

Bulletin

Jean
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of the Rutherford Appleton Laboratory

27 May 1987 No.7

ROYAL OPENING FOR JAMES CLERK MAXWELL TELESCOPE

His Royal Highness The Prince Philip, Duke of Edinburgh officially opened the James Clerk Maxwell Telescope on the summit of Mauna Kea, Hawaii on Monday 27 April.

The Royal opening marked the culmination of a successful collaborative programme between SERC and the Netherlands Organisation for the Advancement of Pure Research (ZWO) to construct a world-class radio telescope for astronomy.

The ceremony was attended by 130 distinguished guests representing local and international interests in the project together with members of the media (press, radio, TV etc).

Welcoming speeches by Professor Bill Mitchell (Chairman, SERC) and Mrs Lynne Waihee (wife of the Governor of Hawaii) were followed by the hand-over of the telescope to Professor Malcolm Longair (Director, ROE and Astronomer Royal for Scotland) by Dr Paul Williams (Director RAL). ROE will administer the facility.

As demanded by local custom, the Telescope facility was blessed by Father George da Costa - a ceremony which included the sprinkling of consecrated water around the telescope using ti (pronounced tea) leaves.

Prince Philip unveiled a plaque commemorating the occasion and the telescope was deemed officially open.

The telescope was then put through its paces by Dr Richard Hills (Project Scientist, JCMT). The observation doors were opened and the carousel rotated giving the guests assembled inside the 'dome' a panoramic view and bringing the antenna to focus on the position of Venus. After a tour of the facility, the Royal party departed down the mountain to prepare for the evenings festivities.

Celebration dinner

In honour of this happy occasion 300 guests attended a dinner at the Aston Nanihoa Island Resort in Hilo, that evening. The guests included local dignitaries, distinguished scientists, people involved with the

(See over)



The commemorative plaque unveiled.

Sir John Clerk (a descendent of the physicist), HRH Prince Philip, Father da Costa and Professor Bill Mitchell enjoy the moment.

Canada Joins Partnership

On Sunday 26 April 1987 the National Research Council (NRC) of Canada and SERC signed an Agreement to become partners in the James Clerk Maxwell Telescope.

The ceremony took place in Hawaii at the Aston Nanihoa Island Resort on the eve of the opening of the Telescope by HRH The Prince Philip, Duke of Edinburgh.

The signatories to the agreement were Dr Bernard Gingras, Vice President for External Relations, NRC and Professor Bill Mitchell, Chairman SERC. A Memorandum of Understanding was also signed between SERC, NRC and ZWO with Dr A Mulder signing as Chairman of ZWO, and Exchanges of Letters were also signed by ZWO and SERC.

In the partnership, the University of Hawaii which operates the Mauna Kea

Observatory has 10% of the total viewing time. The remaining time is divided in the ratio 20% ZWO (no change) 55% SERC and 25% NRC (transferred from the previous 80% which was allotted to SERC).

As a full partner, NRC will provide additional contributions over the coming years equivalent to its share of the costs of constructing the facility. The Canadians will also meet their share of future operational costs.

All three partners will jointly fund a major programme of investment in new instrumentation for the telescope which, in the next ten years, will ensure that the facility maintains its place at the forefront of sub-millimetre-wave astronomy.

Royal Opening *(cont'd from p1)*

design and construction of the telescope, potential users and local staff and their wives.

In 'Aloha' dress (men in flowery shirts, women in the local muu muus) the guests enjoyed a festive and informal evening. Prince Philip mingled with the guests at pre-dinner drinks, surprising several groups by his sudden appearance and friendly discussions.

Following the meal, Professor Malcolm Longair introduced several speakers who praised the success of the project. Dr Ron Newport (Project manager JCMT) thanked supporting organisations and local participants for their tremendous efforts on behalf of the project. Dr Don Hall (Director of the University of Hawaii Institute of Astronomy) spoke about the involvement of the University and Dr Albert Mulder about that of the Netherlands. Dr Bernard Gingras, Vice President of the National Research Council (NRC) of Canada outlined the contribution that they hoped to make to the partnership and the new expertise they would be able to bring to the scientific programme.

Professor Bill Mitchell thanked His Royal Highness for opening the telescope and presented him with a framed antique print "An offering before Captain Cook in the Sandwich Islands" from an engraving of 1784. This showed an Hawaiian priest offering a pig to Cook in a religious ceremony.

The company were then treated to a lively speech by The Prince Philip, full of humour on informality. He congratulated all the partners involved, saying that all Dutch-UK collaborations had been brilliant and always worked. He also remarked that working on the summit of Mauna Kea would not appeal to him. "I'm convinced the only place man should be at 14,000 ft; he said, "is in the pressurised cabin of an aeroplane".



Paul Williams,
supported by
Ron Newport (seated),
hands-over
the telescope.

87 RC 2874

A final address by Dante Carpenter, Mayor of Hawaii led naturally to a programme of traditional hula dances, rounding off an exciting and pleasurable occasion in a memorable setting.



A happy occasion for all. 87 RC 2867

After dinner, speeches

87 RC 2954 and dancing



87 RC 2931.

Thanks to ALL JCMT support staff

Many people have helped in the successful construction of the James Clerk Maxwell Telescope, in the United Kingdom and the Netherlands, in institutions and universities, factories and design offices.

The largest contribution has, however, come from here, in the Rutherford Appleton Laboratory and I thank all of you who have assisted the project in any way for your support.

Although the main effort has come from the project team, particularly those resident in Hawaii, and visiting Council Works Unit Staff before them, there are many others who have given the project excellent support. The engineers, scientists, technicians and craftsmen could not do their jobs effectively without the secretaries, typists, contracts staff, drivers, etc doing theirs.

Thank you all.

Ron Newport

Commemorative Covers

To commemorate the Opening of the James Clerk Maxwell Telescope a special postal cover has been produced. Each cover has a United States 44 cents Airmail Stamp which was cancelled in Hawaii using a special handstamp designed for the occasion.

A limited number of covers will be available at the Cash Office from 28 May at a cost of £1.50 on the basis of one per person.

The cover was designed by David Newport and the handstamp by Steve Carr and Simon Craig, (ROE), using a CAD system.

Trade Exhibition

CSS Systems Limited will be demonstrating the Apple Macintosh II Computer and Apple Laserprinter for desktop publishing on Wednesday 3 June from 10.00 - 16.00 hrs in the R12 Conference Room.

Brighton Riders

On Sunday 21 June a couple of RAL's computing 'whizz-kids', Jane Sidebottom and Duncan Gibson will do a bit of low-tech travelling; pedalling the 56 miles of the 'London to Brighton Bike Ride', in aid of the British Heart Foundation.

We hope to hear something of this adventure in a future issue of the Bulletin. In the meanwhile anyone who would care to sponsor them can contact Jane on Ext. 5368 and Duncan on Ext. 6286.



The next lecture in this series will take place on Thursday 4 June at 3.15 pm in the R22 Lecture Theatre.

THE CHANGING ECONOMICS OF OIL
by

Mr P Oppenheimer
Christ Church, Oxford.

Party Politicals

Dr Steve Ladyman will give an election address on behalf of the Labour Party in the R22 Lecture Theatre on Wednesday 3 June from 12.30 to 1.30 pm.

Robert Jackson, Parliamentary Candidate for Wantage, will give a talk on behalf of the Conservative Party on Monday 8 June from 12.30 to 1.30 pm in the R22 Lecture Theatre.

Outdoor Sports

Sportsday will take place on Friday 3 July at the CSSC Birmingham Sports Ground again this year.

Competitors are asked to make their entries with the representatives listed below.

Bowls	T Morgan
Cricket	A Napper
Football	M Dew
3000 Metres	N Whitehead
Rounders	R Young
Tennis	T Pett
Tug of War	A Forster
Angling	P Craske
Croquet	R Platon
100 Metres	N Whitehead

For details of team composition etc please see posters around the Lab. Transport will be available, information about which will be circulated in the near future.

Thanks

Denis Harriot wishes to thank all who contributed to his marvellous retirement present and to Mr Rawlinson for the presentation on Thursday 9 April. "A very special thanks to Dave Rolstone and wife Ronnie, and John Wilcox for my party and to Dave, John and Tudor," he writes, "also for the flowers for my wife. It was a day we will never forget."

RAL Wives Coffee Club

The Club is holding a Summer Buffet Supper on Friday 5 June at 7.30 pm at the Cosener's House, Abingdon.

Tickets are £9.75 each and are available from Celia Lockwood c/o Mike Lockwood, R25.

Please make cheques payable to Cosener's Coffee Club.

Obituary

Donald David

We deeply regret to announce the death of Mr Donald (Don) David on Saturday 25 April.

Don had been at work, as usual, the previous day, and his ISIS colleagues are particularly saddened by their sudden loss.

Don's early years were bound up with the Army (1943-1956). His attention to detail and the meticulous tidiness of his laboratory no doubt followed from this early training.

In 1960 he joined the Nimrod project (shortly before RHEL was established as part of NIRNS) and worked on many of the special pieces of equipment needed for 'the mighty hunter'. These included the injector beam toroid monitoring system; the ion-source triggering system, using the (then) novel infra-red emitting diodes; special power systems for the extraction magnet pole-face windings and a very sensitive current transformer for measuring directly the output current of Nimrod. Some of the very early work on radiation damage to semiconductors was done by Don.

In 1967 he branched into the realms of computer control, being particularly involved in interfacing equipment via a range of data transmission systems. This work involved him in early experiments in RF ion sources, the first computer controlled beam-line at RAL and design studies for a High Field Bubble Chamber. This was never built, but led to providing instrumentation for the very successful Rapid Cycling Vertex Detector.

On promotion in 1976, Don joined the team which was to produce ISIS contributing to the success of this project with the General Purpose Multiplex system, through which much of the machine is controlled and maintained.

Outside work, Don had an interest in Bridge and played the recorder, being a Welshman he also enjoyed Rugby and classical music.

Don set himself and his colleagues very high standards and was sometimes a hard taskmaster. However, he had a particular aptitude for helping and encouraging junior members of staff.

By all who have worked with him in his many years at RAL he will be sadly missed, both for his technical expertise in the work that he loved and very much as a person.

We extend our deepest sympathy to his family.

Alexandra Rose Day

Please buy an Alexandra Rose in aid of local charities which are helping to care for people in your own community.

Collection tins will be on site during 15-19 June. Please help this worthy cause.

Looking to the Future

Three more old stalwarts of RAL escaped into retirement recently, and into a spell of fine weather that made their near contemporaries more than a little envious.

Barney Wise



Barney admires his gift with presenter David Gray (left).

Barney Wise of ISIS division had his send-off ceremony on Thursday 2 April where he received the gift of a pair of binoculars from his colleagues to enable him to follow seriously a hobby he has had all his life. Being born and bred in Lambourne not much imagination is needed to guess his interest in the local industry.

Barney joined Nimrod Ops in 1961 as an electrician, and worked there until its closure in 1978. He then transferred to ISIS to work mainly on the installation of RF systems.

Making the presentation on behalf of Barneys friends and colleagues, his Division Head David Gray thanked Barney for his efforts on both machines, describing him as a good, dependable electrician. He would be much missed, but everyone wished him a long and happy retirement.

In reply Barney said that it had been a pleasure to work with such good chaps. "I couldn't have had a better section. Thanks very much".

Dennis Rance

Dennis Rance's farewell took place on 29 April. Bill Turner, making the presentation, pointed out that Dennis had already had a dummy-run at retirement, but as we couldn't do without him in Finance and Accounts he'd had to put off the real-thing for a few months. Now the sad (for us) day had arrived and his colleagues wished him a long and happy retirement.

Dennis also received binoculars, and a book 'Devon, Cornwall and the Isles of Scilly, so his summer seems fairly well catered for.



Dennis (left) and Bill share a joke over the farewell card.

Dennis' early career started with his appointment as assistant sanitary inspector to Cookham RDC; he was a Radar Operator in the Royal Navy from 1944-47; had a brief spell with British Rail; became a Taxman and then saw the light. From 1949 he worked at various DSIR establishments including the Radio Research Station, Slough (Appleton Lab), Warren Springs Laboratory, and London Headquarters. In 1965 he joined SERC at State House and came to Rutherford in 1970 as DAO, Engineering Division. He then moved to Finance and Accounts on Data preparations and Job Submission, finally becoming a computer programmer writing the programs which enable us to get our pay rises on time - we hope.

Saying his farewells, Dennis remembered that he started his Laboratory life at Ditton Park in a wooden hut in a park on payroll work. Forty years later he had progressed to - a wooden hut, in a park, on payroll duties. He thanked everyone for their gifts, for the flowers given to his wife Mickie, and for the good wishes of his friends and colleagues.

"I have enjoyed my work," he said, "and consider myself lucky, not least in the people I have worked with over the past few years."

Dick Luckock

Richard (Dick) Luckock retired on 31st March after almost exactly 25 years with RAL.

In an amusing and witty presentation Ian Corbett recalled some incidents of Dick's working life prior to joining NIRNS - (as it was in 1962).

Ian outlined an incident with a large carthorse that Dick was helping the local giant of a blacksmith to shoe; Dick ending up under a couple of tons of horseflesh as the blacksmith heaved up the animals back leg too enthusiastically.



Dick (right) and Dave Evans also find amusement in his card.

Dick served in the Fleet Air Arm during the war and saw service in many places including E. Africa and Egypt, and a few hilarious tales of those days were also told.

His first job with the Lab was novel. As an inspector of the Nimrod glass fibre vacuum vessels which were being manufactured in Wolverhampton he stayed in his own home town for his first two years with us. When he did get to Chilton he joined the Outside Manufacturing Group and became involved with low-temperature testing which continued after his move to Chemical Technology Group and was combined with general materials testing.

In an amusing and sometimes philosophical reply, Dick presented a few more details and some substance to Ian's sketches and outlined his thoughts, if not his plans, for retirement. But as an archer, trout fisherman, ornithologist and member of the Guild of Stickmakers he shouldn't be left with much spare time.

A collection among his many friends at RAL was used by Dick to purchase (wait for it) a pair of Minolta binoculars. A Ray Roberts card and a "potted" tribute from the Chemical Technology section completed his 'goody bag'.

CRAY INAUGURATION BY KENNETH BAKER

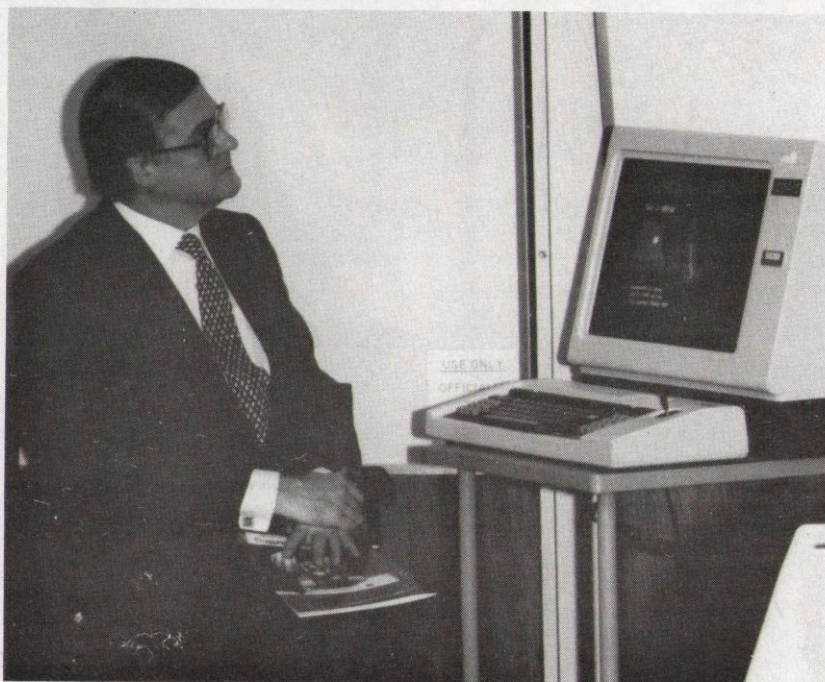
The Rt Hon Kenneth Baker, MP Secretary of State for Education and Science, officially opened the Joint Research Councils' CRAY X-MP/48 supercomputer at RAL on Wednesday 15 April. The Inauguration Ceremony took place in the Atlas Centre in the presence of a large gathering of distinguished guests from other research councils, government departments, the universities and industry.

SERC's Chairman Professor Bill Mitchell, addressed the Minister and guests and expressed his excitement that the Councils should now have such a powerful tool at their disposal. The Cray gives UK universities and polytechnics the powerful supercomputer essential for solving the complex problems which arise in today's research programmes, he said.

Professor John Forty, Chairman of the working party which recommended the purchase of the CRAY, and Professor Sir David Phillips, Chairman of the Advisory Board for Research Councils, also spoke of the benefits that would accrue to the academic community in all disciplines by the use of such a computer. A diverse range of simulation studies such as aircraft design, meteorology, evolution of galaxies, molecular reactions, the circulation of the oceans and the development of new computer were just a few of the areas where the CRAY would facilitate faster solutions.

The Cray will also boost the training of a further generation of designers and users needed for the future.

"This is clearly an important day and I'm delighted to be here to inaugurate the CRAY", said Mr Baker in his address. It is fitting that this supercomputer should be installed at Atlas which already houses some of the most high-powered computers of our day. The



"A task which can be left to a cabinet minister!" Mr Baker watches the Inauguration message appear on screen after pressing the key to initiate it.

87RC 2535

ABRC is to be congratulated on an imaginative decision to purchase the Cray for use by such a wide community. He knew, he said, that the Research Councils had a good record of co-operation with industry and he would encourage them to expand this policy especially in the field of computing.

The Minister then operated the key that produced the Inaugural message on screen and was thanked by RAL Director Paul Williams for sparing time to perform

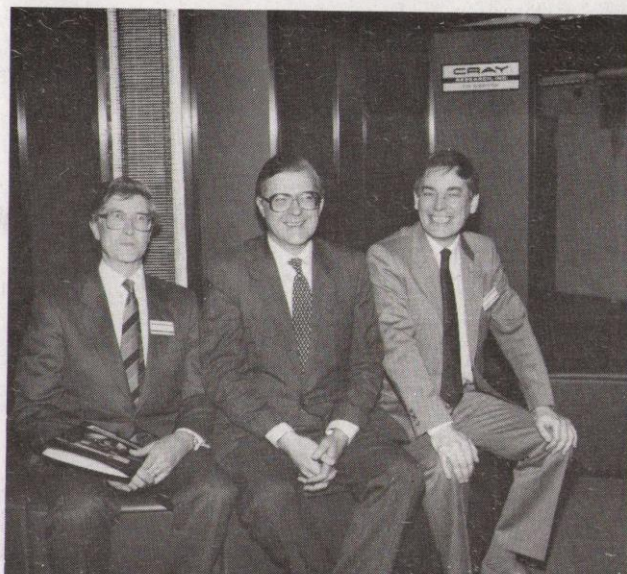
the ceremony. "I believe the Cray is going to make a very important contribution to the computational skill of UK Scientists and Engineers", he said.

Before the ceremony Mr Baker had attend part of an SERC Council meeting and toured the ISIS facility where he discussed the implications of the latest successful research on high temperature superconductors at RAL. As a memento of his visit he was presented with an ISIS commemorative mug.



Presentation of ISIS Commemorative mug. Picture from left to right are Prof. Alan Leadbetter (Head of Neutron Division) Dr Paul Williams (Director, RAL), The Minister and Mr David Gray (Head of ISIS Division).

87RC 2525



The Minister with Professor Forty (left) and Dr Brian Davies, SERC Director of Computing, testing the Cray for user friendliness.

87RC 2532

RAL in stylish win over CRAY

The Laboratory's Rugby XV answered the challenge of CRAY in convincing style in the Inaugural Challenge Cup match at Harwell on April Fool's Day, running out winners 20 - 9. The match had barely begun when RAL found themselves a few metres short of the CRAY line. From the ensuing 2-man lineout SPG and Lewis executed a perfect diversion at the front of the line allowing the forceful Mann to receive a gentle underarm throw from the hooker and to crash over virtually unopposed in the corner. Behind the larger, dominant RAL pack the half-backs Young and Grafton began to dictate play. Intelligent selection of the correct options meant CRAY found it difficult to settle, and when RAL began to run the ball they looked very dangerous. The precision of the RAL play was epitomised by the experienced Hancock's timely arrival at ruck and maul. A sweeping move by the RAL backs with slick handling belying the wet conditions saw Moore in space about 30 metres out, from where he raced over the line leaving the defence in tatters, and his own skipper with a dislocated little finger, cause unknown! The RAL line-out was a plentiful source of quality possession thanks to the excellent jumping of Galbraith and Gledhill, however this received a setback when in attempting a peel around the front of the line-out the tall Scotsman ran nose-first into his colleagues. This seemed to unsettle RAL, and the CRAY team, increasing in confidence, came back into the game. Hustling their opponents and taking every opportunity to spoil their possession, the more mobile CRAY pack drove on strongly at every opportunity, and at the interval RAL's 8-0 lead was vulnerable.

From the restart the RAL pack stormed forward in a valiant attempt at retrieving the initiative, only to see the ball float tantalisingly over all of them and into the arms of the CRAY full-back who drilled it firmly into the Rutherford half. There followed a period of sustained pressure by CRAY, with the reliable Yates clearing for RAL on several occasions. RAL were then penalised for dropping the scrum and CRAY kicked



RAL's Captain, Steve Cooke (right), receives the trophy (a tankard, which was very fitting for what followed later) from CRAY Account Manager, Mr Gordon McBride.

87RC 2493.

a straightforward penalty goal to give them some well-earned points. The Rutherford pack, sensing the game was going away from them, then produced some sustained quality rucking and mauling, with Moss and Booth both outstanding, and the backs ran most of the second-phase possession. RAL seemed certain to score when Thomas was free out on the right but the pass failed to reach him. Then Cooke found himself with the ball following a move by his inside centre, and ran forcefully over the CRAY line for a try under the posts, which was converted by Young. From the restart CRAY won a series of rucks, driving deep into the RAL half, and their progress was only halted by RAL giving away another penalty in easy goal range. However Foster, the CRAY skipper, commendably elected to run the penalty, and after dummying profusely to his own forwards turned to the RAL pack and ran through them

for a spectacular try under the posts which was goaled by CRAY. The score was now 14-9, and the CRAY team were in ebullient mood, chasing anything loose and pressuring the home side. With no-side approaching Grafton made a break and fed Lawless who broke two tackles and took 3 players with him as he crossed the CRAY line for RAL's final try which was again brilliantly converted by Young. Final score: RAL 20 CRAY 9.

After the match the teams enjoyed the facilities of the RAL Recreational Society's bar, and the players would like to extend a special vote of thanks to the Rec Soc for its' support of the event and the bar staff who make the taking of post match refreshments possible.

Steve Cooke & Kevin Lewis

Sales to Employees

The sale of scrap materials to RAL employees will take place on 22 May and 5 June from 12.00 - 12.30 hrs in the R24 Scrap Compound.

Lost & Found

A sum of money has been found recently, on site.

Please apply to Mike Harrison of Personnel, Room 70, R20 or phone Ext. 5600 if you think it is yours.

Bulletin

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