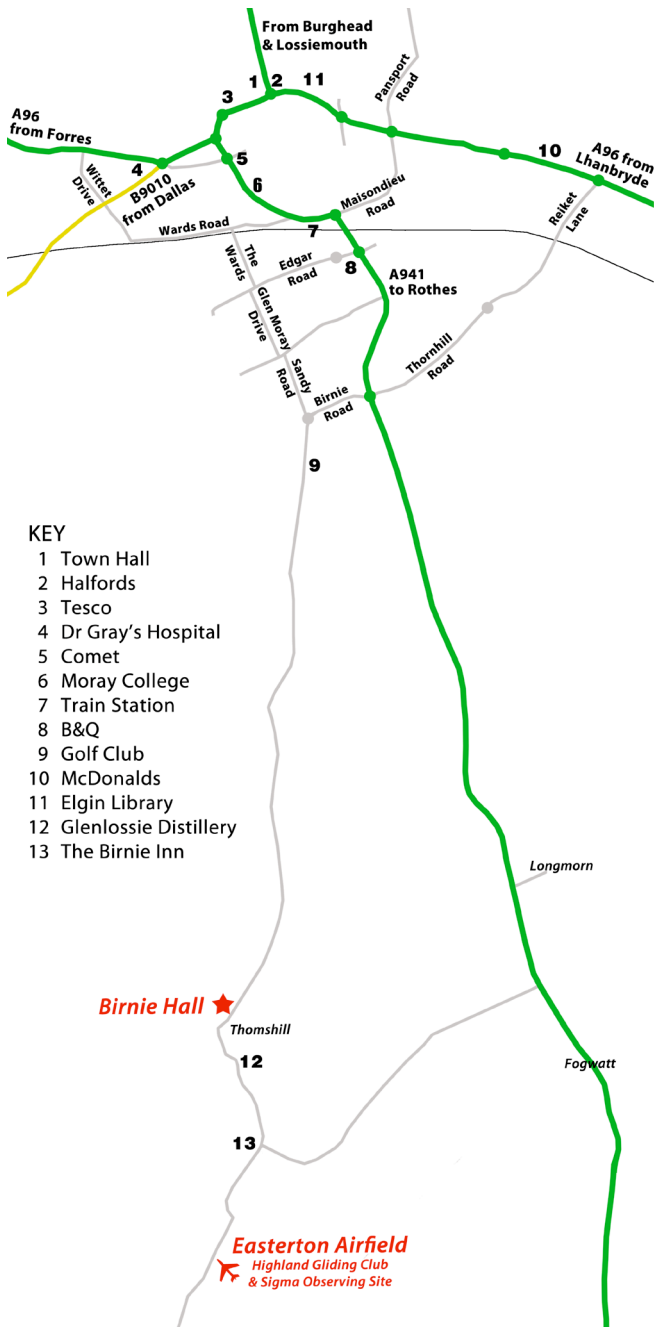


## Where to Find Us



- KEY
- 1 Town Hall
  - 2 Halfords
  - 3 Tesco
  - 4 Dr Gray's Hospital
  - 5 Comet
  - 6 Moray College
  - 7 Train Station
  - 8 B&Q
  - 9 Golf Club
  - 10 McDonalds
  - 11 Elgin Library
  - 12 Glenlossie Distillery
  - 13 The Birnie Inn

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

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

Membership is open to everyone and children's membership is free, but a parent or guardian must accompany them if they're under 16 years of age.

You can 'try before you buy' as the first meeting is free. So do come along and join us.

SIGMA holds its meetings on the first Friday of every month (*with the exception of January*) at Birnie Village Hall, Thomshill, just south of Elgin as depicted on the map.

From the hall it's a short hop to our dark site at Easterton Airfield, which allows us to hold observing sessions immediately after meetings when conditions are suitable. We also have a number of Club telescopes available for members' use.

Observing sessions are also held at our dark site on Friday and Saturday evenings, conditions permitting. Site opening is advised by email (or Facebook for public sessions) but those without this service can be advised by telephone on request. The site is well worth visiting as many deep sky objects can be seen, that would otherwise be obscured by light pollution.

Additionally, SIGMA has an active 'Outreach' programme to bring astronomy to schools, groups, clubs and societies. Full details on how to 'Rent an Astronomer' can be found on our website.

### Membership Rates

£24.....Ordinary

£12.....Student (*over 18 in full time education*)

£18.....Concessionary (*over 60s may apply for this - please contact the Membership Secretary for information*)

Membership is renewed in full (*unless there are extenuating circumstances*) in January, those joining during the year will pay a pro-rata fee. The first meeting is always free.

SIGMA and Highlands Astronomical Society members may attend each other's monthly meetings and events. (*Note this does not confer voting rights unless you are a Club/Society member*).



## Club Meetings and Information 2016

### Presidents

Bill Leslie

Tim Schroder

### Committee

Stan Barber - Chairman

Anne Mitchell - Secretary

Stuart Brooks - Treasurer

Chris Stradling - Events

Mike Thornton - Membership

Stewart Argo - Webmaster

Contact emails for the above are on the website

[www.sigma-astro.co.uk](http://www.sigma-astro.co.uk)

<https://www.facebook.com/SigmaAstro/>

<https://twitter.com/sigmaastro>

**Friday 15th January 2016**

**“SIGMA Stargazing Night”  
at Lhanbryde Community Centre**

SIGMA's monthly meeting, held in conjunction with the *BBC Stargazing Live series*, with an equipment night and public observing session.

Held at Lhanbryde, there is a chance to see the wonders of the local night sky and for the public to engage with local astronomers (us!).

**Friday 5th February 2016**

**“A Journey to a Nearby Star”**

**Paul Jenkins, Highlands Astronomical Society**

Based on a study carried out in the 70's, Paul will be discussing what would be involved in journeying to a nearby star, and whether it would be feasible.

The talk will look at the conclusions and outcomes of the study and also comment on recent updates.

**Friday 4th March 2016**

**“Opening a New Window on Einstein’s Universe”**

**Prof. Martin Hendry, University of Glasgow**

To celebrate the centenary of Einstein's theory of Relativity, Martin will be discussing gravitational waves, “ripples” produced by some of the most violent events in the cosmos. He will explore the amazing science and technology behind detecting these waves, and what they tell us about Einstein's Universe.

**Friday 1st April 2016**

**“Robots to the Moon”**

**Ken McTaggart, Highlands Astronomical Society**

Moon Expert Ken will be talking about Unmanned Lunar Exploration. Over the past 50 years a series of automatic probes have explored the Earth's natural satellite from orbit and on the surface, transforming our view from a flat disc viewed in a telescope to a complex world shaped by dynamic natural processes.

**Friday 6th May 2016**

**“Astrophotography”**

**Pete Sherman, SIGMA**

Pete will give an insight into techniques for imaging the night sky, from simple star trails to deep sky objects such as galaxies and nebulae.

The talk will cover the equipment and software needed and how to set it up correctly, to tempt you into this addictive hobby.

**Friday 3rd June 2016**

**Annual General Meeting & SOAKE  
at Birnie Village Hall**

Our AGM and annual *Solar Outdoor Astronomical Kitchen Event* in Birnie again.

A range of solar telescopes will be available with which to observe our nearest star, alongside a delicious BBQ.

**July 2016**

**2nd Annual  
Professor George Fraser Memorial Lecture  
held at Gordonstoun**

Date and Talk Title still to be confirmed at time of going to press - please check our website for updates

**Friday 5th August 2016**

**“For an Abstract”**

**Bill Ward, University of Glasgow**

The technology exists today that makes possible meteor observations that were previously only dreamed of.

Bill will look at how this technology has revolutionized amateur Modern Meteor Astronomy in the past ten years, and how you can take part.

**Friday 2nd September 2016**

**“Hunting the Dragon”**

**Prof. Andy Lawrence, Royal Observatory, Edinburgh**

Mysterious and violent events take place in the very centres of galaxies - huge outpourings of X-ray and ultraviolet radiation, jets streaking out at nearly the speed of light, and erratic changes from week to week. This talk will trace the history of how we have pieced together the puzzle over several decades, with telescopes, detectors, and theory, and look at what we think we understand now.

**Friday 7th October 2016**

**“Planetary Nebula”**

**Maarten de Vries, Highlands Astronomical Society**

Planetary nebulae are the stunningly beautiful remnants of stars although their appearance and peculiar spectra have long puzzled astronomers. Maarten will explain how these objects are formed, what they are made of and what processes take place in them, as well as suggestions on how to observe them.

**Friday 4th November 2016**

**“Observing Uranus and Neptune”**

**Mike Lunan, Caithness Astronomy Group**

Ice giants Uranus and Neptune are usually overlooked in talks about planets, largely because they are not easy to observe. Mike's talk will give us an insight into why they are so different from the other gas giants, and so different from each other. There will also be up-to-date news about Pluto, including images from New Horizons.

**Friday 2nd December 2016**

**“Christmas Quiz & Prize Draw”  
for SIGMA Members and your Families**

Our annual opportunity to bring the family along for a night of fun, questions and mince pies to end the year.

There will also be the usual prize draw and an update on planned events for SIGMA in 2017.

**The second half of most meetings features an in-depth look into what you can see in the Moray's night sky for the coming month, as well as Space and Club news with details of any forthcoming SIGMA events.**

**Unless otherwise stated, monthly meetings are held at Birnie Village Hall, Thomshill, Elgin, Moray, IV30 8GY.**