Hampstead Scientific Society
Astronomy Section

Annual report 2009/10 session

During the Summer break, before the resumption of the new session, we were contacted by Jane Bendall the Secretary of the Flamsteed Society, based at the ROG, requesting a visit to our Observatory on Sunday June 28th. Their members planned a picnic on the Heath, a visit to our Observatory and then a short pilgrimage to St. John's Church to look at the Harrison tomb. Accordingly on the day, over 40 visitors turned up for the event, the weather was hot and humid but the promised rain held off and all agreed that it was a grand day out.

Total solar eclipse 22nd July 2009

On 22nd of July there was a total eclipse of the Sun. Totality was confined to eastern Asia and the total phase lasted for close to 6 minutes. No part of this eclipse was visible from Hampstead, but Jim Brightwell, David Brown and Trevor Law journeyed to China to observe it. Unfortunately weather conditions were bad in south east Asia and the entire eclipse was clouded out.

Possible comet impact on Jupiter

Towards the end of July, it was reported that a possible comet/asteroid impact had occurred in the south polar region of Jupiter. Anthony Wesley, an Australian amateur discovered an elliptical dark marking in the SP region of Jupiter at about LCM (3) 315. on 19th July 2009 using a 14-inch Newtonian telescope. Simon opened the observatory on three nights, the 17th, 18th and 22nd of August and several members turned up. I wasn't sure that I could see the impact site on the 17th, the atmosphere was unsteady, but Simon reports that it was plainly visible on the 18 th. Plans were made to image the impact site on the 22nd but it clouded up around midnight before the site was visible. We tried again on the 25th but again the sky was murky. The site was on the CM at 22: 27 BST but it was not at all prominent, very difficult to see, it had probably faded since its discovery. But there was a nice shadow transit of Callisto and earlier a good view of the GRS.

Observatory working party Sept. 6th

Eight members of the section turned up for the annual working party on Sunday September 6th. A generally fine mild day contrasted with the last few years' sessions that took place on the hottest days of the years. The steps and path were cleared of weeds, which had grown prolifically during the warm wet summer, and the exterior of the whole building was given a much-needed coat of wood preservative. This also improved the appearance of the building, which celebrates its centenary in 2010. Simon also took the opportunity to bend up some aluminium strip for mounting brackets for the new finder that he has generously donated to the Observatory. Many thanks Simon! Thanks to all who took part and to Julia, who as usual, turned up with an assortment of sandwiches for lunch.

New session resumed

We are pleased to report that both Roger O'Brien and Ennio Tabone have been made demonstrators for the new session and we welcome new assistants Abigale Frost and Nik Beric. The new session of open nights was intended to resume on Friday September 11th. However, the weather conspired to delay the opening for 24 hours. The first clear Saturday evening of the session was well attended

and apart from Jupiter, visitors were treated to views of the International Space Station passing overhead and some meteor activity – Piscids?

At the same time, Terry Pearce and the Astro. Sec. attended the astronomical exhibition and weekend camp at Herstmonceux. Castle Sussex, once the home of the Royal Observatory. A couple of the big telescopes were operational and we viewed M13 with the 10-inch guide scope on the Thompson refractor and Jupiter with the 30-inch Cass. It was sad to see the condition of the optics on the latter instrument. The mirrors had not been re-coated since the RGO moved out and were in a parlous state. It is also a shame that the other instruments including the Yapp Reflector are not operational but are just there as static exhibits. After visiting the domes we then walked to the camp field and were treated to some superb views through an 18-inch Dobsonian, of M81 & M82, M31, M33, M57 & the Double Cluster in Perseus and we had superb views of Jupiter through 4-inch and 5-inch apochromat refractors. We were most fortunate that the event coincided with a very clear night.

Visit to the Hanwell Community Observatory

On September 18th the Astro Sec. and the Assistant Astro Sec. accompanied Terry Pearce to a meeting of the Hanwell Astronomical Society in Oxfordshire. Terry had recently completed the 30-inch mirror for their telescope and the meeting was organized to celebrate this and to show the progress on the huge new telescope. The telescope is a very strange design. The square tube is an open framework construction mounted as an altazimuth on a huge rotating platform on which the observer stands. When completed it will have a Nasmyth focus, with the eyepiece in the altitude pivot. Although we were favoured with a clear night, observations with the new telescope were not possible as there was still much work to be done to make it operational. Members of the Society and guests were addressed by the Chairman Chris Taylor and by Professor Alex Boksengberg who thanked all those who had contributed to the design, construction and funding of the telescope.

Visit by the London Appreciation Society Sept. 25th

On September 25th our observatory was visited by members of The London Appreciation Society. Over 20 members of the LAS turned up plus a dozen or so members of the public. We were fortunate to have a totally clear night and visitors were treated to views of a near first quarter moon, Jupiter and several Messier objects. The latter were viewed through Simon's newly acquired 12-inch Newtonian on a computerized Go-To mount. Once set up the telescope was able to find a number of interesting objects such as M13, M27, M57, M31, M33, M34. simply by typing the Messier number into the handset – very impressive. Thanks to Simon, Ennio Tabone, John Tennant, Slim Loghmari and Dan Pooley who came to help and entertain the visitors, all of whom expressed their thanks for an enjoyable and interesting visit and subsequently made a generous donation of £75 to Observatory funds.

It was decided to open the observatory on New Year's Eve Thursday 31st of December to observe several interesting events. The session was planned to begin at 4:30 pm to observe a shadow transit of Io. Then from 6:52 pm attention would be switched to the moon for a partial lunar eclipse. Not a large partial eclipse, only 13% immersed in earth's shadow and ending at 7:52 pm. Later. Mars

would be well placed for observation although showing only a small disk and still a month before opposition. In the event, the weather prevented any observations.

As we entered the Observatory centenary year it was decided to open on New Year's Day, weather permitting. Unfortunately, the weather did not permit, and shortly afterwards snow began to fall. The heavy snowfall prevented any observations at the beginning of January 2010 and then it was discovered that the lock on the outer gate had jammed preventing our access to the site. The Astro. Sec. contacted Thames Water as the gate and lock are technically their property and I was told that they 'had no budget' for carrying out such repairs and gave us permission to do whatever we deemed necessary to solve the problem. This effectively caused the observatory to be closed for the whole of January – not a good start to our centenary year. Once the snow had melted, the Astro. Sec. managed to sort out the problem with the gate lock and open nights resumed. Mars, in opposition on January 29th was well placed for observation in Cancer. Although not a close opposition and presenting a disk just 14 arcsec in diameter, some surface detail was well seen. The northern polar cap was tilted towards us resulting in good views of northern hemisphere features.

Because this was our centenary year it was decided to extend our session until mid May in order to give visitors a chance to see Saturn, the retreating Mars, Mercury, Venus and our exhibition set up for the centenary party on April 25th. On April 15th all aircraft were grounded due to a volcanic eruption in Iceland. The volcano caused a plume of volcanic ash to spread across the country driven by a northerly wind. The air travel ban lasted for six days and it was a treat to experience clear skies free from aircraft contrails. The seeing at the observatory on the night of 16th April was superb. There was no evidence of volcanic ash at Hampstead and Venus was seen below a slim crescent Moon just after sunset, but Mercury was obscured by trees and buildings. Later Mars was observed. Although its gibbous disk was quite small, it bore high magnification well in the calm air and the polar cap and some ill defined detail was seen. Saturn with its rings at a very narrow angle was very crisp and certainly impressed the visitors. The absence of aircraft pollution certainly made a difference.

Observatory centenary celebration

On Sunday April 25th 2010, the Hampstead Observatory and Meteorological Station celebrated its centenary. This occasion had been on our event horizon for some time and the Astro, sub Committee planned a full day celebration at the Observatory. This consisted of a party and exhibition for members and guests from 12:30 pm until 3:00 pm after which time it was opened to members of the public.

The week preceding the event saw many section members labouring long and hard to tidy up and redecorate the Observatory, transporting exhibition materials and erecting a marquee, in case the weather deteriorated, while others prepared copious quantities of food for the party. The day before the party was fine and sunny but the 25th dawned dull and showery, but this soon cleared up to allow some observations of the Sun to be made through hydrogen alpha telescopes brought by Brian Bond and Jerry Workman and a solar spectrometer set up by Jack Martin. Once again the Sun was devoid of sunspots, apparently loath to quit its last minimum, the deepest for over a century, but visitors were able to see a prominence or two.

Our guests included Peter Hingley from the RAS, Richard McKim and Bob Marriott from the BAA and members of ASH, WOLAS and Loughton Astronomical Societies.

The President made a short speech detailing the early history of the Observatory and thanking all those members of the section who had helped to make this a memorable occasion in particular Simon Lang who had worked late into the night to make sure everything was ready. The President then handed over to the Meteorological Secretary, Philip Eden, who described how the Meteorological Section now boasted a century of daily readings from the same site. Philip was then presented with two commemorative plaques by Steve Haynes from the Meteorological Office, one for himself and the other to hang in the Observatory. All present then drank a toast to the Observatory's centenary with the hope that it would continue its contribution to astronomy and meteorology for at least another 100 years.

Upwards of 80 people, comprising members, guests and visitors enjoyed the exhibition and party which carried on into the late afternoon. All who attended agreed that it was an unqualified success.

The President wishes to thank all those members who worked so hard to prepare the Observatory, and all those who donated food, and brought instruments, making this a very special, enjoyable and memorable occasion.

Public open nights continued until May 16th in order to give visitors the chance to see the exhibition and take a last look at Saturn with the ring system almost edge-on. During this session over 1000 visitors came to the Observatory – a great result in our centenary year.

Doug Daniels (Astro. Sec.)