
Rutherford Appleton Laboratory Bulletin

Acting Editor Jacky Hutchinson

1 May 1991

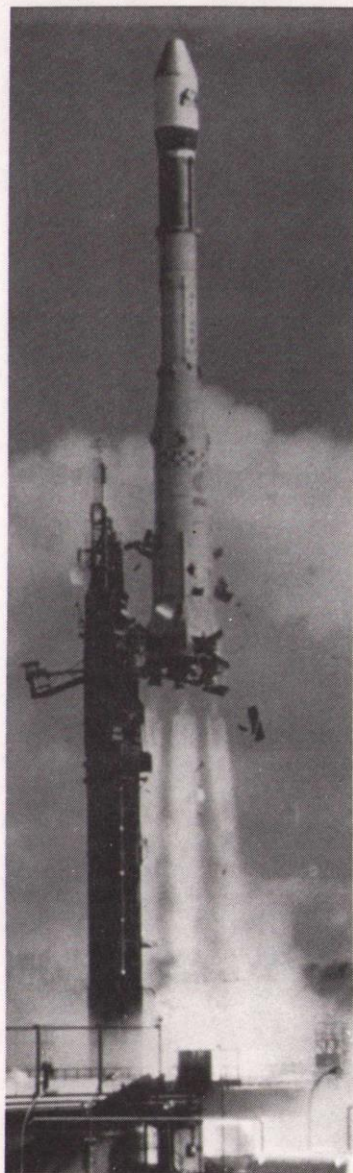
READY FOR TAKE OFF!

There has been a great deal of activity by RAL staff preparing for the launch on 3 May of the ESA Remote Sensing satellite (ERS-1) at Kourou in French Guyana. One of the five instruments on board is ATSR (Along Track Scanning Radiometer), designed and built by a team of engineers and scientists from RAL, Mullard Space Science Laboratory (MSSL), Oxford University Department of Atmospheric, Oceanic and Planetary Physics, and the UK Meteorological Office, with additional contributions from BNSC, Australia and France.

Back in February, the Media gathered at an International press conference at ESTEC, ESA's technical centre, to view the



*Photographing the photographer!
Reg Jones captured on film in front of
ERS-1 at ESTEC during the Press
Conference.*



assembled and tested satellite before it was shipped to the launch site. Sitting proudly on top of the satellite was the ATSR instrument ready to undertake the task of measuring global sea surface temperature to new levels of accuracy required by the climate research community. This instrument is a tribute to the many hours of dedicated hard work by the ATSR team, their project manager Trefor Edwards, and Mike Sandford, the project director.

At the launch site Richard Browning, Peter McPherson and Mike Trower from RAL, joined other members of the ATSR team to participate in the pre-launch and test verification programme before the satellite was mounted on the Ariane rocket. At the launch RAL will be represented by David Llewellyn-Jones, the ATSR principal investigator and Professor John Harries, Head of Space Science Department.

The satellite will be commanded and controlled from ESCO, ESA's operations centre at Darmstadt, Germany where David Lee and Peter McPherson will spend many hours while ATSR is gradually commanded into life during the early weeks of the mission.

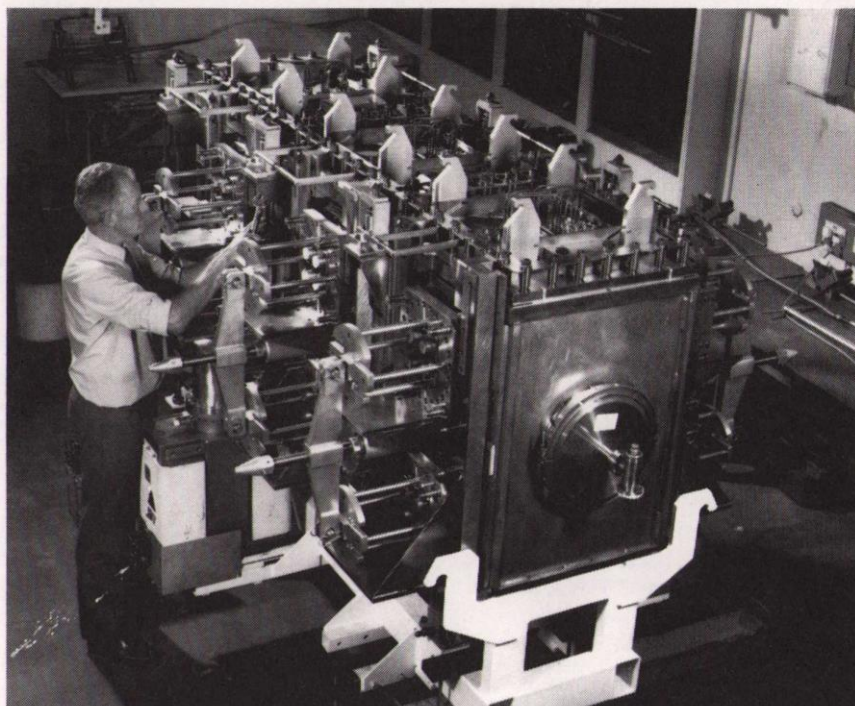
Mark Gorman and Albin Zavody will be stationed inside the Arctic Circle at the ESA satellite receiving station at Kiruna, Northern Sweden with a small but powerful computer to process samples of science data from ATSR and assess its quality. An RAL van delivered this equipment making the nine day round trip to Sweden. This presented a new challenge for RAL driver Brian Turner and navigator Andy Jackson from Space Science Department, who had to keep a watchful eye for such hazards as arctic weather and reindeer on the road!

We wish everyone connected with the project a successful launch on Friday.

New Magnets for ISIS

A new extraction kicker magnet system was installed in the synchrotron during the recent ISIS maintenance shutdown. Three magnets inside the vacuum system produce pulsed fields at a repetition rate of 50Hz to 'kick' the two circulating proton bunches out of the synchrotron ring and send them down the beam line to the target. To do this within one revolution the magnets must be switched on in 200 nanoseconds, requiring both high voltages and high currents.

The original system could not be repaired once it had been damaged a year ago because of the high induced radioactivity, so work began on a new system which incorporates a number of remote handling features to make it easy to service in a radioactive environment. An individual magnet, which will align itself automatically when plugged in, can be installed and removed using a crane. All



John Hirst, mechanical design engineer for the project, makes final checks to the new system prior to installation last February into the ISIS synchrotron.

connections such as water, electrical and vacuum can be made from a safe distance. The new system is now allowing ISIS to operate at its design

energy 800 MeV- keeping ISIS at the forefront of technology as a world class experimental facility.

Observing the Global Environment

A one day conference on the Global Environment was held at RAL on 6 March 1991. The occasion, jointly organised by NERC, SERC and the Remote Sensing Society, was attended by over 100 people, representing over 50 organisations.

The visitors were welcomed by Dr Tony Hughes, Director of Laboratories, who gave one of the keynote speeches describing recent cooperative developments between NERC and SERC. Other keynote speeches were given by Professor John Knill, Chairman of NERC and Professor John Houghton, FRS, Director General of the Meteorological Office.

The programme also considered the role of the atmosphere and oceans in global environmental research. The meeting ended with a session on the management of global environmental data; a topic of increasing complexity and importance. Prof John Harries, David Llewellyn-Jones and Eric Dunford from RAL and Dr David Williams, Head of Earth Observation at British National Space Centre also contributed on this topic.

The Conference was stimulating and highly successful and the smooth local arrangements were a tribute to the organisational skills of Kay Knight from Space Science Department.

A New Exhibition

The RRS-ISIS exhibition was displayed publicly for the first time at the British Crystallographic Association (BCA) meeting in Sheffield. These particular display panels have been produced to advertise the potential advantages in using neutrons in Industrial R & D.

The display attracted a number of interested visitors at the BCA meeting. These included British Steel, who would like to identify the microscopic causes of 'ridging and roping' defects in rolled steels, Rolls Royce, who need to identify the potentially damaging sigma phase in nickel-based superalloys, and the Metropolitan Police Forensic Science Laboratory. We could yet be helping the police with their enquiries!

A Triple Farewell

Mick James



Mick and John admire the cassette recorder

Mick's idea was to drift quietly away to retirement but his colleagues were determined that his 30 years at RAL should be marked with due ceremony.

So on 26 March they gathered in the R12 Electrical Workshop and Mick became the proud owner of a superb radio cassette player and a many signed card. Since his arrival, Mick has had a hand in every major project including the PLA, Nimrod, ISIS and the Central Laser Facility. He helped to install experiments at CERN and DESY. His latest claim to fame was the building of some 2,500 streamer tube detectors for OPAL. This was a job that would be a disaster if not done well, John Connolly told us in his presentation speech- it was done magnificently!

"All this has been achieved without fuss" said John. "Mick is a highly

valued colleague who will be much missed. We all wish him long life, good health and a happy retirement."

Phil Seager



Phil and his wife, Caroline, admire the Ray Roberts card with Director, Paul Williams

At his presentation ceremony on 20 March, the crush of colleagues assembled to wish him well, gave weight to the opening remarks of Director Paul Williams, that the occasion was one of deep regret.

Two strands of commitment have run through Phil's years at RAL. In science, sterling work on bubble chambers, with NBRU and on ISIS; in Staff relations, 20 years of outstanding service to IPMS members.

Phil came to RAL in 1961 via the Navy, the NPL, the NEL and AERE. He worked on the optics of bubble chambers and oversaw the processing of the film used on them. At one point five to six miles of 35mm film

was processed every day. When working with NBRU he was involved in liaison with ILL, Grenoble and sample environment equipment and with the coming of ISIS entered the computer age.

As IPMS Branch Secretary, Phil attended every Annual Conference from 1974 to 1990 leading the SERC team. His work on the Whitley Council was equally remarkable.

To remind him of his days at RAL, Phil was presented with two gifts; a garden seat - upon which to rest his laurels, and a set of crystal glasses to toast the happy days to come.

Erol Harvey

The expanding Exitech Company, set up by former members of the Central Laser Facility, has grown a little larger by recruiting Dr Erol Harvey from the CLF's KrF Laser development programme.

Erol came to RAL two years ago from Australia and has been a key researcher in the team developing the unique KrF pumped Raman laser system which is the basis of plans to build a new high power laser facility to be called Supersprite.

Wishing him well in his new job, Professor Mike Key commented that it was a pity SERC could not offer a full-time staff post to such a promising young scientist but that the CLF's loss would be offset by benefits to Exitech. His colleagues presented him with a Black and Decker "Workmate from his workmates", together with the now traditional engraved pewter mug given to all departing CLF staff.

POCSSS

The Post Office and Civil Service Sanatorium Society medical scheme is open to all SERC employees under the age of 60 and their families. The cost is £1.51 per month, deductible from salary. Members are entitled to free specialist medical consultations and hospital treatment for most non urgent medical conditions. Further details from Vic Cloke R2 ext 5480.

Comic Relief

The twenty four hour Pool marathon raised over £650 for Comic Relief. The organisers and players would like to thank all their sponsors who contributed so generously towards this cause. Taking part were Brian Coan, Niall Downie, Simon Greenaway, Alexis Haines, Stuart Martin, Roger May, Dhiru Patel, Chris Robey and Ben Smith.



Notices

RAL Christian Fellowship

"O give thanks to the Lord for He is good,
for His steadfast love endures for ever."
(Psalm 136:1 RSV)

May 4

Prayer Meeting

May 9

Studies on the Holy Spirit
Wind, rain and water

May 16

Leading Home Groups (Tape)

May 23

Leading Home Groups

May 30

Slices of Daily Bread

Meetings are held in Conference Room 6
(4th Floor) in R2 at 12.30pm every
Thursday. Visitors are always welcome.
Enquiries: John Hogston ext 5183.

Missing

A Philips Pocket Memo machine is
missing from Room 1.03, R1 (Central
Laser Facility). Please contact Chris
Ayling, ext 5603 with any information.

Film Badges

Period	From	To	Colour code
05	22.04.91	19.05.91	Orange
06	20.05.91	16.06.91	Blue

RAL Lectures

May 30

Professor Colin Humphries,
Department of Materials Science,
University of Cambridge.
'Ultimate limits of nanofabrication - how
to write the Encyclopaedia Britannica on a
pinhead.'
3.00pm in the R22 Lecture Theatre.

Thanks

Louie Render would like to thank all
friends and colleagues for the earrings and
gardens chairs that she received on the
occasion of her retirement and to say
goodbye to all those she was unable to see
in person.

Art and Craft Exhibition

To allow everyone plenty of time to
prepare, the tenth exhibition will be held
from 23 - 25 June 1992.
It will be organised by Jenny Coates, R25
ext 6498, Myra Gilbert, Daphne Barrard
and others. Jenny, Myra and the
Committee would like to thank Fran
Childs for organising this event so
successfully over the last five years, under
the auspices of the Recreational Society.

Indoor Sports Day 1991

Congratulations to all who upheld the sporting honour of RAL
at this year's Indoor Sports Day on Friday 8 March.



*Badminton winners Cathy Parry and
Diane Ayres, and Alan Stevens (Far
right)*

Six of the ten trophies went to RAL
competitors, mostly for healthy and
esoteric sports, though the misspent
youth sector did come up with a
'crib' win. Both Badminton titles
were won by RAL. Cathy Parry and
Diane Ayres triumphed for the
second year running, without losing
a game, and Richard Lawrence and
Alan Stevens came back into their
own.

Dick Holdaway finally broke Tony
Short's grip on the Squash title and

Dick Holdaway won the Squash title



*Table tennis players Mark Adams, Harry
Jarvis and Peter Kent*



Jackie Freeman won the Bridge Tournament

RAL's B Team of Mark Adams, Harry
Jarvis and Peter Kent turned the Table
Tennis tables on Tim Pett's previously
invincible trio.

On a more intellectual level, Jackie
Freeman and Mark Gorman won the
Bridge Tournament and Les Brown
and Tony Hewlett won the 'crib'.

At the close of a very enjoyable day,
the prizes were presented by Tony
Egginton, SERC's ex-Director of
Programmes (and newly fledged
pensioner) thus fulfilling a lifetime's
ambition.



*Les Brown and Tony Hewlett receive
the 'crib' trophy*