

## BAA Out-of-London Weekend, 2007 August 31 to September 2

### held at the University of Strathclyde, Glasgow

#### 'Deep Sky and all that Matters'

In 2007 the BAA travelled north of the Border to visit 'Bonnie Scotland' for the annual Out-of-London weekend. The BAA last held a weekend in Scotland in 1994 and the offer from the Astronomical Society of Glasgow (ASG) to host the 2007 event was very welcome. The ASG recently celebrated its centenary and is an active society with over 140 members. They were both pleased and a little daunted when their offer was accepted by the BAA.



Prof. John C. Brown, Astronomer Royal for Scotland, Glasgow University.

The weekend's activities were centred on the University of Strathclyde campus in the centre of Glasgow, with some events in other nearby areas. On Friday evening there was a civic reception and presentations, followed by a full day of lectures on Saturday with an evening visit to the University of Glasgow's Acre Road observatory. On Sunday morning there was a trip to the Glasgow Science Centre and Scottish Power Planetarium. About 95 people attended on Friday evening, with over 120 at the Saturday lectures and 60 at the observatory.

On Friday evening, BAA members and friends were ushered into Glasgow City Chambers by liveried doormen. A formal speech of welcome was given by Baillie Margo Clark at a Civic Reception held in the

marble-pillared reception area, as stern Victorian City Councillors gazed down from their portraits. Baillie Clark welcomed the BAA to Glasgow and spoke of Lord Kelvin, whilst reminding members of the importance of Glasgow as a city of science both in the past and today. Dr Richard Miles, BAA President, thanked the Baillie, the City of Glasgow and the ASG for their warm welcome. The gathering then moved to the main Banqueting Hall. This is a huge, opulent, 16 metre high barrel-vaulted chamber, lavishly appointed and measuring approximately 25 metres by 12 metres. Some of the main features of this room are the ornate stained glass windows, large murals depicting historic scenes of the city and three huge chandeliers, which hang suspended from the rich gilt-encrusted plasterwork of the ceiling.

The meeting was opened by Dr Miles who introduced the first speaker, Dr David Clarke, who gave us a historical grand tour of 250 years of astronomy in Glas-

gow – in 25 minutes. In this whirlwind tour we learned of the early Glasgow telescopes, funded by public subscription; Alexander Wilson's description of the 'Wilson effect'; the building of the original observatory – now the site of a railway goods yard – and the move to the current site some decades ago.

David's talk was followed by Professor John Brown (Astronomer Royal for Scotland) who gave an excellent talk concerning astronomy in Glasgow today, with many witty asides to keep the audience smiling. Prof Brown, who is also known as an amateur magician, didn't bring his wand with him, so we didn't get any 'Rabbits out of Top Hats': just a fascinating talk on the cur-



Browsing the stalls at the Strathclyde campus. Photo: Eileen McLoughlin

#### Deep Sky Section

### The 2008 Deep Sky Section meeting

As mentioned in the December *Journal*, the Deep Sky Section is trying a new venue for its 2008 meeting. Although the annual meeting has moved around the country in the past, for many years now it has been held in Northampton, hosted by the Northamptonshire Natural History Society. However, I am aware that not all people find Northampton convenient, and it is only fair to try other venues occasionally. This year the meeting will take place in Cheltenham on Saturday March 1 and will be hosted by the Cotswold Astronomical Society at Century Hall, Shurdington, Cheltenham, GL51 4TB. This is an excellent venue with easy access and good facilities and may already be familiar to members as it has been used

for BAA workshops. See <http://www.shurdington.org:80/SocCtr/Location.htm> for a map and directions.

This year's programme includes the following talks: 'Bringing the deep sky down to Earth – Las Cumbres Observatory Global Telescope Network' by Paul Roche; 'From the Moon to the deep sky – Sketching with a PDA' by Peter Grego; 'Galaxy far, far away' by Gain Lee; 'Galaxy interactions and peculiarities' by Paul Downing, and 'Wide field DSLR imaging' by Callum Potter. We also hope to have a talk on the Galaxy Zoo project by a member of the Zoo team. In addition to the usual round-up of the deep sky year, there will be an update on the recent behaviour of Gylbudaghian's Nebula. After the main meet-

ing there will also be time for a few short talks by individuals wanting to discuss deep-sky related matters, or give an update on their observing projects.

Admission to the meeting is £7 (payable at the door) which includes refreshments throughout the day and a leisurely buffet lunch with time for socialising. Display material is welcome from Section members and both the BAA sales stand and the Webb Deep Sky Society will be present, along with telescope dealers SCS Astro and Aurora Books. Doors will open at 10:00 with tea and coffee available from 10:30 and the meeting starting at 11:00. All BAA members and their friends are welcome to attend.

Stewart L. Moore, *Director*



ASG President Eric Tomney (left) and BAA President Richard Miles cut the BAA Out-of-London Weekend 2007 Cake. *Eileen McLoughlin.*

rent research interests of Glasgow astronomers, ranging from solar physics, through radio astronomy to gravitational waves.

The evening ended with an invitation to BAA members to join their ASG colleagues for a 'wee dram' in the Bar across George Square.

On Saturday morning at the Strathclyde campus, members signed in to the main day of the meeting and spent a few minutes looking at the vendors' stalls and the ASG posters on the walls. Dr Richard Miles opened the meeting and handed over to Tom Boles from the BAA (a Glasgow Lad) who chaired the morning lecture session. He introduced the first speaker, Dr Nick Hewitt who gave a talk entitled 'Deep Sky Observing'. Nick is a Northampton GP who is a past president of the BAA (1999–2001). He is currently a BAA vice president and is a regular observer, with keen interest in planetary nebulae, active galaxies and solar eclipses. Nick's talk ranged far and wide across many deep sky objects, from globular clusters to variable nebulae and on to galaxy clusters. Members were treated to an interesting presentation with many superb images.

After a break for coffee, the next lecture was given by Dr Philip Best and was entitled 'Radio Astronomy.' Dr Best described the history of radio astronomy and how radio emissions from space were first detected. He showed some examples of radio telescopes and described the full electromagnetic spectrum. The position of radio and the problem of interference from everyday objects was discussed. There were protected bands for radio observation but they were

small and far between. Dr Best described how important the contribution of the hydrogen emission was to research and the best frequency to choose to search for extra terrestrial life and the logic behind it. Interferometry was explained and how radio telescopes could reach resolutions of milli-arcseconds. Dr Best concluded with some impressive radio images and contrasted them with their optical counterparts.

The last presentation of the morning was given by Nick James on 'Remote Access to the Faulkes Telescope'.

The Faulkes Telescope Project is the education arm of Las Cumbres Observatory Global Telescope Network. The aim of the project is to provide free access to robotic telescopes and a fully supported education programme to encourage teachers and students to engage in research-based science education. The project currently has two robotic telescopes, one based in Hawaii and the other in Australia. It was hoped to log on to one of these and carry out some live imaging during the presentation, but unfortunately both telescopes were unavailable due to poor weather. Although disappointing, this caused some mirth amongst the members, who were well used to UK bad weather disrupting their planned observing sessions.

After a buffet lunch, the afternoon session was chaired by ASG President Mr Eric Tomney. Dr David Gavine presented to the BAA, on behalf of Dr Robert McNaught, a signed and mounted set of photographs of his magnificent comet, taken by the discoverer himself. This was accepted with thanks by Dr Richard Miles and will occupy a prominent position in the newly refurbished London office of the Association.

The first afternoon lecture was given by Dr Pete Edwards, a superb presentation entitled 'Mined over Dark Matter' in which Pete gave a summary of the most recent thinking on Dark Matter. His presentation posed questions concerning MACHOs, WIMPs and the detection of exotic particles, as he explained how some of today's cutting edge astronomy is being done from a deep potash mine in Boulby, Cleveland. It is not often that a presentation concerning such

a complex subject is given in such an accessible manner and has a group of serious BAA members roaring with laughter.

The second speaker was Martin Morgan-Taylor, a lecturer in law and legal advisor to the BAA Campaign for Dark Skies. Martin gave an interesting and informative presentation on deep sky imaging with a DSLR. He explained how for a modest expenditure, a modern 'everyday' digital camera could produce images that would have been the envy of professionals only a few years before. Martin gave many DSLR imaging tips during his talk, including how to focus the image at prime focus, and dark, flat-field and bias frames, as well as outlining his 'minimalist' approach to image processing. An excellent presentation, with some superb images, including Hubble's and Gyalbudaghian's nebulae, that had the audience listening intently. Martin also gave the audience an update on the legal situation and guidance issued to local Councils in the four countries of the UK regarding 'obtrusive light'.

There was then a short break for afternoon tea, at the start of which Dr Richard Miles presented Eric Tomney with a book to thank ASG for all its work for the meeting and to mark the occasion. Dr Miles and Mr Tomney then cut the 'BAA Out-of-London Weekend 2007 Cake', which was consumed with alacrity by the assembled members.

Following the break, the first speaker was Dr Martin Hendry, Senior Lecturer in the Department of Physics and Astronomy at the University of Glasgow. His main research interests lie in cosmology, investigating the mysterious dark energy that may be driving the expansion of the Universe, and the search for gravitational waves. Martin gave a superb presentation entitled



David Gavine with the framed and signed set of photographs of Comet 2006P1 (McNaught), presented to the BAA by the discoverer. *Eileen McLoughlin.*



'The Runaway Universe' in which he explained the differences between a 'closed', 'flat' or 'open' Universe. Backed with recent findings and theory, Dr Hendry said that current evidence suggested that the speed of expansion of the Universe was very close to that required for a 'flat' Universe. Recent theories, supported by the WMAP probe and supernovae measurements, suggest that not only is the Universe expanding according to Edwin Hubble but that the expansion is accelerating. Dr Hendry introduced the different parameters of matter, dark matter and dark energy that were contributing to the resultant acceleration and contrasted how their contributions would have been different in the distant past and future. He made the point that modern cosmology wasn't always compatible with everyday expectations. He finished by describing plans for future follow-up research that would help to resolve some of these questions.

The last lecture of the day was given by Tom Boles of the BAA, who served his apprenticeship in Glasgow as a telescope maker with Charles Frank of the Saltmarket. His talk was entitled 'Discovering Supernovae – Motivation and Rewards'. Mr Boles spoke about the many aspects of

patrolling that motivated him. These included the pleasure received from seeing the same galaxies return year after year, and the fact that many of the world's largest telescopes had been used to follow up his observations. He described the special discovery of 2003L which changed astronomers' views on how some supernovae might explode. An example was given where even negative observational results could make a valuable contribution. He finished with a summary of the future expectations in supernovae patrolling and the challenges and opportunities that this might bring.

The afternoon session was formally wound up by Richard Miles who thanked the speakers for their excellent presentations, the ASG for hosting the weekend and gave a reminder that the visit to the Acre Road Observatory was scheduled for that evening.

After dinner, about sixty members were taken by coach to the Observatory. From 8:00pm to 10:30pm the members rotated through four sessions: a tour of the Observatory and its laboratories; a visit to the main observing dome with its 16 inch SCT; a presentation on Radio Astronomy with a 'live' plotting of the radio source 'Cassiopeia A' – an intense radio source 2.9 kiloparsecs distant, being a supernova remnant, approxi-

mately 300 years old, associated with an expanding cloud of material, now around 10 light years across – and a visit to the small teaching planetarium and a whirlwind tour around the sky.

At 11:00am the next morning members travelled by coach to the Glasgow Science Centre and Scottish Power Planetarium. Members enjoyed the 30 minute public presentation of 'The Sky Tonight' under a huge dome with perfect pinpoint sharp stars. The night sky is projected with so much detail, a pair of low power binoculars can be used to resolve the brighter deep sky objects, such as M13 and M31. After the public lecture, BAA visitors were treated to a private showing, with Polaris moved to the northern horizon and the whole night sky rotated slowly above. This gave members a new perspective, observing constellations and nebulae normally only seen from the Equator.

At 1:00pm members departed for trains, planes and automobiles. The ASG heaved a huge sigh of relief – the weekend had been a success. 'Haste ye back': we hope that members will return to Glasgow and Scotland in the near future – you will be sure of a warm welcome, but no guarantee of clear skies.

Tom Clackson, ASG Council

## The BAA visits Dublin in 2008 September

After the very successful 2007 meeting in Glasgow this year's out-of-London meeting will be at the Belfield Campus of University College Dublin and we will be guests of the Irish Astronomical Society. Planning is at an early stage but we expect the meeting to start with a reception on the Friday evening (September 5th) followed by a wide range of talks on Saturday 6th. On the days before and after the meeting we hope to arrange excursions to local sites of astronomical interest.

Travel from the UK to Dublin by air or sea is easy and economical, especially if booked early and we are looking into suitable hotels near the campus.

Put the dates in your diary now and keep an eye on the website for up-to-date news. More details will be included in the April Journal.



The restored 72-inch reflector at Birr Castle is around 2 hours away



The Dunsink Observatory near Dublin



The 5,000 year old Newgrange passage tomb is around an hour from Dublin and it has plenty of astronomical connections



The UCD campus at Belfield is the focus of the weekend's activities.

<http://britastro.org/dublinmeeting>