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FEDERATION OF ASTRONOMICAL SOCIETIES

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End Of A Satellite

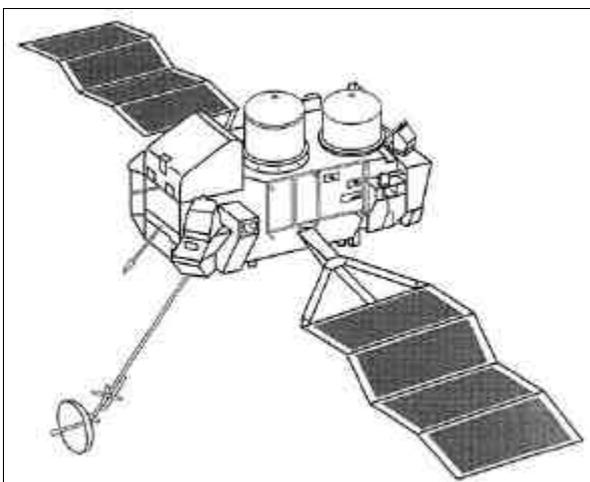


Image courtesy NASA

June 4, 2000 saw the safe controlled re-entry of one of NASA's less known but most successful space observatories.

Launched in 1991 from the Space Shuttle, the second of NASA's Great Observatories had a design life of 5 years. At a weight of 17 tons it was the largest unmanned science satellite ever launched by the USA. Its task was to examine the heavens in the most highly energetic wavelength of all - Gamma radiation. In the event the craft operated without a hitch for 9 years and a decision was taken to de-orbit it in a controlled manner on the failure of one of its three steering gyroscopes. This was primarily a safety decision, as NASA wanted to avoid a 17 ton satellite landing in a populated region. The safe re-entry into an uninhabited area of ocean showed this decision to be correct, but brought to an end one of the least known but possibly most significant eras of space science, with implications for the very future of advanced life throughout the Cosmos.

Electromagnetic radiation ranges in wavelength from long radio waves via infra-red visible light, ultraviolet, X-rays, and finally gamma rays - the shortest, most energetic wavelength of all. All these waves travel at the speed of light and their energy is inversely proportional to their wavelength. Very roughly electromagnetic waves correspond to increasing temperature and energy level of cosmic activities as the wavelength is shortened, with gamma rays signifying the most energetic processes of all.

How did the need for such an obscure scientific investigation come to pass?

In the 1960's gamma rays were more widely known through their lethal association with human nuclear explosions here on Earth, and so the US Defence Department had in place satellites to monitor nuclear tests and explosions by recording the gamma ray signatures of such events.

It soon emerged that there were gamma ray explosions or bursts lasting from a few seconds to 20 minutes or so which had nothing to do with human military ambitions, since they came from well beyond our stellar neighbourhood. Little was known at that time except that they were either due to totally unimaginable violent processes occurring at a vast distance beyond our Galaxy, or that they might be due to less violent but unknown "local" processes.

It was largely to settle such questions that the Gamma Ray Observatory, named Compton after one of the early pioneers of radioactivity, was launched.

During its first 8 years of operation Compton detected and took signatures of 2,000 of these Gamma ray explosions, now termed Gamma Ray Bursters (GRBs), and have demonstrated statistically that the vast majority occur at vast distances well beyond our own Milky Way Galaxy - even several billion light years from Earth, and that for their brief moments of glory they produce as much energy in gamma rays as the total energy output of an entire galaxy of 100 billion stars like the Sun!

Thoughts then turned to the possible mechanisms for such unthinkable energy releases. The current best contender is a collision between the members of a co-orbiting pair of neutron stars. These are the ultradense remnants of stars which weigh more than 1.4 times the mass of our Sun at their lives' end, and although so massive are only the size of a large city. Thus the mass of considerably more than our Sun is compressed into a ball 20 kilometres or so in diameter and the atomic matter exists as nuclear particles called neutrons. If two such objects in a pair collide, the energy release is sufficient to account for the Gamma Ray Burster phenomenon. Another

(Continued on page 2)



REDSHIFT 4 — A Review

By Dave Eagle

Redshift 4 loaded easily from CD No. 1 and was ready to run with absolutely no problems. Once running, it was a bit strange to see a menu bar appear at the top of the screen, and another set of buttons floating in the middle of the desktop. However running the program was a breeze. I haven't had any experience of previous versions of Redshift and the review brochure that I received did not tell me how to operate the program, but I soon easily got the hang of it. Had I really become confused, (It doesn't take much for me at times), the help file was readily to hand at the touch of a button. The screen layout is very graphic orientated producing an extremely rich presentation of the sky. The configuration of the displayed workspace will need to be configured to the users needs, and multi windows can be displayed at the same time. There are a number of workspaces that can be downloaded from web site that highlight the versatility of the program. Viewing, for example, the 1999 eclipse workspace shows the event from above the Earth's surface and the lunar shadow creeping across Cornwall and Devon, the view from the ground and another view from beyond the Moon looking back to the Earth. Apart from the fact that there were no clouds visible over Devon & Cornwall, it all looked so realistic. Moving away from the Earth, the planets were seen in lush detail and the moons of the solar system are represented just the way they look in the many images taken by space probes. For computers that would find this graphic handling a bit much, the images can be replaced with icons to make the screen refresh much quicker. Having used a number of different sky mapping programs over the last few years, I am used to making detailed star maps of areas in which of interest, or plotting paths of comets over the course of a number of weeks. Star maps appeared to print beautifully with selected items like constellation borders and outlines as well as the Milky Way. The package is able to display stars down to magnitude 20 using the Hubble Guide Catalogue. However, I did find that when used at maximum resolution and small fields of view were printed, faint stars were plotted the same size on the chart, making it difficult to distinguish faint patterns of stars when observing through the scope. Another annoyance was that the print legend couldn't be switched off, taking up room on the paper and using ink.

The Sky Diary is an extremely useful facility that calculates the month's events as visible from your location. These are beautifully presented in the workspace with just a click of the mouse. Jacqueline Mitton's authoritative Dictionary of Astronomy is also included in the package and is an up to date definitive astronomical dictionary. Links from each entry can lead you onto another or open an appropriate workspace to see the celestial object that entry actually refers to.

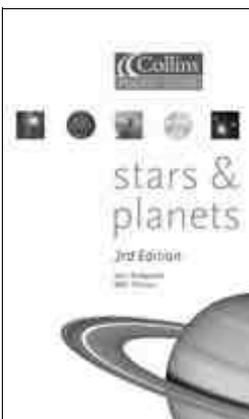
Some of the deep sky objects are also graphically drawn; a view of The Orion Nebula M42 is displayed with faint stars enmeshed in the red fronds and the spiral shape of M51 and the star clouds and dark dust lanes in The Andromeda Galaxy are vividly represented.

The second CD contains all the data required for the battery of images, movies and lectures that are reached via the menu bar telling the story of the Universe.

For someone with a keen interest in the sky who doesn't want to break their bank, Redshift 4 is an ideal package for producing crisp visuals, transporting the keen armchair astronomer out into the universe and giving them a greater understanding of the mechanics of the motions of the heavens. Apart from some minor niggles, there was plenty here to keep the most demanding observer busy on those too often cloudy nights. I would highly recommend it.

Review copy supplied by Focus Multimedia Ltd, The Studios, Lea Hall Enterprise Park, Armitage Road, Rugeley, Staffs, WS15 1LH
<http://www.focusmm.co.uk>

Redshift 4 software is published by Maris Technologies Ltd, 12-50 Kingsgate Road, Kingston, KT2 5AA
<http://www.maris.com>



Stars & Planets — A Review

By Callum Potter

A review copy of this book landed on my doorstep out of the blue, and I must admit to be pleasantly surprised. It is not really the sort of book I would look at twice in a bookshop, but it does have much to recommend it. The book is split into two sections. The first deals principally with stars and constellations, with many pages of star maps showing the night sky as it appears each month for both northern and southern hemispheres. This is followed by maps and notes on each constellation, usually with one page for the map and the descriptions on the facing page. All these maps have been nicely illustrated by Wil Tirion. The second section of the book deals with stars, star formation, galaxies, the solar system and is somewhat a whistle stop tour. Of particular interest to observationalists are the Moon maps and maps of the ecliptic showing the movements of Mars, Jupiter and Saturn through the constellations until 2005.

I would say that this is a fine beginners book, and would be attractive to younger astronomers and observers with binoculars. The illustrations are excellent and there are a number of well chosen photographs and images. Although most are NASA, Hubble or other professional observatories it is nice to see a number that are by UK Amateurs.

However, there are some chapters that are included because a book of this sort has to include them. It would be a brave soul not have a chapters on Telescopes and Astrophotography, but the brevity does not do justice to the subjects.

And the acid test – does it fit into your pocket. Well it depends upon the size of your pockets ! It will certainly not fit into a shirt pocket, but does fit nicely into the side pockets of the anorak I usually wear when observing. Also, if you were planning a trip to the Southern Hemisphere its compact format would be helpful.

Stars & Planets, 3rd Edition, is a Collins Pocket Guide. ISBN 0-00-710079-5. Recommended price £14.99. Available now.

Liverpool Astronomical Society

SIDEWALK ASTRONOMERS — Busy time for the Sidewalkers

Pickerings Pasture Event hosted by Halton Rangers, Friday 12th January 2001

This event started, at 7:30pm, with quite a large amount of cloud. Gradually, this dispersed and, as on many similar occasions, the clearest weather was after 9pm. Several society members scopes were in use. Jim Stacey had his 8inch reflector, John Naylor set up his 8inch Dobsonian and Alan Pritchard's 10inch reflector completed the line up. The largest being the recently completed 16 inch. The views of Jupiter, Saturn and the Orion Nebula seemed to justify every torturous minute spent in making it. The Moon rose at about 8pm.

Rob Smith, the Halton Ranger was the first to contact us about organising this event at this riverside location, and there was a warm Visitors' Center where he had setup a slide projector for a slide show & lecture which was given to the 15 members of the Public.

Leasowe Lighthouse Event Hosted by Wirral Rangers, Friday 26th January 2001

The Leasowe Lighthouse event went very well. The attendance was estimated between 80 – 150. The weather during the day looked promising but began to cloud over in the evening. The forecast over the radio mentioned clear spells and showers.

It was decided early in the day that we should try and bring both newly completed 16 inch telescopes down to the Leasowe meeting for the first time. By about 7pm that just what happen and with help of the rangers we had selected the area for all the telescopes to be set up ready for viewing the night sky. By this time conditions were almost ideal. Views of Venus Jupiter, Saturn, M42 and later M1 the Crab Nebula.

Dave Owen & Dave Thomson

Liverpool Young Astronomers Day — March 3rd 2001 — Young Eyes On The Sky!

Twenty seven future Astronomers assembled at the Liverpool Astronomical Society's Pex Hill Observatory recently to enjoy a day and evening, exploring our Solar System, our nearest Star and the Moon. A full range of events and activities were arranged, from a special tour of the Solar System slide show, event quiz, to supervised observations of the Sun, (with filters), and an 8 day old Moon with the aid of Society members telescopes. Daytime observations were also possible of Venus, Jupiter and Saturn.

The Young Astronomers, plus their mums and dads were given a warm welcome by Steve Southern and Phil Harman, the Society Junior Representatives, and the co-ordinators of this special event. The day began with a slide show presentation, and tour of Our Solar System by David Gittins, who did a whistle stop at each planet and helped with the quiz booklet questions. Through the day the "astronomical" thirst and hunger for not just knowledge, was provided for with hot and cold drinks, and biscuits. The group were then split into teams to work on the full range of activity work and the astronomy quiz booklet. Posters, books and astronomy computer software was also provided. But everyone was eager to look at the Sun and Moon with the telescopes

The Activity work consisted of making your own planisphere, cut out and make a solar system, and answering questions on the American Apollo Moon landings between 1969 –72. Teams were also shown how to safely observe the Sun using special telescope filters, and Eric Strach demonstrated some solar features, for example sunspots, flares and filaments using video images he had recorded over several years. Following a long break for after-

noon tea, the teams began an evening session of other activities, which included studying the features of a 8 day old moon, locating craters, mountains and moon landing sites seen on the sunlit side and on the terminator. The many astronomy internet sites that can be found were demonstrated by Dave Owen, and Society members provided laptop computers to use.

The Director of the Liverpool AS Observatory, Geoff Regan also gave a guided tour of the Observatory and 12" Meade LX200 telescope, with views of the planets Venus, Jupiter and Saturn. Once the day had concluded each young astronomer was given a welcome pack to a new group of the Society, Liverpool Young Astronomers, and its hoped more meetings like the March 3rd event can take place later this year. The evening events were nicely rounded off by views of the MIR space station going over Pex Hill and the observation of a -8 mag Iridium satellite flare.

The Society would like to thank all the young astronomers, mums and dads who attended, and the Society membership who gave up their Saturday to help and organize a day and evening which resulted in such an enjoyable time exploring the Solar System with their feet firmly on the ground but with their heads above the clouds!

Gerard Gilligan

For more information about astronomical activities in Liverpool contact Mr. Ken Clarke, 31 Sandymount Road, Wallasey, Wirral. Tel. 0151 638 3270, email: Clarklunar@aol.com

Scarborough & District Astronomical Society

As a part of our Silver Jubilee celebrations (we formed in March, 1976), the Scarborough and District A.S. is hosting a Summer Star Festival supported by Forest Enterprise. The event is to take place from Friday, 10th, to Monday, 13th August 2001 inclusive. The venue is a large open site in the light pollution-free North Riding Forest, in the North York Moors National Park, exactly midway between London and Edinburgh, John O' Groats and Lands End ! We invite all Astronomical Societies to attend and to avail themselves of what we are offering at our Star Festival in this beautiful part of the country. If you visit our web-site you will see more details about the event and all Astronomical Society secretaries are to be sent details. Camping facilities for caravans and tents will be made available on site.

Other events in 2001 include the commissioning of the Societies 12" f 5.8 and 18.75" Newtonian Reflectors and the Official Opening of the first of our observatories at Low Dalby, adjacent to the Visitor's Centre in Dalby Forest.

In the Autumn, we are to host the FAS Yorkshire Group's annual "Astromind 2001" Competition. The date of which is fixed for Saturday, 13th October. Further details will be made available later in the year, when participating societies will be notified. If there are any societies in the Yorkshire area who have never taken part in this event or have not done so for a number of years, they are encouraged to get in touch with us so that they can be sent details nearer the time. We hope to have many challengers for the much coveted "Radio Leeds Cup"!

Scarborough & District Astronomical Society now meets on the third FRIDAY of each month. The venue is Irton and Seamer County Primary School, off Pasture Lane in the village of Seamer, 3 miles SW of Scarborough.

Contact Address: Sheila Anderson, 25 Highfield, SCARBOROUGH, North Yorkshire. YO12 4AW
E-mail: gwernan2@ukf.net or jonvran@aol.com
S&DAS web site: <http://www.baryte.demon.co.uk/astro>

Central Sidewalk Astronomers - Having fun under the Stars - and online!

Central Sidewalk Astronomers is a group dedicated to Public Service Astronomy in the style and spirit of John Dobson and the San Francisco Sidewalk Astronomers in the USA. As with that group, to which we are affiliated, our aim is to give people the chance to take a look at the night sky through a powerful telescope for the first time.

However, rather than on city streets - our area is not known for its 'coffee shop culture' - our fun generally takes place at organised star parties or in association with other astronomical or non-astronomical events organised by other groups or good causes in our area. We operate in the West Midlands and South Staffordshire area of England - and our organisation is purely Internet-based!

Originally formed in 1999 and relaunched in 2001, CSA is one of only two sidewalk astronomy groups presently operating in the UK - the other is Liverpool Sidewalk Astronomers, a group of members of Liverpool Astronomical Society. We are currently recruiting to build up our membership and new members are welcome at all levels of experience.

CSA is unique in UK astronomy in that we hold our meetings at public events, under the night sky and online, having no general programme of indoor meetings or club lectures. Our aim is purely to inspire the public, promote astronomy and have fun under the stars!

We co-ordinate ourselves via email, and our members all keep in touch with the group and each other via email. We run a Yahoo! eGroup to enable members to chat and discuss group events and astronomy online. This enables us to come together at mutually agreed times without the need to have formal meetings or pay subscriptions. Our group offers free membership to anyone with a telescope or tripod-mounted binoculars and access to email who would like to join in the fun and take part in our events!

Central Sidewalk Astronomers can also be contacted direct by email to Stuart Williams at: csa@urania.plus.com or by Snail Mail to: Stuart Williams, Central Sidewalk Astronomers, 26 Matlock Road, Walsall, WS3 3QD.

The Midlands Star Party - An Invitation to FAS Members!

Central Sidewalk Astronomers are organising the first ever MIDLANDS STAR PARTY for 2001, which is a guest event in support of Bloxwich Carnival over 10/11 August. We are organising the Star Party in association with Bloxwich Carnival Committee and the Friends of Bloxwich Parks, and if well-supported it is hoped that it will become a major annual event.

We would like to take this opportunity to invite any FAS member societies who would like to take part to join us at the Midlands Star Party. So far, we will be working with Wolverhampton Astronomical Society and the Society for Popular Astronomy, but the more the merrier, and all societies or their members are welcome!

The main event takes place on Saturday 11 August - the weekend of the Perseids meteor shower peak, which also has a last quarter Moon this year. Our venue is the King George V Playing Fields, a large public park off Stafford Road, just north of Bloxwich town centre on the A34. Bloxwich is located on the A34 between Cannock, Staffordshire and Walsall, West Midlands, England, and is easily accessible via the M6 motorway or the A5/A34.

A fairground and other events, including arena events, stalls and a World War 2 re-enactment with encampment will be taking place on-site in the park during the Saturday. A turnout of around 5,000 members of the public is expected.

A location map and details of the Carnival, plus a panoramic view of the park, can be found via our web site at: http://members.nbcicom/central_astronomers or if you do not have internet access you can receive details by sending an A4 s.a.e. to Central Sidewalk Astronomers at the address below.

OUR AIMS

The Midlands Star Party has four main aims - to inspire public interest in astronomy, to promote all astronomical societies, to support Bloxwich Carnival and its charities - and to have fun!

For this reason, there is no charge for participation in the event, nor for camping, for which we have arranged permission.

CAMPING

Camping is permitted for Star Party participants on Friday 10 August and Saturday 11 August. Portable toilets will be available on-site, but you will need to bring all other equipment and supplies with you. Shops are 5 minutes away by car or bus. Camping is undertaken at your own risk. The Star Party runs over two days, but the primary public focus is on Saturday 11 August. We are hoping to create an 'astronomy village' if we have enough participants.

DISPLAYS

Societies are welcome to put on displays of their work, sell club merchandise - and of course recruit! We are hoping for access to a small marquee, but this cannot be confirmed at the moment, so it is recommended that you bring a tent or gazebo for club displays. It is also recommended that you obtain Public Liability Insurance, as this will be your own responsibility, as will be equipment insurance. You will probably already have the former as members of the Federation of Astronomical Societies.

FRIDAY 10 AUGUST

For those who can make it on the evening of Friday 10 August there will be the opportunity for some public and private observing and you can also claim an early camping spot! Members of Central Sidewalk Astronomers will be on hand to advise you.

SATURDAY 11 AUGUST

Participants are expected to provide some safe solar observing demonstrations for the public during the daytime on 11 August and to have telescopes available to show any remaining public the night sky during the evening of the same day. Most of the night will however be free for your own personal observing!

Partner societies may have their logo and contact details placed on our web site events page on request, with a link back to their own site.

To take part in the MIDLANDS STAR PARTY, please write to: Stuart Williams, Central Sidewalk Astronomers
26 Matlock Road, Walsall, WS3 3QD

Altrincham and District AS

Has been growing in membership and activities over the last year. Both visual observing from Dark Sky sites and the use of digital imaging equipment has increased. The Society has also been successful in receiving a grant from the Manchester Airport Community Fund for a pair of large astronomical binoculars and improvements to their observatory site.

Visitors and new members are welcomed at the observatory and at meetings held on the first Friday of each month except during July and August.

Web site: <http://www.adas.u-net.com/>

Paul Clark,
ADAS Publicity Officer

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Macclesfield Astronomical Society

As we enter our 11th year, the society now has over 170 regular members with attendance at monthly meetings exceeding 100. We meet on the first Tuesday of every month in the Planetarium at Jodrell Bank in Cheshire. The beginners' class is at 7.00pm followed at 8.00 pm by a lecture given by a researcher or distinguished astronomer (Prof. Rod Davies, Prof. Sir Francis Graham Smith, Prof. Colin Pillinger, Dr. Alan Chapman are expected in the year). In addition, we plan to hold several talks by members on their own interests in Astronomy.

Last year (October 2000) we were fortunate to receive a grant of £5000 as a result of the Millennium Festival Awards for All programme. The grant has been spent on two new Meade ETX 'goto' telescopes with accessories, including a laptop PC for astronomical presentations and computer control of the telescopes. In addition we are planning to purchase a CCD camera and software to enable images captured by the telescopes to be displayed to members of the public at open days and other events to be held throughout the year. We are maintaining our links with local schools and encouraging and supporting the teaching of Astronomy within and beyond the National Curriculum. We are also purchasing pairs of binoculars and planispheres for use by junior members and those getting to know their way around the sky for the first time.

The society website is changing to www.maccastro.co.uk in the near future. We are considering moving our observatory from its present location at Gradbach Mill Youth Hostel to a more convenient site at Langley Cricket Club near Macclesfield. We are also discussing the formation of more observing and discussion groups to accommodate the changing needs of our increasing membership.

John Thomson, Secretary, 0161 973 6027,
email: jhandlc@yahoo.com

Shetland Astronomical Society

Have been awarded a grant of five thousand pounds from the lottery, Awards for All. This was after writing up a project, or a series of projects that embodied the aims and ambitions of the society. I would be happy to talk to anyone who is thinking of making a similar application.

We also registered the society with the Inland Revenue as a charitable organisation. This was after advice from the FAS and from local societies in Shetland but also with some help from the Inland Revenue. We are also trying to insure our telescope and have been pointed in the right direction by the FAS. Possibly the insurance of artefacts could become as inexpensive as public liability insurance if other member societies got together?

We are considering having a get together of some sort when the 2003 eclipse occurs at the end of May in that year. I would like to ask for advice from those who have had successful Star Parties to find out how it is all done, getting exhibitors, speakers and so on. Good wishes from Fetlar, Shetland.

Peter Kelly, 01957 733242, theglebe@zetnet.co.uk

Salford Astronomical Society

On Saturday February 4th, eight members visited Astrofest, travelling by train on what has now become an annual pilgrimage. Their interest lies mostly in what the exhibitors in the hall have to offer. However, sometime around noon, the fire alarm was activated resulting in the evacuation of the premises for around 20 to 30 minutes and although fortunately, it turned out to be a false alarm, our intrepid travellers took advantage of the incident to go for an early lunch. A good day was had by all.

The society is now the owner of a Starlight Express Colour CCD Camera, obtained with the help of a £500.00 grant from the local council. A team of seven members, headed by the Director of the Observatory, will be responsible for the long term project which is intended to be mainly of benefit to the visiting public on our monthly open nights and other events.

Our meetings take place every Wednesday throughout the year and after the last lecture of the winter session on March 28th (with the exception of the AGM on April 25th), the society enters the summer season of informal meetings at the Observatory in Chasely Field, Chasely Road, Salford.

Contact Kath Redford, 2 Albemarle Road, Swinton, Manchester, M27 5ST. Tel 0161 794 3179

E-mail: salfordac@ast.man.ac.uk

Web site: <http://www.salfordastro.org.uk>

Vectis Astronomical Society.

Here on the Isle Of Wight we have had a good year. The Observatory is shaping up well with installation of our new equipment moving apace. We were successful with a number of grants and donations and have therefore been able to connect a Starlight CCD colour camera to our telescope and two new computers for imaging and display and we are about to order a new projector. We have also had some small but useful no-strings cash grants. Our ultimate aim is to automate the telescope and operate the cameras from the warmth of the control room.

We are about to make an instruction video to issue to members who would like to use the instruments but don't know how. I shall ask silly questions like "Which end of the telescope do I look through?" and Observatory Director John Smith will answer with his customary patience and explain that it is necessary to open the dome first etc. The video needs to be very clear and to start from absolute basics for the benefit of members who are complete beginners.

John has launched a very successful basic Astronomy course for sixth-formers which is our latest project.

Meetings 7.30pm on fourth Friday of each month at Newport Parish Church Centre, Town Lane, Newport. Contact Rosemary Pears (Mrs.). Tel/Fax 01983 853126. E-Mail may@tatemma.freeserve.co.uk. Web site: <http://www.wightskies.fsnet.co.uk>

SOCIETY NEWS ROUND UP

AYLESBURY AS

Meetings on the 1st Monday of the month in the Aylesbury area. Further details from Alan Smith, 182 Marley Fields, Leighton Buzzard, Beds, LU7 8WN, Tel. 01525 374258

BECKINGTON AS

New website www.basnet.org.uk

BRADFORD AS

Lectures held at Eccleshill Library, Bradford at 7.30 pm.

April 23 Moon Rocks and Life, Ron Tippet. May 21 The Story of the Metre, David Cook, June 4 Big Fuzzy Blobs, Rod Hine. June 18 Dyson Spheres, David Palmer. July 2 Mars Rover Mission, P. Nixon. July 16 Summer Solar Special. For any further information on these or fortnightly observing sessions please ring 01274 573210 or 01274 672570, or see website at www.bradford-astro.freereserve.co.uk/index.htm

BRIGHTON & HOVE AS

Meet at the St John's Day Centre Church Road Hove. For further details contact Gary Burford on 01273 883548, email gary@cepheus.freereserve.co.uk. May 1st Seb Oliver "The Darker Side Of Cosmology". June 5th Dr Robert Smith Presidential lecture "The Active Sun". July 3rd Jonathon Loveday "TBA"

CARDIFF AS

Meetings alternate Thursdays, September to July, 7.30 pm. at Dept of Physics and Astronomy, Univ. of Wales, 5 The Parade, Newport Road, Cardiff. Contact David Powell (secretary), 029 2055 1704. Email CAS@ilddat.demon.co.uk.

Web site: http://carina.astro.cf.ac.uk/cas/cas_home.html

COTSWOLD AS

Meetings 2nd Saturday of the month. **New Venue** Shurdington Church Hall, Shurdington, Cheltenham. Contact Duncan Willoughby 01452 416405.

12th May Space Guard, Jay Tate. 9th June Life of Stars, Ken Sheldon. 14th July, Deep Sky Exotica, Nick Hewitt BAA President.

CRAWLEY AS

Our meetings are held on the 3rd Friday of the month at Ifield Community Centre, Ifield Drive, Crawley. This season our speakers have given us very interesting talks on subjects as diverse as Bob Turner on Star Formation, Norman Walker on Work on BAA Sunspot numbers, and Graham Bryant on Building a Backyard Observatory. Future speakers include, Cynthia James on X-ray Astronomy, Dr David Whitehouse on Astronomy in the Media, and Teresa Grafton from The London Planetarium. We have also launched our society web-site which can be found at <http://uk.geocities.com/crawleyas/>

Secretary, Sue Hudson-Cook, E-mail: suelcook@aol.com

EASTBOURNE AS

Meetings held on Saturdays in Willingdon Memorial Hall, Church Street, Willingdon. Contact Bob Cripps, tel. 01323 732067 or Peter Gill, tel. 01323 646853

12 May Aurorae and Noctilucent Clouds, Dr. Dave Gavine
9 June Space Astronomy at the Start of the 21st Century, Dr. Paul Murdin
7 July The Formation of Galaxies, Prof. Joseph Silk, FRS.

FARNHAM AS

Contacts: Laurence Anslow (01252) 681754, Lbanslow@aol.com, Barry Bellinger (01252) 661842 barry.bellinger@nokia.com
Stewart Moore (01252) 624088 slm@sigarro.demon.co.uk
Farnham web link: <http://www.astronomy-world.co.uk/>

Meetings are held on the second Thursday of each month at the Central Club, South Street, Farnham, Surrey.

May 10 Impacts and Dinosaurs, Dr Malcolm Coe. Jun 14 AGM + Society members talk. Jul 12 2001 Solar eclipse

HARROGATE AS

General Secretary now: Dr. Jon Iddon, tel. 01423 709428

HUDDERSFIELD ASTRONOMICAL AND PHILOSOPHICAL SOCIETY

Frequent meetings at 4A, Railway Street, Huddersfield, or Huddersfield Town Hall. Details from: Robert Williams, 01484 348754. Email: raw-ginger@hps27.freereserve.co.uk.

20 Apr The Galileo/Europa missions to Jupiter, Paul Money

LA SOCIÉTÉ GUERNESIAISE—ASTRONOMY SECTION

Meets every Tuesday evening and Friday if clear for observing at the observatory, Rue du Lorier, St. Peters, Guernsey. Tel 264252.

Web site: www.astronomy.org.gg

LEEDS AS

Contact Ray Emery (r.emery@westview.leeds.co.uk) or new President Mark Simpson, 37 Roper Avenue, Leeds, LS8 1LG.

Main Meetings 2nd Wednesday of the month at 7.00pm, at Centenary House, North Street, Leeds.

Web site: <http://www.astro.leeds.co.uk>

9th May - The Hubble & Herschel Deep Fields - Dr N Metcalfe,

University of Durham. 13th June - The Hidden Colours of the Universe

(X-ray astronomy) - Prof. Bob Warwick, University of Leicester

11th July - Amateur Meteor Astronomy - Mr. Len Entwistle, of Elland

8th August - The Sunward World (The observation of the Inner Planets) -

Mr. Robert Steele, Director of BAA Mercury and Venus section

Also LEEDS ASTROMEET 2001, Saturday 10th November

LOUGHTON AS

We meet every Thursday at 8.00pm in the Scout Hall, Loughton Lane, Theydon Bois, Essex. We also hold Open Evenings every second Sunday evening 7.00 - 9.00pm until April at our Observatory in Loughton Hall, Rectory Lane, Loughton, Essex. Contact: Charles Munton, 14a Manor Road, Wood Green. London N22 8YJ, tel: 020 8889-9253, e-mail: charles@munton.u-net.com Web site: <http://las-astro.org.uk>

10 May Dr Bob Forrest, TBA. 24 May Jerry Workman, Mars. 31 May Dr. Paul Hewitt, Extra-solar Planets

MANCHESTER AS

Secretary now Kevin J. Kilburn FRAS. Email kkilburn@globalnet.co.uk
Manchester Astronomical Society, Godlee Observatory, Main Building, UMIST, Manchester.

NORTH EAST LONDON

Meetings normally held 3rd Sunday of the month (exc. August), 3pm, in the Park Room, Wanstead House, 21 The Green, Wanstead, London. Contact. Bernard Beeston, 020 8363 5696

NORTH ESSEX AS

Meetings are held at the BT Social Club Hall, Collingwood Road, Witham, Essex. The Doors open at 19:30hrs for the talk to start at 20:00hrs on third Thursday of every month except August and December. The talks charges are £2.00 for members and other society member and £3.00 for non-members. Contact Iain Manning 01376 521897 or email iain@manning.netlineuk.net or John Green 01376 518512, email j.r.green@amsrve.net

15 March, David Nugent – Mars. 19 April, Dr Barrie Jones - Planets and life beyond the Solar System. 17 May Trevor Sproston - Beneath a Victorian Moon. 21 June tba. 19 July Gary Cavie - 2001 A Space Odyssey. 20 September Dave Eagle - Computers in Astronomy

NOTTINGHAM AS

Lecture June 7th "Looking for Life on Mars". Dr. Mark Sims, Beagle 2 Mission Manager, University of Leicester.

SALFORD AS

HQ: The Salford Observatory, Chasely Field, Chasely Road, Salford, M6 7DZ. Contact: Kath Redford, 2 Ablemarle Road, Swinton, Manchester, M27 5ST. Tel. 0161 794 3179 Email: salfordac@ast.man.ac.uk
Web site: <http://www.salfordastro.org.uk>

SOUTH EAST KENT AS

Meetings are Saturdays at 7.30pm, Secretary: John Kemp 01227-766470, email johnandcatherinekemp@supanet.com

April 28th Monkton Field Study Centre: "Astronomy with small telescopes" - John Carruthers and Alan Buckman.

May 12th Eastry Church Hall: "Cosmic Impacts and Extinctions" – Dr Michael Baron

2nd June 11am Bexhill-On-Sea. SAGAS Summer meeting; Norman Walker "Observations ancient & modern", Peter Gill "Recent Solar activity and the upcoming Eclipse", Nik Szymanek "CCD imaging and how to get the right results", Michael Maunder "Simplified photographic processing". Caterers on site, 6 trade stands, ISDN links, seating for 200. Followed by an evening at Herstonceux Science Centre starting 6.30 till late with tours of the domes and telescopes. Entry by ticket: £1.50 afternoon + £1.50 evening; provide own transport - Please contact SEKAS secretary who will co-ordinate carloads.

11th Aug. 8.30pm Monkton F.S.C. Barbecue and (weather-permitting) Perseid Meteor Watch.

STRATFORD UPON AVON AS

Meetings 7.30pm at the Home Guard Club, Tiddington Nr Stratford upon Avon. Details: www.astro.org.uk or phone Robin Swinbourne 01926-882187 Forthcoming meetings:

April 24 "Cosmology", by Dr. Chris Baddiley. May 9 "Chemistry of the Cosmos", by Mikhael Mavrommatos. May 22 "Origin & Structure of the Planets", by Dr. Mike Leggett. June 13 "Introduction to Expansion of the Universe", by Steve Smith. June 26 "Extrasolar Planets", by Dr. Paul Hewitt. July 11 "Digital Imaging", by Various Members.

TIVERTON AS

Meetings first Friday of the month during term time. 7.30pm at Blundells School, Tiverton. Observing: Wednesdays from 9:30 pm until 16th May, tel 01884 252942 for details

4th May Dr. Allan Chapman, "The Amateur Astronomer in Victorian Britain" tel 01884 259092 for tickets

1st Jun AGM followed by David Tucker (BAA Treasurer) "The BAA"
Web site: <http://www.tivas.org.uk/>

LIST OF OFFICERS 2000/2001

President: **Malcolm Jones**,
See front cover for details

Vice President: **Pam Spence**
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Devon Group : **John Parratt**
See Publicity Officer above

East Anglia Group : **VACANT**

SAGAS Rep: **VACANT**

FAS ANNUAL CONVENTION

The 2001 FAS Annual Convention and AGM will return to the
Rutherford Appleton Laboratory, Chilton, Oxfordshire on the
13th October 2001

Lectures, tours of RAL, trade stands and exhibits.

If you would like to exhibit your society's work or provide a
trade stand please contact Stan Waterman

Advance Tickets Now Available
Price £5.00 each from Dave Sutton
please send an SAE

Advertising Space

Small adverts for members and their societies are free.
For adverts of a more commercial nature we can provide up to A5
size in area for a small fee.
The newsletter has a circulation over 4000 to a specialised reader-
ship.

Contact the Editor for details.

Membership Changes

Remember to send society contact changes to the Membership
Secretary, Eric Hutton (see above).

Equinox Star Party—2001 14-23 September

Loughton AS will again host the annual Equinox Star
Party on 14th to 23rd September with Saturday 15th being
the 'main event' day. Further details will be provided in
the Summer Newsletter, but for early information please
get in touch with Mike Cook, 01708 375146, or by post at
No. 2 Sunset Drive, Havering-atte-Bower, Essex,
RM4 1QL.

Deadline for submission for next newsletter, 30th June 2001.

Please remember to send ALL articles to the Editor, Callum Pot-
ter. Regrettably material can only be returned if supplied with a
SAE.

2001 Handbook

The 2001 Handbook has been printed and circulated to all Society
secretaries. If your Society has not received your copy please get
in touch the Publications Secretary