



# spectrum

staff news and events

December 2007



## KEITH'S CHRISTMAS MESSAGE

This is my first Christmas message to you all as Chief Executive of STFC and it provides the perfect opportunity to acknowledge the tremendous work carried out by staff from across the Council during the year. I know that it can be difficult to stay focused on work priorities when so much is changing. Nevertheless, I have been extremely impressed with the depth of commitment of staff throughout the STFC towards keeping the 'show on the road'.

### CELEBRATING OUR PAST

It has been a turbulent twelve months, but in the festive spirit, I'd like to mention some of our achievements. After bidding a very fond farewell to the CCLRC and PPARC Councils in the early part of the year, we successfully launched the new research council in April. We also celebrated a number of anniversaries: the 30th anniversary of the Central Laser Facility, the 40th anniversary of Chilbolton and the 50th anniversary of the Rutherford Appleton Laboratory.

### A YEAR OF ACHIEVEMENTS

Following the official launch of Diamond by the Queen, HRH Prince Philip took time out to visit the Space Science and Technology

Department enjoying presentations on a range of exciting projects. Through Sky on Google Earth, the UK ATC has opened up astronomical exploration to the entire world and the new Astra Gemini laser system successfully fired its first shot to target.. We also set up new staff management structures, advisory committees and the STFC Council itself. This is by no means an exhaustive list. The teams associated with all of these activities are to be commended for extremely successful outcomes.

### SEASONAL GREETINGS

The main message I want to get across to you is that none of this work has gone unnoticed by me. I very much value your patience during such challenging times and your dedication to the work of the council. I hope you enjoy the various Christmas parties and celebrations – you deserve them.

A very Merry Christmas to you, your families and loved ones.

Keith Mason



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## EDITORIAL

Many thanks for the feedback in the Spectrum readership survey. I will publish the survey results on the STFC intranet in the New Year.

However, in respect to some very important issues raised, I have cut the

print run for Spectrum by 20 percent with immediate effect. Of course, a PDF version with links to further information is also available on the STFC intranet (<http://staff.stfc.ac.uk/default.aspx>).

Jim Gallagher



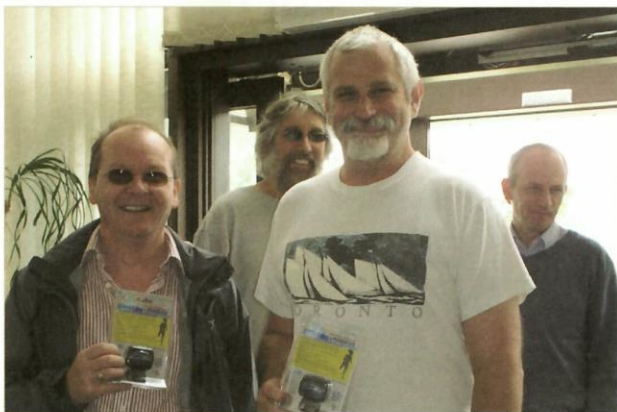
### Site responses

- RAL
- Daresbury
- UK ATC
- Swindon



# 'Health Matters...'

**We know health matters and to help us all the Occupational Health team at RAL have introduced a number of new initiatives over the past twelve months.**



Participants of the lunchtime walk were presented with a free pedometer

## HEALTHY WALKS

Health professionals continually remind us of the benefits of taking exercise, but for many people finding the time to build this into their busy schedule is too difficult. So on 27 June, it was great to see in excess of 100 people turn up to the launch of three 'healthy walks' around the extensive site and adjoining land. Their incentive was not just to get into the habit of walking at lunchtime but also to take possession of a free pedometer on completion of one of the three signed routes.

## WEIGHTWATCHERS

Earlier this year the Occupational Health team offered employees the opportunity to join two lunchtime groups. The take up for both six-week courses was extremely good. Overall a staggering 181.8 kgs (400lbs/28.5 stone) has been shed.

## KICKING THE HABIT...

Well in advance of the introduction of the anti smoking legislation this summer, employees were invited to join a seven-week smoking cessation group, with the promise of ongoing support and

financial assistance with the purchase of Nicotine Replacement (NR) therapy.

## LIFESTYLE CHANGE

Smoking is a significant health hazard, so it was very encouraging to see the level of interest generated for this course, and for a number of people it has seen the start of a significant lifestyle change.

## THE RIGHTEOUS GOOD

John Good described himself as a hardened smoker and had previously had several unsuccessful attempts to quit. He used a drug based therapy to counteract the effect of nicotine withdrawal. He now admits to becoming a 'stuffy and intolerant' non smoker.

## REDUCING TEMPTATION

Andy McMenemy, a new recruit, jumped at the opportunity to join the course. He used NR chewing gum. He had previously lived in a house full of smokers and moved to a non smoking house to reduce the temptation.

## OCCUPATIONAL HEALTH SUPPORT

Well done to all those who stopped smoking having attended the course, have stopped smoking independently or have simply cut down.

Occupational Health continue to provide this support so if any individual or group at RAL are interested in kicking the habit please contact them on ext 6666.

**Susan Merrifield**

## Accessibility for everyone

### The Corporate website

The redesign of the information architecture / menu structure is about to get underway and we are looking for volunteers who use assistive software to navigate the web. If you do and would like to be part of a user-testing group, we would like to hear from you. The Web Team wants to make the corporate website accessible for everyone and to achieve this, we need your help to

give us feedback on web pages and content. If you are interested, please contact the Web Team at [www@stfc.ac.uk](mailto:www@stfc.ac.uk).

Also, please remember to let us know your views on the corporate web site by filling in the short user-survey at <http://www.so.scitech.ac.uk/questionnaire/>, or by following the link on the homepage ([www.scitech.ac.uk](http://www.scitech.ac.uk)).

**Patrick Ffinch**



## IN THE NEWS! *Highlights from the Media Team*

### THE LARGE HADRON COLLIDER FOR EIGHT YEAR OLDS!

Whilst we have been involved in taking a large number of journalists to CERN in advance of the start up of the Large Hadron Collider (LHC), the latest visit provided a few different challenges! BBC Newsround, the news programme aimed at 8-12 year olds, decided that they wanted to tackle CERN and the LHC.

Accompanied by Dr Brian Cox from the University of Manchester, the Newsround crew toured the LHC tunnel, the ATLAS experiment and the computer centre.

The most bizarre moment of the trip was when the crew asked to borrow a bicycle from one of the workers in the tunnel (it is 27 km around) in order to demonstrate how the protons will whizz around before colliding in one of the four accelerator



BBC Newsround presenter, Lizo, in front of ATLAS

experiments. Whilst this seemed a little odd at the time the final clip in which the footage was dramatically speeded up demonstrated

the point well – and fortunately there were no collisions on the day!!

The LHC piece was aired on Newsround on 7 November appearing throughout the day on the CBBC channel as well as on the traditional 5.25pm slot on BBC One. Related web pages can be viewed at <http://news.bbc.co.uk/cbbcnews> (type CERN into the Search box).

**Gill Ormrod**  
STFC Press Office



# DOUBLE STAR COMES HOME

Highly successful scientific mission ends, disintegrating during descent.

After nearly four years of science operations, the equatorial satellite TC-1 re-entered the Earth's atmosphere on 14 October and disintegrated. Throughout the mission, the Satellite Operations Group (SOG) at RAL has coordinated the science operations of the European instruments on board the Chinese Double Star mission.

## SCIENTIFIC COOPERATION IN SPACE RESEARCH

Double Star was the first joint Chinese/ESA collaboration, and was the first mission launched by China to explore the Earth's magnetic field in space. The mission included both TC-1 with five European science instruments, and the polar-orbiting satellite, TC-2 with two, looking at different space regions. Observations were also coordinated with those of the ESA cornerstone Cluster mission's four satellites. SOG has been conducting science payload operations

for Cluster since 2000, and was readily able to adapt its systems for the two Double Star satellites.

## SCIENTIFIC IMPACT

Amongst discoveries made by Double Star is that of more than 140 ion density holes thousands of kilometres in size, found in the solar wind and associated with particles back-streaming from the Earth's magnetic field. The onset of three consecutive magnetic sub-storms, which can cause colourful aurorae and perturbations of GPS signals, have been observed with Cluster, leading to a better understanding of this process.

## CREDIT TO RAL

While it is sad that the TC-1 mission has finished, it had greatly exceeded the nominal mission length of 18 months. The ESA project scientist, Philippe Escoubet said, "I'd like to thank the Satellite Operations team at RAL for doing a great job". SOG had prepared the detailed timelines of commands needed to execute the science instruments' weekly

planned observations. This involved communicating with the Chinese teams who are nearly one working day away in time. The joint project also needed to overcome language and cultural differences.

## TWIN LOSS (TC-2)?

Plans to continue support of science operations on TC-2 were suspended after contact was lost in early August; recent contact with it is being evaluated.

As Trevor Dimbylow, EPOS Project Manager says, "It has been an exciting international collaboration - it is hoped that there will be many more to follow."

For more information visit the ESA website for Double Star or visit [http://jsoc1.bnsc.rl.ac.uk/pub/DSP\\_coord/DoubleStar\\_RAL.html](http://jsoc1.bnsc.rl.ac.uk/pub/DSP_coord/DoubleStar_RAL.html).

© Anne Chadwick



The EPOS team at RAL celebrated delivering the final instrument commands to China

# The Chadwick Library's theses collection

Research students at Daresbury Laboratory have been recording their pioneering work in Masters and PhD theses since time began (well,

1955). Some of those one-time students still work here. The developments of the facilities and programmes at Daresbury are reflected in this collection, which is located in the Chadwick Library's 'rolling stack', arranged in subject order for easy browsing.

## LIBRARY CATALOGUE QUICK SEARCH

You can see all 211 theses titles on the Library catalogue by typing 'thesis' into the keyword box as a title word, and choosing DL Library on the Quick Search page. Or to check by author, use the advanced search feature, type 'thesis' into the keyword box and a surname in the author field. You can also use the advanced search to find recently completed theses by adding the date to the publication year field.

## RESEARCH FOUNDATION

Any Daresbury staff that have not donated a copy of their own thesis, please do so if you can! Do encourage all research students working at Daresbury to donate a copy of their thesis to the library - by doing so, they can help to expand this collection and ensure that their valuable research will be accessible to all.

© Sue Padgham  
Chadwick Library



Some of those one-time students still working at Daresbury Laboratory, pictured with Sue. Back row: David Holland, Paul Kummer, John Simpson. Front row: Tracy Turner, Sue Padgham, Mike Dufau



# STFC & Parliament

## Managing Big Science

The House of Commons Public Accounts Committee (PAC) has recently published a report 'Big Science: Public Investment in Large Scientific Facilities'. This looked at ten large Research Council projects, including four STFC facilities. The Committee members were generally supportive of our science and during the evidence session held in May, Edward Leigh MP, Chairman of the Committee said, "Personally, I would rather spend £300 million on a Diamond Synchrotron than waste another £1 billion on Tax

Credits' overpayments". The STFC facilities looked at were:

- Diamond Synchrotron;
- ISIS Neutron Source, Second Target Station;
- Energy Recovery Linac Prototype (ERLP);
- Muon Ionisation Cooling Experiment (MICE).

The report's recommendations focussed on the need for enhanced project management and financial control, and on greater stakeholder consultation in such projects.

### PAC IN SESSION

The Committee held an oral evidence session in May. In this session Keith

Mason explained how STFC would ensure that the knowledge gained from building and running complex facilities, would be captured and utilised in the management of current and any subsequent facilities being built by STFC or other Research Councils.

### OUTCOMES

STFC will work with RCUK and DIUS to help draft a Government response to this report in the next few weeks. This will outline what steps have already been taken, or will be taken, to address the recommendations made in the report.

🗨️ **Nigel Calvin**

### RECOMMENDATIONS

The Public Accounts Committee's recommendations were aimed at the Research Councils and the new Department for Innovation, Universities and Skills (DIUS). Some of the key findings and recommendations were;

- Estimating of construction and operating costs should be improved;
- Research Councils should jointly develop a cadre of project management expertise and share these skills for new projects;
- DIUS and the Research Councils should draw upon expertise in the broader scientific community and industry, to contribute to the decision-making process when selecting new facilities;
- DIUS should track the economic impact of the current group of large-scale facilities and draw lessons for the development of future facilities.

## STFC strikes gold

### Safety – an integral part of doing good science

Safety in the STFC got off to a flying start in 2007. STFC's large UK experimental sites won external recognition for their safety management and performance. The awards for RAL and Daresbury Laboratory were received from the Royal Society for the Prevention of Accidents (RoSPA), and the UK ATC won external recognition from 'Scottish Engineering'.

### A DECADE AT THE TOP

For RAL this is the 10th year running to be awarded a RoSPA Gold Award and the first to earn the RoSPA President's Award. This places RAL in the top 10 percent of those organisations seeking RoSPA recognition.

Gareth Baker, Graeme Finlan, Ron Lambert, Barry Manifold, Jim Wells, Laura Matthews Left to right front row :- Angela Roythorne, Jan Harris, Rose Russell, Fran Childs



### NINE CONSECUTIVE AWARDS

Daresbury Laboratory also received a Gold Medal for occupation health and safety management performance – its 9th consecutive year! The RoSPA award is a Health and Safety Executive (HSE) benchmark covering safety leadership, occupational health monitoring and actual accident performance. Meanwhile, the UK ATC received an award from Scottish Engineering in recognition for demonstrating high standards in safety management systems. They scored well in an audit based on documented submissions, a site tour and interviews.



### HQ TO SHARE THE LOAD

Swindon Office has not been idle in raising awareness of health and safety either. It decided to take part in the 2007 European Agency for Safety and Health at Work campaign - 'Lighten the Load'. With proven experience of promoting and maintaining a safe and comfortable working environment, STFC will continue to ensure that systems and procedures are meeting and exceeding standards.

🗨️ **Jim Wells**



# PROFILE



# WRIGHT INTO SPACE!

John Wright retired from RAL at the end of September after a long and varied career working in Space Science and Technology. His friends and colleagues, including several ex-RAL staff, gathered to commemorate this event on 5 October, just one day after the fiftieth anniversary of the start of the space age itself. (Sputnik was launched on 4 October 1957.)



## CONTRIBUTING TO SUCCESS

John has worked on some high profile science missions, including IRAS (Infrared Astronomy Satellite) and the X-ray astronomy missions Ariel-5 and Ariel-6. Ariel-5 was particularly successful and is famed for making observations of X-ray binary stars that confirmed the existence of black holes.

## A WELL-TRODDEN PATH

John's career has taken him to the Falkland Islands, to Germany and to France, as well as being based at Ditton Park and RAL. He has always been involved in the operation of spacecraft and over the last 25 years, he has been the key person in ensuring that the RAL ground station has been successfully employed on a range of space missions. John has developed the ground station so that it now consists of the very visible 12 m antenna, a 2.4 m antenna on the roof of R68, and a new 4.5 m antenna at Chilbolton.

## SHARING THE KNOWLEDGE

Although John has retired, he will still be working for us as a consultant for a couple of days per week, so we will benefit from his knowledge and expertise for some time to come.

👤 Peter Allan







## Campus Eye - Sailing victory

An STFC sailing team won the Elite Cup in the 2007 Civil Service Offshore Regatta held in Cowes in July. The team, made up from departments across RAL including ISIS, Diamond, Technology, Estates and Computational Science and Engineering came second place in the points table for the Silver Jubilee Cup, Rutherford Appleton Trophy and Pairs Competition.



### CIVIL SERVICE REGATTA

The Civil Service regatta celebrated its Jubilee this year and fifteen yachts from across the Civil Service ranging from the Veterinary Laboratory to GCHQ, took part in the racing. The STFC yacht, skippered by Chris Greenough and Steve Carr as Mate, came a very creditable joint third overall in the competition. The other crew members were Martyn Bull, Nick Rees, Robert Rushton, Steve Jago, David Hackett and Jens Thomas.

### CRUISING FOR PLEASURE

To many, sailing is the only complete sport! It has many guises - cruising for pleasure along the Brittany coast or trying to keep your 40ft yacht inches ahead of fifteen others around racing marks in the Solent. All of these are

a strange combination of pleasure, exercise, stress and excitement and the RAL Sailing Club is involved in all of these through the CSSA (Civil Service Sailing Association - <http://www.cs-sailing.org>).



We are currently seeking experienced racing skippers from across STFC to participate in the 2008 Civil Service Regatta. If you are interested in yacht racing, either as crew or skipper, please contact Chris Greenough ([c.greenough@rl.ac.uk](mailto:c.greenough@rl.ac.uk)).

📞 **Martyn Bull**

## RAL Arts & Crafts Exhibition 2007

The 15th STFC Arts & Crafts exhibition was held over three days 2-4 October at RAL. Feedback from visitors was very positive - so much so, this makes it the most successful one to date.

There was a wide variety of exhibits to illustrate the wide-ranging talents, skills and interests of the people at the Laboratories. This included art work in various media, displays of photography, model military vehicles and embroidery.

The performing arts encompassed solos and various duo/group combinations and others who just 'joined in'. Arguably the bravest of all was Graham

Kerr who started off each lunchtime session with a recital of his poetry.

'Favourite in Show' was voted for by the visitors over the three days and the presentation of the Myra

Gilbert Perpetual Trophy was made by Richard Holdaway to Peta Foster for her handmade chocolates - well deserved because we were able to taste the samples!

My thanks are given to all those who contributed, helped and visited over the three days and made it such a success it was.

📞 **David Farrell**



## DIARY

14 December  
**TALKING SCIENCE LECTURE**  
RAL Central exhibition area/Pickavance Lecture Theatre, 10:30 & 19:00  
Dr Ken Farquhar:  
'Entertaining Science'  
Contact: Elizabeth Clarke

18 January  
**TALKING SCIENCE LECTURE**  
DL Merrison Lecture Theatre, 19:00  
Professor Elizabeth Williamson  
'Is cannabis a medicine or a drug?'  
Contact: Tony Buckley

8 February  
**TALKING SCIENCE LECTURE**  
RAL Pickavance Lecture Theatre, 10:30, 13:30 & 19:00  
Dr Jonathan Wood:  
'Biomimetics - Learning from nature'  
Contact: Elizabeth Clarke

Have you got an event that you would like included in the Diary?

Send your stories or ideas to the Editor, Jim Gallagher ([jim.gallagher@stfc.ac.uk](mailto:jim.gallagher@stfc.ac.uk)) or give him a call on (01793) 442037.

The deadline for the next edition is 18 January.



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