



Rutherford
Laboratory

COMMON/CSCAL/IBM , NERR, NCH, NGAP, ISCAN, NBR, NGR, NSCAN, NRO
1 IYSEL, IYSEU, IYMAX, NTRACK, 7 - 21 July 1975
2 NBEGIN, NTK, NTRY, NMISS, NSSR, NFIC, MAXMIM, NFIRST, NEND, JTR
COMMON/CFID/MFX(20,3), MFY(20,3), NFDX(10,3), NFX(3, NFDX(3)
QTAB(2,20,3), NX(100,4), NY(100,4), XN(2), YN(8), ID
R IDY(100,2), JDX(4), JDY(4), IHS(4), IGV(2), IUN(2), I
S NCF(16), IFS, NFS, FX, FY, JK, PIC, KPIC, NCOUNT, NBIN, Y
T MAXN, CTA, CTB, MX, MY, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ

bulletin

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'NEVER FRAZZLED'

It can be interesting to toss an unusual word at someone (preferably an acquaintance) and then wait for the reaction; for instance - "frazzled". The word, used as recently as last Friday 27 June, certainly produced a few puzzled expressions amongst those present including your Editor who thought he knew - then had second thoughts. So - into the Library and the Concise Oxford Dictionary and the Shorter Oxford Dictionary (which naturally is larger than the Concise). There it was - in both - although one gave it as a verb, the other as a noun. "Frazzle" - to fray, wear out - to a condition of exhaustion! Its origin, from a limited search, suggests the USA - about 1825!

The occasion was the presentation to Wendy Morris of farewell presents from her colleagues and friends by the Director of the Rutherford Laboratory Dr G H Stafford. Wendy who is retiring for an excellent reason - she is getting married on 11 July - has occupied the position of Personal Secretary to Dr Stafford for the past 7½ years.

Wendy started her career at Reading University - working for the Assistant Registrar. Her next post took her to Uganda as Secretary to the (then) Minister of Culture and Community Development. After two years of Culture she returned to the UK & applied for a job at the RL.

The Director, in an amusing speech, recalled the day Wendy arrived and came to speak to him and the impression he then had of a shy and very retiring person. However, behind that very feminine image there was a lot of steel and during the whole of her time as his secretary he could not remember her getting 'frazzled' at any time. Perhaps the exterior evidence of this 'steel' could be seen in the red sports car she drove, often seen in his car parking space during his absence from the Lab. In a more serious vein Dr Stafford spoke of the great service Wendy had given to the Lab; she had certainly made his life a lot easier during the past seven years. Wishing her the best of luck in her forthcoming marriage he then made the presentation.

Wendy is leaving the district to live in a tiny village near Ipswich, in a small



cottage with a tiny garden already, one understands, under cultivation.

We feel sure that all who knew Wendy will join with us in wishing her every happiness in the future. The final words we leave to Wendy who has written to say:-

Everything was such a rush on my last day in the Lab that I couldn't personally thank everybody who contributed to my lovely presents. I am so pleased with the heat tray and the elegant glass candle-holders. I hope this letter will convey my sincere thanks to everybody for the presents and for 7½ happy years at the Rutherford Laboratory.

Wendy Morris

* * *

FILM BADGE NOTICE

It is Period 7. Colour Strip - ORANGE for 8y film and neutron packs. Please check that you are wearing the correct dosimeters and that all old ones are returned. Any queries regarding film issue, please contact - The Film Service, G4A, R2, Ext. 430.

MISSING EQUIPMENT

The following item has been reported missing from T.A.M.S. Workshop, Building R1. ½" Wolf portable electric drill, RL No 14/3065. Anyone knowing the whereabouts of this item is asked to contact E Gibbs, Ext. 394.

INTERNAL EVENTS

NIMROD LECTURE SERIES

Monday 7 July
11.30
Lecture Theatre

Two Photon Physics in the Resonance Region

H R Rubinstein/Weizmann Institute and RL.

HEP SEMINAR

Wednesday 9 July
11.00
R61 Conference Room

t - Channel View of s - Channel Resonances

P Hoyer/Stony Brook

SEMINAR IN COMPUTING

Wednesday 9 July
14.00
R61 Conference Room

The IBM International SWITCH Network

J MacEwan/IBM Information Services Ltd

SWITCH is an example of an attempt at a star network offering high availability to on-line terminal users and bulk data transmission. The network is used for IBM's internal business purposes only and is based at IBM Information Services Ltd at Havant.

NIMROD LECTURE SERIES

Monday 14 July
11.30
Lecture Theatre

Quantum Numbers and Decay Modes of the ψ (3095) and ψ (3684) Resonances -
A Summary of Results from SPEAR

Vera Luth/SLAC

HEP SEMINAR

Wednesday 16 July
11.00
R61 Conference Room

Palermo Review of Y^* Spectroscopy

R T Ross/RL

INSTITUTE OF PHYSICS MEETING

Wednesday 16 July
13.30-17.00
Lecture Theatre

The Particle Nuclei Interaction Group of the Institute of Physics is holding a half-day meeting on Intermediate Energy Physics, the programme is as follows:-

Some Aspects of Kaon-Nucleus Interaction at Low Energies - *J Law/U. of Guelph.*

Hadronic Atoms & Ticklish Nuclei: The $E2$ Nuclear Resonance Effect - *M Leon/Los Alamos*

Determination of $E2$ and $E4$ Moments of ^{165}Ho using Muonic X-Rays - *R Kunselman/U. of Wyoming.*

Each talk is timed at 45 minutes and the meeting ends with a discussion period. Further information from Dr C J Batty, R12, Ext. 426.

SEMINAR IN COMPUTING

Friday 18 July
11.00
R61 Conference Room

Three of C & A Division's Current Projects.

C S Cooper, C D Osland, P C Thompson.

1. A command language decoder which will provide general decoding facilities for all that wish to use them e.g. ELECTRIC, HASP etc - *C S Cooper.*
2. The graphics spooling facility whereby output for the FR80 will initially go into the HASP spool area. From there it will automatically be sent to the FR80 without further user intervention - *C D Osland.*
3. A data base containing lists of users, documents held, terminals and work-stations. From this many useful items can be extracted e.g. mailing lists - *P C Thompson.*

NIMROD LECTURE SERIES

Monday 21 July
11.30
Lecture Theatre

Structure of Multiple Production

C Quigg/FNAL

RUTHERFORD LABORATORY BULLETIN

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Editor: H F NORRIS

Deadline
for
Insertions

GENERAL & SOCIAL NEWS
Tuesday 1600

INTERNAL & EXTERNAL EVENTS
Wednesday 1200

Room 42 Building R20
Rutherford Laboratory
Chilton Didcot Oxon
Abingdon 21900 Ext 484

PHYSICS LECTURE
Monday 21 July
14.15
Lecture Theatre

Waves and Instabilities in Beams and Plasmas

J D Lawson/RL who has supplied the following abstract -

Phenomena associated with waves and instabilities in beams and plasmas are often discussed in presentations of considerable mathematical complexity. Despite this, the essential physical ideas behind such phenomena are surprisingly simple.

In this talk an attempt will be made to present them in non mathematical terms. The physical significance of such things as dispersion diagrams, phase and group velocity, active and passive media, velocity space instabilities and Landau damping will be discussed.

The abstract supplied ends as follows. (PS - If you have a barbers pole, bring it along)

There will be no further lectures in the Nimrod Series and Computing Seminars until the autumn.

NIMROD SCHEDULE

CYCLE 2 3.7.75 - 20.7.75		MACHINE PHYSICS		HIGH ENERGY PHYSICS
Team	Beam		Experiment	State
BRISTOL/SOTON/RL	K15a	No 120:	K^-p diff-cross sections	Setting up
BRISTOL/RL	$\pi 12$	No 166:	A and R Polarisation parameters $\pi^- p \rightarrow K^0 \Lambda$	Setting up
BIRM/SURREY/RL	K17	No 156:	X rays from K^-p atoms	Setting up
IMPERIAL/RL	$\pi 8a$	No 128:	Meson production near threshold	Setting up
RL	$\pi 11$	No 154:	Radiobiological tests	Data
RL/OXF/ROME	T1		Test Beam facility	Tests

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OVERSEAS VISITS

Dr R T Ross, to Heidelberg and Munich, 3-11 July, to discuss bubble chamber film with Heidelberg group and to give seminar at Munich.

Messrs L Phillips, J Connolly and D L Hill, to CERN, 6-11 July, to test optical spark chambers on P.A.R. Experiment.

Mr F Wickens & Mr P E Strickland to CERN, 7-11 & 7-16 July respectively to work on experiments

Dr B D Jones, to CERN, 7-9 July for discussions

Dr M R Jane, to CERN, 8-14 July, to run experiment to calibrate neutron counter

Mr R L Sekulin, to CERN, 11-29 July, for discussions on BESSY scanning tables and on 4.2 GeV/c K^-p experiment etc.

Dr D E Baynham & Mr N H Cuncliffe, to the USA, 13 July - 2 August, to participate in ISABELLE Summer Study & to visit LBL, SLAC & LLL.

Mr C J Adams, to CERN, 16 July - 17 August to work on CERN network plans

Dr D Maden, to Oslo, 16-17 July for discussions with Norsk-Data-Elektronikk

Dr R J N Phillips, to CERN, 19 July - 13 August for discussions & collaboration with Theorists & experimenters

Dr G Manning, to the USA, 21 July - 28 August, to attend PEP Summer Study at SLAC

BRITISH ASSOCIATION

The 137th Annual Meeting of the British Association for the Advancement of Science will be held at the University of Surrey, Guildford from 27 August - 3 September. Attendance booking form deadline - 16 July 1975. Full details of programme etc from Training Section, R20, Ext 266.

SOCIAL NEWS

CHRISTIAN FELLOWSHIP

11 July: Derek Smaje will be concluding his series of talks on the Islamic faith. These have proved to be very interesting & have concerned not only basic beliefs but also the historical background to a faith which started with one man but now has many millions of adherents. Why not come along this Friday when there will be time for discussion? The venue is the R12 Conference Room and the time 12.30 pm.

18 July: John Thewlis, of the Atlas Lab, will be continuing his reading of the Book of Revelation. All are welcome to come along and hear God's Word at 12.30 pm in the R12 Conference Room.

THE NIMROD SCENE

As can be seen from the schedule on page 2, Nimrod is expected to be operational again this week. Since the beginning of February an extensive programme of modifications and maintenance has been undertaken and an outline of this work was given in Bulletin No 3.

Some of the modifications were in connection with the new injector project, the opportunity being taken to install various items of equipment ready for the introduction of the new injector upon completion. The high energy drift space between the new injector hall and the Nimrod magnet has been completed with the installation of beam line transport magnets, diagnostic devices and the debuncher. It therefore seems an appropriate time to give a brief progress report on the injector itself.

The pre-injector part of the new 70 MeV injector, has been moved from the development area in R25 and reassembled

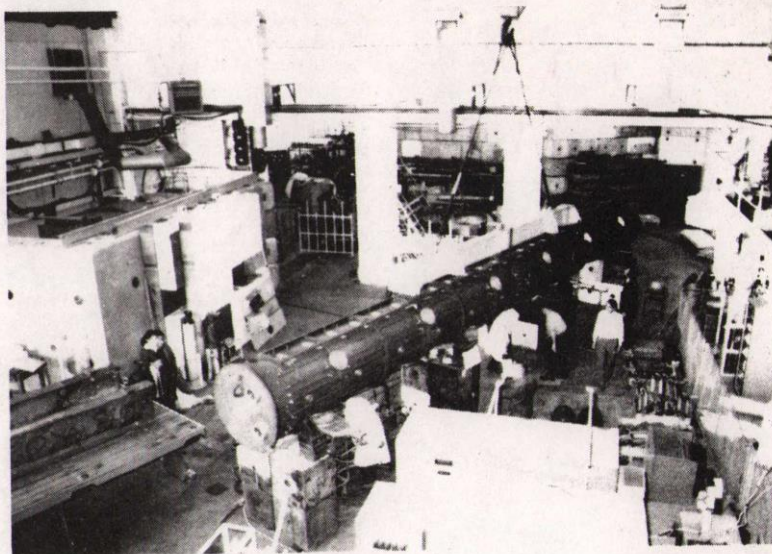


Photo - unloading completed in Hall 2.

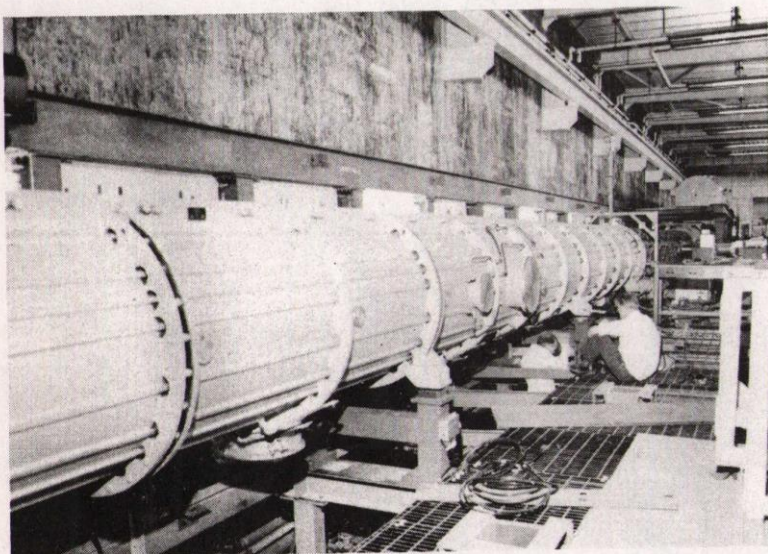


Photo - in position in the new injector hall.

in the new injector building. Commissioning of the pre-injector is now in progress and has resulted, at the time of writing, in a beam of 120 mA at the normal operating energy of 665 KeV.

At the opposite end a significant change has taken place with the installation of Tank 4. It had arrived very early on the morning of 18 June from the manufacturers, Morfax of Mitcham. The top photograph shows the 6½ ton, 12½ metre long tank safely unloaded from its transporter into Hall 2. Satisfactory vacuum testing was carried out following its journey and after a coat of paint, tank 4 was moved to its permanent abode. This took place on 24 June and the lower photograph shows it in its final position in the new injector hall.

There is still plenty of installation, testing and commissioning to be carried out but with the arrival of the fourth tank, the shield wall can now be completed and the R.F. cubicles feeding tanks 3 and 4 installed. The installation and alignment of drift tubes in tanks 2 and 3 has been completed and is virtually complete in tank 1; high power R.F. testing is in progress in tank 2.

The area around the injector is getting more congested and the available

floor space is rapidly being eaten up as new equipment is installed, especially with the arrival of the last tank.

I wish to express my thanks to Vaughan Wordingham for a guided tour and to both Vaughan and David E Gray for their cooperation and help in supplying information for this brief report.