Notes and News

From the President

The excitement and awe of astronomy

With this February 2006 issue of the *Journal*, we have entered another new year with all the excitement and anticipation that brings. We at the BAA are looking forward to our two Out-of-London meetings; one on the weekend of April 21–23 in Liverpool, the other at the British National Space Centre in Leicester on September 2. We also have more 'Back to Basics' meetings and Observers' Workshops planned as well as several Observing Section get-togethers in the pipeline. I hope to attend as many of these gatherings as possible and look forward to meeting you there.

I have to admit that my interest in astronomy and my affection for the subject in part stems from its unpredictability, the surprises that it has to offer. As each year goes by, something new appears in our sky which is accessible to the amateur, or a new discovery is achieved by one or other of the giant ground-based telescopes or space probes. What has 2006 in store for us? Phenomena such as eclipses, favourable planetary apparitions or approaches by periodic comets are readily predictable, but what has Mother Nature prepared for us during the coming months? Possibly a bright nova (one must be overdue by now!), a bright Earth-approaching asteroid as yet unknown, a spectacular comet arriving from the Oort cloud or even, shudder the thought, a supernova in our own Milky Way galaxy reaching say magnitude –4 or –5. There is a real chance that any or all of these events could take place during 2006 and the few years that follow. I shall keep my fingers crossed in anticipation of an exciting time ahead.

Supernova 1987a and the Tarantula Nebula, about two weeks after outburst. An SN in our own Milky Way galaxy is overdue. *Anglo-Australian Telescope*.

Closer to home we have a number of important changes which we expect to begin this year. Last August, my predecessor Tom Boles indicated that the Royal Astronomical Society will be undertaking a complete refurbishment of the interior of Burlington House, of which we the BAA currently occupy three rooms on the top floor. Six months on, I can now share with you something of the plans that are in the pipeline.

Firstly, it is planned that access will be greatly improved with a lift being installed at the far left of the building permitting wheelchair access to the upper floors. The use of a lift will be a great boon to BAA staff since the plan is for the office to be located again on the second floor: no more the labours of Sisyphus carrying boxes up long flights of stairs only to return back down with yet more material! Although I can never quite decide which is more arduous, climbing or descending the stairs, I can assure you that it is a good way of keeping fit.

Important decisions still need to be made in relation to the BAA Library, which is currently housed in the largest of our three rented rooms. An in depth assessment of the options will be made by the re-formed Library Committee comprising our Honorary Librarian Tony Kinder, Dick Chambers, Peter Hudson, Richard McKim and myself. Richard has had a long experience of the Library having been instrumental in producing an inventory of its contents in 1981, which has been maintained by Tony. Once this assessment has been completed, we shall report our recommendations to Council. The current proposal is to combine part of our Library with that of the RAS in a seamless manner but in such a way that BAA-owned

Calling all new members!

In October Council appointed Martin Morgan–Taylor to the new position of New Members' Co-ordinator, with the specific task of helping new members to get the most from their membership of the Association. Martin introduces himself below.

Hello! Please let me introduce myself as your New Members' Coordinator, and say a few words about myself and my role in the Association. I am an active deep sky and planetary imager, as well as a regular speaker at regional astronomical societies. I am also President of the Northamptonshire Natural History Society, which provides a regular venue for BAA Section meetings.

My task as New Members' Coordinator is quite simple; I aim to help 'knit' newcomers of all abilities into the Association, so that we may all benefit from one another. Each of us has something to offer and I can help you to find answers to your questions. In short, I am a first port of call and a go-between to some degree.

As a leading international scientific association, our membership is spread throughout the world, and my role is to help to break down the barriers that distance may create. Not everyone will be able to attend meetings, but all should be able to obtain maximum benefit from the Association.

You may be unsure whom to ask about an issue, and I will be setting up a New Members' Zone on the Association website in the new year which will provide answers to 'FAQs', your frequently asked general questions. So I hope I can point you in the right direction. We have many different Sections, some of which have newsletters; others hold Section meetings. All welcome new members of every ability. Some Sections such as Instruments and Imaging are cross-discipline – for example it has recently held meetings concerning planetary webcam imaging and deep sky imaging involving different techniques.

There will also be a number of exciting new members' projects, where newcomers will have the opportunity to engage in the construction of simple equipment, or start some meaningful science. For example, the Minor Planets Section website carries some simple projects on following some of the brighter asteroids: see **http://homepage.ntlworld.com/roger.dymock/Vis%20obs.htm.**

Please do contact me if you need direction, or introduce yourself at a meeting. I am here to help you get the most out of your Association. My E-mail address is **mart@dmu.ac.uk**: I look forward to hearing from you!

Martin Morgan–Taylor

literature is clearly identified: this would allow BAA members access to the combined RAS/BAA collection during normal working hours as well as on some Saturdays.

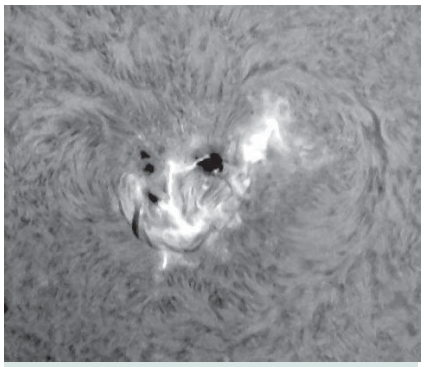
One major change to the layout of Burlington House will be the provision of a lecture theatre on the ground floor seating upwards of 100 people. We could expect to hold our January, February, March, May, October and November meetings each year at Burlington House: the Christmas meeting usually attracts a larger audience and so on these occasions, we shall probably have to move to an alternative larger capacity venue.

The planned refurbishment is expected to start late this year and will require approximately 12 months to complete, during which time we shall relocate the BAA office to temporary accommodation at a nearby location: more of that anon. In the meantime we shall be using the move as an opportunity to streamline our operation still further. Hopefully by the time I relinquish my present role and hand over to a new President in October next year, all of these improvements will have been put in place.

As well as looking forward to the future, I must also look over my shoulder at times gone by. This issue of the *Journal* is something of an anniversary issue for me as I have to confess that I am celebrating 40 years as a member of the Association, having been elected on 1966 January 26. The mid-1960s were a remarkable time, with the dawning of the Space Age well underway and the prospect of humans landing on the Moon and returning safely to Earth. Even though four decades have now passed, we still seem to be witnessing a voyage of astronomical discovery. I continue to be enthralled and entertained by what happens in 'outer space'. Hopefully you also get that selfsame kick that you remember from your earliest astronomical experiences: when you too were struck with wonder and awe at some unusual or spectacular event in the night sky.

Richard Miles, *President*

Solar Section



Close-up image of type 2n flare in AR 808 at –11°/ E26° taken on Sept 12 at 10:00UT. *Eric Strach*.

2005 September

The month started quietly with a single sunspot on the disk in the southern hemisphere and a blank northern hemisphere. The single penumbral spot (AR 805) at –10°/24° was in its second rotation, having been previously observed on August 1 as AR 794 at –12°/25°. After crossing the CM on Sept 4 it started to decay and died on the disk on Sept 7.

The lull of northern inactivity was broken on Sept 9 by the appearance of a small spot at +10°/242° (AR 809) but it did not develop and was no longer visible after Sept 11.

One spot group dominated activity during the month, the return of AR 798 first seen between August 14 & 24. This group, AR808, was first seen on Sept 8 as an irregular penumbral spot close to the eastern limb at –10°/231°. On Sept 9 it still comprised a single irregular penumbral spot containing several umbrae and one other spot at the leading position. It was of type Ekc. Other smaller penumbral spots had developed around the main spot by Sept 10; the total area was estimated to be 930 millionths. When next seen two days later, the appearance of the group had changed considerably; now there were many penumbral spots throughout the length of the group with the largest being in the middle. The total area was now 810 millionths. The group had a similar appearance on Sept 13 although its length had increased slightly to make it type Fkc and it was nearing the central meridian. By Sept 16 the now Ekc group had its largest spot at the leading part of the group with a few small penumbral spots following, and the total area had reduced to 540 millionths. This group had further reduced in size by Sept 17 when it was of type Eac and had an area of 320 millionths. It was last seen on Sept 19 as an Hax spot close to the eastern limb.

The northern hemisphere was seen spotless from Sept 1 to 4, 12 and 16 while the southern hemisphere was seen spotless on Sept 7, 22 and 23.

Hydrogen alpha

Prominences

The prominence MDF for September was 5.0 (9 observers).

The MDF was slightly up on last month, but remains at a low level. Despite this, very active prominences were seen at 07:40 UT on Sept 2 on the NW limb at N27º to N36º. At 07:55 one of the spikes erupted as a jet reaching a height of 200,000km, with faint streamers running like curtains southwards towards the limb. The appearance changed continuously and by 10:54 UT the turmoil had quietened down (see image). Some remnants were still seen on Sept 3 at N35º and N38º.

Image taken on Sept 2 at 08:57UT showing prominence on the NW limb. *Eric Strach*.

On Sept 7 a low hedgerow type was seen on the W limb at –09º to –21º, also a half-loop type was seen on the E limb at –10° which developed into a full loop on Sept 8.

Filaments

A dense filament was seen near the W limb on Sept 6, extending from S08º to S20º. It was seen as a hedgerow prominence on Sept 7 as described above. Filaments surrounded the 'giant' spot group AR 808 and penetrated into the midst of the group.

Flares

AR 808 was very flare-active with reported activity on all days from Sept 8 to 17 and 19.

The following report was received from Brian Mitchell:

'On Sept 8 it (AR 808) appeared at –10°/230° on the east limb under a magnificent large arch prominence, multi-stranded but very circular and estimated to be between 30 to 40,000km high. As it crossed the disk, very hot strands of plage were seen in and around the spot group, with arched filaments appearing around the group. Plage activity was strongest as the group crossed the CM on Sept 14.'

2005 October

October saw a sharp downturn in solar activity with an MDF of only 0.66 compared with 1.47 for the previous month. There were 10 days with no recorded sunspot activity.

On Oct 4, a bipolar group was observed at –08º/286º consisting of 3 penumbral spots and many small spots. The next reported observation on Oct 9 showed the group had disappeared, but there was a bright plage in a similar position.

A single spot was seen on Oct 30 at –08°/290°, a return of AR 813, which must have survived the passage on the averted side of the Sun. On the following day this spot had changed into an elongated group, spanning just over 10° of longitude. Although still very faint on Nov 1, it expanded even further to 15° with a spot count of 17.

Hydrogen alpha

In contrast to the paucity of sunspots in October, the prominence count was the highest recorded so far this year. The average MDF of the 7 observers who submitted reports was 6.0.

Prominences

A pyramidal prominence was seen on the W limb at +18° on the Oct 2. It veered northwards. On Oct 5 two interactive prominences were seen in a similar position.

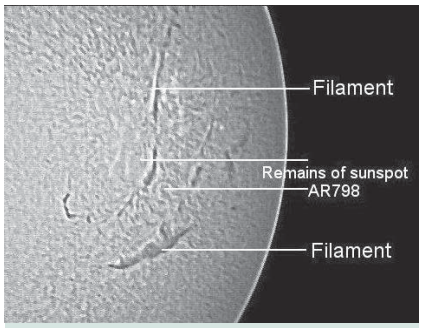
A hedgerow prominence was seen on Oct 5 at –08° to –19° on the W limb. On Oct 15 a small prominence was seen at +01° on the W limb and seemed to be the continuation of a filament (see below). On the following day this prominence was arch shaped at 09:25 UT but at 11:00 UT it consisted of two pillars connected by fine jets.

On Oct 17 a low but extensive and intricate prominence was seen on the W limb extending from –08° to –29°, undoubtedly the same structure as the largest filament described below. On Oct 19 and 20 four interactive prominences were seen on the E limb at +22° to +34°. On Oct 21 the most northerly became a slender high pillar at +36°.

Filaments

Three remarkable filaments were seen on October 10 in the southern hemisphere, the two largest crossing the CM, the smallest and most southerly being to the W of the CM. It is estimated that the most northerly S-shaped filament equalled the length of the solar radius, whilst the middle filament was three-quarters of its length. Observers on Oct 13 saw them partly fragmented. On Oct 15 the largest filament was approaching the W limb and the most northerly had reached the W limb just south of the equator and continued as the small prominence described above. The next day almost the whole filament was hugging the limb whilst a prominence at –26°, the remnant of the 'middle' filament, veered northwards.

On Oct 21 a lazy S-shaped filament seemed to have arisen from the slender high prominence at 36° N described above. This filament crossed the CM on Oct 27 and was last observed on Oct 30 as a gently undulating structure extending from 42° N obliquely to the W limb at 25° N.



The solar disk imaged in H-alpha at 13:00 UT on 2005 Oct 13 by Peter Paice, Belfast.

Mike Beales, *Director*

BAA sunspot data, 2005 September–October

	September		*October*	
Day	*g*	*R*	*g*	*R*
1	2	19	1	8
2	1	17	1	10
3	1	13	0	0
4	1	12	1	20
5	1	11	1	20
6	1	10	1	20
7	1	15	1	18
8	2	28	1	15
9	2	36	1	9
10	2	44	1	11
11	2	49	1	9
12	1	48	1	11
13	1	58	0	0
14	1	48	1	14
15	1	47	1	11
16	1	39	1	13
17	2	47	1	16
18	2	50	1	11
19	2	34	1	16
20	1	20	1	10
21	1	19	1	11
22	1	19	0	0
23	1	21	0	0
24	2	22	0	0
25	2	22	0	0
26	2	29	0	0
27	2	22	0	0
28	2	20	0	1
29	2	19	0	0
30	1	7	1	10
31			1	17
MDFg		1.47 (48)		0.66 (50)

North & south MDF of active areas g

	MDFNg	*MDFSg*
September	0.57	0.84 (33)
October	0.25	0.42 (33)

g = active areas (AAs)
MDF = mean daily frequency
R = relative sunspot number
The number of observers is given in brackets.

Campaign for Dark Skies

Newcastle and North Tyneside light the way

On 2005 November 11, in the imposing surroundings of Newcastle United's vast St James' Park Stadium, the BAA Campaign for Dark Skies recognised the much improved lighting now being installed in the Newcastle and North Tyneside area. This PFI scheme, worth £6 million, will see the replacement of nearly 60,000 streetlamps over the next five years. WRTL Exterior Lighting are supplying 'Arc' luminaires, with emissions carefully downward-directed. This should mean a considerable reduction in skyglow, and better visibility of the night sky, in and around the area as the scheme proceeds.

Bob Mizon, CfDS co-ordinator, presented seven BAA Good Lighting Awards to the various partners involved in financing, supplying and installing the replacement luminaires: Eclipse Partnership, Newcastle City Council, North Tyneside Council, Royal Bank of Scotland, Scottish and Southern Energy, Southern Electrical Contracting, and WRTL Exterior Lighting.

From left to right, the photo shows Bob Mizon, CfDS; Clr John Shipley, Newcastle City Council; Martin Swales, Strategic Director of Development, North Tyneside Council; Ray Stowell, Managing Director, Southern Electric Contracting; Mark Burrows, Partner, Eclipse Partnership; Larry Fidler, Partner, Eclipse Partnership and Derek Millar, PFI Manager, WRTL Exterior Lighting.

Bob Mizon, *Coordinator*

Mars Section

Mars in 2005: First interim report

Mars was at perihelic opposition on 2005 November 7, and a huge number of observations – as yet too many even to count – has been received from 95 persons. These date from as long ago as 2004 November, and daily coverage has been achieved for many consecutive months. The seasonal retreat of the S. polar cap has been well followed, and the diurnal and orographic clouds have lately been attracting interest. The closeness of the approach enabled many superb images, videos and drawings to be made. Damian Peach's image on the front cover of this issue is a splendid example of his work. In this short note we focus purely upon the exciting recent dust storm activity. Smaller scale activity was observed earlier in the apparition, but in October there was a regional-scale event.

The following dust storm alert appeared in *BAA E-Circular* No. 204 dated 2005 October 21: 'A significant martian dust storm is presently occupying much of the length of the great *Valles Marineris* canyon system, and is apparently still spreading. The event began as a small yellow cloud located just W. of *Margaritifer Sinus* on the S. border of *Chryse* on 2005 October 13. After a few days, activity seemed to cease, but on October 18 there was a strong resurgence, with dust moving north across *Chryse*, whilst a second bright core appeared further west near *Aurorae Sinus*. Dust then rapidly spread along *Valles Marineris*. The region was observed by the Director before dawn this morning, October 20, when the dust storm was seen to have expanded further.'

'Another dust disturbance occurred on October 17, at the W. border of SE *Tempe*. Beginning at Ls = 306° (October 13), this dust storm – in terms of both Martian date and location – is similar to the large regional storm that took place at Ls = 315° (2003 December 13) near the end of the last opposition. It also resembles local or regional events from the 1990 and 1992 oppositions (in a very similar location) that occurred at Ls = 308° and 316° respectively. (For full details of the 2003 event, see the *6th Interim Report* on Mars at its 2003 opposition, available at the BAA Mars Section homepage: http://www.britastro.org/mars)'

'For the historical storms see the writer's monograph on *Telescopic martian dust storms*, BAA *Memoirs*, volume 44 (1999). Other historical examples could be quoted, at similar Ls and in a similar location, right back to 1879. Historical records show that the present event is unlikely to develop into a planet-encircling event, but it could yet spread further. The seasonally latest encircling storm started in 1924 December at Ls = 311°, but only storms that began in *Hellas*, *Noachis* or near *Solis Lacus* ever achieved encircling status.'

BAA Circular No. 800 also carried this news. Although few UK observers could witness the event, it was well seen from the USA, and an excellent series of images by Clay Sherrod appears on the front cover. By October 21, fingers of dust had spread into (or more likely, secondary dust cores had freshly arisen over) N. *Argyre* and southern *Solis Lacus*. The *Argyre* activity rapidly spread southeast into S. *Noachis* and began to impinge upon the S. polar cap. On October 28 a spectacular resurgence of activity occurred over *Margaritifer Sinus–Aram (Thymiamata)*, as the original core of the storm was decaying. This latter activity (captured in detail by the HST) expanded to the SE, and by October 30, *Meridiani Sinus* was greatly obscured. The small summer SPC was affected by the dust, becoming faint and hard to see.

The international nature of our Mars patrol enabled the daily course of the storm to be followed in detail. The dust reached and dimmed *Hellespontus* to the east, but no dust core arose in neighbouring *Hellas*, nor did the event penetrate beyond *Solis Lacus* to the west. The event did not last more than a few weeks, but a persistent dusty haze veiled some of the markings – especially around *Noachis–Argyre–Margaritifer Sinus* – for some time after.

There will be a huge amount of material available for later analysis, and I hope our members will help to keep a full daily record of the planet going for several months yet.

Richard McKim, *Director*

Cover images – Dust in the 'Eye of Mars'

The cover of this issue presents a montage of the recent perihelic opposition of Mars supplied by the Section Director. Ten small images by Clay Sherrod (400mm Ritchie–Chrétien, f/32, Arkansas Sky Observatory, USA, stacked webcam images) show the progress of the large regional dust storm that began in S. *Chryse*–E. *Valles Marineris* and then expanded to the south, east and west to blow dust into the 'Eye of Mars' (*Solis Lacus*). Left column, top to bottom: 2005 October 18, 19, 20, 21, 23; right column, top to bottom: October 26, 27, 28, 29, 30.

The large centre image secured on 2005 November 6 (23h 05m UT, CML = 138°) by Damian Peach (355mm Schmidt–Cass., f/40, Loudwater, Bucks., UK, stacked webcam images) shows Mars after the storm, and is arguably the finest amateur image ever obtained of the planet. It shows a large and complex *Solis Lacus* to the upper left, a dull S. polar cap, the bright *Olympus Mons* passing the CM in the north, and a bluish N. polar hood.

Aurora Section

2005 September

The magnetic storm of Sept 02/03, with a maximum Kp value of 7–, followed that of August 31 and was part of a 27-day repetitive cycle traceable back to May 2005.

A large active sunspot group appeared on the eastern solar limb on Sept 07. The nine X-class flares it generated resulted in a period of very active geomagnetic activity from September 09 to 17. Storm sudden commencements were reported on Sept 09, 11, 12 and 15. The planetary magnetic index Kp reached 8– on Sept 11 and 7 on 11 and 15. Relatively quiet conditions obtained from Sept 20 to 24.

Our geomagnetic observers Tony Rickwood (Ullapool), Jim Henderson (Kincardine O'Neil), David Pettitt (Carlisle) and Karl Lewis (Saltash) all observed the above activity on their automatic self-recording instruments, which gave 24-hour coverage with due allowance for the effects of latitude and design of equipment.

Ron Livesey (Edinburgh) manually read his suspended magnet instrument only in the evenings, to detect variations in the hotizontal field direction D, and noted stormy conditions on Sept 09, 10, 12 and 15. As sometimes happens disturbed conditions observed, particularly on Sept 21 and 22, did not correspond with the quiet conditions recorded at Eskdalemuir Observatory of the British Geological Survey and by our other observers.

According to a NASA report, red aurora of unspecified form was seen from Arizona on Sept 10/11 and 11/12. John Boyko at Detroit observed a white auroral glow on 10/11. Jay Brausch recorded major aurorae on Sept 10/11 and 11/12 at Glen Ullin, North Dakota. He observed active aurora also on 02/03 with lesser events on 01/02, 03/04, 04/05, 09/10, 12/13, 13/14, 14/15, 16/17 and 25/26. Holger Anderson at Vildbjerg in Denmark recorded a big auroral glow on 12/13 to an elevation of 50°.

In the UK Tony Rickwood recorded a glow on 09/10, 10/11 and 26/27. Jim Henderson reported a glow on 02/03, 15/16 and 27/28, Ian Brantingham near Banff noted a glow on 02/03, 09/10 and 26/27 and Dave Gavine recorded a glow at Elgin on 02/03 and at Edinburgh on 15/16. Ken Kennedy at Broughty Ferry detected a glow on 14/15, and Alastair McBeath at Morpeth reported glows on 12/13. Observations were hampered by cloud cover and no major auroral activity was detected to match the magnetic storms, although it could have been present.

2005 October

The magnetic field was quieter than in September. There was an active period from Oct 01 to 03 with a maximum planetary magnetic index Kp of 4– on the morning of Oct 02. There was a more active period from Oct 07 to 10 with a maximum Kp of 5– in the late evening of Oct 07. A Kp of 4+ was reached on the morning of Oct 17. A short burst of active conditions took place around midnight on 21/22 with a Kp of 4. Further active spells appeared on Oct 25 to 27 and in the evening of Oct 31 when Kp maxima were respectively 4 and 5.

Our magnetic observers in the local longitude zone identified disturbed periods on Oct 01 to 03, 07, 09, 19, 27 and 30. Very disturbed conditions were observed on Oct 08, 25 and 31.

On the evening of Oct 08/09 Ian Brantingham near Banff noted quiet glows, arcs and rays to a maximum elevation of 20°. Alastair Simmons near Milngavie later that same evening observed a quiet homogeneous arc.

Laars Poort, our observer in Greenland, has now moved to Thule not far from the magnetic pole. Consequently he turns south to observe aurorae. On the night of Oct 24/25 he noted an active fragment of rayed veil to an elevation of 45°.

On the evening of Oct 25/26 Dave Gavine at Edinburgh saw auroral light through cloud, while on 26/27 Howard Miles at Pityme in Cornwall reported an unusual quiet glow. Although at a low latitude, Howard has in the past recorded a number of aurorae which have been confirmed by other observers and by magnetometry. The possibility of seeing auroral light from Cornwall should not be dismissed out of hand. However, on occasion it has been shown that ice crystals in the upper atmosphere have reflected light from towns and from oil refinery flares to produce false auroral glows.

On the night of Oct 31/Nov 01 Tony Rickwood at Ullapool saw a quiet glow while Ian Brantingham near Banff noted glows and rays reaching to a maximum elevation of 25°.

R. J. Livesey, *Director*

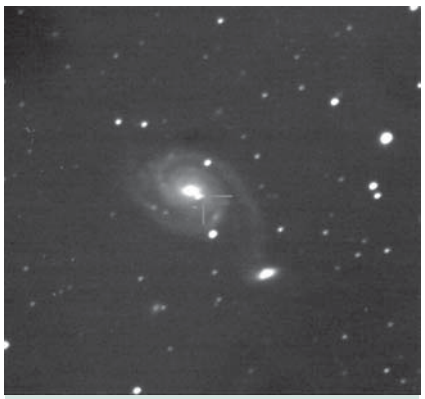
Tom Boles bags the first supernova of 2006

Ex-BAA President Tom Boles was able to claim the first supernova discovered in 2006 during a short break in cloud cover on January 2. The supernova was found at January 02.856 in galaxy NGC 7753 with a magnitude of 18.1. It appeared on IAU *Circular* no. 8656 of 2006 January 6, where it was designated Supernova 2006A.

The object was confirmed by W. Li with the 76cm KAIT survey telescope at the Lick Observatory on January 05.108. Poor weather in the UK prevented definite confirmation by observers here, but traces of the object are visible on an unfiltered CCD image taken by Gordon Rogers at Long Crendon on January 04.794.

Nothing is visible at the location of the SN on Tom Boles' master images of 2005 Oct 10 and 2005 Sept 24 (limiting mag 19.5), or on a beautiful image of NGC 7753 that can be found on the Internet at **www.noao.edu/outreach/aop/observers/n7753.html.** The object is in the constellation of Pegasus and is one of Halton Arp's examples of peculiar interacting galaxies.

Hazel McGee



Discovery image of supernova 2006A. 350mm SCT, 2005 Jan 2.856 UT. *T. Boles.*

The Asteroids and Remote Planets Section

Following a lengthy period of ill-health, former ARPS Director Andy Hollis sadly passed away on 2005 November 21 (an obituary appears on page 48). He had already relinquished the position of Section Director which he had held for the past twenty-one years. At the November Council meeting I was formally appointed to that role, and I would first like to thank Andy for creating and running the Section for so many years, and Richard Miles, Assistant Director, for holding the fort in more recent times.

Roger Dymock

Asteroids of the near Earth variety have been making headlines for some years – almost certain impacts (according to the media) always, fortunately, turning into definite near misses. The remote planets, Uranus and Neptune, have been left out in the cold being rather overshadowed by the *Cassini/Huygens* mission to their neighbour, Saturn. Pluto of course is fighting to hold on to its 'planet' title following the discovery of other similar sized Edgworth–Kuiper Belt objects.

Much has changed in the asteroid world during the twenty-one years of the Section's existence. For most of this period visual observations, occultations, and photoelectric photometry, all involving main belt asteroids, formed the major part of the Section's activities. Since then the advent of CCD cameras has allowed amateurs to obtain astrometric and photometric data of NEOs and even Edgworth–Kuiper belt objects. Accurate lightcurves of main belt asteroids are readily obtainable also by use of CCD cameras.

With so much increased activity the ARPS will, in future, concentrate its efforts on the minor planets. The Director of the Saturn Section, David Graham, has kindly agreed to incorporate observations of Uranus and Neptune into his Section's activities.

One of my first tasks as Director will be to identify those BAA members who are interested in any aspect of the celestial bodies for which this Section is responsible. These include visual telescopic observations, imaging (photographic, CCD, webcam), virtual observing using on-line resources, orbital motion, the impact hazard, history of discovery and observation, general understanding of the planets and minor planets and space missions to those bodies. My objective is that the Section should be able to offer something to everyone: active, virtual and armchair observers. If you wish to contribute to the running of the Section in any shape or form then I would be more than happy to hear from you.

If you are interested, please contact me:

Email: **roger.dymock@ntlworld.com**
Post: 67 Haslar Crescent, Waterlooville, Hampshire, PO7 6DD
Phone: 023 9264 7986

Roger Dymock, *Director*

Deep Sky Section

Observing the planetary nebula NGC 1514

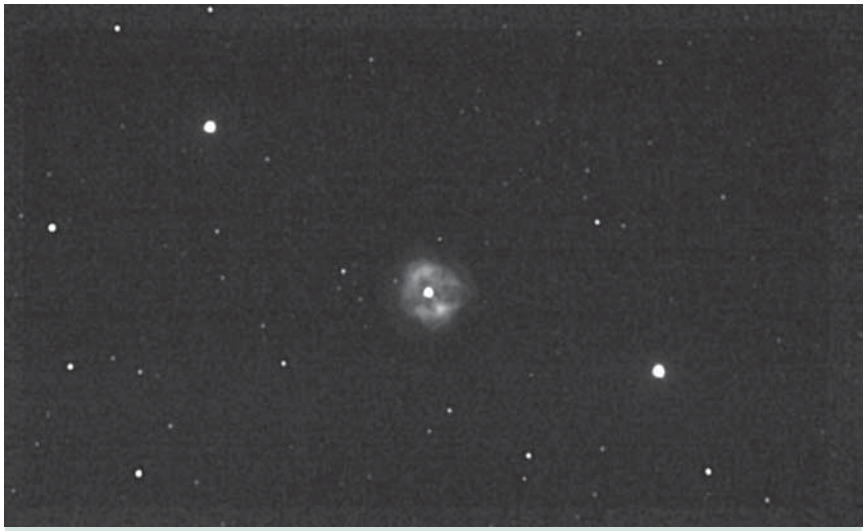


Image of NGC 1514 by Martin Morgan–Taylor, Glenfield, Leicester, UK. 200mm f/6 Cape Newise reflector. 6′ 6min stacked images through OIII filter. Processed in IRIS and finished in *Photoshop*. Canon 20D at 400ISO in RAW mode. North up. 2005 Nov 11, approx. 03:00 UT.

On 1790 November 13 William Herschel swept up an object in Taurus that was to change his opinion of the nature of deep sky objects. Up until that time it had generally been assumed that all nebulae could be resolved into stars if only a telescope of sufficiently large aperture were used. However this object, number 69 in his class IV nebulae (planetary nebulae), contained a star centrally in the nebulous envelope that was clearly associated with it. In his own words '...a most singular phenomenon; a st8m. with a faint luminous atmosphere of a circular form, about 3' in diameter. The star is perfectly in the centre, and the atmosphere is so diluted, faint, and equal throughout, that there can be no surmise of its consisting of stars, nor can there be a doubt of the evident connection between the atmosphere and the star. Another star, not much less in brightness, and in the same field with the above, was perfectly free from any such appearance.'

This object is the planetary nebula now catalogued as NGC 1514. Located at RA 4h 9.28m and dec. +30° 46.55 min (2000.0), it rides high in the winter night sky transiting at 19:30UT in mid-February. Visually it is a very rewarding object, and it is easy to see how Herschel was convinced that the star and envelope were connected. This is also an object that responds well to averted vision, particularly with an OIII filter, when it becomes a superb object with the central star still visible. Without the filter the disc is uniform and featureless, while with it there is a small fainter portion on the NW rim and the whole disc has a brighter and more mottled appearance. This is one of the best planetaries in the sky for demonstrating the benefits of nebula filters.

The image shown here was obtained by Section member Martin Morgan–Taylor. Martin commented that only six frames were obtained as at 3 a.m. both telescope and operator were suffering from severe dewing problems.

Stewart L. Moore, *Director*

Deep Sky Section Annual Meeting

The Deep Sky Section returns to Northampton again this year for the annual meeting which takes place on March 4 at the Humfrey Rooms, Castilian Terrace. This year the admission charge has risen slightly to try to make the meeting self-financing, but it is still excellent value as it includes refreshments throughout the day in addition to a buffet lunch. Doors will open at 10am to allow people to set up displays, with the meeting starting at 11am.

This year the speakers include Guy Hurst, Open clusters; Nick Hewitt, Globular clusters; Martin Nicholson, Remote observing; Grant Privett, Observing really deep sky objects, and Karen Holland: 'Praesepe, two merging clusters?' This will be an update on the work Karen presented some years ago.

Anyone needing directions to the Humfrey Rooms should visit the following web page: http://www.hamal.demon.co.uk/location.htm. If you don't have internet access please contact me by phone for directions on 01255 861349.

Stewart L. Moore, *Director*