

**Accidents happen**

Are you in RAL's death benefit scheme? For only 50p per month - subscriptions have been temporarily suspended - your nominated beneficiary will receive £200 immediately without fuss or formality. Don't wait until it's too late, join today. £1 enrolment fee gives immediate cover. For more information and an application form contact Ann Treedy, 2.21, K71 on ext. 6018.

**Global warming debate**

Cornwall appears to be taking the threat of global warming very seriously. Richard Harrison of SSTD was invited to speak recently at a workshop which took place at St Austell College and was co-organised by the Roseland Observatory. Over 200 O and A level pupils from schools in Cornwall attended 'The Global Warming Debate' and heard Richard talk about the effect of the Sun on the Earth and other speakers on related subjects. The pupils spent time in small groups considering questions related to global warming - for example how it will affect fish stocks, agriculture, native species of plants and animals - and then gave presentations on their discussions.

"It was a long way to travel to give a talk but it's great that CLRC staff at the laboratory are among their list of experts on this topic. It was great fun and it's good to see the future generation taking this topic seriously", he said.

**Franco-British co-operation**

Applications are now invited for the 2002 Alliance programme in pure and applied sciences, technology and applied social sciences. Alliance aims to promote the development of Franco-British scientific co-operation between universities and public sector research institutes in France and the UK.

The closing date for new applications is 1 May 2001 and full details can be found at <http://www.britishecouncil.org/france/english/science/alliance.htm>

**SECIS**

The SECIS team has been busy analysing results from their 1999 eclipse expedition and have published several papers. Ken Phillips has had an article accepted for publication in Scientific American which was written with an Indian colleague, Bhola Dwivedi. Due to be



published in 2001, it will be on solar coronal heating and will contain results from SOHO and SECIS illustrations. Ken believes that the article is the first full-length solar article for Scientific American for many years and the first one with an RAL author.

The other good news is that the team have funding to take the SECIS instrument to the next eclipse (21 June, Africa). More details will be available as the plans unfold. <http://www.secis.rl.ac.uk>

**Gordon Walker would like to invite his friends and colleagues to join him for a farewell drink at 4pm on Thursday 22 March in the DL coffee lounge and at 3pm on Friday 30 March in the R22 Restaurant.**

**Part time service and how it affects your pension**

You may be aware that the basis of all pension calculations is the formula:

$$\frac{\text{pensionable pay} \times \text{reckonable service}}{80}$$

But what does that mean if you are a part time worker? For part timers, pensionable pay for the calculation is not take home pay but the full time rate for the grade. Reckonable service will be the amount of time the part timer has been in the scheme divided by the number of hours in a full time week then multiplied by the number of hours worked each week.

$$\frac{\text{part time worked} \times \text{hours worked per week}}{\text{full time hours for post}}$$

Example: You have been in post for five years. The full time hours for your post are thirty seven and you work twenty hours each week. The following calculation will give your reckonable service:

$$\frac{5 \times 20}{37} = \text{reckonable service}$$

Part timers shouldn't worry if their hours vary or they regularly work extra hours; JS is regularly informed - by HR - of any changes to the hours worked and these will be taken into account when your pension is calculated.

If you have any queries please contact Ian Maxwell (Head of JSS) on 01793 411943.

**Articles, ideas and letters are very welcome!**

Articles to the Editor or Correspondent by 15th of the month.

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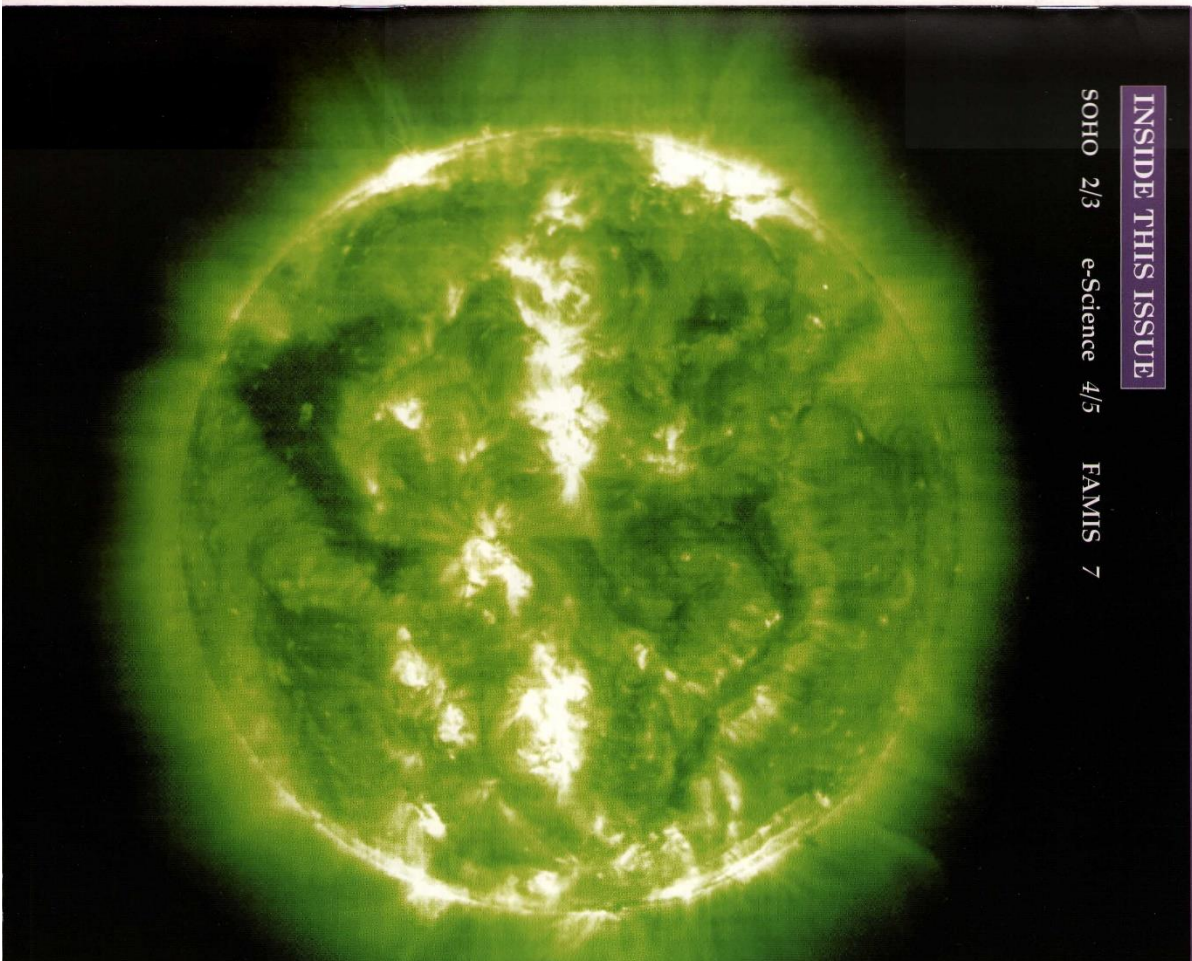
**LABNEWS**

MARCH 2001

A MONTHLY NEWSLETTER FOR STAFF OF THE COUNCIL FOR THE CENTRAL LABORATORY OF THE RESEARCH COUNCILS

**INSIDE THIS ISSUE**

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# SOHO and the solar maximum

*SOHO has been scrutinising the Sun for five years, culminating in recent spectacular observations of the Sun at its most violent.*

Article extracted from Frontiers by kind permission of PPARC

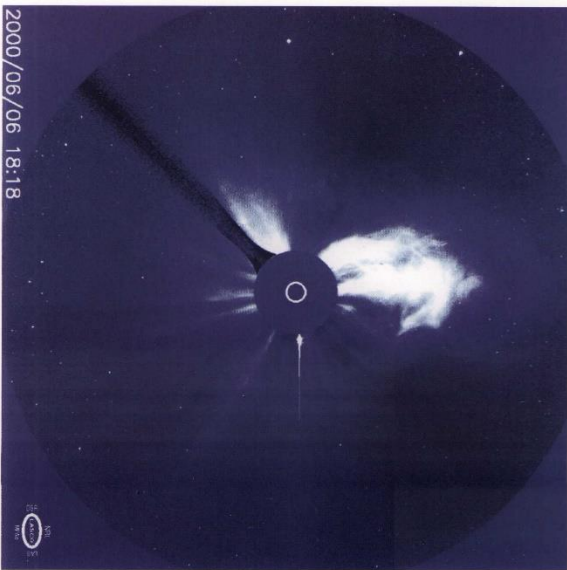
Every so often, a space mission comes along that takes a particular area of astronomy to a new plane through a series of rapid revolutionary strides.

The ESA/NASA Solar and Heliospheric Observatory (SOHO) is just such a mission. Its success, since its launch in December 1995, has touched on most areas of solar physics and truly justifies its selection as part of ESA's first Cornerstone mission. The mission has generated thousands of scientific papers as well as major media interest with a string of intriguing discoveries, such as solar tornadoes, the 'magnetic carpet', imaging the far side of the Sun, the discovery of more than 200 comets, solar 'jets' inside the Sun, Earth-directed solar clouds and Earth-sized explosions detected throughout the solar atmosphere - to mention just a few. This article highlights some of the recent results which illustrate the power of the SOHO mission.

### SOHO's goals

SOHO carries three sets of instruments designed to explore:

- The solar interior, using a method known as helioseismology which involves monitoring small vibrations of the Sun's surface by exploiting the Doppler effect (a shift in wavelength of emitted light due to motion) or variations in intensity;



This SOHO/LASCO image shows a coronal mass ejection in progress. The white dots are stars.

- The complex solar atmosphere, using an array of imagers and spectrometers operating in ultraviolet and visible wavelengths;

- The solar wind - the stream of charged particles generated at the Sun which passes over the spacecraft.

This three-part package provides an unprecedented view of a star - from its interior to its influence in space. There is a very strong UK involvement in the mission, with one instrument - the Coronal Diagnostic Spectrometer (CDS) - built and operated by British scientists. UK teams have also been heavily involved in constructing another instrument, the Large Angle Spectroscopic Coronagraph (LASCO),

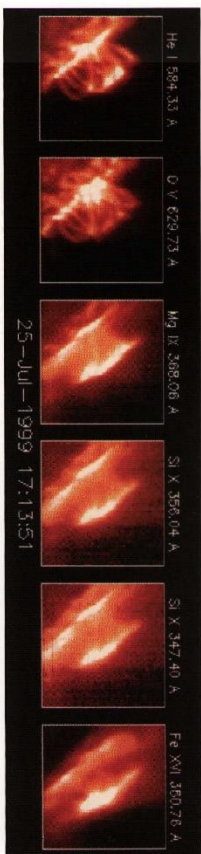
and have participated scientifically in many of the other 10 instruments.

The Sun's activity varies over an 11-year cycle. SOHO scientists have been following the rise of this activity over the past five years, relishing the prospect of using the spacecraft's instruments to examine the Sun when most active as it is at this moment (2000-2001). As the Sun becomes active, the number of sunspots - the dark blemishes on the face of the Sun - increases. However, more dramatic effects happen, including large explosions known as solar flares which occur deep in the solar atmosphere, and the eruption of huge clouds into space known as coronal mass ejections. These are driven by the complex, ever-changing solar magnetic fields which

can be traced by imaging the Sun in ultraviolet light.

SOHO provides an unprecedented view of flares as demonstrated by the unique images taken of the flare of 25 July 1999 by the CDS instrument. This device selects radiation from different elements in the Sun's atmosphere to create 'temperature maps' of the hot, electrically charged gas, or 'plasma'. Rather like weather maps, such images are used to analyse the activity within the solar atmosphere, in an effort to understand why the explosive flare events occur.

One peak of recent flare activity occurred in early June 2000, when a series of large, so-called X-class, flares rocked the northern hemisphere of the Sun. Associated with these events were



These six images, each 200,000 km<sup>2</sup>, were produced from ultraviolet radiation from, (left to right) helium, oxygen, magnesium, silicon and iron with corresponding temperatures of 20,000 to 2,000,000 °C.

a set of huge coronal mass ejections, one of them engulfing the Earth. The arrival of such clouds at Earth can cause severe problems for power distribution, communication, navigation and satellite industries, and may activate the aurora.

Clearly, studies of the eruption of these coronal mass ejection events are not only interesting to solar physicists but also to commerce. However, observing the onset of mass ejection events is notoriously difficult. Using the CDS instrument, UK scientists are trying to map the 'weather patterns' in the Sun's atmosphere in the lead up to the eruption.

SOHO's nominal mission length was two years but it is still going strong and could well continue for

## diamond update

REAL staff may have noticed some test borings for a geological survey taking place to the east of the main gate. This work follows on from similar tests to the south of site. Rick Mason from Building Projects Group said, "Before the final decision is taken about the siting of **diamond** it is necessary to get confirmation of the structure of the soil and rock to ensure that it is suitable to support the foundations of the facility. The site that is currently being tested is preferred by both the Management Board and the Local Authority. Final decisions over the site should be made in the next month and an Outline Planning Application will then be submitted".

The current site investigation involves sinking borings in three different locations of the site to ensure that the results are representative of the whole area. A percussion rig starts the borings until it hits the hard rock. Then rotary drilling equipment takes over, recovering core samples of the rock to a depth of 35 metres. The soil and rock cores go through a series of laboratory tests to evaluate their characteristics. There will be a series of further detailed tests on the final site. Work on the specification and design of the new synchrotron is progressing apace at DL with a view to beginning the manufacturing phase in about a year.



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Consultation with the user groups is being stepped up to identify the nature of the first available beamlines for researchers when operations begin in about five years.



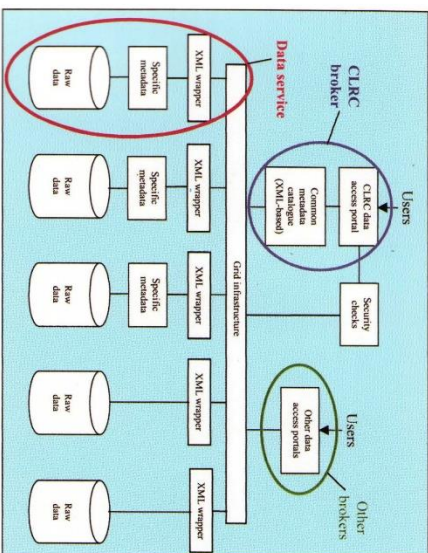
# The CLRC e-Science programme

*e-Science is enabling increasingly complex and challenging scientific problems to be addressed through the use of advanced IT. Current e-Science activities in CLRC are laying the groundwork for a new multi-million pound three year programme starting in April 2001. The pilot projects described here are exploring how Grid techniques can enhance the multi-disciplinary science programme supported by CLRC.*

## Data portal

A web-based data portal is being developed which will offer a single method of browsing and searching the contents of scientific data resources held at CLRC through use of a central catalogue containing metadata about these resources. The structure and contents of this catalogue are based on a metadata model for representing scientific data which has been developed by the project. Extensive use is being made of XML and related W3C standards for representing, transferring and manipulating the metadata.

The project, which is being carried out by ITD and CSE, with the assistance of ISIS and SPD, is prototyping these ideas by developing a pilot implementation of the proposed system which will enable researchers to access and search metadata about data resources held at ISIS and the SRS.



The Data Portal system architecture

The British Atmospheric Data Centre (BADC) at RAL makes a variety of data resources available to the UK environmental research community. This project is investigating how Grid techniques can improve the services which the BADC offers its users including being able to remotely identify and retrieve data from a range of sources, if necessary with subsequent processing to reduce the volume of data which needs to be transferred over the network. The project will also review ways in which the Grid can improve UK access to data from instruments on the ENVISAT satellite to be launched by ESA in mid-2001.

**SMART experiments**  
Many university-based researchers who carry out experiments at the SRS and ISIS have to travel to the facilities to control the experiments as their data is collected. The SMART project, a collaboration between teams at DL and

HPC in the Grid  
This project aims to develop a computational Grid which will enhance access to high performance computers and enable novel combinations of computer simulation, remote measurement and data analysis. CLRC's computing groups are co-operating with the universities of Edinburgh and Manchester to form the UK High End Computing Consortium. This consortium has initially established a working Grid infrastructure using the Globus toolkit. This is now being exercised with a

variety of applications including remote medical imaging (to help surgeons during operations) and real-time flood warning analysis to assist emergency services.

**Grid reference**  
With any new development like the Grid it is necessary to get many people up to speed quickly and to define best practice so that any experience gained is quickly shared. This project is establishing a reference Grid implementation platform within ITD which can then be cloned by teams in other departments developing Grid applications. The reference platform is a Linux PC running Grid middleware based initially on the Globus toolkit. The project is also operating a Grid Certification Authority, currently for the UK particle physics community. An internal forum is held regularly to disseminate newly acquired technical knowledge.

**StarGrid**  
The StarGrid project, involving SSTD and ITD, is integrating the Globus toolkit into the KAPPA package which is part of the Starlink astronomical data processing software suite. This enables image files to be retrieved from remote data archives using Grid techniques, processed locally and, if necessary, reloaded into the archive.

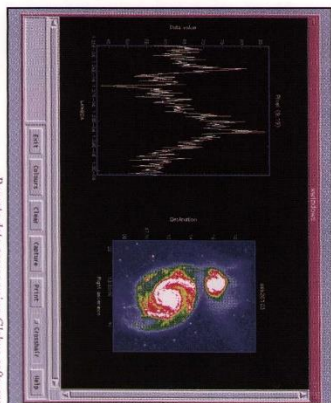
## Gigabit networking

With many scientific programmes rapidly increasing the volume of data which they generate - for example by using more complex computational models or higher resolution experimental detectors - the bandwidth of networks through which the data must be moved becomes a limiting factor. The development of Grid technology will make it easier to move data around as part of a distributed data analysis process. Within CLRC, the internal networks must carry data between experimental facilities, computers, disk and tape stores, and external locations. To meet the growing data traffic requirements, local area networks are being increased to a gigabit capacity now with further increases to 10 gigabits planned within two years.

**Petalbyte data storage**  
The Atlas Data Store (ADS) at RAL provides secure and affordable long-term storage for experimental and computational data from many of the scientific facilities in CLRC and elsewhere. Data curation will be increasingly important as the cost of facilities, and the data they produce, continues to rise. The future demands of the particle physics community in particular will require major upgrades to the ADS capacity over the coming years. A major increase towards petabyte capacity is currently underway with further increases planned over the next 3-5 years. As the Grid provides easier access to large scale data storage facilities, intelligent data access will

## Remote data access using Globus software

become an increasingly important issue. Metadata based data location tools are currently under development in CLRC to meet this need.



Remote data access using Globus software

David Boyd and Paul Jefferys

www.e-science.clrc.rl.ac.uk/



**Medical Matters**  
by Jackie Hutchinson and Tony Buckley

Most people know that a press officer writes news releases and organises interviews, but another task is to track media coverage. We keep a file of printed articles that mention CLRC, its projects or its laboratories, and we try and get copies of all broadcasts involving CLRC research or staff.

Each morning staff in PPR scan the national broadsheets and local newspapers (at RAL and DL) to pick out not only any articles that mention CLRC, but also articles with a science, technology or computing angle that might be of interest to staff. We summarise these and produce a daily list which is posted on the intranet. We've been doing this for a couple of years now and, inspired by a young computer enthusiast in the office, we now also link directly to those articles that are on the web. So now you don't have to move from your desk to read them! From the home page (<http://admin-www.rl.ac.uk/admin/>) use the 'Press cuttings' link to see the new cuttings file. We did have one or two hitches when setting this up. One of the lessons we learnt was that, although links to articles in national newspapers seem to last, those in local papers are

transitory. One day we set up a pointer to a story about Durebury Laboratory in one of the local newspapers in Cheshire. Then the following week we were alerted to the fact that this link pointed to a story about... breast implants! We hastily removed the link, but maybe not quickly enough. The hit rate for that day was substantially up on the average. Could this have been a coincidence?

We do have a press cuttings agency to scan for us but there is a delay before we see some of the articles they find. So, if you find an article anywhere that mentions CLRC, any of its projects or laboratories, do let us know. We'd particularly appreciate your help with the weekend newspapers, the tabloids or any of the more specialised magazines. And don't forget to let us know about **your** news.



# Minister supports major new projects at Daresbury

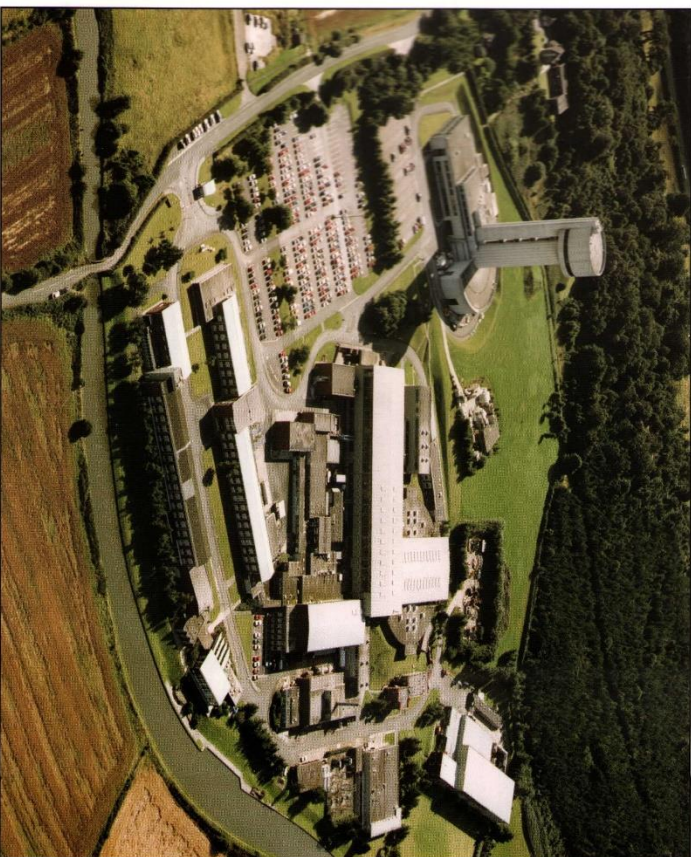
Stephen Byers, Secretary of State for Trade and Industry, visited Daresbury Laboratory on Friday 2 March to announce his response to the North West Science and Daresbury Development group's report. Amongst a package of other measures, he announced support for two projects worth £150 million, part of the proposed Centre for Accelerator Science and Imaging and Medicine (CASIM), subject to approval later this month from the normal scientific review process and the completion of feasibility studies.

The projects are a £50 million fourth generation light source and a

£100 million proton cyclotron. These projects offer significant scientific, medical and industrial benefits. He also announced the establishment of a Public-Private Partnership Company to act as a bridge between Daresbury and industry to enhance the exploitation of its scientific expertise for the benefit of the region, and the establishment of a North West Science Council to bring together higher education institutions, the regional development agency (RDA) and industry to develop a 10-15 year science strategy for the region.

"I hope when people look at the response that were making today they will recognise that the Government acknowledges the real strengths that

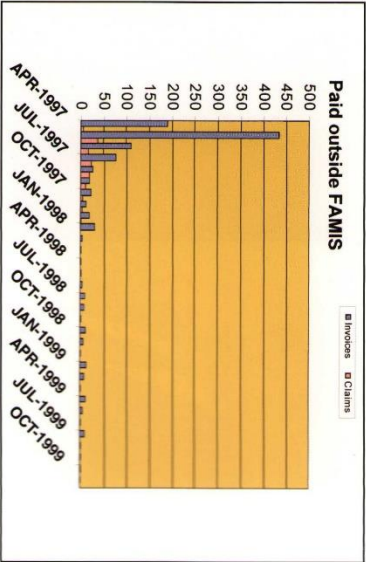
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# "It's getting better all the time"

Those of you with long memories may recall CCLRC's new Finance system, FAMIS, going live in April 1997. Initially it was pretty tough going, especially when the system was not available for three crucial weeks in July. However, though it was far from clear at the time, the corner had just been turned and serious progress has been made since then.

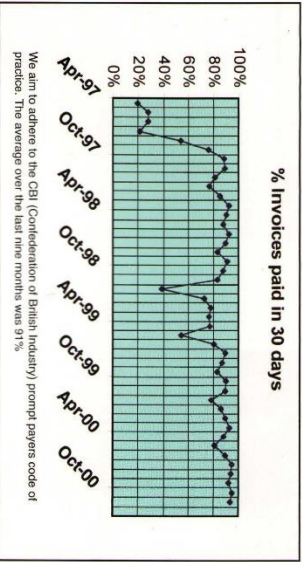
The worst problems at that time were paying bills and travel claims. We had to pay many of them by hand, and that caused even more problems. The first graph shows that after July 1997 the number of manually paid bills fell dramatically and has never risen significantly. By September the same was true for claims.



HM Treasury expects us to pay our suppliers within 30 days and our average payment time over the year is reported in the accounts. The second graph shows the proportion of bills we actually paid within 30 days each month. It is clear that since October 1997 we have achieved over 80%. The two big dips - in December 1998 and May 1999 - were caused by cash flow problems. Notice that these dips have not recurred since then, partly because we are getting better data from FAMIS, making it possible to make better predictions of the future cash flow position, in time to avert crises.

The small dip in May 2000 came from a very different cause - the 'love bug' virus delayed the weekly payment run!

Accounts	Jan-99	Jan-01
Cash	2	0
DL Cash	2	0
Lloyds Sterling	7	0
Lloyds ECU/Euro	7	0
PvC	7	0
Periods closed	6	0
Payables	5	0
Receivables	5	0
Purchasing	9	0
Fixed Assets	4	0
General Ledger	9	0



Most people associate Finance with 'the accounts'. The time it has taken to produce our final printed accounts has reduced from almost a year for 1997/8, which was not at all acceptable, to an achievable and wholly acceptable target of 90 days this year. That would have been unprecedented, even in the days before we implemented FAMIS.

The table shows one reason for this huge improvement. Finance departments always take reconciling bank statements and closing months very seriously. By chance, a report survives showing the position on 19 January 1999. We were running months behind even then, with some work not even started for the year. In comparison December 2000 was completely closed by 22 January 2001. We would like to reduce this still further, but the improvement over the past two years is pretty staggering. Note that the Fixed Assets module was not even in production in January 1999 which makes the present up-to-date situation even more impressive.

I had planned to write an article about FAMIS for LabNews around Easter 1997. That was put off - for four years as it turned out! It is therefore a particular pleasure to be able to report that, thanks to the efforts of many people in many departments, FAMIS has indeed been 'getting better all the time'.

Kern Hartley



## Congratulations to...

**Q**uan Hao, until recently a senior lecturer at De Montfort University, will shortly take up the Associate Directorship of MacCHESS, the Life Sciences arm of the synchrotron at Cornell (USA). Quan has had a very close association with Daresbury and the Molecular Biophysics group in particular, and has been central to their effort in *ab initio* phasing of PX data. The advances in low resolution phasing using a mark obtained from X-ray solution scattering data is worth pursuing (a grant application with Quan Hao and Michael Woolfson has just been submitted). In view of this, he has been appointed as a Senior Collaborating Scientist in the Molecular Biophysics Group for five years with effect from 1 March and it is expected that he will spend a couple of weeks a year at Daresbury.

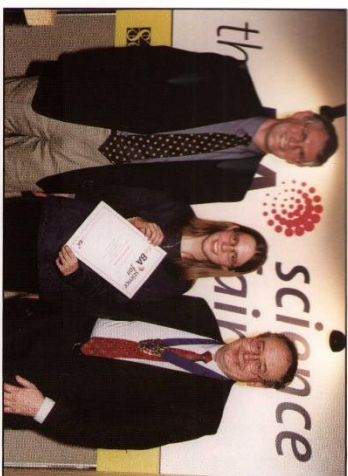
To celebrate the appointment, a small reception took place in the Daresbury



Auf Wiedersehen Quan Hao! He is seen here among friends and colleagues from Daresbury Laboratory and De Montfort University (photo courtesy J.G. Grossmann).

Science Centre. It is hoped that the fruitful collaboration will continue. His

friends and colleagues wish him all the best for his new job at Cornell.



Catherine is pictured with Ian Haplin from Intel (who sponsored the prize) and Sir William Stewart, President of the BA.

### Top young scientists recognised

A Reading student who spent some time working in the Particle Physics Department at RAL was one of the winners at an event organised by the British Association recently. Catherine Davison from Queen Anne's School won a trip to California to represent Britain at the 52nd International Science and

Engineering Fair in San Jose, which takes place later this year. Catherine's work at RAL – the comparison of the effectiveness of two Monte Carlo Generators for the identification of Higgs events in the W+W- Channel – was judged as one of the outstanding projects exhibited at the BA's Science Fair at the Royal Society.



### Top marks in Payroll

Alison Ward and Nicky Elliott from Payroll have both successfully completed their Payroll Alliance Certificate in Payroll Administration. The certificate has taken them about 18 months to complete through open learning, both passed with flying colours and special congratulations go to Alison who received an Edinburgh Crystal rose bowl (pictured) for the student with the highest level of success in 2000. We wish both of them good luck in the next stage of the NVQs.

## Retirements

### Bob Chandler

Richard Lawrence-Wilson opened his presentation at Bob Chandler's retirement by saying that he felt the Bob had done a great deal for the workforce of CLRC (and SERC) over the years and for a great many individuals.

Bob has lived in Didcot all his life. After leaving school he became an assembly mechanic before moving onto UKAEA. His evening and weekend work as a driver for Fryor's taxis enabled him to become a skilled mechanic. He started working at RAL, on NIRSNS, as a general worker in 1965. His starting salary was £16 1s, which if compounded with a similar grade today, would have attracted a massive 1900% pay rise. Richard commented that it was partly thanks to Bob that this sort of salary increase had become possible.

Over the years Bob became more and more involved in the unions. He has been highly respected in his roles as secretary and chairman of the union and this was recognised in 1998 when he was awarded an MBE. Richard said that Bob's compromises



had always been balanced well and carefully. Richard was usually on the opposite side of the table to Bob in times of negotiation but felt that Bob had been a worthy negotiator and a respected colleague.

Bob was presented with a Ray Roberts' card, a workmate and home garden vouchers. His wife, Moireen, was presented with a bouquet of flowers.

### Dave Evans

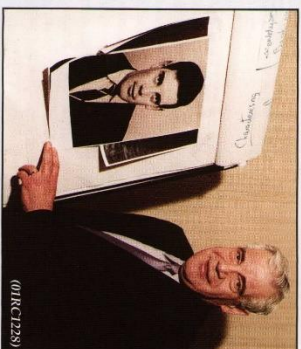
Dave Evans joined NIRSNS in 1963 working on water chemistry, epoxy resins and materials testing for Nimrod. He had previously worked in industrial chemistry at Harwell. His career at RAL has seen steady progression through the ranks. In 1979 he became a PFTO and a member of the Institute of Chemists and the International Cryogenics Materials Conference Board. He has served the conference as secretary for the last ten years.

His recent work has included several high profile projects such as the ATLAS end cap & barrel superconducting magnets, CMS composite structures, the BABAR end cap and a complicated carbon fibre structure installed at SLAC and ALMA, who propose to use a carbon fibre structure to support the dishes of 64 radio telescopes for 20 years at 5000m in the Atacama desert, Chile.

Elwyn Baynham presented Dave with some mementoes of his time at RAL including two plaques - conductors through the ages, and cricket bat and balls. His presents included an electric hedge cutter, a ratchet branch lopper, battery drill/driver and a jigsaw. His wife, Sally, was presented with a bouquet of flowers.

Dave said the time had simply flown by. The decision to come to RAL was one of the two best decisions he had ever made, the other was marrying Sally. Commenting on retirement, he said that he and Sally had prepared some 'learning plans' to help him in his new career. He hoped

that, after about six months' intensive training, he would be up to the job and may even be apply to apply for IIP? He hopes to continue travelling a lot and to spend time with his grandchildren. He also has a PhD to finish.





## The tenants' tale

Whilst it is not explicitly a part of the core mission of CLIRC to act as a landlord to other businesses, there can be both strategic and tactical benefits to the primary objectives of the organisation by having certain kinds of tenant on site.

At DL the space vacated by the NSF in the tower buildings has been exploited to host four tenants having a particular synergy with the work of CLIRC. Three of these are technology/business brokers and the other is an innovative SME.

The first tenants at DL were Faraday Foresight NW who work principally with regional organisations, industry and academia. Their core business is based on building effective technology and skills transfer mechanisms for the commercial exploitation of knowledge. This is carried out through awareness conferences, workshops and the formation of partnerships and consortia as transfer mechanisms. They are involved in the UK Foresight programme and some key technology areas, notably microsystems. Examples of these are the SMIDGEN consortium and the 1,lab-on-a-chip National Foresight Link project. This technology area is important to CLIRC as it helps to bring customers to the CMEF and the LIGA line at Daresbury.



The North West Business Leadership Team (NWBLT) took up residence in August 2000. Formed in 1999 they comprise a group of the most influential business leaders in the North West. Their remit is to address key strategic issues affecting the well-being of the region and its people. Membership is by invitation of the chairman and is normally restricted to senior board members of major public companies in the North West. Their approach is to act as a strategic, business-led think-tank focusing on a small number of key projects. Currently they are engaged in the implementation of the NWDA's Regional Strategy launched in January 2000. The opportunity to have such important contacts on site at Daresbury adds greatly to the quality of our relationships with major NW industry.

Nimtech took up their office accommodation in February. They are a not-for-profit company limited by Guarantee. Formed in 1984, Nimtech is involved in the rapid and effective dissemination of new and improved technology (hence Nimtech) into businesses in the NW region. As a major potential technology provider, CLIRC is well placed to work with

Nimtech in its core mission. Elementary 2000 is a high tech SME developing novel surface coating technology for high volume product applications. They took up residence in the tower in August and have contracts with CLIRC for the supply of materials analysis services.

We also have a couple of inanimate 'tenants' in the form of 18 communications masts on the tower roof (belonging to Mercury) and a GPS aerial on the Science Centre roof (belonging to Ordnance Survey).

These tenants together will generate direct income for DL in excess of £50 k next year. Add to this the benefits from having such contacts on site and their contribution to the commercial life of the laboratory can be seen to be increasingly important both now and in the future.

Chris Pickles

## Steve's snookered

Richard Stephenson has won the 2000 snooker finals over three closely fought frames with Steve Burge. The Paul Williams snooker trophy (pictured) has been played for intermittently over the last 15 years. It was re-launched three years ago and a display base was added to the tankard where the winners' names have been recorded for posterity. The competition is now played annually during the autumn/winter months.

With the 'Champions Cup', a singles league competition about to start, anyone interested in participating should contact the secretary, David Farrell, on ext. 5935.

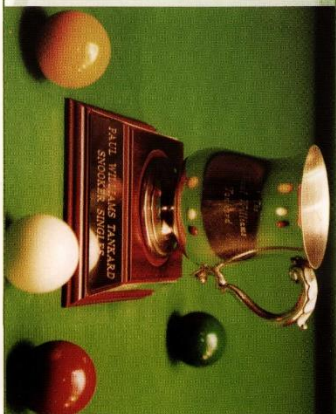


Photo courtesy Dave Farrell



Dear Natalie,

Please could you convey my sincere thanks to all my colleagues and friends that made my retirement day such a memorable occasion.

Maireen and I would like to express our gratitude to all those that contributed to the presents of a workmate (which will be well used in the coming months) and £125 of garden vouchers which we will use to put towards a garden water feature in the spring. Thank you also for the lovely spray of flowers which we later gave to Maireen's mother who is ill and in hospital.

The Ray Roberts card was an unexpected addition and I will be

thanking him personally for the artist's impression of my life at RAL. Ray's cards have become a symbol of retirement presentations over the years and I feel honoured to have received one and will treasure it.

I am sorry that I was unable to say farewell to many people who could not make it to the presentation and I appreciate all the messages of goodwill sent to me in cards and by email. I am sure that I will see you all at some time in the not too distant future, but until then, I wish you all good luck in the times ahead.

Kind regards

Bob Chandler

Dear Natalie,

May I take this opportunity to say thank you all for my retirement presents and the wonderful bouquet of flowers presented to my wife, Jean. I have thoroughly enjoyed the last 40 years at RAL with so many friends



(01RC1218)

and colleagues. I have seen a lot of changes during my time at a pleasant and lively laboratory! I shall miss the challenge of attempting the impossible physics requirements but now look forward to a completely new lifestyle and the challenges that it will bring.

I'm sorry that I couldn't say goodbye to you all personally but you haven't got rid of me that easily as I will be coming back for a few days a week for the next 12 months.

Good luck,

Jim Libby



It is expected that most of the placements will begin in August and be completed by the end of October. The closing date for applications is 31 March. Further details and copies of the application forms are available from Nicholas Hillier at the BA on 020 7973 3064 <nick.hillier@btisoc.org.uk>

### PPARC appointment

Professor Ian Halliday has been re-appointed as Chief Executive and Deputy Chairman of the Particle Physics and Astronomy Research Council (PPARC). His re-appointment is for four years from 1 April.

### Ever wanted to know what it was like on the other side of the media fence?

Each year the British Association offers practising scientists the chance to experience life as a journalist. The Media Fellowships scheme consists of a secondment (on salary from their employer) of up to 8 weeks with a media organisation, working alongside journalists to gain first hand experience of the news accumulation and selection process. Fellows learn to work within the conditions and constraints of the media to produce pieces for publication/broadcast in the national media, as well as becoming better equipped to communicate their expertise to the public and their colleagues.

- You are eligible to apply if you are a scientist or engineer:
- Resident in the UK.
  - With a minimum of 2 years experience - in any discipline.
  - Working in an academic or research institution, industry or the Civil Service.
  - In full time employment with your employer's consent to be released on full pay.

- The scheme offers:
- A 6-8 week Placement with a media host.
  - Financial assistance with living costs incurred during the period of placement.
  - An accommodation and travel grant to attend the BA's Annual Festival of Science as a representative of the media host. (Glasgow University 3-7 September).