

Bulletin

A Monthly Newsletter for RAL Staff

August 1993

Happy Birthday ATSR!

ATSR celebrated its second year of operation in space on 1 August. The Along Track Scanning Radiometer was launched on 17 July 1991 on board ERS-1, Europe's first environmental remote sensing satellite.

Built at RAL in collaboration with the University of Oxford, the Mullard Space Science Laboratory at UCL and the UK Met Office, this remarkable instrument has since orbited the Earth nearly 15,000 times and provided scientists with a flood of data with which to measure the sea surface temperature across the globe with unprecedented levels of accuracy (± 0.3 K). This information is crucial to our understanding of the processes which influence changes in the Earth's climate.

From the production of the first fully processed image of the southern tip of Greenland two days after it was switched on, the ATSR data processing and software team has gone on to process tens of thousands of ATSR images to optimise the performance of the instrument and its data processing system and for a wide range of scientific studies. The data processing system at RAL operates round the clock and is now able to process data at four times the rate it is acquired by the satellite. This allows RAL not only to manage the huge amount of data transmitted by the satellite but also to reprocess large quantities of data on request.

One of the most critical technological features of ATSR is the closed cycle cooler. Developed by teams from Space Science Department and Technology Department, the cooler, the first of its kind to operate in space, has kept ATSR's sensitive detectors or 'eyes', at their optimum operating temperature of around 90 K; equivalent to nearly 200 C below room temperature!

In the two years of its operation, ATSR has proven its mission to provide unprecedented precision in the measurement of the surface temperature of the world's oceans. Scientists at RAL are hoping to repeat this success on the next phase of the ATSR programme. ATSR-2, which will include new instrumentation for detecting vegetation, will fly on the ERS-2 mission which is scheduled for launch in 1994. ■



ATSR's view of the world: global sea surface temperature
(93FC1677)

Inside

36 years in space	
New publication for RAL	
Missing Fellows	
Receiver for JCMT	2
Yasuaki Yutani	
Safe driving	3
Sports day	4

Geoff survives 36 years in space!

It is a commonly-held belief among Geoff Hawkins' colleagues and friends in Space Science Department that Geoff had worked at RAL longer than anyone else on site, even longer, I am told, than Jack Gourlay. Whether it's true or not, Geoff retired on 18 June after 36 years' service with an unchallenged record!



Geoff accepting his retirement gifts from Richard Holdaway, Head of Space Systems Division

A more certain fact about Geoff is the number of space projects which he has worked on during his long association with RAL - 18 in all, including ISAMS, ATSR, CASSINI and ATSR-2. Geoff will be spending his retirement in more down to earth style in Weymouth where he has bought a house. We wish him well!

P.S. Geoff thanks his friends at RAL for their generous retirement gifts. He wishes those he was unable to say goodbye to personally, the very best of luck and good health in the future. ■

RAL to launch new publication

RAL is to have a new quarterly science publication from December this year. Currently in its planning phase, the colour journal of 18 to 24 pages will publicise the work and achievements of the Laboratory to a wide and diverse audience: universities, industry, funding bodies and opinion formers.

Staff are invited to propose features, articles and items for inclusion in the December issue. Please bear in mind that although the articles may have a scientific bias, they must be accessible to a wide audience. Not all readers will be scientifically qualified.

You can discuss your ideas for the journal with Monica Brown, the journal editor, either by phone on ext 5484 or drop her a note (OV/VM id MB). ■

Missing but not forgotten

The article 'Visiting Professors and Fellows' in last month's Bulletin, omitted to mention the following staff:

Dr L J Gray
ICSTM

Professor R Holdaway
*University of Southampton
& University of Kent (Visiting Scientist)*

Dr J Lang
University of Strathclyde

Dr D M Willis
University of Sussex (Visiting Reader)

Bill David and Bruce Forsyth are in fact Visiting Professors at UCL and the University of Warwick respectively and not Fellows as the article implied. ■

New receiver for JCMT

The Millimetre Technology Group of the Space Science Department at RAL has recently commissioned a new state of the art heterodyne receiver on the James Clerk Maxwell Telescope situated on Mauna Kea, Hawaii, in fulfilment of a development contract from ROE. All major elements of the receiver were designed and constructed at RAL.

The receiver detects radiation emitted from astronomical sources at a wavelength of approximately 0.6 mm, often referred to as the sub-millimetre wavelength region. By observing emissions from such molecules as carbon monoxide, astronomers can learn much about the structure, dynamics and chemistry of our own and other galaxies.

The JCMT is currently the largest telescope in the world capable of operating at sub-millimetre wavelengths and is situated at a prime observing site. To achieve optimum performance, the telescope must be furnished with very sensitive (low noise) receivers. The new receiver has dramatically increased the sensitivity of the JCMT in the sub-millimetre wavelength region and it has already allowed the first observation of neutral carbon in the extra-galactic source M82. It completes a trio of sensitive receivers developed by a collaboration involving the University of Kent, Herzberg Institute, Ottawa and RAL. ■

Farewell to the RIKEN son!

The human side of international co-operation in science and technology was very much in evidence in June when RAL played host to Yasuaki Yutani from the Institute of Physical and Chemical Research (RIKEN), Japan.

Yasuaki, Deputy Manager in the Accounts Section at RIKEN, spent two months at Swindon Office and one month at RAL. His visit was designed to strengthen ties between the two organisations. RIKEN, a government-funded, non-profit making research institute, is funding the construction at ISIS of a muon facility costing some eight million pounds - its first major project based overseas.

As a member of the project accounts team, Yasuaki had visited RAL nine times before but only long enough to attend project meetings. When the posting to SERC was advertised at RIKEN, he was quick to apply seeing it as an opportunity to gain greater insight into our working practices and a way of improving his English.

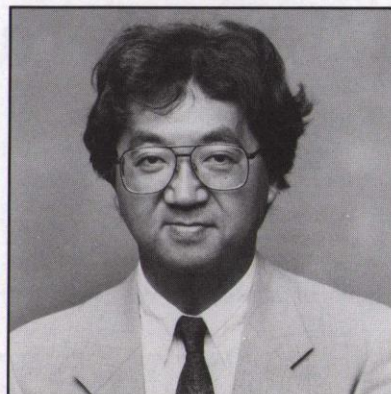
At RAL, Yasuaki toured many of the sections within Administration

Department. He was particularly interested in ways in which our administrative structure and mechanisms differed from those at RIKEN. He concluded that the differences are greater in administration than they are in our approaches to science. He was surprised and impressed by the level of computerisation within the Department.

More generally, the method of promotion within RIKEN is very different from our own. The decision to promote staff at RIKEN is made by consensus of the managers involved and is based on personal knowledge of individuals rather than a formal review or interviews.

Cultural differences are also quite marked. The work ethic in Japan is very strong. For instance, it is routine for staff at all levels to work overtime without payment or not to take their full leave entitlement.

Yasuaki's visit to RAL may be the first of a series of exchanges between RAL and RIKEN. It is the Japanese way to build confidence through extending personal contact.



Yasuaki Yutani (93RC2850)

As a footnote, when asked what he would remember most about his visit, Yasuaki was quite specific - the English countryside. That he should marvel at the countryside and at the short time in which he could reach it from his lodgings in Didcot, is not altogether surprising. His journey of 20 miles to work in Tokyo, which is renowned for its congestion, takes one and a half hours each way! ■

Safe driving awards

Between them, six of the drivers in RAL's Transport Section have clocked up no fewer than 89 years of accident-free driving! In recognition of this excellent record, they have received National Safe Driving Awards from the Royal Society for the Prevention of Accidents (RoSPA). The scheme, which was set up in 1927, attracts a large number of entries each year and the awards are highly valued by individuals and employers alike.

The 1992 awards went to:

Driver	Award	Accident-free
Brian Baker	Diploma	4 years
John Culley	28 year medal	28 years
Matthew Fitzgerald	14 year medal	14 years
Aidan Shoebridge	Diploma	2 years
Eddie Smith	30 year medal	30 years
Brian Turner	11 year medal	11 years

High hit rate for RAL

The second day in July was remarkable for two reasons, the sun shone and it was the day on which SERC held its outdoor sports day!

RAL teams did exceptionally well, winning five out of the ten events: bowls - pairs (Tudor Morgan and Bob Maybury), croquet (Andy Kurzfeld and Roy Platon), tennis - mixed pairs (Tim Pett and Lorna Claringbold), tennis - mens pairs (Richard Wilkinson with Tony Short (Daresbury)), and athletics - womens 100 metres (Diane Ayres). ■



Bowled over: Tudor receives his trophy (93/461/10)



Andy and Roy accept their shield from Sir Mark Richmond (93/461/6)



Diane catching her breath and the trophy (93/461/15)



It's no effort at all: Katie Hopgood and Sue Glaysher struggling with the travelling rug! (93/461/36)

Rec Soc News

Aunt Sally competition

On Friday 30 July, the Rec Soc staged an Aunt Sally competition. Four teams took part. The winners were the Stores '108s'. The 'Magnificent Six' from R18 came second. The event was helped along by generous helpings from the barbecue. Tired and arm-weary, everyone made their way home after an enjoyable, if breezy, summer evening.

Thanks to all who helped to organise the event - Andy Napper. ■

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Editor: Monica Brown

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