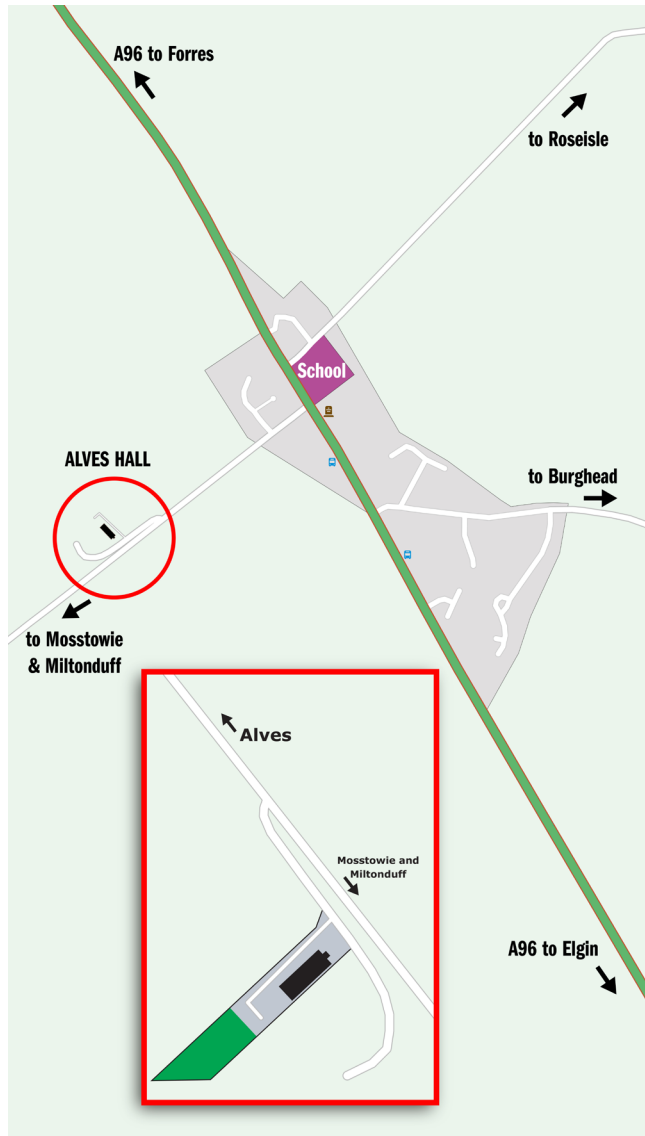


Where to Find Us



****Doors open 7pm for 7.30pm start****

Come along and join us - your first meeting is free.

Meetings

We meet on the first Friday of the month (unless otherwise specified) at Alves Village Hall.

- Under 16s must be accompanied by a parent/guardian.
- 16 – 18 years of age may attend unaccompanied but the parent/guardian is to ensure that they are provided with transport to/from the meeting.

Club/Public Events

In addition to our monthly meetings, we offer occasional club and public events eg. solar or night observing sessions, meteor watches and astronomy workshops.

- Under 18s be accompanied by a parent/guardian.

Moray Astro Meets

Occasional observing sessions which can be held anywhere in Moray as and when the “seeing” (sky conditions) is favourable (and subject to volunteers’/experts’ availability) can take place from September through to March; location and opening is advised by email and through Facebook. At other times there may be the occasional Solar observing.

SIGMA also conducts ‘Outreach’ to bring astronomy to schools, and groups, though this too depends on volunteers’ availability. Details on how to contact SIGMA can be found on our website.

Membership

Membership starts in January, with a pro-rata rate for anybody joining throughout the year. Your first meeting is FREE.

Joining Month	Ordinary	Student*	Under 18
January – March	£28.00	£14.00	FREE
April – June	£21.00	£11.00	FREE
July – September	£14.00	£8.00	FREE
October – December	£7.00	£4.00	FREE

* Student membership: aged 18 or over in full-time education

SIGMA Members re-joining each year pay the full year’s rate whenever they re-join, unless there are extenuating circumstances. Further information can be found by contacting the Membership Secretary.

Affiliated Clubs/Societies

SIGMA membership gives you affiliated membership of both *Highlands Astronomical Society* and *North Ronaldsay Astronomy Group*. You are welcome to attend their monthly meetings and events. Members of these clubs/societies are also welcome to attend SIGMA meetings and events. (Note this does not confer voting rights.)



Club Meetings and Information 2024

Presidents

Bill Leslie
Tim Schroder

Committee

Pete Sherman (Chairman)
Richard Oakley (Secretary)
Stuart Brooks (Treasurer)
Chris Stradling MBE (Events)
Mick O'Donnell (Membership)
Kevin Stocks (Health & Safety)
Helen Williamson (Webmaster)
Ray Palmer
Jackie Eadie

Contact emails for the above are on the website

www.sigma-astro.co.uk

Friday, 5 January 2024 (ZOOM)

In Search of the Goddess of the Dawn – The Story of the Aurora

Andy Green, Fellow of the Royal Astronomical Society

The Aurora is one of nature's greatest phenomenon but what is it? What causes it? What does it mean? In this presentation we aim to cover all of this and perhaps more. With over 15 years aurora hunting Andy has a great insight into searching for this elusive light show.

Friday, 2 February 2024 (ZOOM)

How the Universe Will End

Prof. Brad Gibson, University of Hull

One of the most exciting questions in all of science remains "How did the Universe begin?"; less spoken about though is the opposite end of the life-cycle: "how the Universe will end...". Professor Gibson will walk you through our Universe, from its birth and toddler phase, to the rough teenage years and mid-life crises, and ultimately, its mysterious fate, billions of years from now.

Friday, 16 February 2024 (ZOOM)

The Beauty and Violence of the Sun

Hazel Collett, British Astronomical Association

Hazel gives a brief look at the make-up and some physical data about our local star the sun: Violence – caused by the dynamics of the sun including effects such as aurora. Beauty – what to look for i.e. sun dogs. There is also a short bit on observing the sun – sunspots and prominences. The talk concludes with a short stunning video from the Solar Dynamics Observatory.

Friday, 1 March 2024 (ZOOM)

The Pluto Story

*Prof. Ian Robson, Science and Technology Facilities Council,
Royal Observatory, Edinburgh*

How was Pluto discovered? Why did discovery and observations of Kuiper Belt Objects eventually lead the International Astronomical Union (IAU) to declassify it in 2006? Although 'what is a planet?' might seem to be an easy question to answer, it turns out that the ensuing debate by professional astronomers was both complicated and fractious. The twists and turns of Pluto's demotion are revisited on a personal basis – astronomical democracy in action – or not, and what was the legacy from the decision and what have we learned from the New Horizons space mission to Pluto and beyond.

Friday, 5 April 2024

Antikythera

Richard Oakley, SIGMA

This fascinating time piece believed to date from 200 B.C. has completely changed our view on gear mechanisms. This talk covers the machine layout and the gear mechanisms that are adopted to achieve its functionality. This presentation discusses the research that has been carried out to determine how the machine works and the contributions of each researcher and what needs still to be done. The talk also discusses who may have designed the Antikythera mechanism and from where it originates and when.

Friday, 3 May 2024

The Bear and the Ship

Dr. Howie Firth MBE, SIGMA

Through an old Shetland folktale and a 2,000-year-old Mediterranean voyage leads Dr. Howie Firth on an astronomical trail to Siberia and ancient Egypt. We visit the islands of Fetlar and Paxos, and take a journey in the sky with the star Canopus and two constellations.

Friday, 7 June 2024

AGM

SIGMA Members

Review of SIGMA over the last year and committee election.

Friday, 5 July 2024

Equipment Night/Solar Observing

SIGMA Members

A chance for you to see the different types of telescopes and binoculars within the membership up close.

Friday, 2 August 2024

Navigating the Night Sky

Pete Sherman, SIGMA

When starting out finding your way around and locating objects in the night sky can be difficult and frustrating, leading to many giving up astronomy prematurely. With the advancement of GOTO and self-aligning telescopes, learning the constellations and star hopping is a dying talent. Pete will cover recognising the constellations, movement of the sky over time, star magnitudes, using star maps/planetarium software and star hopping to aid your enjoyment of telescope or binocular viewing.

Friday, 6 September 2024

SunSketcher: How Round is the Sun?

Dr. Hugh Hudson, University of Glasgow

The North American total eclipse of April 8, 2024 was wonderful. A smartphone app was developed (mainly by undergraduate students at Western Kentucky University), and was taken up by some 40,000 observers, generating scientifically useful data by timing Baily's Beads precisely, which should lead to a better measurement of the oblateness of the Sun. Dr. Hudson will describe this unique outreach-plus-science programme, some of the background and history explaining why it's important to measure the actual shape of the Sun. The presentation will include some intermediate results of the data analysis.

Friday, 4 October 2024

Weird Stars

Pauline Macrae, HAS

Not all stars are born equal. This can lead to some real monsters, large & small, out in space looking and behaving in weird ways. This talk looks a little closer at some of these stars but beware, nightmares are made of these...

Friday, 1 November 2024

Exploring small planets with TESS, HARPS-N and CHEOPS

Prof. Andrew Cameron, University of St Andrews

Extrasolar planetary systems contain both familiar planet types – gas giants like Jupiter and Saturn, ice giants like Uranus and Neptune – and unfamiliar ones such as rocky super-Earths and mini-Neptunes with extended atmospheres. But what about true Earth analogues? In principle these are easy to detect with space photometry from missions like TESS and CHEOPS, but weighing them with ground-based spectrographs like HARPS-North is proving to be a headache – thanks to the stellar equivalents of sunspots and faculae that mottle the faces of their host stars. These mask the stellar orbital reflex motion that reveals a planet's mass. Andy will talk about some recent successes, and a major new initiative to bring ultra-realistic, large-scale computational models of the physics of stellar photospheres to bear on the problem.

Friday, 6 December 2024

Christmas Quiz

Bring along the family/friends for a night of fun, questions, mince pies and the usual Christmas raffle.