

Rutherford Laboratory Bulletin

No. 30/66
1 Aug 66

General News

Westminster Abbey, 900th Anniversary Science Exhibition.

This Exhibition is based on the lives and work of scientists commemorated in Westminster Abbey. Amongst the subjects covered are Astronomy, Radio and Telecommunications, Mechanical and Civil Engineering, Geology, Biology, Chemistry, Medicine and Time.

The Rutherford Laboratory in association with the U.K.A.E.A. is presenting an exhibit on the life and work of Rutherford.

The exhibition will be open to the public daily (except Sundays) from 1 August to 3rd September, 9.30 a.m. to 8 p.m. (9 p.m. on Wednesdays). The admission fee will be 3/- for adults and 1/6 for children.

VISIT. Members of the International Teachers Conference will visit the Laboratory on Wednesday, 3 August.

Machine Schedules

P.L.A.

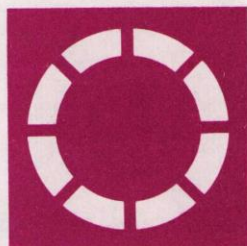
<u>Date</u>	<u>Team</u>	<u>Experiment</u>
2-4 August		Maintenance
5-10 August	RHEL & KCL	(p,p) (p,p') Reactions in Zn ^{64,66,68,70}

Internal Events

Mon, 1 Aug 11.15 a.m. Lecture Theatre	Nimrod Lecture Series	Mr. B. Renner (Cambridge)	Applications of Current Algebra to K-mesons
Tues, 2 Aug, 11 am & 2 pm Atlas Lab. Conf. Rm.	Atlas Lecture Series	<u>Lecture 3:</u> <u>Lecture 4:</u>	Generalization to simultaneous differential equations A heuristic study of the error propagation for some classical numerical methods.
Thurs, 4 Aug 11 am & 2 pm Atlas Lab. Conf. Rm.	Atlas Lecture Series	<u>Lectures 5 & 6:</u>	The theory of linear multistep methods
(Coffee at 11 a.m. tea at 3.15 p.m.)			
Mon, 8 Aug, 11.15 am Lecture Theatre	Nimrod Lecture Series	Prof. T.D. Lee (Columbia Univ)	Remarks on C.P.T. Non-invariance

Rutherford Laboratory
29.7.66.

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



Rutherford Laboratory Bulletin

No. 31/66
8 Aug 66

General News

MISSING EQUIPMENT. The following items of equipment have been reported missing from the R.2 Electrical W/S group:

1/4" Drill, A.E.R.E. No. 14817
" " " " 14515
Hoverette Cleaner No. 2944

Anyone with information on the whereabouts of these items are asked to contact Mr. A.P. Childs, Building R.2, Ext 287.

OVERSEAS VISIT. Dr. R. Taylor, to Canada and the U.S.A., 7-20 August for discussions at various laboratories.

CHANGE OF ADDRESS. International Electronics Ltd., will be moving to the following address on 6 August:

132/135 Sloane St.,
London S.W.1. Telephone 01-730 0337

All Equipment, Empty Crates, etc., should continue to be returned to Lock Gate Works, Haslingdon, Lancs.

Machine Schedules

P.L.A.

Date	Team	Experiment
8-10 Aug	RHEL & KCL	(p,p) (p,p') Reactions in Zn ⁶⁴ , 66, 68, 70.
11 Aug.	Radio & Space Research (Slough)	Counter Tests.
12-15 Aug.	Oxford Univ.	(p, α) Reactions in Pb ²⁰⁸

NIMROD Period 2 - Cycle 4 (10.8.66. - 30.8.66.)

Machine Physics - Extracted Proton Beam Studies,
High Energy Physics

Team	Beam	Experiment	
Birmingham U/ Camb. U./RHEL	K6	K ⁺ - nucleon total cross-section measurements	Data
UCL/Westfield Coll.	π^- 2	π^- p differential cross-section measurements	Data
RHEL/Oxford U.	K7	π^- p polarisation measurements	Data
AERE/UCL/Southampton U.	P3	A study of $\pi^- + p \rightarrow \begin{smallmatrix} n + x \\ p + x \end{smallmatrix}$ processes	Data
Oxford U.	K1S	A study of high energy π and p interactions in the Helium Bubble Chamber	Setting up
AERE/QMC	π^- 4	A study of Σ β decay	Setting up

Internal Events

Mon, 8 Aug, 11.15 a.m. Lecture Theatre	Nimrod Lecture Series	Prof. T.D. Lee (Columbia Univ.)	Remarks on C.P.T. Non-invariance
Tues, 9 Aug, 11 am & 2 pm Atlas Lab. Conf. Rm.	Atlas Lecture Series	<u>Lectures 7 & 8</u>	Error reduction and error control
Thurs, 11 Aug, 11 am & 2 pm Atlas Lab. Conf. Rm.	Atlas Lecture Series	<u>Lectures 9 & 10</u>	Recent contributions to the subject

(Coffee at 11 am, tea at 3.15 p.m.)

Fri, 12 Aug, 11 am - 4 pm: Exhibition by C & N (Electrical) Ltd., of their 7500 modular rack system for housing electronic equipment, in the P.L.A. Conference Room Building R.12.

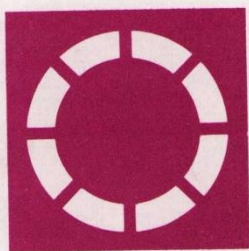
The Nimrod lecture on 8 August, will be the last until the early Autumn.

Social News

CHRISTIAN FELLOWSHIP. P.L.A. Conf. Room, 12.30 p.m., Thurs, 11 Aug, All welcome.

Rutherford Laboratory
5.8.66.

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



Rutherford Laboratory Bulletin

No. 32/66
15 Aug 66

General News

EXTERNAL COURSES. The Borough Polytechnic, London, SE1 prospectus of part-time courses in Science & Technology for 1966/67 has been received. The following selected list of part-time courses may be of interest:

Electrical & Electronic Engineering

Microwave valves and transistors; Digital Circuit Techniques; Introduction to transistor theory and applications; Field effect transistors; Integrated circuits; Basic transistor measurements; Aspects of digital communications; Pulse circuit techniques; Digital circuit techniques; Principles of feedback control; An introduction to modern control theory.

Mathematics

Advanced mathematics for engineers and physicists; Design and programming of electronic digital computers; Operational research techniques; Computational methods, numerical analysis and computing programming; Statistical methods for scientific and industrial workers; Computational and numerical analysis - computer programming, and statistics, analysis of observations, computer programming.

Physics

Nucleonic circuitry; Nuclear radiation detection; Radiological protection; Laser Physics; and Nucleonic techniques and measurements.

Enrolment for part-time courses is on 14 September. Enrolment for special lectures and special laboratory courses is effected by post, as and when arranged. Details will be published in the bulletin from time to time.

Reading College of Technology. The 1966/67 prospectus of short courses has now been received, covering computers, mathematics, electrical engineering and electronics, and mechanical engineering.

Further details of all the above courses may be obtained from Mrs. M.C. Gould, Personnel Group, Bldg R.20, Ext 575.

CONFERENCES The Institute of Physics and the Physical Society have arranged the following conferences to be held in the remainder of 1966:

5-7 Sept	:	"Rare Earths", at Durham
12-16 Sept	:	"Radiation Measurements of Nuclear Power", at Berkeley.
19-21 Sept	:	"Instrumental Optics and Optical Design", at London.
21-23 Sept	:	"The Physics of Semiconducting Compounds", at Swansea.
21-23 Sept	:	"Nuclear and Particle Physics", at Glasgow.
26-28 Sept	:	"Advances in Electron Microscopy", at London.
28-30 Sept	:	"Physical Basis of Yield and Fracture", at Oxford.
28-30 Sept	:	"Energy Beams and their Uses", at York
18-19 Oct	:	"Liquid Scintillation Counting", at Teddington (N.P.L.)
17-18 Nov	:	"Small-Angle Scattering of Electrons and X-Rays", at London.

Further information from H.F. Norris, Bldg R.20, Ext 484.

RADIOLOGICAL PROTECTION GROUP NOTICE. Changing Film Badges. People on the regular $\beta\gamma$ film list and fast neutron list should have changed their films on Monday, 8 August.

Colour Strip - Blue } $\beta\gamma$ films
Period Number - 09 }

(first 2 digits of film number)

All old films to be returned to Miss J.A. Towers, Bldg R.20, Ext 253/430, or placed in boxes beneath film boards.

OVERSEAS VISITS. Dr. G. Manning, to CERN, 16-18 August, to attend the NRC meeting at CERN.

Mr. D.A. Gray, to CERN, 16-20 August, to attend the ECFA Working Group 2 meeting and visit the CERN PS.

Dr. D.V. Bugg to the U.S.A., 16 August for approximately 2½ weeks to lecture on the K6 experiment at various laboratories and to attend meeting of the American Physical Society.

Dr. K.F. Chackett, to Lysekil, Sweden, 19-26 August, to attend a conference.

Machine Schedules

P.L.A.

Date	Team	Experiment
16-18 Aug		Maintenance
19 Aug	Accelerator Physics	
20-25 Aug	RHEL/QMC	(pn) Analogue States

Internal Events

Thurs, 18 Aug.,
2.30 p.m. Atlas
Lab., Conf. Rm.

Talk Dr. John W. Brackett
(Univ. of Edinburgh)

MAP: A system for on-line Mathematical Analysis

DEMONSTRATION A small demonstration of digital voltmeters and pulse generators by Dynamco Instruments Ltd., Farnborough, Hants, will be held in Room 9, Bldg R.36, 10 am-2.30 pm approx, Thursday, 18 August. Details may be obtained from Mr. A. Stirling, Ext. 214.

Mon, 15 Aug.,
11.15am, Lecture
Theatre.
Special Lecture
Prof. M. Ross
(Univ. of Michigan)

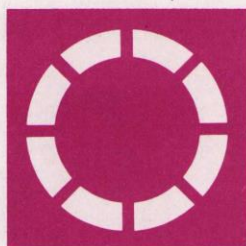
Decays of Baryon Resonances in the Quark Model

Social News

CHRISTIAN FELLOWSHIP. P.L.A. Conf. Room, 12.30 pm Thurs, 18 August. All welcome.

Rutherford Laboratory
12.8.66.

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



Rutherford Laboratory Bulletin

No. 33/66
22 Aug 66

General News

THE PHYSICS EXHIBITION - 1967 The 51st exhibition in the series will take place at Alexandra Palace, from 17-20 April, 1967.

Anyone wishing to take part in this exhibition is asked to get in touch with Mr. T.R. Walsh, Scientific Administration, Bldg R.20 Ext 438 before 2 Sept this year.

RADIATION PROTECTION GROUP NOTICE. Please check that you are wearing your current film, i.e.:

Colour Strip - Blue) $\beta\gamma$ films
Period Number - 09)

(first 2 digits of film number)

All old films to be returned to Miss J.A. Towers, Bldg R.20, Ext 253/430, or placed in boxes beneath film boards.

MISSING EQUIPMENT. The following instrument is missing from the AERE Loan Pool:

"Halogen" Leak Detector, Cat No. 3.4/1115; LP No. 1743 (both numbers on instrument in white paint)

Will the borrower or anyone in possession of this instrument please contact R.W. Bond, Ext 72-4103 or R.W. Rose, Ext. 72-4110.

VISITORS. A party of students of the University of Nijmegen, Netherlands, will visit the Laboratory on Thursday, 25 August.

OVERSEAS VISITS. Dr. A.M. Segar, Dr. L.K. Rangan and Mr. P.J. Litchfield, to Saclay, 23-26 August for discussions on the Eta experiment.

Mr. D.R. Perry, to Vienna, 27 Aug - 5 Sept, to present a paper at the IAEA symposium on Neutron Monitoring for Radiological Protection.

Dr. N.H. Lipman, to the USA 27 Aug - 13 Sept, to attend the Stanford Conference, the XIII International Conference on HEP at the University of California and to visit other Laboratories.

Dr. P.K. Kabir, to the U.S.A. 27 Aug - 15 Sept to attend the HEP Conference at the University of California and to visit other Laboratories.

Machine Schedules

P.L.A.

<u>Date</u>	<u>Team</u>	<u>Experiment</u>
22-25 Aug	RHEL/QMC	(pn) Analogue States
26-29 Aug	RHEL	$n = \frac{1}{2}$ Spectrometer Tests
30 Aug - 3 Sept	Manchester Univ.	(p,p) (p,p ⁱ) Reaction Studies on Li ⁶ and Li ⁷
4 Sept	Imperial College	Satellite Counter Tests

Internal Events

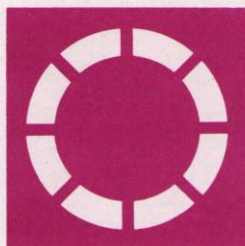
Wed, 24 Aug, 11 a.m. Lecture Theatre	High Energy Physics Discussion Group	Dr. G.H. Burkhardt (Birm. Univ.)	Asymptotic Behaviour of Scattering at Fixed Angle
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Social News

CHRISTIAN FELLOWSHIP. P.L.A. Conf. Rm, 12.30 p.m. Thurs, 25 Aug. All welcome.

Rutherford Laboratory
19.8.66.

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



Rutherford Laboratory Bulletin

No. 34/66
29 Aug 66

General News

POST-GRADUATE COURSE A post-graduate course of twelve months full-time study in "Cryogenics and its Applications", is to be held at Southampton University, commencing in October, 1966. The course is recognised by the Science Research Council for the award of Advanced Course Studentships. Further information from H. F. Norris, Bldg. R.20, Ext. 484.

POST GRADUATE EDUCATION CENTRE "Magnet Design Course", 31 October - 4 November, 1966. This course is intended to be suitable for both engineers and scientists with or without experience in the field. Further information from H. F. Norris, Bldg. R.20, Ext. 484.

MISSING EQUIPMENT The following items of equipment have been reported missing:-

Hoover Dustette, Model 2614, Serial No. 52041
Frequency Converter, Serial No. 2936
Electric Drill, Serial No. 2202
Avometer, Model 8, Serial No. 107383-C-960
Electric Drill $\frac{1}{2}$ ", Serial No. 0535813

Anyone with information on the whereabouts of these items, please contact Inventories Section, Accounts, Bldg. R.20, Ext. 570.

The following items have also been reported missing:-

2 - Solartron Dual D.C. Amplifiers, Serial Nos. F4092 or F6092 and F4158 or F6158
3 - Solartron Special Junction Units - Serial Nos. F692, F682 and F687

These items are probably in a cardboard carton, with the Rutherford Laboratory Stores number, 2553 in black on the carton, also marked with the date, 10 June 1966. Anyone with information on these items are asked to contact B. H. Skinner, Bldg. R.6, Ext. 6306 as soon as possible.

OVERSEAS VISITS. The Director, to the U.S.A. 29 August - 11 September. He will be visiting Berkeley and Stanford and will attend the XIII International Conference on High Energy Physics and Instrumentation

Dr. W. A. Smith and Dr. P. A. Chatterton to the U.S.A. on 1 Sept. and 6 Sept. respectively, returning on 16 Sept., to present papers at the 2nd International Symposium on Insulation of High Voltages in Vacuum, at MIT. They will also visit other Laboratories in the vicinity.

ATTACHMENT. Mr. R. Billinge leaves on 1 Sept. for about one year's attachment to CERN, where he will join in the work of the 300 GeV Accelerator Study Group.

Machine Schedules

NIMROD Period 2 - Cycle 4 (30.8.66 - 20.9.66)

Machine Physics
High Energy Physics

<u>Team</u>	<u>Beam</u>	<u>Experiment</u>	
Hydrogen Bubble Chamber Collaboration	K1	π^-d Interactions	Data
Oxford U.	K4	A Study of the decay modes of the K^+	Data
Birmingham U./ Cambridge U./RHEL	K6	K^- - nucleon total cross-section	Data
Oxford U.	K18	A study of high energy π^- and p interactions in the Helium Bubble Chamber	Setting up
RHEL/Oxford U.	K7	π^-p polarisation measurements	Setting up
AERE/QMC	π^-4	A study of $\Sigma\beta$ decay	Setting up

Internal Events

Wed., 31 Aug.
11 a.m. Lecture
Theatre

High Energy
Physics Discussion
Group

Dr. T. Pradhan
(Calcutta)

Fock Space Methods
in Current Algebra

External Events

8 - 14 Sept. 1966 International Nuclear Industries Fair, to be held at Basle, Switzerland.

EVENT AT AERE

Thurs. 1 Sept.
2 p.m. Conf.
Rm., Bldg. 8.9

Joint Applied
Maths Group
Seminar

Mr. T. A. J. Nicholson

Strategies for Very
Large Optimization
Problems

Social News

CHRISTIAN FELLOWSHIP. P.L.A. Conf. Rm., 12.30 p.m., Thurs. 1 Sept. All welcome.

Rutherford Laboratory
26.8.66

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