

A slice of Highlands astronomical life!

Tues 5th Oct 2010

Introduction

A warm welcome to Stargazey Pie, the newsletter of the Highlands Astronomical Society. After a year off Pie duties, and only one month on, Antony decides he needs another holiday, so I'm filling in for him. Once again we were at Smithton Primary School, the location chosen for the next few months until the new venue at Smithton-Culloden Church is ready. Here are the notices for this month.

- HAS Monthly Meeting Venue Smithton Primary School for the foreseeable future.
- Welcome to our newest member Kath Lindann
- **New Observatory Manager** is Gerry Gaitens. Thanks very much to Paul Jenkins for his more than capable tenure. Rhona Fraser remains Deputy Observatory Manager.
- HAS Secretary Roles (Membership Secretary and Organising Secretary)
 - Firstly, **a very big thank you to Pat Williams** who has stepped up to the mark and performed way above and beyond the call of duty over the past few years. Pat has been instrumental in re-shaping the Society and has put in a tremendous amount of dedication and sheer hard work. This has often been done without due recognition and it is right that this is now addressed. Pat is now taking time out from committee matters to actively participate in the hobby she is so passionate about.
 - The HAS Secretary role is being divided into two manageable parts:
 - **Membership Secretary:** act as Charity Officer, record and monitor committee meetings and membership of the Society
 - **Organising Secretary:** compile and manage the programme of meetings, organise social events, outings, etc.

The Committee are making a passionate plea to the membership for volunteers to recruit to these posts. We are a large Society and for too long the running of it has been supported by too small a team of enthusiastic individuals. The Society desperately needs its membership to rise to the challenge and play an active part to ensure its survival and development.

- **HAS Tea Team** many thanks to Fred and Jean Millwood who have been the mainstay of providing our liquid refreshments for the past couple of years. Marion Porteus has kindly volunteered to lead the Tea Team and will be ably assisted by Linda and Irene. Additional volunteers to help out over the year would be most welcome.
- Solar Saturday Observing Sessions: JSL Observatory now finished for the year. Please check the website for details of 'ad hoc' sessions.
- Nighttime Observing Sessions: JSL Observatory sessions open at 8.00pm with last admission at 10.00pm. Finish time is around 11.00pm. Please check the website for the most up to date information.

Fri 8 th Oct -	public & members	supervisor:	Gerry
Sat 9 th Oct -	public & members	supervisor:	Paul

Fri5th Nov -public & memberssupervisor:PaulineSat 6th Nov -public & memberssupervisor:Rhona

!! Very important – assistants are still needed! Training and ongoing support will be provided.

Please contact Rhona if you want to help your Society out.

- **HAS Discussion Forum (Messageboard)** this facility is now operational for all members to take part. Put http://spacegazer.freebb3.com/ into your web browser and follow the easy instructions to register. We look forward to many interesting discussions, debates, observing opportunities, buying and selling and anything else which stimulates our members to regularly use this online resource.
- Next HAS meeting is on Tuesday 2nd November 2010 with a talk on 'Galaxies' by Pauline Macrae of HAS. The 'Youngstars' sessions for children (8-14 years old) is held before every main meeting, running from 7:00pm until 7:30pm. Our last meeting was attended by 45 people (38 Members [1 new] 4 visitors and 3 Youngstars (1 new).
- **HAS Seeing Stars article** was published in this Friday's Inverness Courier and will shortly find its way onto our website. The article is called 'Heavenly families of open star clusters' and was written by Rhona Fraser.
- **HAS Communications with Members** there has been considerable discussion at Committee meetings as how best to routinely keep members up-to-date with current and forthcoming events. Various options ate the website, group texting (SMS), emailing, MFR, Inverness Courier, Society mobile 'phone, etc. Suggestions from the membership are welcome for consideration.
- HAS Christmas Dinner Our Christmas Dinner, for members and partners, will be held this year at 'the Dairy', Daviot, on Saturday 4th December, 7.00pm for 7.15pm. £21.00 per head (£10 deposits – non-returnable – due now to Paul Jenkins). Menu and details have already been emailed to members.
- **HAS Outing** This has been cancelled die to Committee resource constraints.
- Astronomical Events & Highlights an easy to read and use guide is provided by Manchester University and can be found at <u>www.jodrellbank.manchester.ac.uk/astronomy/nightsky/</u>.

<u>The Main Event</u>

'A Midsummer Night's Dream' By John Rosenfield

This intriguing title referred to the moons of Uranus, some of which are called after the Shakespearean play of the same name. It is said that the satellites of the outer planets have all been named after Shakespeare's characters but John told us otherwise and their designations come from various sources.

It was John Flamsteed who saw Uranus first but he didn't realise the faint point of light was actually a planet and instead catalogued the object as a star, 34 Tauri. William Herschel is credited with its discovery and he also found two moons: Oberon and Titania. William Lassell found Triton, Umbriel and Ariel through the 24" reflector that he built and Kuiper saw Miranda, the last of the five biggest moons around Uranus.

Uranus is a gas giant, the seventh planet from the Sun and its most remarkable feature is its tilt which puts it almost perfectly on its side. Uranus was initially called Herschel's planet after its discovery but Herschel wanted to name it Georgian Star in honour of the King. However, in keeping with the naming of the other planets, Uranus was chosen because in Greek mythology he is the Father of Saturn. What is unusual is that whilst all the other planets are called after Roman gods, Uranus is derived from Greek and the planet should have been called after the Roman <u>Caelus</u>.

Next we were introduced to the five major satellites:

Miranda is the smallest of these and is renowned for its huge canyons and grooves. It is thought to have been geologically active in the past when it would have been subject to tidal heating whilst in orbital resonence with another of the moons.

Ariel has deep rift valleys that extend downwards for six miles in some places. Many have smooth floors and the question is, what made them that way?

Umbriel is extremely dark, reflecting only half the amount of light as Ariel. There is a bright ring shape which may be due to an impact or possibly a methane volcano.

Titania is the largest moon with a rocky core and ice mantle. Its surface is geologically young and shows one very long rift valley.

Oberon is a little smaller than Titania but is the most massive of the moons and very heavily cratered.

John also mentioned two other moons because they are both on collision courses; Desdemona with either Cressida or Juliet, and Portia with its parent planet.

Altogether there are 27 satellites, many of which were discovered by Voyager 2 although some were also found by the Hubble Space Telescope. There are also 13 rings, only known about since 1977, made of a dark material.

John then showed us images of some of the moons taken from the NASA website. Although the cameras on the Voyager spacecraft were quite basic compared to those of today, the photographs are still stunning and allow us to glimpse these small worlds orbiting a planet that is nearly 20 times further from the Sun than the Earth.

Highland Skies – September 2010

Antony McEwan

October? Already? Wow – we're well into proper observing time now. Have you seen Jupiter yet? Good, then having seen one of the brighter planets you'll be ready to switch to "faint fuzzy mode"!

Or, actually, to start with how about "bright snowball mode"? Comet Hartley 2 is currently just below Cassiopeia and will travel through Perseus and Auriga as the month progresses. At it's brightest it is hoped that Hartley 2 will be about magnitude 5, visible with the naked eye, but comets can be unpredictable at the best of times.

A finder chart for the comet is available and should help you find it with binoculars or telescopes: <u>http://www.popastro.com/sections/comet/Hartley_Oct10.html</u>

Comets are fascinating to watch over several nights. They move pretty quickly from night to night, so the background stars will change fairly rapidly. Also, it can be fun to observe comets from a dark sky site and try to detect the tails that emanate from the bright core. The most visible tail consists of matter being blown away from the comet's nucleus by the solar wind, and can sometimes be seen as a long glowing trail heading in the direction away from the Sun's position. The ion tail can sometimes be seen too, if it is strong enough and conditions are favourable.

Long-time observers will probably remember Comet Hale-Bopp, which had excellent examples of both types of tail, which were visible over many degrees in 1997. Not many comets give as good a show as Hale Bopp did, but any comets that come to naked eye visibility in a winter sky have a good chance of being a good performer. Keep an eye on this one, just in case...

The area through which Hartley 2 will be passing is littered with open clusters. Astrophotographers following the comet will have a (star-) field day! Particularly so in the middle of the month, from about the 19th to 22nd when the comet's path will take it close to NGC 1778 and 1757, just north of the famous Auriga clusters, M36, M38 and NGC 1907. Wide field eyepieces anyone?

A few nights before that, from 15th to 17th, the comet will be close to three clusters in Perseus; NGC 1513, NGC 1528 and NGC 1545, all of which are bright, being 6th to 8th magnitude objects. Could this get any better? A bright (possibly naked eye) comet passing through a conglomeration of stunning open clusters on a series of dark winters nights? Well, it would be a bonus if he sky remained clear, that's for sure.

Other than that main highlight, there's so much to see in the October sky. It's not so cold as to be uncomfortable yet, so please take every opportunity you can to get outside and observing the night sky.

Remember, we're keeping an eye on Jupiter to try to spot the formation of a new Southern Equatorial Belt, so don't ignore the beautiful gas giant simply because you've seen it already! As if you could ignore it anyway, with it shining away at magnitude -2.75 mid-month like a golden searchlight in the southern sky!

Next Time

The next meeting will take place on Tuesday 2nd November at Smithton Primary School (bring a cushion). The talk will be by me (Pauline) and is entitled 'Galaxies' so I had better start writing it... The Youngstars children's group will start at 19:00.

Until then, don't forget to come along to our observing sessions – best time of year with the evenings dark but not yet too cold!

See you in November,

Pauline