The British Astronomical Association

February 2001 · Number 106

newsletter

FORTHCOMING MEETINGS

Saturday February 24th 14:30
Scientific Societies' Lecture Theatre,
23 Savile Row, London W1
Speakers:
Paul Roche – Neutron Stars
Richard Fleet – Construction of a Dobsonian
Richard McKim – Mars 2001

Wednesday March 28th 17:30
Scientific Societies' Lecture Theatre,
23 Savile Row, London W1
Speakers to be announced

Saturday April 28th York
David Ratledge – CCD Astronomy

Wednesday May 30th 17:30
Scientific Societies' Lecture Theatre,
23 Savile Row, London W1
Professor Clive Ruggles – Stonehenge
Lee Macdonald – Title TBA

Exhibition Meeting
Saturday July 7th 11:00,
London Guildhall University

Webb Society AGM
Saturday May 19th 10:30,
Rutherford Appleton Laboratory, Nr. Oxford

OFFICE EASTER CLOSING DATES
Please note that the Office will be closed for Easter from the afternoon of Thursday 12th April and will open again on the morning of Wednesday 18th April 2001.

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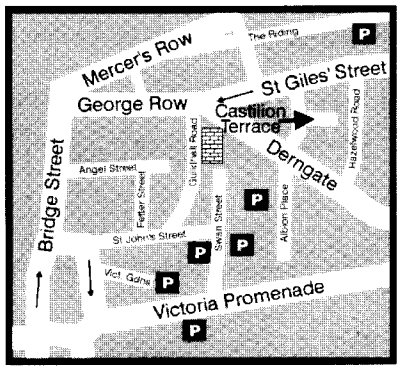
Deep Sky Section 20th Anniversary Meeting

The Deep Sky Section of the British Astronomical Association was formed 20 years ago. To celebrate the anniversary, there will be a special meeting of the Section this year.

Date: Saturday, 2001 March 3rd from 11:00 until approximately 18:00.

Venue: The Humfrey Rooms, Castilian Terrace, Northampton.

It is hoped that there will be contributions, in some form or another, from the past and present Directors of the Section, amongst others. The provisional lineup of contributors include:-



Ron Arbour – *"The Formation of the Deep Sky Section"*

Nick Hewitt – *"Bipolar and Variable Nebulae"*

Owen Brazell – *"New Challenges in Planetary Nebula Observing"*

Mark Armstrong – *"Successful Supernova Searching"*

Karen Holland – *"Brown Dwarfs and the Praesepe"*

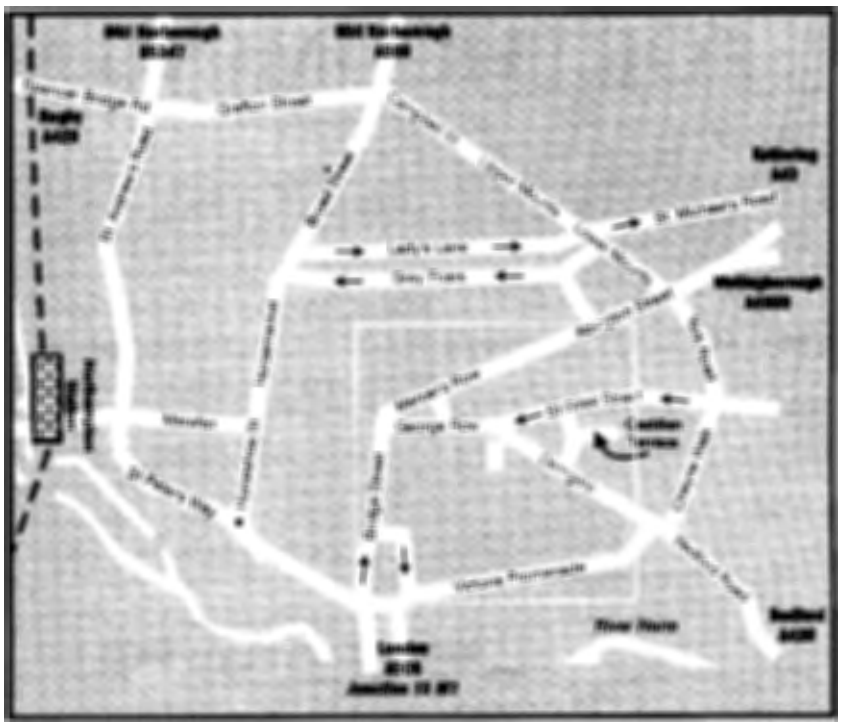
Alan Dowdell – *"M51 – The True Story"*

John Lewis – *Exhibition of Artwork*

Plus short contributions from:-
Denis Buczynski
Martin Ratcliffe
Bernard Abrams
Don Miles

The meeting will be free. Refreshments will be available during the day and there will be a 'cheese and wine' at lunchtime. There will be an exhibition of Deep Sky material from the last 20 years. Please support this meeting. It will help the Director/Organiser if you can indicate your intention to attend by dropping a line by e-mail or snail mail.

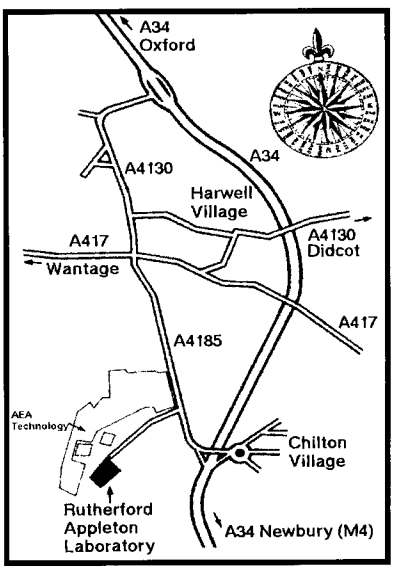
Nick Hewitt
Director



Webb Society Annual Meeting

Rutherford Appleton Laboratory, Oxford, Saturday, 2001 May 19.

Speakers have been provisionally booked for this year's Annual Meeting. They include Richard Jakiel from Atlanta, Georgia, and Ronald Stoyan from Germany. Sales stands are expected to include Earth & Sky, Venturescopes and the Webb Society's own publications.
All those booking will receive a detailed map to assist in finding the venue!
Further details will be available nearer the meeting date from Brian McInnerny, 14 Heathfield Avenue, Poole, Dorset BH12 5DJ. If you would like to receive an email with full details when available, please send a request to **agm@webbsoc.demon.co.uk**



skyNOTES *by Neil Bone*

February - March 2001

Sun and Moon

As February opens, the days at last begin to lengthen noticeably. There are still plenty of hours of good darkness in the evenings, however, and many observers regard this as the best time of year, with the bright stars of the 'Orion quarter' well on show until late on. By March, the nights are becoming a good deal shorter. The **Vernal Equinox**, when the **Sun** cuts north of the celestial equator, occurs at 13h 31m Universal Time (UT = GMT) on March 20.

The Sun's increasing northerly declination on the ecliptic – its apparent annual path against the star background – offers improved viewing opportunities for solar observers. Sunspot activity should reach its maximum for cycle 23 in the next six months. Activity changes from day to day, and can be safely followed by projecting the Sun's image onto a piece of clean, white card. One standard observing method is to count the numbers of Active Areas (AAs) present on the disk. Some AAs may be comprised of multiple spot centres, others of a single spot or pore. On a busy day, there might be as many as 10 AAs visible. AAs can grow or decay as the Sun's rotation carries them across the visible hemisphere. A group appearing over the eastern limb will be carried out of view at the western about a fortnight later – if it survives that long.

The **Moon** is **New** on February 23 and March 25, meaning that the second fortnight of each month will provide the darkest night-time skies. The steep angle of the ecliptic to the western horizon on early spring evenings offers good viewing conditions for the young crescent Moon in the 4-5 days after New. At such times, the terminator (day-night line) cuts across some of the most rugged, cratered lunar terrain, and impressive views can be had with even a small telescope as shadows throw much of the detail into relief.

Full Moon glares down on February 8 and March 9.

Civil Time reverts to BST on March 25; thereafter, observers should remember to subtract 1 hour to arrive at the astronomical standard of UT.

The Planets

Mercury is at **inferior conjunction** between Sun and Earth on February 13, then moves to the morning sky, reaching an unfavourable greatest elongation 27 degrees west of the Sun on March 11.

Venus' splendid evening apparition comes to a rapid end during this interval. At the beginning of February, the brilliant (magnitude –4) 'Evening Star' sets more than three hours after the Sun, and is an unmistakable beacon, brighter than anything else except the Moon in the night sky. By early March, however, Venus is closing rapidly on the Sun, setting less than two hours later. During the last fortnight of March, the planet's elongation east of the Sun decreases by about a degree each day, and it will be lost from view as it reaches **inferior conjunction** on March 30. During March, particularly, Venus should show an obviously crescent phase in small telescopes or stably-mounted binoculars.

As Venus departs the evening sky, **Mars** becomes more prominent in the morning. The Red Planet, among the stars of Libra and Scorpius, brightens from mag. +1 to mag. 0 between early February and late March, and increases in apparent disk diameter to a reasonable 9 arc-seconds. Those with larger telescopes (200 mm aperture and upwards) should be able to begin making more detailed observations and drawings, though Mars' southerly declination (and consequent low elevation above the horizon) will be something of a hindrance.

Jupiter and **Saturn** continue their good showing high among the stars of Taurus. As darkness falls, both are well up in the southern sky, with Jupiter being much the brighter at mag. –2 relative to Saturn's mag. 0. Jupiter's ever-changing atmosphere, with its dark belts and light zones, is a source of much interest for observers with telescopes of 80 mm or greater aperture. Best views are often to be had on calm, hazy nights when the seeing is good; the less stable air on very transparent, frosty nights causes the stars to twinkle and can obscure planetary detail.

Saturn's rings, now well open towards us, are a magnificent sight in any reasonable-sized telescope.

Meteors

The next two months are very much the quiet season in the meteor calendar, with only minimal background **sporadic** activity in evidence, and little in the way of showers present until the **Virginids** being to show in the latter half of March. Virginid meteors come from two radiants – one in the Virgo 'bowl', the other near Spica - and are often long-pathed and slow. Some shower members can be bright.

Aurorae

With sunspot activity close to maximum, there is always the chance that an Earth-directed Coronal Mass Ejection could bring the aurora to lower latitudes. Statistically, the equinoxes are a particularly favourable time, and it is well worth watching the northern sky for signs of unusual light. Several alerts have been issued in the past few months, but on most occasions bad timing or poor weather have meant that any resulting aurorae have been missed from the British Isles.

The coming months may be the most favourable time for low-latitude aurorae in 2001; around sunspot maximum itself, (probably towards the end of the year) there is usually a dip in auroral frequency.

Variable Stars

Algol (Beta Persei) has favourable eclipses on February 11-12 and 14, and on March 6. During eclipse, the star fades noticeably from its peak mag. +2.1 to +3.4.

For late-night observers (or early-risers!), **R Coronae Borealis** continues to show unusual activity. The star dropped to one of its deep minima (from normal peak mag. +6) a couple of years ago, and doesn't yet seem to have fully regained its maximum brightness. Indeed, as of late 2000, R CrB had dipped again below seventh magnitude. The star is currently undergoing one of its most active periods for many decades.

Deep Sky

As dusk falls in late February, the bright stars of Orion and his retinue are already passing the meridian into the western half of the sky. Mid-evening sees brilliant **Sirius** – at mag. –1.47, the brightest star in the night sky – stationed due south. The faint winter Milky Way trickles south past Betelgeuse through the dim stars of Monoceros and just east of Sirius towards the horizon. Along its length can be found a number of fine open star clusters. A good target for binoculars or small telescopes is the fairly scattered **M41**, easily found just a few degrees south of Sirius.

By late evening, the dim constellation of Puppis has taken Sirius' place on the meridian. Here, more or less level with the Dog Star in elevation above the southern horizon, can be found another couple of open clusters **M46** and **M47**. The pair can be seen well in the same binocular field. Binoculars also reveal their contrasting appearance: M47 is bright and relatively sparse, while M46 is rich in faint stars and appears more as a hazy patch. Small telescopes resolve these objects nicely.

Higher up in the midnight sky, Cancer is also home to two contrasting open clusters, **M44** and **M67**. M44 – also known as Praesepe – is a hazy patch to the naked eye, well seen as a rich collection of reasonably bright stars in binoculars or a small telescope. M67, just above the circlet of stars marking Hydra's head, is more compact and barely resolved in binoculars.

As spring advances in late March, our evening perspective changes, with a view outwards to intergalactic space. For now, the winter clusters along the next spiral arm out from our own in the home Galaxy provide the prime deep sky attractions.

Neil Bone

Comet C/1999 T1 (McNaught-Hartley)

This comet is expected to be approximately magnitude 7 at the beginning of February fading to around magnitude 9 by the end of March.