

Although the Observatory is closed to the public during the summer months, the work of the Astronomy Section still carries on. So on the night of Aug. 12th - 13th 2002, Simon Lang and I went to Paul Clements' cottage near Ware Herts. to observe the annual Perseid meteors. For once conditions were ideal with a fairly dark sky, a rare clear night and no moon. A fairly good display was seen and two meteors actually photographed.

Also in August on the 17th - 18th, we were alerted to an Earth grazing asteroid 2002 NY40, which was expected to be visible as a 9th mag. object. The asteroid approached the Earth at a distance of 530,000 kms, just beyond the moon's orbit, so not that close! The asteroid was moving through Sagitta and Vulpecula at a speed of 5 arc mins./min. At 00.26 hrs on August 18th, it was due to pass just 14.5 arc mins. south of alpha Vulpeculae. I prepared to photograph it but of course it was CLOUDY. The asteroid will make another close approach to Earth on 18 Aug. 2022 when the predicted chance of an impact with Earth will be about 1 in 500,000 but I probably won't be in a position to photograph it then!

The session of open nights began on September 13th and I hope that the Meteorological Secretary will forgive me for encroaching on his report, but I fear that Meteorology has been the main feature of this session!

From mid September until the New Year, there were a *possible* 48 nights when the Observatory could have been open. In the event 42 nights were totally clouded out. From October 18th to December 28th there was not a single Friday or Saturday evening or Sunday morning that was clear. That is an interval of 10 successive weeks when observations were impossible. The remaining part of the session from Jan. 3rd 2003 to closure at Easter, fared a little better. Out of 46 possible open nights 27 were clouded out. I cannot remember a session so cloud ridden. This was a great pity as both Jupiter and Saturn were well placed for observation and Saturn's ring system was fully open. The appalling weather prevented any sustained observations of these planets and few images were secured. On the rare occasions when it was reasonably cloud free, the definition was very bad with much turbulence possibly caused by high altitude rapidly moving air streams.

Once again the Society participated in Science Week, which began on March 7th. The Section's contribution to this event was to open the Observatory on every clear night during the week, which together with the two weekends gave a total of 10 possible openings. Once again the weather limited our activities to just 3 nights. This was however, an improvement on last years' effort.

Despite the appalling weather, public attendance at the Observatory has been very good on the few nights that *were* clear and this was reflected in the fund box takings which were surprisingly good. The open evenings ended on April 19th.

On May 7th Mercury transited the Sun. The transit began at 05 hrs. 12 mins. 53 secs. and ended at 10 hrs 31 mins. 42 secs. Simon Lang kindly volunteered to open the Observatory for those members who fancied an early morning session and several took advantage of it. For once it was actually clear and I managed to secure some nice digital images with my 150mm Helios refractor fitted with a 102mm objective filter produced by Terry Pearce. The early part of the transit was however, ruined by aircraft contrails, several of which criss crossed the Sun and persisted for a very long time. Aircraft contrails are yet another form of pollution that is on the increase and which we have now to suffer.

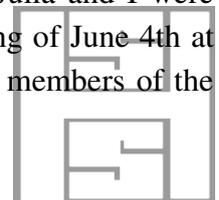
The Observatory was once again opened for two nights on May 10th and 11th as part of the Hampstead and Highgate Festival. Both sessions were again fully booked and 25 people attended on both occasions. Although both sessions began with cloud, this fortunately cleared sufficiently to allow the visitors a glimpse of Jupiter and the Moon. This event raises funds for the Observatory as the visitors actually pay for the privilege of attending and it raises the Society's profile by introducing some science in to what is predominately an 'artistic' event.

The Total Lunar eclipse of May 16th turned out to be a non-event. The sky was reasonably clear at midnight and we had high hopes but it clouded up totally before the umbral stage began at 02.03 hrs. and it was raining before totality commenced at 03.14 hrs. In any event the moon was very low in the south and it would have been difficult to obtain any good images. We look forward to the next total lunar eclipse on November 9th, when conditions *might* be more favourable with the moon at higher declination.

May 2003 has been a busy month and at sunrise on the 31st there was an annular eclipse of the Sun. The true annular phase was only observable from the far north of Scotland. Greatest eclipse occurred at Lat. 66 degrees 33.2 mins. N with a duration of a little over 3½ minutes.

From London only a partial eclipse was observable at sunrise. The event required a very early start as the sun rose at 03.50 hrs and the eclipse ended at 06. 30 hrs. In the event, cloud and sea mist limited observations from Scotland, but Simon Lang observed a thin crescent rising above the sea horizon from Flamborough Head and Martin Williams saw the partial eclipse from the roof of High Point in Highgate.

Astronomers have been suffering the increasing adverse effects of light pollution for many years now and this Society has always supported the efforts of the Campaign for Dark Skies. I was more than happy therefore, to be invited to submit evidence to be presented to a Parliamentary Science and Technology Committee inquiry into 'Light pollution and Astronomy.' My written report concerning the increased threat imposed by this pollution to the study of astronomy in this country was used as part of the evidence brought before the Parliamentary Committee. Julia and I were invited to attend a meeting at the old Royal Observatory Greenwich on the evening of June 4th at which presentations were made by both amateur and professional astronomers to members of the



Parliamentary Committee.

We put forward our views deploring the lack of legislation and control of street lighting, security lighting, sports floodlighting and advertising lighting, pointing out that the night sky was a 'Site of Special Scientific Interest' (SSSI) which has as yet, no laws formulated to protect it. Many images of light polluted skies were shown caused by badly designed and positioned lighting fixtures as well as examples of well designed light fixtures which are available to caring local authorities if only they had the will or incentive to install them.

It was also pointed out that poor lighting wastes energy, wastes money and contributes to global warming via emissions of 'greenhouse gases' which the Government has agreed to substantially reduce.

We were able to converse informally with members of Parliament during refreshments and afterwards they were treated to a short presentation in the Planetarium to demonstrate a 'proper' dark sky. We then proceeded to the dome of the 28-inch telescope to view the Moon which had obligingly made a brief appearance through patchy cloud.

It is hoped that this exercise may at last result in some positive actions to limit the insidious spread of light pollution which is ruining the study of astronomy in this country.

As you can see from this report, despite bad weather the section has had a fairly busy year and this has, at times meant extra manning at the Observatory to cover the extra events. Our thanks to all demonstrators and assistants for taking part and for their continued enthusiastic support.

Doug Daniels (Astronomy Secretary)

