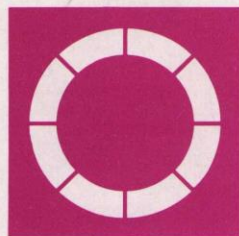


Rutherford Laboratory

Bulletin

No. 9/68 on 4 Mar 68 missing

No. 10/68
11 Mar 68



Rutherford Laboratory Bulletin

General News

COMPUTING FORUM. As mentioned in last weeks' Bulletin, an internal computing forum for all users of the Laboratory's central computing facilities will be held in the Lecture Theatre on Thursday, 14 March commencing at 1400 hours.

A panel consisting of R. Taylor (Chairman), H. Hurst, J. W. Burren, A. Mayhook and IBM personnel will consider questions from anyone who uses the RHEL central computing facilities. A resume will be given of progress made in the past year, the present situation and possible future developments.

RADIATION PROTECTION NOTICE. Film Issues. Period 3 commenced Monday, 26 February. Colour Strip - BLUE for β and fast neutron films. Please check that you are wearing the correct films and that all old films have been returned.

Next film change - 25 March

VISITORS. Thirty-eight people attending the High Voltage Technology Course at the Education and Training Department, AERE, will visit the Laboratory on Friday, 15 March.

BURSARY AND SANDWICH COURSE AWARDS 1968. A limited number of awards are available to members of staff who wish to undertake full-time or Sandwich courses at Universities. Details may be obtained from the Personnel Group, and anyone who would like to be considered for such an award should contact Mr. D. Williams, R.20, Ext. 495.

OVERSEAS VISITS. Dr. R. J. N. Phillips, to the U.S.A. 12 - 18 March, to attend a Regge pole "status discussion" meeting at Eugene, Oregon.

Mr. A. G. Ashburn & Mr. R. N. Walker, to the U.S.A., 12 March - 5 April, when they will visit a number of Laboratories for discussions on various subjects.

Machine Schedules

NIMROD Cycle 3 (27.2.68 - 19.3.68)

Machine Physics: High Energy Physics (X1/K9, π^+ , K8, K10S, X2/K12, X2/K13, X2/K14, X2/K14A)

Full details of Cycle 3 were given in Bulletin No. 8/68.

P.L.A.

Date	Team	Experiment
11 - 14 Mar.	King's Coll., London	Proton Scattering at 50 MeV
15 Mar.		Maintenance
16 - 19 Mar.	King's Coll., London	Proton Scattering at 50 MeV

Internal Events

Mon., 11 Mar. 11.45 a.m. Lecture Theatre	Nimrod Lecture Series	Dr. K. Berkelman (CERN)	The Pion Form Factor
Mon., 11 Mar. 2.15 p.m. Lecture Theatre	Nimrod Proposal Lectures	Dr. D. V. Bugg	A Proposal to measure S and P wave Amplitudes in π^+p Elastic Scattering between 80 and 300 MeV (Cambridge U./RHEL Collaboration)
Tues., 12 Mar. 12. - 1.15 p.m. Lecture Theatre	Lectures for Experimentalists	Dr. M. A. R. Kemp	Elementary Scattering - Part 4.
Wed., 13 Mar. 11 a.m. Conf. Rm. R.1	H.E.P. Disc. Grp.	Dr. N. M. Queen (Birmingham U.)	KN Forward Dispersion Relations and Coupling Constants
Wed., 13 Mar. 12.40 p.m. Thurs. 14 Mar. 1.15 p.m. Lecture Theatre	Film	"European Organisation for Nuclear Research" a 20 minute, colour film.	

During 1967 a new film of CERN was made by the Swiss film director Guido Franco in collaboration with the Public Information Office. We are very fortunate in being able to show this film so soon after its release.

Thurs. 14 Mar. 2 - 4 p.m. Lecture Theatre	Computer Forum	(See 'General News' for details)
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There will be no lecture in the Nimrod Series on 18 March owing to the Symposium on Nuclear Physics, details of which will be given in the next Bulletin.

External Events

Mon. 11 Mar., 4.15 p.m. Queen Mary Coll. London	Theor. Phys. Seminar	Prof. B. Mottelson (Copenhagen)	Pairing Effects in Nuclei
Mon. 11 Mar., 6 p.m. Savoy Place, London	IEETE Lecture	The Rt. Hon. The Lord Penney K.B.E., F.R.S. (Rector Imp. Coll. of Sc. & Tech)	Nuclear Energy

Tues. 12 Mar. 7.30 p.m. Univ. of Reading	IERE Reading Meeting	Dr. E. A. Faulkner (U. of Reading)	Transistor Noise (Particularly in relation to the design of low noise audio amplifiers)
Tues. 12 Mar. 8.30 p.m. 21 Banbury Rd. Oxford	Nuclear Phys. Seminar	R. D. Gill (Oxford)	Information from γ - Ray Measurements
Wed. 13 Mar. 4.45 p.m. Royal Fort, Bristol	Phys. and Geo. - Phys Colloq.	Dr. D. J. Dingley (Bristol)	Anomalous Dislocation Invisibility and Burgers Vector Determinations in Transmission Electron Microscopy.
Wed. 13 Mar. 7 p.m. Alcan Industries Ltd.	IEE Oxford District Meeting	Visit to the Banbury Works of Alcan Industries Ltd. where hot and cold rolling and extrusion of aluminium and its alloys is carried out	
Thurs. 14 Mar. 4.15 p.m. Univ. Coll. London	Elementary Particle Phys. Seminar	Dr. C. Wilkin	Low Energy Predictions from High Energy Scattering.
Thurs. 14 Mar. 4.15 p.m. Clarendon Lab. Oxford.	Theor. Phys. Seminar	Prof. C. P. Enz (Geneva)	Towards a Many-Body Theory of Second Sound in Solids.
Thurs. 14 Mar. 8.30 p.m. Phys. Lecture Rm. 21 Banbury Rd. Oxford	Seminar in Elementary Particle Phys.	Prof. D. Perkins	Recent Observations on the High Energy Muons in the Cosmic Radiation.
EVENTS AT AERE			
Tues. 12 Mar. 2 p.m. Conf. Rm. B. 8.9	Theor. Phys. Div. Seminar	Prof. J. M. Ziman (U. of Bristol)	Localisation of Electrons in Ordered and Disordered Systems
Thurs. 14 Mar. 3.30 p.m. Conf. Rm. H.8	Nucl. Phys. Div. Colloq.	Dr. C. J. Batty (RHEL)	Experiments using the Neutron Time-of-Flight Facility at the P.L.A.

Social News

RECORD SOCIETY. Tues. 12 March, 1.15 p.m., Lecture Theatre

"Hoffnung Festival Concert"

Items include "Concerto to end all Concertos" and "Concerto for Vacuum Cleaners and Floor Polisher". This is a recording of a live performance held in the Festival Hall about 10 years ago. Guaranteed to dispense the winter gloom.

CHRISTIAN FELLOWSHIP. 12.30 p.m. Friday, 15 March, Conf. Rm., R.12.

Bible Study on "Sanctification" led by Frank Smith, Accounts Section.

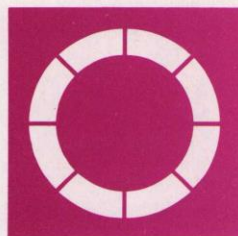
All are welcome.

Rutherford Laboratory

8.3.68.

H. F. Norris, Ext. 484
Scientific Admin. Group
Building R.20.

No 11/68
18 Mar 68



Rutherford Laboratory

Bulletin

General News

NUCLEAR STRUCTURE PHYSICS SYMPOSIUM. The Laboratory has arranged a Symposium to be held from 21-23 March on the possible use of Nimrod for nuclear structure experiments. Up to the present the experiments using Nimrod have been concerned with the properties and interactions of elementary particles.

The study of the properties of nuclei (nuclear structure physics) has generally been confined to low or medium energy machines, such as the P.L.A.

Recently there has been a growing interest in access to high energy machines so that beams of π and K mesons and of high energy protons may be used for nuclear structure experiments.

The purpose of this symposium is to discuss the possible use of Nimrod for these experiments and in particular to consider whether there are aspects of nuclear structure physics which can be investigated by using the beams available on Nimrod and which cannot be studied in other ways by experiments on more conventional machines.

Approximately one hundred and eighty physicists, mostly from this country but with some from overseas will be attending the Symposium. Ten invited speakers will discuss possible experiments and review other work of interest in this field.

RADIATION PROTECTION NOTICE. It is Period 3. Colour Strip - BLUE for β 's and fast neutron films.

Please check that you are wearing the correct films and all old films have been returned.

Next film issue - 25 March.

DERELICT VEHICLES. Will the owners of the following vehicles please remove them from the Rutherford Laboratory Site:-

Motor Cycle, Reg No. LMO 419 - in Transport Section Car Park
Austin Van, Reg No. 989 HHK - parked West side of Bldg. R.25.

These vehicles will be disposed of if not removed by 31 March 1968.

FILM SHOW. There will be no film show this week owing to the Nuclear Structure Physics Symposium.

DAMAGED MAIL. An envelope from the Rutherford Laboratory with contents missing, was received on 28 February by the Cyclotron Institute, Texas A & M University, College Station, Texas. This may have been addressed to Prof. J.A. McIntyre. The sender is asked to contact B.E. Kingdon, R.20, Ext. 6297, as soon as possible.

VISITORS. Thirty Students from the University of Aston, Birmingham will visit the Laboratory on Monday, 18 March.

Thirty Students from University College London will visit the Laboratory on Tuesday, 19 March.

Machine Schedules

NIMROD Cycle 4 (19.3.68 - 9.4.68)

Machine Physics
High Energy Physics

Team	Beam	Experiment	
Imp. Coll./Westfield Coll.	X1/K9	K^+p Interactions in Hydrogen Bubble Chamber	Data
QMC/AERE/RHEL	π^+4	A Study of Σ^- Beta Decay	Data
Univ. Coll. London	K8	K^-p Elastic Scattering Studies	Setting up
Oxford Univ.	K108	Studies of Neutral Final States in K^-p Interactions	Setting up

P.L.A.

Date	Team	Experiment
18-19 Mar	King's Coll London	Proton Scattering at 50 MeV
20 Mar		Maintenance
21 Mar	Radiation Protection Grp	Irradiations
22 Mar - 2 April	Manchester Univ	Elastic Scattering of Protons off P and Closed Shell Nuclei

Internal Events

Owing to the Nuclear Structure Physics Symposium, no lecture will be given in the Nimrod Series this week.

Mon, 18 Mar, 2 p.m. Lecture Theatre	Nimrod Users Meeting		
Tues, 19 Mar, 12-1.15 p.m. Lecture Theatre	Lectures for Experimentalists	Dr. M.A.R. Kemp	Elementary Scattering - Part 6
Wed, 20 Mar, 11 p.m. Conf. Rm, R.1.	H.E.P. Disc Grp.	Dr. C. Goebel (RHEL)	Boot strapping with Finite Energy Sum Rules
Thurs-Sat, 21-23 Mar,	Symposium on the use of Nimrod for Nuclear Structure Physics (see General News for details)		

Mon, 25 Mar, 11.45 p.m.
Lecture Theatre

Nimrod
Lecture
Series

Prof. S.B. Treiman

A Survey of Current Algebra and
PCAC

External Events

Mon, 18 Mar, 4.15 p.m.
Queen Mary College

Theor
Phys Seminar

Prof H. Frohlich
(Liverpool)

Microscopic Derivation of the Equations
of Hydrodynamics

Mon, 18 Mar, 6.30 p.m.
Bath Univ. of Tech.

Inst of Maths
Branch Meeting

Mr. W.A. Cameron
(C.E.G.B. Bristol)

The Variety of Mathematics used in a
Large Industry

Wed, 20 Mar, 4.45 p.m.
Royal Fort, Bristol

Physics and
Geo-physics
Colloq.

Prof. D.H. Perkins
(Oxford)

Neutrinos

EVENTS AT AERE

Tues, 19 Mar, 2 p.m.
Conf. Rm, B8.9

Theor Phys.
Div. Seminar

Prof. H. Frohlich
(Chadwick Lab)

Superconductivity in Metals with
Incomplete Inner Shells.

Thurs, 21 Mar, 3.30 p.m.
Conf. Rm, H.8

Nucl. Physics
Div. Colloq

Dr. W. Darcey
(Oxford U)

The Derivation of Spectroscopic Factors
from (D,p) Reactions.

Social News

RECREATIONAL SOCIETY NEWS. Angling - It is now possible for members only to join the Civil Service Angling Society and so have access to eight Private Fisheries including the Ham Bridge Fishery which extends for $2\frac{1}{2}$ miles of the River Kennet, between Newbury and Thatcham (trout and coarse fishing). Details and application forms may be obtained from Ernie Clark, R8, Ext. 6290/519.

Society Building - The decorating of the Recreational Society Building, R.14 is progressing well, but new volunteers are always welcome at lunchtimes, evenings and weekends. If available, contact Ron Hecken, Ext. 465.

The Society is also seeking any second hand furniture, (particularly comfortable chairs) floor coverings and curtains. Offers please, to Jenny Towers, Ext. 430 or Myra Gilbert, Ext. 6143.

FINAL FILING. The last of a series of annual 10-pin bowling matches between Nuclear Physicists, Accelerator Physicists and Engineers of the P.L.A. was held on Monday, 11 March, at Reading.

The match resulted in victory for the Accelerator Physicists who beat the Nuclear Physicists by a narrow margin, ie, 1178 to 1111. The Engineers were close behind with 1045 points.

After the match the competitors adjourned to a near by hostelry, where John Boon presented the trophy, a model of an Alvarez accelerator, to Norman Fewell who accepted it on behalf of the winning team. It would be interesting to know how many new scattering theories were postulated and shattered during the course of the evening.

RECORD SOCIETY. 1.15 p.m. Tues, 19 March, Lecture Theatre

Folk Songs by Peggy Seeger and the Lilly Brothers.

CHRISTIAN FELLOWSHIP. 12.30 p.m. Fri, 22 March, Conf. Rm, R.12

Prayer Meeting, led by Robin Elliott of Nimrod Beam Physics Group.

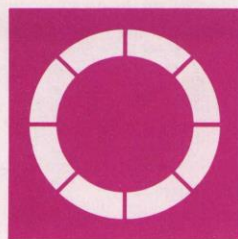
H.F. Norris, Ext. 484
Scientific Admin. Group.
Building R.20

Rutherford Laboratory
15.3.68

STOP PRESS

EXTRA SHOWING OF THE CERN FILM, 12.40 p.m. FRIDAY 15 MARCH, LECTURE THEATRE.

No.12/68
25 Mar 68



Rutherford Laboratory Bulletin

General News

RADIATION PROTECTION NOTICE. Film Issues. Period 4 commences Monday, 25 March. Colour Strip - PINK - for $\beta\gamma$ and fast neutron films.

Please change your films promptly and return all old film as soon as possible.

THE ROYAL SOCIETY. The programme of meetings for April, May and June is now available and may be seen in Room 21, R.20. The review lecture on 4 April, "The alignment of nuclei", will be given by M.A. Grace, F.R.S. at 4.30 p.m., at 6 Carlton Terrace.

OVERSEAS VISITS. Mr. A.R. Mortimer and Mr. R.W. Wimblett, to the USA on 24 March for three weeks, where they will visit various Laboratories and firms for discussions on the design, development and operation of mechanical engineering equipment used on accelerators and associated experiments.

SEMINAR. The B. de Rothschild Foundation for the Advancement of Science in Israel and, Technion - Israel Institute of Technology have announced a Batshera Seminar on Quantum Fluids to be held from 28 July - 16 August. The Seminar will consist of lectures and research colloquia on superconductors, He^3 He^4 and their mixtures. Further details from H.F. Norris, R.20, Ext. 484.

Machine Schedules

NIMROD Cycle 4 (19.3.68 - 9.4.68)

Machine Physics: High Energy Physics (X1/K9, π^4 , K8 and K10S)

Full details of Cycle 4 were given in Bulletin No. 11/68.

P.L.A.

Team

Beam

Experiment

25 Mar - 2 Apr.

Manchester Univ.

Elastic Scattering of Protons off P and Closed Shell Nuclei.

Internal Events

Mon, 25 Mar, 11.45 a.m.
Lecture Theatre.

Nimrod Lecture
Series

Prof. S.B. Treiman

A Survey of Current Algebra and PCAC

Tues, 26 Mar, 12 - 1.15 p.m.
Lecture Theatre

Lectures for
Experimentalists

Dr. M.A.R. Kemp

Elementary Scattering - Part 6.
(Part 5 was given last week and not
Part 6 as shown in the Bulletin)

Wed, 27 Mar, 11 a.m.
Conf. Rm, R.1.

H.E.P. Disc.
Grp.

Dr. C. Michael

KN Sum Rules - Regge Contributions
and Coupling Constants.

Wed, 27 Mar, 12.40 p.m.
Thur, 28 Mar, 1.15 p.m.
Lecture Theatre

Film

The Day Tomorrow Began, a 30 mm
colour film from the U.S.A.E.C.

This very new film deals with the first reactor to be built. It was released on the 25th anniversary of the first sustained nuclear reaction.

Mon, 1 Apr, 11.45 a.m.
Lecture Theatre.

Nimrod Lecture
Theatre

Prof. A. Merrison
(Director, Daresbury
Lab)

Experimental Programme at Daresbury

External Events

25-28 Mar, Inst of Maths and its Applications and the British Computer Society, Joint Conference on Optimization - at the Univ. of Keele.

EVENT AT AERE

Tues, 26 Mar, 2 p.m.
Conf. Rm, B.8.9

Theor. Phys. Div.
Seminar

Dr. M.I. Sobel

A New Look at the Inverse Scattering
Problem.

Social News

A.E.R.E. RECREATIONAL ASSOCIATION. Members who elected to pay subscriptions by deduction from Salary should note that w.e.f. 1 April, 1968, the deduction will be made at tenpence per month instead of one deduction of ten shillings in April.

Existing instructions from members will be deemed to cover the new arrangements unless Salaries Section, Bldg. R.20, are advised otherwise. There is NO change for weekly paid staff.

RECREATIONAL SOCIETY. Susie, Gill and Dusty will be in the Lecture Theatre at 12.30 p.m. on Wednesday, 3 April. Next weeks Bulletin will give their reasons for being there, and will also provide a very good reason why a lot of other people should be in the Lecture Theatre, on, - Wednesday, 3 April at 12.30 p.m.

Thursday, 4 April is another date to remember; no details at the moment as arrangements have not yet been finalised. So once again, see the next Bulletin.

Because of these two 'events' there will be no film show.

RECORD SOCIETY. 1.15 p.m., Tues, 26 March, Lecture Theatre.

Bach's Suite No. 2 for Flute and Orchestra, played by the Berlin Philharmonic
Orchestra conducted by Herbert van Karajan.

As a bonus, the sparkling last movement of the Suite will be repeated in a delightful version sung by the Swingles Singers.

CHRISTIAN FELLOWSHIP. 12.30 p.m. Fri, 29 March, Conf Rm, R.12

Mr. M.C. Rust, Pastor of Thame Baptist Church will talk on an Easter Theme.