area of stargazing we were really interested in doing before we bought our first telescope.

- We thought the more expensive the equipment the more we would see - this wasn't the case.

The solution was to join East Riding Astronomers, attend the meetings, meet members and listen to their advice.



Where are we now?

We stuck with it, learned from other members and taught ourselves. Now we can

- Set up and use our equipment in the dark, using our computerised telescope mount to find a star or planet to view.
- Plan our nights out using information from the club.

Our advice

Make your first astronomy purchase membership of an astronomy club. Ask the members for advice and look through their equipment before buying your first telescope. Get advice from someone who owns and uses the equipment you are interested in before you decide to buy it.



GETTING STARTED AS AN AMATEUR ASTRONOMER

Step 1

Stargazing is a fascinating hobby that can keep you interested for an entire lifetime. But if you take the wrong first steps, your journey towards the stars can be over in a few short weeks. Your first step should be to find and join a local astronomy club. The Federation of Astronomical Societies lists around 207 astronomy clubs and societies in the UK and the Go Stargazing website gostargazing.co.uk has an excellent location map.

Step 2

Your next step is to start to learn the night sky and when ready invest in some form of optical aid, perhaps binoculars or a small telescope. A reasonable budget for your first telescope is just a few hundred pounds. A used (good condition) telescope is a very sensible first investment. Stay away from hobby killers – buying a poor-quality telescope or one that is complex, expensive and beyond your current technical capability is a recipe for frustration, disappointment and an early exit from the hobby.

Step 3

Your third step is to grow your hobby as your interest grows - there's enough to keep you fascinated for a lifetime.

Good telescopes may have several owners - they introduce them to astronomy before moving on to their next owner.



Visit fedastro.org.uk to find your local astronomy club

WHAT TO SEE IN THE NIGHT SKY

During the coming months there are many interesting things to see in the night sky - here are some of the highlights.



Noctilucent Clouds

Noctilucent translates as night-shining. These very high clouds can appear 90 to 120 minutes after sunset or before sunrise. For your best chance of seeing them look north in July and August.

International Space Station (ISS)

ISS is our global spaceship in which astronauts carry out scientific investigations. Timings for us to see ISS vary hugely but are very predictable over a short timescale. We have a live ISS map on our website eastridingastronomers.org.uk

*Photographs which have been taken by our members



Meteor tracks through the Plough*

Meteors

To spot meteors; find somewhere away from light pollution, use a comfy lay back chair and wait. Wrap up warm and use just your eyes. Here are some of the peak days for meteor spotting - try a few days either side too.

Name	Starts	Ends	Best night
Alpha-Aurigids	28 Aug	5 Sep	31 Aug
Orionids	2 Oct	7 Nov	22 Oct
Ursids	17 Dec	26 Dec	23 Dec

Visit eastridingastronomers.org.uk for information on the sky in the next coming months.

Lunar Occultations

Lunar occultations occur when the moon moves in front of a star or planet. Occultations of planets by the moon are much rarer than occultations of stars.

Moon occults Uranus on 14 September and 5 December.
Moon occults Mars on 8 December.

Moon Shadows

Clair-obscur which translates as moon shadows are another lunar effect. These shadow shapes are formed every month as sunrise moves over the lunar surface and are best seen through a small telescope. You might want to try to see these effects **Lunar X, Lunar V, Jewelled handle, Eyes of Clavius.**



Crescent of the waxing Moon*

★ASTRO★PHOTO★GRAPHY★

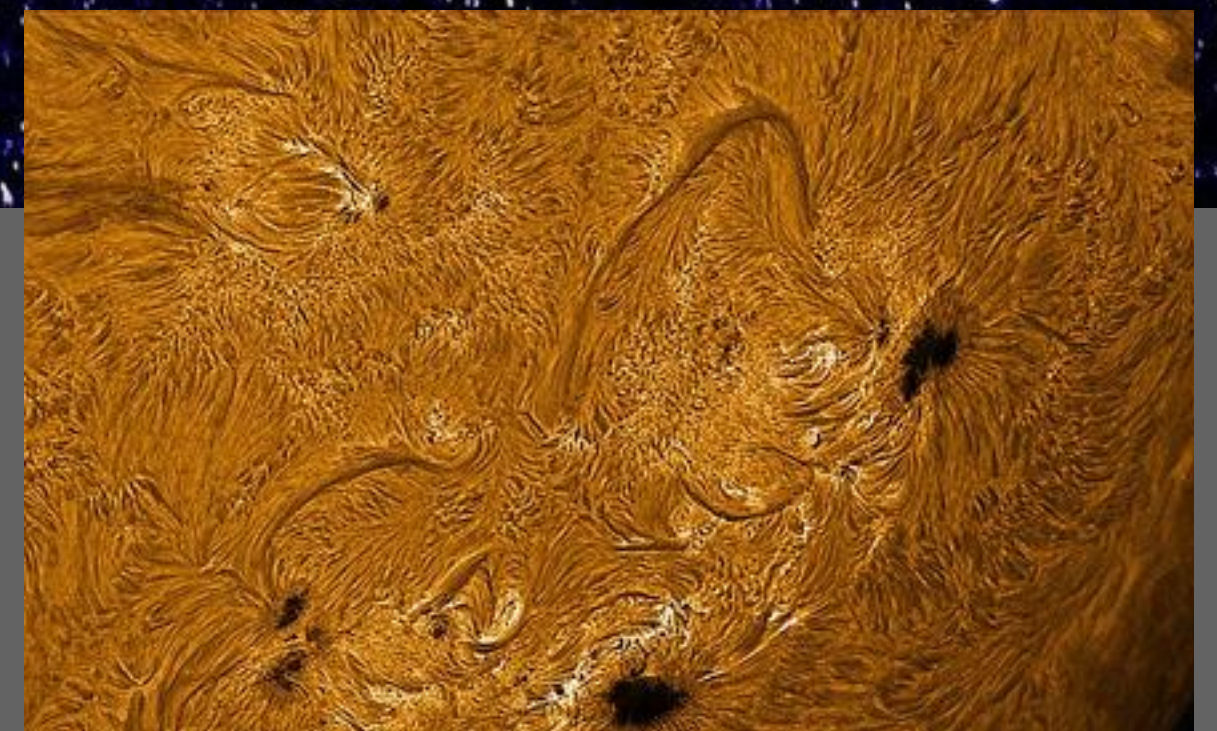
Astrophotography, photographing the night sky or the Sun, is one of the most demanding branches of amateur astronomy.

See more images like these at the top of the Treasure House tower, just past Neptune!

Astrophotography can be as simple as pointing a tripod camera at the sky to capture star trails. A simple entry into wide angle astrophotography is possible using a digital camera, a standard lens and short exposures.



Comet Neowise was taken with a barn door style mounted camera



Photographing the Sun requires special filters, equipment and a great deal of care to avoid injury and damage to equipment.

Mainstream astrophotography combines astronomy, computers and patience in equal amounts. To capture enough light from the very dim objects that are the favourite target of astrophotographers it can mean multiple exposures that add up to hours and hours of photographing the same object. Once the data is collected it will need processing to produce the amazing images that the digital amateur astrophotographer is capable of. Here are two stunning images from our members.



The moon



Jupiter

Another branch of astronomy is Electronically Assisted Astronomy (EAA). This is a relatively new branch of astronomy where a camera collects light through a telescope and displays results live on a computer screen. It can let you see dimmer objects than you would with the eye alone and you can take some excellent photos too.

Astrophotography is a difficult skill to learn and can become very expensive, so don't rush into it!