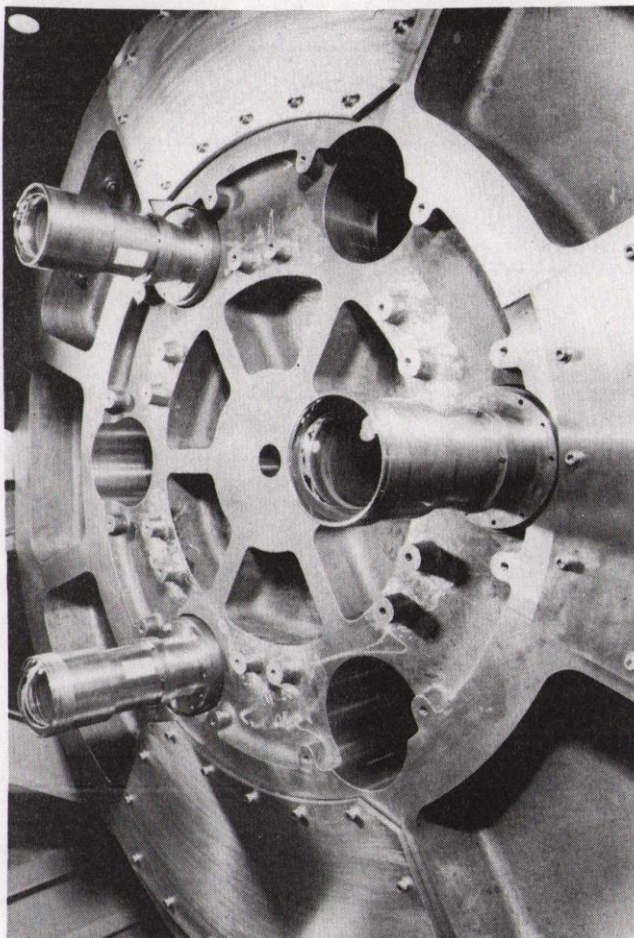


RCBC Gathers Momentum



Although delayed by the national engineering strike major components of the Rapid Cycling Bubble Chamber are now arriving steadily.

Recent arrivals

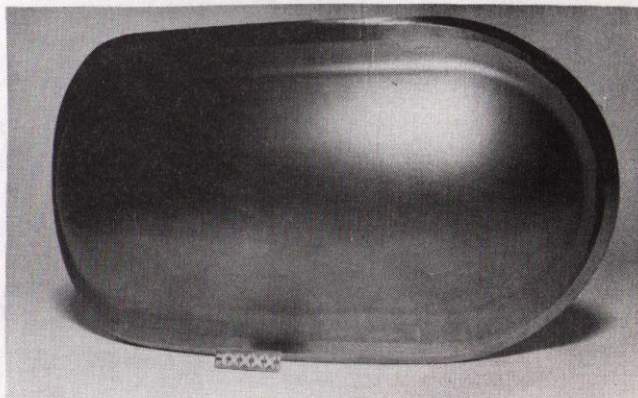
The most recent arrivals include the lens plate and the third telecentric lens. The first photograph shows all three lenses mounted in the massive lens plate. The second photograph shows the hexagonal rotating gate of the first optical channel mounted on the back of the lens plate. The lens plate is an accurately machined casting of aluminium bronze weighing 1.3 tonnes and provides mechanically stable stereo bases for the three optical channels.



The refrigeration control vessel which was completed mechanically some months ago has now had radiation shields fitted and all exposed parts super-insulated.

Most development work has now been completed. Particularly important in this respect has been the successful provision of the beam entry and exit windows for the chamber. The latter is shown in the third photograph.

In addition to receiving components we have also delivered a significant number of control and vacuum units to CERN where their installation is being supervised by Tony Eastwood, the first of the laboratory staff to take up residence at CERN in preparation for the assembly and tests on site.



INTERNAL Events

HEP LECTURES

CONFERENCE ROOM R61 - 1100 hrs

- 16 Jan: Prof J Steinberger/CERN
"CDHS: Some Recent Results
and Future Plans"
- 23 Jan: Dr G Shaw/Manchester
"QCD and Multiplicities in
Electron-Positron
Annihilation"

NIMROD LECTURES

LECTURE THEATRE - 1400 hrs

- 21 Jan: Dr G Myatt/Oxford
Title to be announced
- 28 Jan: Dr V Rittenberg/Bonn
Title to be announced

CHRISTIAN FELLOWSHIP

LECTURE THEATRE - 1230 hrs

- 31 Jan: Film: "COL. JAMES B IRWIN
in APOLLO 15"

RUTHERFORD LABORATORY LECTURE

LECTURE THEATRE - 1515 hrs

- 24 Jan: Dr J E Midwinter
"Optical Fibre Systems --
a Reality at Last"

INFORMAL LECTURE SERIES

CONFERENCE Rm R20 - 0900 hrs

Every Tuesday starting:-

- 22 Jan. S W Lovesey
"Theory of Neutron Scatter-
ing by Condensed Matter".

EXTERNAL Events

THEO.PHYS.SEMINARS

T.P.CONF.RM - AERE - 1400 hrs

- 15 Jan: Dr J A Hudson/AERE
"The Work of Fracture Studies
Group, Metallurgy Division"
- 22 Jan: Dr V R Saunders/Daresbury
"Recent Advances in MCSF and
CI Theories"
- 29 Jan: Dr R S Pease/Culham
(CONF.RM.B551) "Fusion Research and
the Future"

ASTROPHYSICS SEMINARS

F5 CONF.RM - CULHAM - 1400 hrs

- 16 Jan: Dr Ester Antonucci/Turin
"Solar Rotation in the Years
of Decreasing Solar Activity"

PHYSICS COLLOQUIA

H H WILLS LAB - BRISTOL - 1630 hrs

- 14 Jan: Dr M Fall/Cambridge
"Galaxy Clustering"
- 21 Jan: Prof M Gordon/Essex
"Critical Phenomena and
Statistical Mechanical Models
for Polymers"
- 28 Jan: Prof A Keller FRs/Bristol
"Irradiation of Polyethylene;
20 Years of Research Aside!"

OVERSEAS Visits

S F J Cox to CERN from 14 Jan-20 Feb
to work on RMS experiment.

M Edwards to CERN from 14-18 Jan to
attend EMC collaboration meeting.

C J S Damerell to CERN from 14-25 Jan
to work on NALL.

L G Denton to CERN from 15-18 Jan to
attend NA9 meeting.

W M Evans to CERN from 15-25 Jan to
supervise installation work.

G P Warner to CERN from 18 Jan-3 Feb
to work on RMS experiment.

G H Grayer to CERN from 20-25 Jan for
meetings and work on UAL.

C J Batty to CERN from 20-24 Jan to
attend meeting of PSCC.

A Astbury to CERN from 21-26 Jan to
attend meetings and work on prop 204.

S Jaroslowski to DESY from 23 Jan-
6 Feb for commissioning of Cathode
Processor.

R J N Phillips to CERN from 27-30 Jan
for discussion and EMC meeting.

Missing

Would anyone knowing where the
following piece of equipment can be
found, please contact Brian Judd
Ext 570.

Pluslite AERE No 24378

Late of R3 - missing for about
12 months.

A Tektronix plug-in amplifier type D -
serial number 102079, is missing from
SNS R55. Would anyone knowing of
its whereabouts please contact
D R Culliford Ext 204.

Rutherford Laboratory Lecture

The next lecture in this series will
be held on THURSDAY, 24 January 1980
at 3.15 pm in the MAIN LECTURE
THEATRE.

DR J E MIDWINTER, Post Office
Telecommunications, Ipswich.

OPTICAL FIBRE SYSTEMS - A REALITY AT LAST

Optical fibre transmission systems
are now starting to enter the
telecommunications networks of
western countries in place of
coaxial or wire cable systems,
after some ten to fifteen years'
development. Research is still
moving forward rapidly so that
further generations of systems can
be seen. The technology promises
substantial cost reductions to the
user when volume production is
achieved. But who will benefit
from this? The talk attempts to
explain the technology and provide
some preliminary answers to the
question.

Dr J E Midwinter is Head of the
Optical Communications Systems
Division at the Post Office
Research Centre at Martlesham
Heath and is a Visiting Professor
to Queen Mary College, Electrical
Engineering Department, University
of London.

Obituary

We are sad to announce the death of
Mrs Phyllis Woodcock at the John
Radcliffe Hospital, Oxford, on Sunday
6 January. She was well-known,
especially to visitors to the
Laboratory, as the Manageress of The
Cosener's House, for many years up to
her retirement in 1969.

Library Notice

Missing from the Library

1. Erdelyi, A., ed
"Tables of integral transforms"
2 volumes
2. Hannula, R.
Systems 360/370 Job control
language and access methods

We should like to see these volumes
back in the Library immediately - no
questions asked. Thanks.

Safety

PERIODIC SAFETY TEST OF PORTABLE ELECTRICAL EQUIPMENT

The test carried out during Oct/Nov
1979 has now been completed. The
current marker is BLUE and is marked
"DO NOT USE AFTER MARCH 1980".

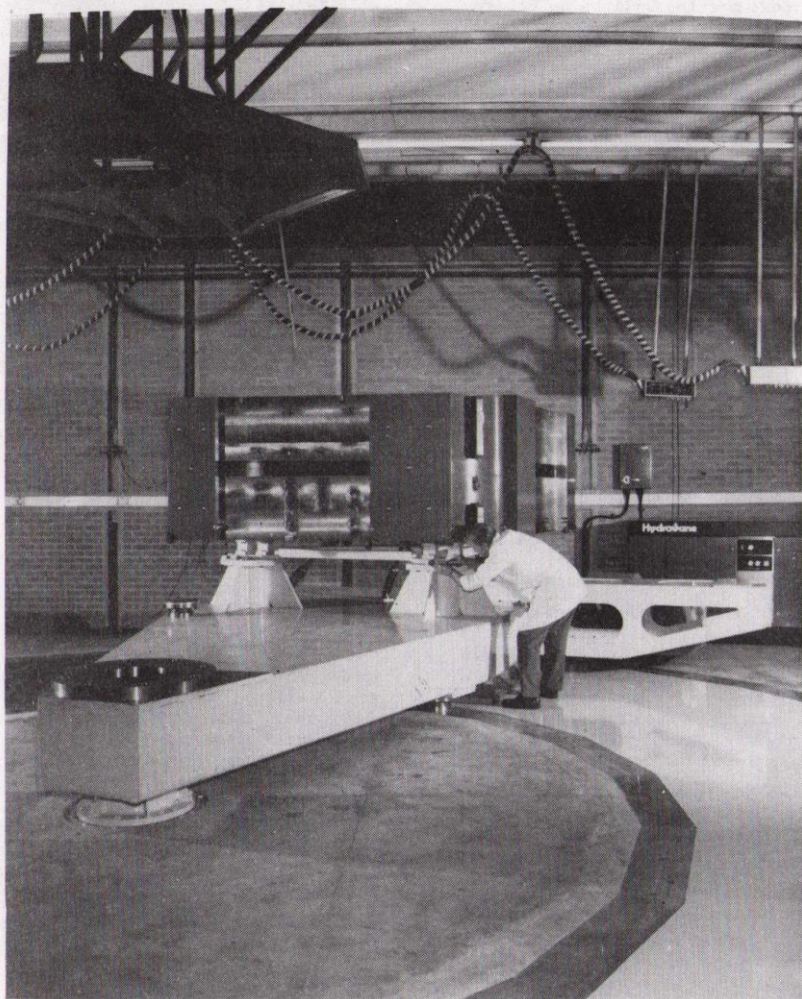
Portable electrical equipment marked
otherwise, or unmarked should be
considered unsafe and must NOT be
used.

All such items should be returned if
possible to Electrical Services
Section Building R18. Alternatively
ring A Hipwell Ext 573.

Lapel Badges

Wanted - secondhand plastic lapel
badges. When the special event is
over you don't want them but we do.
'Save It for SciAdmin.' Contributions
to Marjorie Sherwen, R20. Thank you.

Oxford Spectrometer Takes Shape



During late November, major components for the Oxford Magnetic Spectrometer were delivered to the Department of Nuclear Physics, Oxford University.

This instrument, a joint project of the Rutherford Laboratory and the Nuclear Physics Department, will be used in conjunction with the Oxford University folded tandem Van de Graaff accelerator, for the study of charged particle reactions, particularly heavy ion transfer reactions using beams of Lithium, Carbon and Oxygen ions. The advantages of using this device rather than an electronic sensing array are those of high resolution, large solid angle of capture and discrimination against unwanted particles.

Configuration

The Spectrometer assembly comprises an entry Sextupole magnet and Quadrupole magnet, a main 100° sector Dipole magnet in which the central orbit radius of the ions is 1.6m and an exit Multipole magnet. These magnetic elements plus the target chamber and detector box are mounted on a large steel base platform which

is constrained to move in a circular arc about a vertical axis through the centre of the target chamber. It is rotated by means of an air floatation system and driven pneumatically.

Installation

The photograph shows the main Dipole magnet steel sector and support platform in position on the central pivot bearing. Installation of these massive components, - the main sector Dipole weighing some 50 tonnes, - necessitated lowering them from ground level through an opening in the tandem vault roof, moving them along the tandem vault, and positioning them in the target room, a not inconsiderable task, performed within the scheduled ten days.

Sales to Employees

Sales of scrap metal/plastics as set out in RLN 12/73 will be made on 18 January and 1 February at the scrap compound, rear of R40 from 1200-1230 hrs.

Training

READING COLLEGE OF TECHNOLOGY

COURSES

(one evening attendance per week between the given dates)

"Introduction to Microprocessors"

2 Jan - 27 March	Motorola 6800
14 Jan - 27 March	Motorola 6800
14 Jan - 3 March	Intel 8080/85
6 Feb - 26 March	Intel 8080/85
6 Feb - 27 March	Texas 9900

24 Jan - "Electronics for
27 March Mechanical Engineers"

5 - 25 "Intermediate Electronics
Feb for Mechanical Engineers"

7 Jan - "Microprocessors for non-
27 March Electronic Persons"

22 Jan - "Basic Electronics"
5 March

LECTURES

25 Jan - "An Introduction to Matrix
28 March and Finite Element
Methods"

Christian Fellowship

17 Jan: HAVE YOU EVER WONDERED WHAT IT IS REALLY LIKE TO BE 'DOWN-AND-OUT' AND HAVE NOWHERE TO GO?

Come and listen to the moving experience of Padre Brian McAvoy who joined some of these people and lived as one of them at a Franciscan Monastery recently. Brian's talk should be extremely interesting and well worth hearing.

24 Jan: TOO HEAVENLY MINDED TO BE OF ANY EARTHLY USE?

Another Bible Study and discussion.
Also in R2 Conference Room at 12.30p.m.

31 Jan: DON'T MISS OUR VERY SPECIAL FILM which will be shown in the Lecture Theatre at 12.30p.m.

It describes the experience of COL. JAMES B IRWIN in APOLLO 15 and the effect it has had on his life.

This is a tremendous opportunity for all SRC staff to see a film of this wonderful scientific achievement and to listen to Col. James Irwin's personal account of landing on the moon.

Film Badge Notice

It is Period 1. Colour strip GREEN. Please check that you are wearing the correct film and all old ones are returned to allow the dose totals for 1979 to be compiled.

Goodbye 'Gee'



Friends and colleagues gathered together on Friday 7 December to make a presentation to Mrs G Newbold who was retiring after nine years at the Laboratory.

'Gee' started in 1970 as a print room assistant. By the time she left us she was responsible for R18 print room (Building & Works Division) dealing with drawings, microfilms, printing and filing as Clerical Assistant to the mechanical, electrical and civil engineering drawing offices.

She will also be remembered as one of the guiding spirits of the Laboratory's Christian Fellowship.

Gifts of a sewing machine, a tray picturing building R18 and a bouquet of flowers, were presented to her by Bert Brooks, who spoke warmly of her work for his division, thanked her, and wished her a long and happy retirement.

In response 'Gee' thanked everyone for the wonderful gifts and said how enjoyable she had found her years at the Laboratory.

'Gee' is the last of the "Rutherford Newbolds", her husband (who attended the presentation) and her son having also worked here at one time.

Slimming Club

The Laboratory Slimming Club has started again on Wednesday 9 January. We meet every Wednesday from 1230-1300 hrs in the East Wing Conference Room of building R1. New members are always welcome.

For further details please contact Gill Waters on Ext. 6234.

Folk Club

The next meeting will be on Friday 1 February, featuring 'HOGLEG' a three piece band, Bert, John and Martin on guitar, harmonica and banjo, who claim to play anything from Country to Rock, Folk to Blues. Also appearing are Mike and Dave from Newbury who play traditional folk music. Do come along, and bring your friends. Tickets are on sale at £1.40 at the door or £1.20 in advance from:-

John Ellis Ext 6369/494
Alan Hodges Ext 6323

Table Tennis

"Ruthless Rutherford" was how a local paper described the Laboratory's 'A' and 'B' table tennis teams who are at present challenging strongly for honours in Division II of the Didcot and District Table Tennis League.

Despite having temporary playing conditions for this season's league matches the teams have done well in the first half of the season. Originally four teams were entered, but the 'D' team had to be withdrawn, mainly as a result of lack of practice facilities.

The RL 'A' team of Tim Pett, Eric Thomas and Colin Cherrill are at present joint leaders with British Rail 'D' in Division II with 23 points. The 'B' team of Bob Hopgood, John Varley and Peter Tipper, also in Division II are playing well, being only 2 points behind the Division Leaders with 21 points. The 'C' team of Brian Wyborn, Harry Jarvis, Peter Horton, Peter Collins and Richard Lawrence are only 5 points behind the leaders of Division III, Abingdon Old Gaol, and 2 points behind Culham who are second in the table, and therefore still well in the promotion race.

Local match results of our teams appear regularly in the 'Herald' Series of newspapers. For any other enquiries please contact John Varley, Ext 6302.

Lost & Found

A silver filigree brooch was found in the Restaurant Foyer on 7 January. Please contact M E Fry R20, Ext 495.

Lady Appleton will be visiting the Laboratories on Monday 21 January. During her visit she has been invited to unveil a portrait of her late husband Sir Edward Appleton, after whom the Appleton Laboratory was named.

The Portrait is a photographic copy of the painting by Sir William Hutchison, the original of which hangs at Edinburgh University where he was Principal and Vice-Chancellor from 1949-1965.

We welcome to the Rutherford and Appleton Laboratories Drs Jia-Wei Hu, Han-Yi Sheng, Zheng-Xen Li, Guo-Rui Zheng and Wen-Heng Zhao, visiting physicists from the Institute for High Energy Physics, Peking who have joined us for a year.

Dr Zheng will be working on mini computer software for the HEP Data Handling Group, Dr Zhao with the Polarized Target Group, and Drs Hu, Sheng and Li will be based with the Electronics Group of Instrumentation Division, assisting in the development of electronics for HEP experiments at CERN.

Dr Fan Ming-Wu from the Institute of Atomic Energy, Beijing also joins us for a year, under the auspices of The British Council, and will work with the Computing Applications Group of Technology Division.

We wish them all a pleasant and productive year amongst us.

Lunchtime Music 12-30

Wednesday 16 Jan:- Lecture Theatre 'EQUINOX' - Jean Michel Jarre.

Jarre is one of the new wave of composer/producers of electronic music in the style of Oldfield, Wakeman, Froese etc, but whereas some of these twiddle with synthesizers in a shed at the bottom of the garden, Jarre uses the French system known as "Dans un appartement au bout de le jardin".

He produces a tremendous range of sounds - some mimicking traditional instruments, but mainly combinations outside their scope - to convey impressions of tides, birds, thunderstorms etc. The music is sometimes disturbing, sometimes restful, but never boring.

Those who saw, recently, the slide/tape presentation of ILL Grenoble may remember some of his music (for the volume if nothing else). This is a chance to hear it without all those distracting pictures!



Deadline for Insertions

BULLETIN

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Abingdon (0235) 21900 Ext 484

10.00 hrs Monday 21 January 1980.

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