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ISSUE 61

## FEDERATION OF ASTRONOMICAL SOCIETIES

<http://www.fedastro.demon.co.uk>

### FAS Convention 2000

Saturday September 30th 2000

Rutherford Appleton Laboratory near Didcot in Oxfordshire.

Dr Richard Harrison (Rutherford Appleton Laboratory) - "The SOHO Mission"

Dr Bob Owens (National Museum of Wales) - "Kuiper Belt Objects"

Nik Szymanek (Havering AS) - "CCD Imaging"

Professor Phil Charles (Oxford) - "Towards the Event Horizon"

Professor Mike Edmunds (Cardiff) - "Sir Isaac Remembers..."

#### Provisional timetable

8.30am Open to traders (Access is available beforehand if required but no FAS members will be available until 8.30am).

9.00 Open to public

10.00 Dr Richard Harrison, Rutherford Appleton Lab.: "The SOHO mission"

11.00 Coffee break

11.30 Two half hour talks plus AGM:  
Dr Bob Owens, National Museum of Wales:  
"Kuiper belt objects"  
Nik Szymanek, Havering AS: "CCD imaging"

1.30 Lunch

2.30 Professor Phil Charles, Southampton University: "Towards the Event Horizon"

3.30 Tea break

4.00 to 5.00 The Ken Marcus Memorial Lecture:  
Professor Mike Edmunds, University of Cardiff: "Sir Isaac Remembers..."

6.00 Conference ends

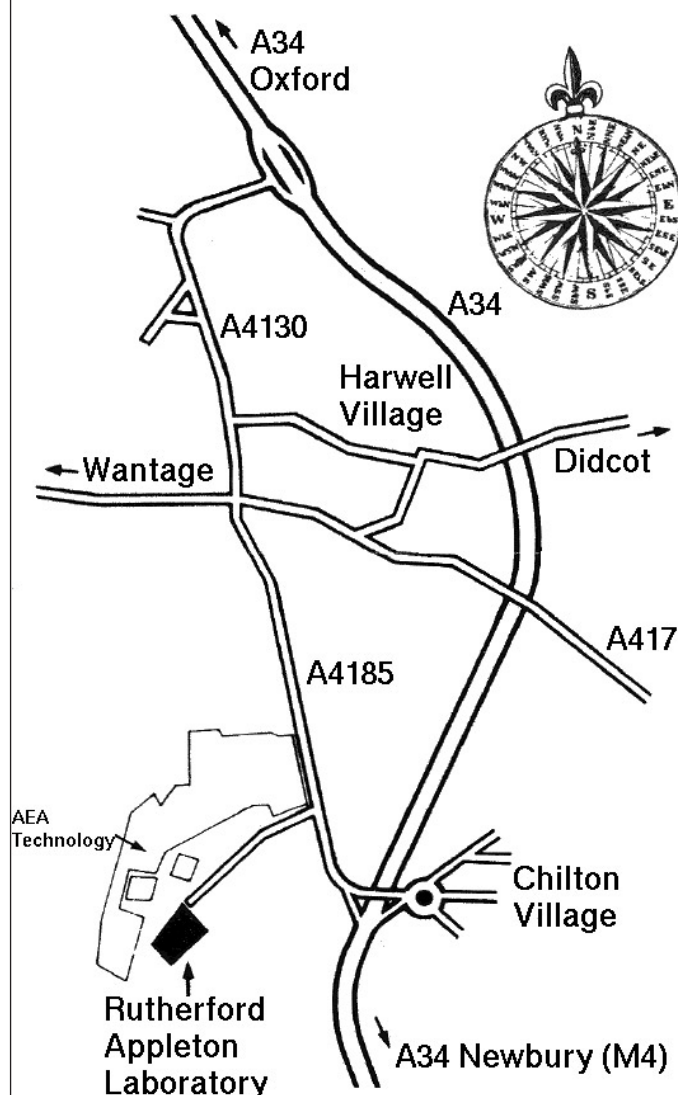
Trade stands to include:

Astronomy Now, Earth and Sky/Fieldview  
David Hinds Ltd, Venturescope

Tickets £4 in advance, £5 on the door.

The restaurant will be open for lunch. This is being run by the RAL.

For tickets contact The Treasurer, Dave Sutton



# The Revision of the National Curriculum

Peter Corbally, Salford A.S.

FAS Education Secretary

The National Curriculum for England and Wales has been revised this year and the new orders come into force in September 2000 replacing the Dearing Revision of 1995. The astronomical aspects of the curriculum have not escaped attention in the revision but have come out of it strengthened if anything, although astronomical matters still only make up about 21 % of the total National Curriculum.

Some of the revisions are merely changes of wording which sharpen the intended focus of the topic. For example in Key Stage Two ( age 7-11 ) the second statement has been changed from "Pupils should be taught that the Earth spins around on its own axis, and how day and night are related to this spin" to "How day and night are related to the spin of the Earth on its own axis". Minor alterations, to be sure, but the new version takes it for granted that the pupils know the Earth spins on its own axis and the emphasis is placed on the formation of day and night.

Three of the five statements in the Key Stage Three Programme of Study ( ages 12 -14 ) have also been changed in the same way ; the effect being to introduce slightly more astronomical content. For example the third statement has been re-written from "that gravitational forces determine the movements of planets round the Sun" to "Pupils should be taught about the movements of planets around the Sun and to relate these to gravitational forces". The new wording puts the focus on the orbits of specific planets and Kepler's Laws rather than the vague "planets" in general of the original.

In Key Stage Two the "28 day Moon" has survived the cull ; "Pupils should be taught that the Moon takes approximately 28 days to orbit the Earth".

It is in the proposed Key Stage Four Programme of Study ( ages 15 -16 ) that the most substantial revisions have been made. The topics to be studied have been increased from 4 to 5 and vague references to astronomical matters have been fleshed out into specifics. For example the old statement that "Pupils should be taught the relative positions of the Earth, Moon, Sun, planets and other bodies in the Universe" has been replaced with the bolder "the relative positions and sizes of planets, stars and other bodies in the universe (for example, comets, meteors, galaxies, black holes)". So black holes have descended from the realms of Science Fiction and are now compulsory objects in the syllabus of our schools and will feature in examinations for pupils aged 16. A re-drafted statement says that "Pupils should be taught how gravity acts as a force throughout the universe". The old statement had just mentioned gravity in the solar system. Cosmology and cosmogony have also been expanded with the insertion of the word "origin" into the statement that "Pupils should be taught about some ideas used to explain the origin and evolution of the universe". The fifth and completely new statement in Key Stage Four introduces SETI, " Pupils should be taught about the search for evidence of life elsewhere in the universe". This might be seen as a necessary step in order to begin to educate the population for the possible announcement of an alien contact.

This revised Key Stage Four Science curriculum is due to come into schools in September 2001 and will be examined for the first time in 2003. The old version of the National Curriculum Science Key Stage Four from 1995 was never properly introduced because the Exam Boards fought it off and retained their GCSEs.

I am currently completing a FAS guide to the astronomical aspects of the National Curriculum for our member societies. The booklet has been held up by the late publication of the revised curriculum ( May 2000 ) but is due to be reviewed by the Council meeting on July 1st and should be available at the Autumn Convention.

# Javea and District Astronomical Society

Jean Preston Secretary & Treasurer

The January meeting of the JDAS was held on the 20th. No field work had been arranged so that members could get back in good time for some sleep before observing the Moon Eclipse - which in our cloudless sky was dramatic and very colourful. At the meeting a lecture was given, with slides from NASA, reviewing the achievements of the Hubble Telescope and its repairs by the shuttle 'Discovery'.

The February meeting was held on the 17th and our president, Mike Glazier, gave a talk on colminating telescopes, which was most interesting. Arrangements were made for a Star Party in May at one of our member's villa. Also a visit was arranged to the Valencia Hemispherique on the 12th March. The Hemispherique is a very high-tech planetarium very recently opened in Valencia and very well attended.

Our fieldwork was constellation identification aided by the excellent audiotape from the Astronomical Society of the Pacific on the Spring Skies.

The weather at the March meeting was rather overcast and cloudy so there was no fieldwork but Mike gave us an interesting talk on resetting a telescope with the aid of a cotton reel. Unfortunately our trip to the Hemispherique at Valencia had to be cancelled but it is hoped to arrange another date for the trip.

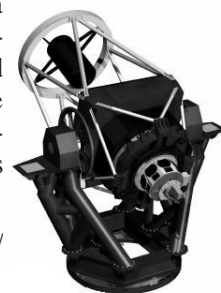
Our meeting in April was held at a new venue, still Javea but way outside the town and well above it with no light pollution. The new venue is Campo de Tiro San Jeronimo and is on the road between Javea and Denia. We now meet on the third Thursday in the month. To start our meeting Mike gave us a talk with slides on the planets which was most interesting and when dark we went outside to a beautiful clear night. We looked around the Spring/Summer sky with the help of an audiotape from the Astronomical Society of the Pacific.

A 'Star Party' was held in a members' villa situated above a small village in the Jalon Valley where light pollution is at a minimum. Unfortunately as 'Murphy's Law' always applies, some cirrus clouds formed after dark which spoilt seeing somewhat - and of course, shortly after the members went home this cirrus completely cleared giving a superb sky. Meanwhile, whilst setting up the telescopes etc. a splendid buffet table and bar on the terrace ensured the inner man was cared for ready for the spiritual uplift of stargazing.

## The Liverpool Telescope

Would you like observing time on a 2 metre telescope? A robotic telescope is currently being constructed on La Palma, and 5% of the time has been put aside for public education and amateur astronomy. Details from the BAA at:

<http://www.ast.cam.ac.uk/~baa/LT.html>



A club for the keen amateur astronomer who wishes to do a moderate amount of observing and socialising with their like minded fellows or lasses. Unlike most clubs meetings will be based around Lunations rather than the Civil calendar. The club caters for those interested in observing the Moon and beyond. All observations whether visual, recorded manually or imaged in any way are encouraged. All practical endeavours including telescope making or re-furbishment to image processing are welcomed. A news-sheet will appear occasionally with members images and jottings. There will be no formal lecture program or organising of public events.

The society has a Dark Sky site to the South of Birmingham provided by a member. He has agreed to have the club meet there on Saturdays at New Moon.

Dates for 2nd half of 2000 are:

2nd September, 8th October, 25th November, 30th December.

There are two main telescopes on site. A portable 9" F11 planetary scope and a 12" F6.5 on a Fullerscopes MK4 equatorial mount in a newly constructed dome. A 16" F5 Dobsonian will normally be present as well, along with a small 6" F5 equatorially mounted on a solid pier.

Meetings in Birmingham at Old Moon will be at my observatory and/or in some congenial spot agreeable to all.

Anyone interested should contact Andrew on 0121 243 6950 or by E-Mail at 106136,2750@compuserve.com.

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## Whirlpool Star Party

**Shannonside Astronomy Club** will be hosting the annual Whirlpool Star Party in the County Arms, Birr, Co Offaly, Ireland on the 29th and 30th of September and the 1st of October 2000.

This is the premier astronomical event in Ireland, attracting participants from home and abroad, and this year we have a distinguished list of speakers lined up to inform and entertain you. They are (in alphabetical order):

Professor Mike Baillie, dendrochronologist (author of Exodus From Arthur)

Dr Julian Barbour (The End of Time)

Neil Bone (Observing Meteors, Supernovae and other transient phenomena)

Professor John Brown, Astronomer Royal for Scotland

David J Eicher (The Universe from Your Back Yard and editor of Astronomy magazine)

Brian Harvey (The Chinese Space Program; from Conception to Capabilities)

Dr Gordon Love, an expert in adaptive optics.

If the weather permits we hope to be able to actually use the Leviathan, the 72 inch telescope built by the 3rd Earl of Rosse in the mid 19th century and now fully restored.

For further details contact David Bell, Bansha, Askeaton, Co Limerick, Ireland or [sdbell@gofree.indigo.ie](mailto:sdbell@gofree.indigo.ie)

### Kath Redford Publicity Officer

The society has settled down into the summer session of informal meetings at the observatory. On warm placid evenings, more often than not, they take place outside in the observatory field, followed by group observing when darkness descends and skies permit.

On the evening of April 6th and a clear night, most members observed the occultation of the crescent moon with Jupiter, Mars and Saturn. However as everyone knows, there was more to follow. The first signs of an impending aurora were spotted by a member around 9.30pm (BST) from his garden. Alerting others, a little later on some members observed what turned out to be the early stages of a more spectacular one yet to come. Shortly after midnight (BST), those who stayed up witnessed the spectacle. The intensity of the aurora peaked and the northern sky from east to west was ablaze with colour. The reds, greens and whites, with the accompanying rapid motion of the curtains and sprays, and which occurred on and off during most of the night, was deemed to be the best auroral display that members had ever seen from this area. Many coloured photographs were taken, the display giving the opportunity for the astrophotographers to resurrect their non-digital camera equipment.

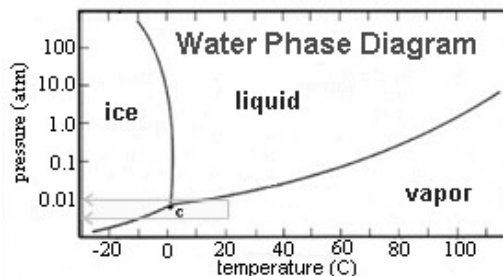
What a show, in spite of the urban light pollution and with clear skies throughout!!

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## Making a Splash on Mars

When scientists revealed dramatic new pictures of flood-like gullies on Mars, the big surprise wasn't that the Red Planet might harbor water, according to a Science@NASA news story. Researchers have known for years that water exists there. There are trace quantities of water vapor in Mars' atmosphere and substantial amounts of water ice at the martian poles. There may even be enough frozen water beneath Mars' surface to fill a large ocean if melted. What was amazing is that water may be present as a liquid very near the planet's surface and occasionally on top of the surface when underground deposits burst forth for a brief flash flood.

Above: A phase diagram of water. The 'triple point' (labeled



“C” in the diagram) is the temperature and pressure where all three types of water can exist at once. In the diagram, note that liquid water cannot exist below 6.1 millibars. This fact is significant because the atmospheric pressure at the martian surface hovers just below that value. Any water that might form on a warm afternoon from melting water would quickly disappear in the desiccated martian atmosphere.

NASA

## Stargazing could Boost Isle of Wight Tourism

THE SKY is quite literally the limit for a new tourism initiative.

“Two of the brightest stars in British Astronomy, Dr. Patrick Moore and Dr. John Mason, visited the Island last month for an astronomy lecture and suggested astronomy should be seen as a resource for tourism and promoted as part of the Island’s heritage. Director of I.W. Tourism, Tim Addison, was over the moon with the suggestion. ‘We are always looking for new ways of attracting tourists and when astronomers of Dr. Moore and Dr. Mason’s stature come to the Island and tell you it should be promoted as an astronomy resource, you sit up and listen to them,’ said Mr Addison.

“I think people would enjoy coming to the Island just to sit under the stars.” He said Fort Victoria Planetarium, near Yarmouth, was a member of I.W. Tourism and proprietor Paul England was already promoting astronomy in the course of its business. “I can see us promoting some great stargazing event in the future,” said Mr Addison. He said he could see the astronomy being integrated into other programmes like the I.W. Walking Festival.

Mr Addison said he would be keen to speak to the astronomers to see how the Island could best take advantage of its natural resource and Dr. Mason would be relieved to hear that the I.W. Council is already doing its bit for astronomy. George Woodhouse, principal lighting engineer for the authority, said the Island’s lighting policy fell within criteria set by the Campaign for Dark Skies. “We have been listening to astronomers for years,” said Mr Woodhouse. “There are a few people on the Island interested in astronomy and if we get complaints from them we do something about it.”

He said as older lights around the Island needed replacing they were being replaced with dark~sky-friendly lights.

from County Press newspaper. Isle of Wight.

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## The Astronomy Centre Alive and Kicking

The Astronomy Centre was founded in 1982 with private financial investment. The original twofold purpose was to establish a centre of astronomical excellence as well as to interest and inform the general public. The latter aspect has since been devolved to Planet Earth Centre.

As a non-profit making organisation, The Centre is financed by subscription membership, donations of time and money, sponsorship and fundraising activities.

It is run by two unpaid project managers (who are responsible for the overall project as well as the day to day administration), a Technical Director with a technical support team, and a public relations and liason officer.

The main aim is to provide a major practical observatory equipped with a reflecting telescope of at least 40” (1 metre) aperture.

Paid up members receive two newsletters per year, invitation to two star parties, practical advice and the use of equipment owned by the Centre as and when appropriate.

Current Status: Dome in position. Looking for more sponsors.

The Astronomy Centre  
Bacup Road, Todmorden, Lancs OL14 7HW ENGLAND  
<http://www.astronomycentre.org.uk>

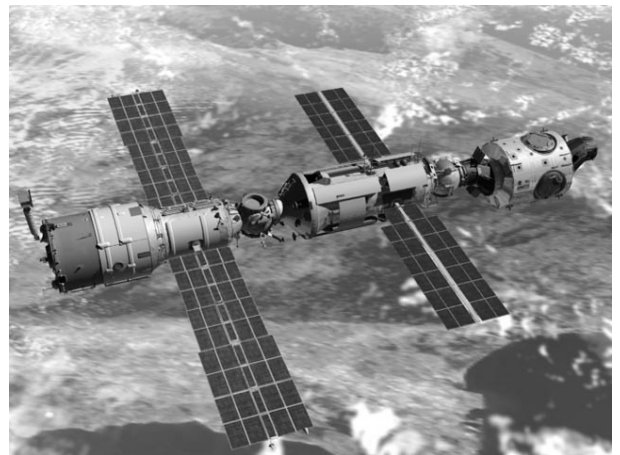
## Next stage in the International Space Station about to launch

### The Russian module ‘Zvezda’

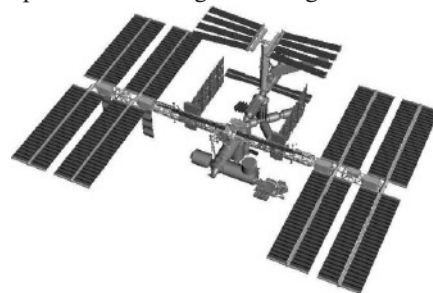


Zvezda provides life support, command and control and early living quarters to the ISS

The Zvezda service module is the first fully Russian contribution to the International Space Station and serves as the cornerstone for early human habitation of the station. Named for the Russian word for ‘Star,’ the service module is scheduled to be launched unpiloted at 12:56:28 AM EDT on July 12 as the third station component, docking by remote control with the already orbiting Zarya and Unity modules at an altitude of about 245 by 230 statute miles (394 x 371 kilometers).



The 42,000-pound module, similar in layout to the core module of Russia’s Mir space station, will provide the early station living quarters; life support system; electrical power distribution; data processing system; flight control system; and propulsion system. It also will provide a communications system that includes remote command capabilities from ground flight controllers.



Courtesy NASA

## Northern Lights Stop Lecture Walsall Astronomical Society

Alan Ledbury

A lecture on star classification, being delivered to Walsall Astronomical Society on Thursday April 6th was interrupted when members who were using a telescope to observe the alignment of planets became aware of an Aurora or Northern Lights display in the sky over Pelsall.

The lecture was abandoned as audience and speaker went outside to watch a spectacle, which is most uncommon in the midlands. The display started indistinctly and was at first difficult to distinguish from the twilight, but as the darkness increased structures began to emerge. Initially two columns of white light extended from the northern horizon to almost overhead, the upper parts were tipped with pink and a crimson cloud hovered in the east, the columns faded and drifted to the east to merge with the cloud.

As more structures became visible the entire club migrated to Pelsall North Common, one of the darkest spots in the light polluted Black Country, to better enjoy the spectacle.

At the height of the display which lasted for more than an hour it was possible to see pale blue curtains drifting all along the northern horizon, a light green arc from east to west passing just beneath the pole star and a series of columns rising from the curtains to the zenith.

Over a period of 15 minutes the vertical column developed crimson ribbons or organ pipes either side until the structure resembled a perfectly symmetrical sheaf of wheat rising into the Plough which was directly overhead at the time.

Although Aurora are seen regularly in Alaska they are extremely rare at the latitude of Walsall which is only ten miles from Birmingham. Club members were unanimous that this was the best any of them had ever experienced and suggested everyone should glance northward on clear nights in case of a repeat.

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## North Norfolk Astronomy Society

Secretary, Lynette Barker

North Norfolk Astronomy Society was formed just over two years ago. They meet every two months in East Barsham Village Hall for speaker evenings and they have regular Observing evenings at the Fieldview Astronomy Centre in East Barsham. They were recently awarded a Millennium grant of £1,607.00, which enabled them to buy two telescopes and a pair of binoculars that members can borrow for use at home.

They are currently fundraising to allow them to attract a wider range of guest speakers to their Speaker meetings. Popular subjects for speakers this season have included Einstein's Tram. Cosmology, Solar Viewing. The Galileo Mission to Jupiter and Astrophotography.

New members for the Society are always welcome and anyone interested should contact Lynette Barker on 01328 855877

## Cleveland And Darlington Astronomical Society

Proudly presents

### "Cosmos IV"

Saturday 7th October 2000

10 am. - 6.15 pm.

at

The Pursglove Centre, Prior Pursglove College,  
Guisborough, Cleveland

Featuring :

- Dr. Paul Murdin** "Black Holes Are Real !"  
**Dr. Carole Haswell** "Searching For Black Holes"  
**Dr. Allan Chapman** "Giovanni Domenico Cassini, Pioneer Of Planetary Astronomy"  
**Peter Rea** "Passage To A Ringed World"  
**Paul Money** "2Mass: A New View Of The Universe"

Admission £6.00 by advance tickets only.

For tickets, write to:

Mr. N.M. Haggath,

74 Queensferry Gardens, Shelton Lock, Derby, DE24 9JS.

Please enclose a long s.a.e.

Make cheques payable to "Cosmos North-East".

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## Leeds Astromeeet 2000

November 11th (Saturday)

Centenary House, North Street, Leeds.

The Astromeeet is a one-day convention for amateur astronomers held every year in November by the LAS.

Five high quality speakers to entertain us once again:

**Dr. Allan Chapman** (Oxford University)  
"John Harrison and the Longitude: What REALLY happened"

**Pam Spence** (President, FAS)  
"Recipe for a Solar System"

**Jonathan Shanklin** (Director, BAA Comets Section; British Antarctic Survey)  
(Subject to Jonathan's availability - Title to be announced)

**Professor Ken Pounds** (Leicester University)  
"Recent developments in X-ray Astronomy with the Newton Observatory"

**Dr. Andrew Newsam** (Liverpool John Moores University)  
"The Liverpool (robotic) Telescope, La Palma"

Trade stands so far confirmed:

Earth & Sky / Fieldview Norfolk  
Chris Marriott - SkyMap Pro (Astronomical software)  
British Astronomical Association  
TL Optics  
Stockport Binoculars & Telescopes  
Martin Lunn (books, etc.), York

# SOCIETY NEWS ROUND UP

## ABINGDON A.S

Contact: Bob Dryden 01491 201620  
Or Sebastian Linfoot 01865 725094  
Flat 10, Pembroke Court, Rectory Road, Oxford OX4 1BY

## ANDOVER

Contact : Jeff Geary, 15 Evingar Road, Whitchurch, Hampshire,  
RG28 7EY

e-mail : [jeff\\_geary@microcosmic.freeseerve.co.uk](mailto:jeff_geary@microcosmic.freeseerve.co.uk)  
website : [www.microcosmic.freeseerve.co.uk/aas](http://www.microcosmic.freeseerve.co.uk/aas)

Meetings : Every third Thursday in Grateley Village Hall  
Map and details of speakers available on our website.

## AYLESBURY

Contact: Alan Smith. 182 Marley Fields, Leighton Buzzard, Beds.  
LU7 8WN. Tel: 01525 374258

## BEDFORD

Secretary: Lisa Harrington, 24 Swallowfield, Wyboston,  
Beds. MK44 3AE Tel. 01480 406350  
E Mail:(Dave Eagle): [daveeagle@observer1.freeseerve.co.uk](mailto:daveeagle@observer1.freeseerve.co.uk)  
<http://www.observer1.freeseerve.co.uk>

## BRADFORD A.S

Contact: David Cooper, 36 Pollard Lane, Undercliffe,  
Bradford.BD2 4RN.  
<http://www.andybat.demon.co.uk/bas/index.htm>  
E-mail: [has@andybat.demon.co.uk](mailto:has@andybat.demon.co.uk)

## BRECKLAND ASTRONOMICAL SOCIETY

Meetings are on the second Friday of every month, starting at  
7:30pm.

Contact: Spence Allen. Tel: 01953 850571.  
E-Mail:[sastrohing@AOL.com](mailto:sastrohing@AOL.com)

## BRIDGEND

Meets on alternate Fridays between Sept & June.  
Contact: Clive Down 01656 740754  
E-mail [clivedown@btinternet.com](mailto:clivedown@btinternet.com)  
WebSite: [www.freenet.co.uk/homepages/BridgendAS](http://www.freenet.co.uk/homepages/BridgendAS)  
Sept 8th "Why Elliptical Orbits?" by Brian Stokes of Swansea AS  
Oct 13th "Setting free the Quarks" By Dr Simon Hands of Swansea  
University  
Nov 10th Subject TBA by Dr Jonathan Davies, Cardiff University  
Dec 8th "Unusual Stars" by Dave Powell of Cardiff AS

## CARDIFF

Contact: Mr D. Powell, 1 Tal-y-bont Road, Ely, Cardiff. CF5 5EU.  
Tel: 01222 551704

Meetings are held at Dept. of Physics & Astronomy, Uni of Wales,  
5 The Parade, Newport Road, Cardiff

7th Sept "Extra Solar Planets" Dr Amanda Baker, Uni. College  
Cardiff

21st Sept "Giovanni Domenico Cassini" The beginning of modern  
planetary astronomy. - Dr Allan Chapman.

5th Oct "The Next Generation Space Telescope" - Prof. Mike  
Disney, Uni College Cardiff

19th Oct "Observing Meteors" - Ms Shelagh Godwin Surrey

2nd Nov "Spaceguard UK" - Major J. Tate Wiltshire

16th Nov "Where Matter meets Antimatter", Dr Gerry Skinner

## CLACTON & DISTRICT AS

Meet very first Thursday of the month, except August, at the  
Friends Meeting House, Granville Road, Clacton-on-Sea. 7:30 -  
10:00pm.

Contact: David Pugh, 40 Hawthorn Rd, Clacton-on-Sea, Essex.  
CO15 4QZ. Tel: 01255 429849

## CORNWALL A.S.

Contact: Steve Harris, 26 Nanscober Place, Helston, Cornwall, TR13  
OSP Tel: 01326 569254 E-mail:[sph@eidonet.co.uk](mailto:sph@eidonet.co.uk)

## HANNEY & DISTRICT AS

Meetings held at the Hanney War Memorial Hall, East Hanney,  
Oxfordshire at 8.00p.m.

Contact Bob Church, tel 01235 764089

## AS of HARINGEY

Meets twice monthly on the 1st and 3rd Wednesdays. 7pm - 10pm.  
NOTE: The new venue is the White Hart Lane School, Wood  
Green. London N22.

Contact: Jerry Workman, 91 Greenslade Rd, Barking, Essex, IG11  
9XF. Phone 0181 5077568

<http://www.garym.demon.co.uk/index.htm>

## HARROGATE AS

Monthly meetings at "Friends Meeting House", Homestead Road,  
Harrogate, usually on the last Friday of every month.

Contact: Bryan Bonser, 01423 331029 or Tony Bills, 01423 501976

## HASTINGS AND BATTLE AS

Contact: Keith Woodcock 24 Emmanuel Road, Hastings, East  
Sussex TN34 3LB. Tel: 01424 443883

E-mail: [Keith@habas.freeseerve.co.uk](mailto:Keith@habas.freeseerve.co.uk)

## HAVERING AS (HAS)

The society meets at the Cranham Community Centre, Marlbor-  
ough Gardens, Cranham, Essex, on the third Wednesday of each  
month, excluding July and August.

Sept 20th "Rosetti Missions" Roger Brian

Oct 18th "Genesis - Birth of a Star" Paul Money

Nov 15th "His Latest fantastic images" Nic

Dec 20th Christmas Titbits, Quiz and nibbles

Contact: Frances Ridgley, 133 Severn Drive, Upminster, Essex.  
RM14 1PP. Tel: 01708 227397

## HEART OF ENGLAND (HOEAS)

Catchment area: West Midlands & North Warwickshire

Postal contact: John Williams, The Secretary, HOEAS, 100 Stan-  
way Road, Shirley, Solihull, B90 3JG.

Web site address: <http://members.aol.com/hoegas>

Email: [HOEAS@aol.com](mailto:HOEAS@aol.com)

Formal meetings held on the last Thursday of the month at Furnace  
EndVillage, Shustoke (near Coleshill), Warwickshire.

September 28th AGM + John Williams (Astro Photography for  
the beginner)

October 26th Dr. Chris Baddiley (Cosmology)

November 30th Tom Boles (Searching for Supernovae)

January 25th Shaun Albrighton (Observing with Binoculars)

## HEBDEN BRIDGE AS

This last season our membership rose to 39 and we meet every 4th  
Wednesday at Hebden Bridge Tourist Information Centre, 1 Bridge  
Gate, Hebden Bridge. at 7:30pm

20th September "Let there be Light", Rod Hine, Bradford A.S.

18th October "Russell Porter - Arctic Explorer, Artist and Tel-  
escope Maker"

15th November "A Particle Detector Bigger than Lancashire"  
Dr. Jeremy Lloyd-Evans (Leeds University)

13th December "Binoculars and Binocular Astronomy"  
Len Entwisle (Hebden Bridge A.S.)

10th January "Observing the Caldwell Objects"

David Ratledge (Bolton A.S.)

Tel: 01282 616294 E-mail: [j.hbas@argonet.co.uk](mailto:j.hbas@argonet.co.uk)

## HULL & EAST RIDING AS

We meet at Wyke College, Grammer School Road, Bricknell  
Avenue, Hull from September to April, Meetings start at 7.30 p.m.  
and finish by 9.30 p.m. and are usually the first Monday of the  
month except for September and January when it is the second  
Monday. The programme of speakers has not been arranged yet  
but the dates are :

11 Sept 2000, 2nd Oct, 6th Nov, 4th Dec, 8 Jan 2001, 5th Feb ,  
5th Mar, 2 April (AGM)

For further details please contact : Tony Scaife Tel 01482 668665  
(President) or Helen Marshall Tel 01482 443397 (Secretary)

## JAVEA & DISTRICT ASTRONOMICAL SOCIETY

Meets on the 3rd Thursday of the month at:  
Campo de Tiro, San Jeronimo, Javea, Alicante', Spain  
Contact: Mike Glazier. Tel: 0034 96 285 3202 - 647 1785

## LEEDS A.S

Venue: Centenary House, North Street, Leeds from 7:00pm onwards. All are made very welcome.  
Aug 9th "The Astro Quiz"  
Sept 13th "Global Positioning Systems" by Prof. A.H. Dodson  
Institute of Engineering Surveying and Space Geodesy - University of Nottingham  
Oct 11th "How To Make Planets" by Prof. Michael M Woolfson  
University of York  
Nov 8th "The Highest Energy Particles In Nature" by Prof. Alan Watson - University of Leeds  
Nov 11th Saturday, Astromeeet 2000  
Dec 8th "The Presidential Address" - accompanied by Christmas Social  
Website: [www.astro.leeds.co.uk](http://www.astro.leeds.co.uk)

## LETCHWORTH

Meet on the last Wed of each Month.  
Contact: Alec Wilkinson, 54 Broadmead, Hitchin, HERTS.  
SG4 9LX  
Tel: 01462 623654  
<http://www.flexability.co.uk/ldas/>

## LIVERPOOL AS

Ken Clarke, 31 Sandymount Drive, Wallasey, Merseyside L45 0LJ  
(Please encl. large sae) Tel:0151-6383270 / 0151 7945356(24hrs)  
E-Mail: [ggaastro@liverpool.ac.uk](mailto:ggaastro@liverpool.ac.uk)  
<http://www.liv.ac.uk/~ggaastro/home.html>

## LOUGHTON ASTRONOMICAL SOCIETY

The venue is Theydon Bois Scout Hall, Loughton Lane, Theydon Bois, Epping, Essex.  
Public Open Meetings twice per month during the winter on Sunday evenings, 7pm-9pm.  
Meetings every Thursday at 8:00pm.  
Contact: Charles Munton. 14a Manor Road, Wood Green, London N224YJ. 0181 8899253, e-mail: [charles@munton.u-net.com](mailto:charles@munton.u-net.com)

## LYRA

Meet on the first Thursday of the month at the Elizabeth Denes Hotel, Corton Rd, North Lowestoft. Starting at 8pm in the function Room.  
Contact: Richard Chilvers. Tel 01502 574010.  
WebSite: [www.lowestoft.net/lyra](http://www.lowestoft.net/lyra)

## MANCHESTER AS

Contact: MAS. c/o Godlee Observatory, UMIST, Sackville St, Manchester. M60 1QD. (0161 2004977, 24hrs. Fax 0161 2287040).  
<http://www.u.net.com/ph/mas/>

## MIDLAND SPACE FLIGHT SOCIETY

Focuses on (you guessed it) space flight and exploration.  
Contact: Andy Salmon, Olympus Mons, 13 Jacmar Crescent, Smethwich. B67 7LF  
E-mail: [andy\\_salmon@compuserve.com](mailto:andy_salmon@compuserve.com)

## MILTON KEYNES AS

Meetings held at Rectory Cottages, Church Green Road, Bletchley, 8pm.  
More society details on <http://website.lineone.net/~jmbell>

## NEWBURY

Meet at the United Reform Church Hall, West Street.  
E-mail: [naas@btinternet.com](mailto:naas@btinternet.com)  
Website: [www.naas.btinternet.co.uk](http://www.naas.btinternet.co.uk)

## NORWICH A.S

All meetings at the Seething Observatory from 7:30pm to approx 10:30pm. Admission £2, under 16's £1, ample parking.  
Situating off the B1332 Norwich - Bungay Road Signposted 8 miles south of Norwich.

B1332 Signpost Seething Observatory, (Harvey Lane): 1 mile down Harvey Lane/Toad Lane.  
<http://nas.gurney.org.uk/>  
Contact: Frank Lawlor. 01508 493321  
E-mail: [FLawlor@compuserve.com](mailto:FLawlor@compuserve.com)

## SALFORD AS

Contact: Kath Redford 2 Albemarle Road, Swinton, Manchester. M27 5ST Tel: 0161 7943179.  
E-mail: [salfordac@ast.man.ac.uk](mailto:salfordac@ast.man.ac.uk)  
WWW:<http://www.salfordastro.org.uk>

## SCOTTISH ASTRONOMERS

Ken Mackay at Hayford House, Cambusbarron, Stirling FK7 9PR .  
<http://star-www.st-and.ac.uk/~fv/sag/sag.html>

## SHROPSHIRE

Observing meetings are held once a month at Rodington Village Hall, between Shrewsbury and Telford.  
The meetings at the Gateway Arts and Education Centre are held quarterly and attract about 30 people for talks by well known people on the circuit.  
Contact: Jacqui Dodds, 35 Marton Drive, Wellington, Telford. TF1 3HC.  
E-mail: [Jacquidastro@breathemail.net](mailto:Jacquidastro@breathemail.net)  
WebSite: [www.astro.cf.ac.uk/sas/sasmain.html](http://www.astro.cf.ac.uk/sas/sasmain.html)

## SOLENT

Room 8 of the Oaklands Centre, Fairisle Road, Lordshill, Southampton, 7.30-10pm every third Tuesday of the month.  
Aug 15 T..B..A.  
Sep. 19 Searching for Supernovae Ron Arbour  
Oct 17 A..G.M.  
Nov 21 T..B..A.  
Dec.19 Meteors Neil Bone

## VECTIS AS

John Smith on 01983 865451 or 27 Forest Road, Winford, Sandown, I.O.W. PO36 0JY.  
MEETINGS 7.30pm, fourth Friday of each month except December at Newport Parish Church Centre, Town Lane, Newport 92 members and a splendid new Observatory on our little Island.

## WEST MIDLANDS AS - New Society

Anyone interested should contact Andrew on 0121 243 6950 or by E-Mail at [106136,2750@compuserve.com](mailto:106136,2750@compuserve.com).

## WOLVERHAMPTON

The meetings take place at Beckminster Church Hall, Birches Barn Road, Wolverhampton, from 7:30 p.m. on alternate Monday evenings.  
Contact: Michael Bryce (Secretary) on 01562 742850 or Barbara Russell on 01902 650168 for programme details.  
The Secretary's email is [michael\\_bryce@hotmail.com](mailto:michael_bryce@hotmail.com).  
New website at <http://www.wemfas.atfreeweb.com/was/was.htm>,

## YORK A.S

We meet on the first and third Friday in each month except August at The University of York Rm. G120, Goodricke College, York at 8pm  
Contact Hazel Collett 01423-320012 Mon-Thur. daytime or Martin Dawson 01904-658072 evenings.

If the society your looking for is not listed try the FAS handbook which contains details of all the Societies in the FAS. If your society wishes to be mentioned in the round-up send in your events/change of meeting date/location etc. and I'll endeavour to slot them in. In newsletter editions which are pushed for space, entries which duplicate the handbook or have been published previously may be removed.

## LIST OF OFFICERS 1999/2000

**President: Pam Spence,**

See Front cover for details

**Vice President: Malcolm Jones**

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E-mail 100257.1434@compuserve.com

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See Front cover for details

**Treasurer: Dave Sutton,**

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**Membership Sec: Eric Hutton,**

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Tel 01992 610243. E-mail: bookman@rmpc.co.uk

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E-mail: rpk@ronkelley.demon.co.uk

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See Front cover for details

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VACANT

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See Vice President above

**Publicity Officer: John Parrat**

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**Chilterns Group :**

VACANT

**Devon Group : John Parrat**

See Publicity Officer

**East Anglia Group :**

VACANT

**North West Group : Ron Kelley**

See Minutes Secretary

**SAGAS Rep:**

VACANT

**West Midlands : Andy Salmon**

Olympus Mons, 13, Jacmar Crescent, Smethwick,

WARLEY, West Midlands, B67 7LF. Tel: 0121 5654845

E-mail: Andy\_Salmon@compuserve.com

**Yorkshire Group : Paul Harper**

45, Lydgate, Lepton, HUDDERSFIELD, West York-

shire, HD8 OLT Tel: 01484 606832

**Website Co-ordinator: Nick Quinn**

15, Newham Lane, STEYNING, West Sussex, BN44 3LR

Tel: 01903 814090 Nick@nquinn.demon.co.uk

## FAS AGM

### Your Federation needs YOU

To coordinate the Federation of Astronomical Societies requires the help of volunteers. At this AGM a number of people are standing down or shuffling around to new jobs. If you think you might like to help please contact a member of the current FAS committee for information on the various posts. All posts are up for grabs and some will remain vacant if no one comes forward.

Those where the current incumbents are standing down are:-

Asst. Treasurer  
Newsletter Editor  
Meetings Organiser  
Auditors  
Public Liability Ins.

Please come forward if you can help.

### Publications Available

<b>Astrocalender</b>	£1.40 + A5 SAE + 31p stamp
<b>Observational Astronomy</b>	£2.00 + A5 SAE + 31p stamp
<b>Step by Step Astrophotography</b>	£1.30 + A5 SAE + 31p stamp
<b>Using a Telescope</b>	£1.80 + A5 SAE + 31p stamp
<b>Choosing a Telescope or Binoculars</b>	£0.60 + A5 SAE + 26p stamp
<b>Hazards &amp; Safety Guidelines</b>	
<b>FAS Handbook</b>	£3.50 + A5 SAE + 40p stamp

Please state your Society name to qualify for these prices.

**Contact Publication Secretary For Details & Bulk Orders**

**Payment – Cheques payable to F.A.S**

**MALCOLM JONES, Tabor House, Mulbarton Road**

**Norwich, Norfolk. NR14 8JT**

**E-mail: 100257.1434@compuserve.com**

### New FAS Editor Required

Unfortunately, due to a change in job and the imminent arrival of our first baby, the editor and proof reader (expectant wife) are no longer able to maintain this newsletter with the effort it deserves. Therefore as from this Autumn the Federation will be looking for someone (or more than one) to take on this task.

The benefits of the job include the contacts made with many Societies in the UK and abroad and access to many newsletters from around the country thus ensuring you will never miss out on events occurring across the UK.

It has been a wonderful insight into the Amateur UK Community and I have made many friends through the newsletter and whilst working as a committee member of the FAS.

The Outgoing Editor, Rob Barter

### MEMBERSHIP CHANGES

Remember to send society contact changes to the Membership Secretary, Eric Hutton.

### Deadline for submission for next newsletter, 01/10/2000.

Please remember to send ALL articles to the Editor, Rob Barter. Regrettably Material can only be returned if supplied with a SAE.