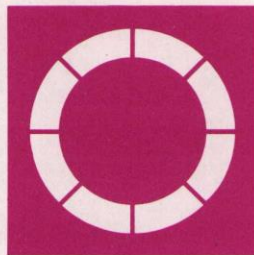


No. 32/68  
16 Sept. 68



# Rutherford Laboratory Bulletin

## General News

**OBITUARY NOTICE.** We deeply regret to announce the death of Mr. R. A. Padgham of the Central Engineering Group on Tuesday, 10 September. Bob Padgham who was aged 58, came to the Rutherford Laboratory in 1962. During this time he worked in the R9 workshop; in later years as a chargehand. He was liked and respected by his colleagues and will be sadly missed. Our deepest sympathy is extended to his wife and family.

**RADIATION PROTECTION NOTICE - FILM ISSUES.** It is Period 10. Colour Strip - ORANGE for  $\beta\gamma$  and fast neutron films. Please check that you are wearing the correct films and that all old films are returned.

**DATAFAIR 69.** Datafair 69 will be held in Manchester from 25-29 Aug. 1969. Abstracts of up to 500 words should be sent to: The Head of the Conference Department, The British Computer Society, 23 Dorset Square, London N.W.1 to arrive not later than first post on Friday, 15 November, 1968. Further details from H.F. Norris, R20, Ext: 484.

**INTER/NEPCON '68.** A conference and exhibition of the latest techniques for the production and manufacture of electronic components and equipment is to be held at Brighton on 8-10 October. Amongst the subjects under discussion are:- microwelding and microsoldering, connection and interconnection techniques in electronic equipment and microcircuit sealing and encapsulation. Details from H.F. Norris, R20, Ext: 484.

**VISITORS.** Sixteen sixth form pupils from Lord Wandsworth College, Basingstoke will visit the Laboratory on Saturday, 21 September.

**OVERSEAS VISITS.** Dr. A.A. Carter, to CERN, 16-23 Sept., to install equipment and make arrangements for the Cambridge/RHEL experiment (SC 22) at CERN.

Mr. J.V. Cresswell and Mr. H.W.C. Hollins, to CERN, on 16 Sept. for fifteen and five days respectively, to install and service electronic equipment on the S70 and Epistle Beam Lines.

Mr. R. Mackenzie, to CERN, 18 Sept. for two weeks in connection with the installation of equipment for SC22.

Mr. D.A. Gray, to CERN, 18-19 Sept., to attend meeting of the working party on 300 GeV Magnet Design.

Dr. R. Taylor, Mr. H. Hurst, Mr. J.W. Burren, Mr. J. Sparrow and Mr. M. Mitchell to Scheveningen (Netherlands), 18-20 Sept. to attend SEAS annual conference.

Mr. K. A. Freeston, to CERN, 18 Sept. for seven days in connection with the installation and commissioning of plant room for S70 beamline.

## Machine Schedules

NIMROD Cycle 10 (10.9.68 - 1.10.68)  
Machine Physics; High Energy Physics, (K11, K12, K13, K14, K10S,  $\pi$ 7 and K8)  
Full details of Cycle 10 were given in Bulletin No. 31/68.

### P.L.A.

Date	Team	Experiment
16 Sept.	King's Coll. London	Backward Angle Measurement on $C^{12}$ and $O^{16}$
17-18 Sept.		Maintenance
19-24 Sept.	Queen's Univ. Belfast & Westfield Coll.	Cross-section Measurements on $B^{10}$ (p-d) $B^9$ Reaction at 50 MeV.

## Internal Events

Mon, 16 Sept., 11.45 a.m., Lecture Theatre	Nimrod Lecture Series	This date will be given over to reports on the Vienna Conference. People speaking will include Dr. P.K. Kabir, Dr. R. Phillips and Dr. G. Manning.	
Tues., 17 Sept., 10.30 a.m., Lecture Theatre	HEP Disc Group	Dr. J. Sucher (U. of Maryland)	Electromagnetic Mass Differences
Tues., 17 Sept., 12.00 a.m., Lecture Theatre	Lecture for Experimentalists	Dr. G. Manning	Part 1 of a Short Course on $K^0 \bar{K}^0$ System.
Thurs., 19 Sept., 2 p.m., Lecture Theatre	HEP Special Seminar	Dr. O.W. Greenberg (U. of Maryland)	Three Triplet Model for Baryon Resonances.
Thurs., 19 Sept., 10 a.m. - 4.0 p.m. P.L.A. Conf. Room R1A. EXHIBITION by Thorn Bendix Ltd. (Thorn Electronics), including a comprehensive range of scintillators, also nuclear power sources, curpistors (ionization chambers) and zinc-silver chloride long-life batteries.			
Mon., 23 Sept., 11.30 a.m., Lecture Theatre	Nimrod Lecture Series	Dr. Villa (SLAC Stanford)	SLAC Streamer Chamber and the Photoproduction Survey.



## Social News

RUTHERFORD AND ATLAS LABORATORIES OPEN CHESS TOURNAMENT. The tournament commences on 1 October. Entries must be in by 24 September. Names please to P. Craske, Ext: 275 or W. Glasgow, Ext: 321. More details next week.

RECREATIONAL SOCIETY CONCERT. Many requests have been received for another "LIVE" show with Susie, Gill and Dusty singing folk songs. It has now been possible to arrange this, so please make a note of the date and time - Thursday, 19 Sept., at 12.30 p.m. in the Lecture Theatre.

And don't forget - Its "LIVE" folk.

CHRISTIAN FELLOWSHIP. Fri., 20 Sept., 12.30 p.m. P.L.A. Conf. Room, R12.

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

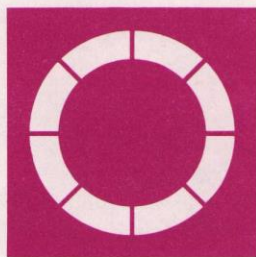
All are welcome.

H. F. Norris, Ext: 48,  
Scientific Admin. Group  
Building R.20

Rutherford Laboratory  
13.9.68



No. 33/68  
23 Sept 68



# Rutherford Laboratory Bulletin

## General News

**VISITORS.** Thirty sixth form pupils from the Commonweal School, Swindon, will visit the Laboratory on Saturday, 28 September.

**RADIATION PROTECTION NOTICE - FILM ISSUES.** It is Period 10. Colour Strip - ORANGE - for  $\beta\gamma$  and fast neutron films. Please check that you are wearing the correct films and that all old films are returned.

**EXTERNAL PROTON BEAM SWITCHING.** As part of the recent beam-tuning exercise on Nimrod's extracted proton beams, switching from X2 to X1 during a single pulse has been achieved for the first time. Early measurements indicated  $2.1 \times 10^{11}$  protons in X1 and  $1.2 \times 10^{11}$  in X2, from a circulating beam of about  $10^{12}$ . It is hoped to improve the technique, particularly since the present extraction magnet is not laminated.

**OVERSEAS VISITS.** Dr. L.C.W. Hobbs to CERN, 22-24 Sept., to attend meeting of Study Group for High Efficiency Ejection.  
Dr. G. Manning, to CERN, 22-24 Sept., to attend E.E.C. meeting.  
Mr. W.S. Spinks to Frankfurt, 22-28 Sept., to attend technical specialists training course at Adox Fotowerke.  
Dr. E. Blackmore, to Yugoslavia on 22 Sept., for two weeks, to attend the Summer School at Herceg Novi.  
Mr. A. Holcroft and Mr. A.R. McCulloch, to CERN on 22 Sept. for four and twelve days respectively to work on the assembly, installation and testing of the liquid hydrogen target assembly for the 'Epistle' experiment.  
Dr. G.H. Stafford, to CERN, 24-26 Sept., to attend meeting of Steering Committee for the European Physical Society.  
Dr. H.H. Atkinson, to CERN, 25-28 Sept., for discussions on polarized targets.  
Dr. C.M. Fisher, to Yugoslavia, 24 Sept. - 4 Oct., to attend the Herceg Novi School of Physics and to give a lecture.

## Machine Schedules

NIMROD Cycle 10 (10.9.68. - 1.10.68.)

Machine Physics; High Energy Physics, (K11, K12, K13, K14, K10S,  $\pi$  7 and K8).

Full details of Cycle 10 were given in Bulletin No. 31/68.

### P.L.A.

<u>Date</u>	<u>Team</u>	<u>Experiment</u>
23-24 Sept.	Queen's Univ. Belfast and Westfield College.	Cross-Section Measurements on $B^{10}$ (p - d) $B^9$ Reaction at 50 MeV.
25-26 Sept.	R.H.E.L.	(p, n) Reactions by Time of Flight Method.
27-30 Sept.	U.B.C. (Univ. of British Columbia, Canada).	Life-time of $H^-$ ions in a Magnetic Field.

## Internal Events

Mon. 23 Sept., 11.30 a.m.	Nimrod Lecture Series	Dr. I. Butterworth (Imp. Coll./RHEL)	Resonances
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Please note change of title and speaker from that given in the previous Bulletin.

**EXHIBITION.** Dexion Limited are exhibiting a comprehensive range of their products on Monday, 23 Sept., from 10 a.m. to 4.30 p.m. in the PLA Conference Room, R.12. Demonstrations will be given of the "Speedframe" assembly, and items of an Automated Warehousing system will be displayed. Use will be made of cine films and colour slides during the exhibition. There will be no talk in the 'Lectures for Experimentalists' series this week.

Wed. 25 Sept., 11 a.m. Conf. Room, R.1.	H.E.P. Disc. Grp.	Dr. J.G. Taylor (Q.M.C.)	Toller Poles for Pedestrians
Wed. 25 Sept., 2 p.m., Conf. Rm., R.1.	H.E.P. Disc. Grp.	Dr. D. Atkinson (Imp. Coll.)	A Proof of the Existence of Functions that Satisfy Exactly both Crossing and Unitarity.
Wed. 25 Sept., 2 p.m., Conf. Rm., R.12.	P.L.A. Nuclear Physics Gp.Seminar	Dr. D.G. Montague	Report on the Gordon Conference on the Shell Model.
Mon. 30 Sept., 11.45 a.m. Lecture Theatre.	Nimrod Lecture Series	Dr. M. Bowler Oxford.	10 GeV $K^+$ Studies (This date is still provisional).

## Social News

**A.E.R.E. FILM SOCIETY.** Tickets for the 1968/69 season can be obtained from I. Sewter, Library, R.20. Annual subscription £1, guest tickets - 4/-.

**CHRISTIAN FELLOWSHIP.** 12.30 p.m. Fri. 27 Sept., P.L.A. Conf. Room, R.12.

Continuation of Bible Study on "The Victorious Life", led by Ben Kingdom, Scientific Admin. Group. All are welcome.

**RECREATIONAL SOCIETY CONCERT.** Owing to illness, the concert of folk music on Thursday 19 Sept. had to be postponed. It is hoped to announce a new date shortly. This will be shown on notice boards and blackboards around the Laboratory.



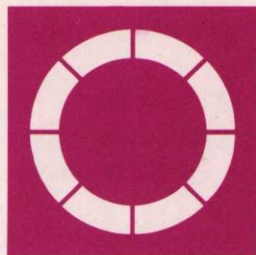
RUTHERFORD AND ATLAS LABORATORIES OPEN CHESS TOURNAMENT. This tournament which commences on 1 October is open to non-members of the Recreational Society. There is still time to enter and challenge the defending champions, Bill Turner and John Davies. Twenty-four names have been received so far, but there is still room for more. Names please to P. Craske, Ext: 275 or W. Glasgow, Ext: 321 by 24 September.

Rutherford Laboratory.  
20.9.68.

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



No. 34/68  
30 Sept 68



# Rutherford Laboratory Bulletin

## General News

**OBITUARY NOTICE** We deeply regret to announce the sudden death at work of Mr. A.P. Nicoll of the Engineering Division on Thursday, 19 September. Nick, who was aged 48, came to the Laboratory in 1964. He worked in R18 as an electronic mechanic where he was very well liked by his colleagues and will be sadly missed. Our deepest sympathy is extended to his wife and family.

**RADIATION PROTECTION NOTICE - FILM ISSUES.** It is Period 10. Colour Strip - ORANGE. Next film change, Monday, 7 October.

**MISSING FILE.** A foolscap lever arch file, marked M 101 on the spine and containing results of magnet measurements has been reported missing. Anyone finding this file is asked to return it to M.J. Newman, Bldg. R1, Ext. 421.

**VISITORS.** Prof. Perkins and fourteen members from the Graduate Physics Laboratory, Oxford, will visit the Laboratory on Thursday, 3 October.

**FILM SHOWS.** Beginning this week a new series of film shows will be presented in the Lecture Theatre each Wednesday and Thursday lunch times. See 'Internal Events' for details of the first film.

**QUEST 4.** The Autumn issue is due to be published at the beginning of October. In Bulletin 25/68, dated 8 July a request was made for contributions. Result - a virtual NIL RETURN. The distribution list gives such figures as R1 - 340 copies, R2 - 350 copies, R25 - 150 copies etc adding up to a total distribution of between 1300 & 1400. It is difficult to believe that not even one per cent of the people receiving Quest have something to say. Arguments put forward include - "I can't write" or, "My English is bad". It doesn't matter. If you have an interesting story to tell, put it down on paper and do not worry about style, phrasing, spelling or any of the other excuses so often given. It is ideas, news, stories, that count. If you have anything to contribute, PLEASE contact your local correspondent, H.F. Norris Rm 42, R.20. Ext 484.

**OVERSEAS VISITS.** Dr. M.R. Jane, to CERN, 29 Sept - 1 Oct, for discussions of progress of analysis of  $K^0 \rightarrow 2\pi$  interference experiment and planning of experimental runs in November.

Dr. N.H. Lipman and Dr. T.G. Walker, to CERN, 29 Sept - 2 Oct, for discussions.

Mr. J.A. Fox to CERN 29 Sept - 2 Oct, to attend booster power supply and 300 GeV power supply meetings.

Dr. R. Taylor and Mr. J.W. Burren, to Nice, France, 30 Sept - 2 Oct, to attend I.B.M. Seminar on hardware and software developments for large computer systems.

Mr. S.C. Maskell and Mr. W.G. Seddon to CERN, 30 Sept. for ten and fourteen days respectively, for commissioning of electronics equipment for CERN experiments.

Mr. C. Maclean, to CERN, 2 Oct. for approx. two weeks, to test and commission 'B' racks on Dr. Threshers' experiment.

## Machine Schedules

NIMROD Cycle 11 (1.10.68 - 22.10.68)

Machine Physics

High Energy Physics

Team	Beam	Experiment	
UCL/CERN/Brussels	K 11	2.3 GeV/c $K^-$ Exposure with the Propane Bubble Chamber	Data
U./Tufts U. (USA)			
Birmingham U.	K 12	$K^+p$ Differential Cross-section Measurements from 0.45 - 0.85 GeV/e	Setting up
Cambridge U/RHEL	K13	Measurement of the Amplitude for $\Delta S = -\Delta Q$ Interactions in $K^0$ Decay	Data
UCL/RHEL	K 8	$K^-p$ Differential Cross-sections from 0.85 - 2.2 GeV/e	Data
Imp. Coll/Southampton U.	$\pi^7$	An Investigation of Narrow Bosons Produced in $\pi p$ Collisions	Setting up
P.L.A.			
Date	Team	Experiment	
1-2 Oct.		Maintenance	
3-8 Oct.	RHEL	(p,d) and (p,t) Reactions on Ni Isotopes	

## Internal Events

Please note that the Nimrod Lectures on Mondays will commence at 11.30a.m. in future. Coffee will be served from 11 a.m.

Mon, 30 Sept, 11.30 a.m. Lecture Theatre	Nimrod Lecture Series	Dr. M. Bowler (Oxford)	The Low Mass $K\pi\pi$ System in 10 GeV/c $K^+p$ Interactions
Mon, 30 Sept. 2.15 p.m. Lecture Theatre			Nimrod Users Meeting
Tues, 1 Oct, 11 a.m. Conf. Rm, R1.	HEP Disc Grp.	Dr. G. Ringland	Discussion of the Veneziano Model and Duality
Tues, 1 Oct, 12 noon, Lecture Theatre	Lecture for Experimentalists	Dr. G. Manning	Part 2 of a Short Course on $K^0 \bar{K}^0$ System
Wed, 2 Oct. 12.40 p.m.	Film		
Thurs, 3 Oct. 1.15 p.m.			'In the Dark', 35 mins, black & white.
Fri, 4 Oct. 12.35 p.m. Lecture Theatre			A British Insurance Association film.

'In the Dark', the first film in the new season is concerned with safety. A violent explosion, then a pall of smoke. As the smoke clears a man lies badly injured. This sets the scene for the investigation into the causes of the accident. This film will be of the greatest possible use to everyone concerned with accident prevention in industry and the home. To enable as many people as possible to see this film an extra showing has been arranged on Friday.



Mon, 7 Oct. 11.30 a.m.  
Lecture Theatre

Nimrod Lecture  
Series

Dr. H.H. Atkinson

Polarized Targets - A Review

## External Events

### EVENTS AT AERE

Tues, 1 Oct, 2 p.m.  
Conf. Rm, B.8.9

Theor. Phys  
Seminar

Prof. G.G. Hall  
(U. of Nottingham)

Calculations Illustrating a New Form of  
Variational Principle.

Thurs, 3 Oct, 3.45 p.m.  
Conf. Rm, B.7.21

Nucl. Phys.  
Colloq.

Dr. R.J. Howerton

Evaluation Activities in Livermore

## Social News

FILM SHOWS. The 1968/69 Season opens this week with a film entitled 'In the Dark'. Please see "Internal Events" for details.

CHRISTIAN FELLOWSHIP. 12.30 p.m, Fri, 4 Oct, PLA Conf. Rm, R12.

A recording of another Billy Graham sermon. An invitation is extended to all to come and hear this wonderful preacher.

RECREATIONAL SOCIETY CONCERT. The concert of folk songs has been rearranged and will now take place on Wednesday, 9 Oct at 12.30 p.m. in the Lecture Theatre.

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

Rutherford Laboratory  
27.9.68