



General News

NEW CHAIRMAN OF NUCLEAR PHYSICS BOARD Professor D.H. Wilkinson, F.R.S. has been appointed Chairman of the Science Research Council's Nuclear Physics Board following the retirement of Professor C.F. Powell, F.R.S. who has been Chairman since the Board was formed in 1965.

RADIATION PROTECTION NOTICE - FILM ISSUES. Period 5 commenced 22 April. Colour Strip - PURPLE for 68 and fast neutron films. Please check that you are wearing the correct films and that all old films are returned promptly.

RAIL TRAVEL, PADDINGTON - DIDCOT. A new British Rail timetable comes into force on Sunday, 5 May. The 09.15 train shown as running non-stop from Paddington to Oxford will now stop at Didcot where it will be met by the Laboratory bus. The official timetable will be amended in due course.

SCIENTIFIC ADMIN NOTICE. Part of the Scientific Admin Group are moving rooms on Monday & Tuesday, 6 & 7 May. B.E. Kingdon will be moving to Rm. 41 and H.F. Norris to Rm 42. Telephone extensions remain as before.

SYMPOSIUM. A Symposium on complex analytic methods in mathematical physics will be held at Indiana University, Bloomington, Indiana, U.S.A, on 3-6 June 1968. Further details from H.F. Norris, R.20, Ext. 484.

OVERSEAS VISITS. Dr. G. Manning, to CERN, 5-8 May, to attend EEC Meeting, N.P.R.C. Meeting and to hold discussions.

Mr. D.C. Thomas, to CERN, 5-8 May, for discussions on TT T & experiment.

Dr. C. Michael to Bulgaria and CERN, 6-21 May, to attend an International Seminar on Elementary Particle Theory at Varna, Bulgaria, returning via CERN for discussions.

Machine Schedules

NIMROD Cycle 6 (30.4.68 - 21.5.68) Machine Physics: High Energy Physics (X1/K9,77 4, K8 & KlOS) Full details of Cycle 6 were given in Bulletin No. 16/68

Date

6-8 May

9-10 May

11-15 May

Team

Birmingham U.

Oxford II.

Experiment

Polarization Measurements

Maintenance

Asymmetry Measurements and Pick-up Reactions on Si^{28} and Pb^{208}

Weak Interactions: Part 5.

The Present Status of Glauber Theory.

Internal Events

Mon, 6 May 11.45 a.m. Lecture Theatre

Tues, 7 May, 12-1.15 p.m. Lecture Theatre

Wed, 8 May, 11 a.m. R1 Conf. Rm.

Wed, 8 May, 12.40 p.m. Thurs, 9 May 1.15 p.m. Lecture Theatre

Nimrod Lecture

Lecture for

Experimentalists H.E.P. Disc.

Grp.

Dr. C. Wilkin (U.C.L.)

Dr. B.G. Kenny

Dr. J.C. Taylor (Oxford U.)

Toller Poles

"The Nature of Fire", a 19 min, colour film issued by the Fire Protection Association

This film provides basic facts about the nature of fire and its control with the idea that if people know what fire is they will more readily avoid those acts of carelessness or ignorance which often cause fires.

This is the last in the present regular weekly film shows. Since the start of the series last Autumn, twenty-four films have been shown. The Editor would like to thank all those who have sent in suggestions for future film shows; they will be considered when planning the next Autumn series.

Wed, 8 May, 2 p.m. R.12 Conf. Rm.

Thurs, 9 May, 3.15 p.m. Lecture Theatre

Mon, 13 May, 11.45 a.m. Lecture Theatre

External Events

Mon, 6 May, 4.15 p.m. Queen Mary Coll. London

Mon, 6 May, 5.p.m. Univ. of Reading

P.L.A. Lecture

Rutherford Laboratory Lecture

Nimrod Lecture Series

Theor. Phys Seminar Collog.

Prof. G.W. Greenlees (U. of Minnesota)

Prof. D.H. Wilkinson (Oxford)

Dr. R.A. Carrigan (Carnegie and DESY)

Dr. K.J. Barnes (Imp. Coll.)

Prof. A.K. Jonscher (Chelsea College of Science) and Tachnology

The third in a series of three lectures on "The Reformulated Optical Model".

How to Look at the Mucleus.

Mesic X - Rays

Current Algebra and Form Factors

Electrical Conduction in Disordered Dielectrics and Semiconductors.

Thurs, 9 May, 4.15 p.m. Clarendon Lab. Oxford Prof. W.R. Wright The Peierls - Bogolyubor Inequality for the Theor. Phys Seminar Free Energy. Thurs, 9 May, 4.15 p.m. Univ. Coll. London Elementary Dr. A. Donnochie Nuclear Phrenology Particle Physics (Glasgow) Seminar Fri, 10 May, 4.15 p.m. Clarendon Lab. Oxford Prof. W. Allis (Subject to be announced) (Oxford) EVENTS AT AERE Tues, 7 May, 2 p.m. Conf. Rm, B 8.9 Theor. Phys. Dr. A. Leggett Condensation and Coherence in "Partially (Univ. of Sussex) Div. Seminar Finite" Systems. Thurs, 9 May, 3.30 p.m. Conf Rm, H.8 Dr. B. Rose Visit to Australia and Pakistan Muclear Phys. Div. Collog.

Social News

RECREATIONAL SOCIETY - ANNUAL OPEN DARTS TOURNAMENT. The Society is again sponsoring the Annual Darts Tournament this year, which will be open to everyone working at the Rutherford and Atlas Laboratories. The proposed date is Friday, 24 May and it will be held in the R.22 Coffee Lounge; a bar extension will be applied for.

The Challenge Cups, "Team", "Double" and Singles will be played for by teams of four, consisting of one singles player, two doubles players and one extra player who will also take part in a knock-out game with any guests.

A charge will be made for each team entered but all guests are welcome at no extra charge. Prizes will be given to all winners and runners up of the final games.

Any section wishing to enter a team or requiring further information, should contact Joe Hoskins or Bill Russet, R.12 Electrical Workshop, Ext. 6198.

The names of team players and entrance fee are required by Friday, 18 May and names of any guests are required by Wednesday, 22 May.

RUTHERFORD AND ATLAS LABORATORIES CRICKET CLUB. At the inaugural meeting held on 29 April the following officers were elected:-

Chairman:- P. Craske, Secretary:- J. Rimen, Treasurer:- J.A. Lidbury
Committee: A.R. Cash, D. Craddock, A. Jenkins and R. McClure.

An annual subscription of 2/6 is proposed (plus initially, 6d per person per game). For further information, contact any

committee member.

BETATOMIC '68. Harwell are arranging another 'pop' dance on Friday, 28 June. Tickets which are available to staff and personal guests only, will be sold in the Cash Office, R25, at 12/6, from 3-31 May.

Transport is being arranged and tickets at 2/6 each are also available from the Cash Office. Any queries regarding the dance should be made to Mrs. H. Woodcock, Ext. 6189 and not the Cash Office.

CHRISTIAN FELLOWSHIP. 12.30 p.m. Friday, 10 May, Conf. Rm, R.12

Prayer Meeting led by Ernie Newbold. All are welcome.

RECORD SOCIETY. There will be no more regular weekly record programmes until the Autumn.

H.F. Norris, Ext. 484 Scientific Admin. Group. Building R20

Rutherford Laboratory

3.5.68.





Rutherford Laboratory

General News

OBITUARY NOTICE. We deeply regret to announce the death of Mr. W. A. Calvert, Experimental Worker 9, of the Central Engineering Group, on Tuesday, 7 May. Bill Calvert who was aged 62 joined the Laboratory in June, 1962. Our deepest sympathy is extended to his wife and family.

RADIATION PROTECTION NOTICE - FILM ISSUE. It is Period 5. Colour Strip - PURPLE for both \$8 and fast neutron films. Next film issue - 20 May.

SUGGESTION AWARDS. At the meeting of the Suggestions Awards Committee on Thursday, 25 April the following awards

£7. 10s. 0d. to R. W. Wheatley - Increasing the efficiency of the R.2 lift. £5. 0s. 0d. to C. R. Gascoigne - A method of reducing wear on a bandsaw. £5. 0s. 0d. to E. G. Starr - Elimination of a hazard on the air cooled diffusion pumps. £3. 0s. 0d. to W. Higgins - Prevention of a hazard to pedestrians on Road 1. £1. 10s. 0d. to A. Smith - Improving efficiency in R.43.

Machine Schedules

NIMROD Cycle 6 (30.4.68 - 21.5.68) Machine Physics; High Energy Physics (X1/K9, 77 4, K8 and K10S). Full details of Cycle 6 were given in Bulletin No. 16/68.

P.L.A.

Date

Team

Experiment

13 - 15 May

Oxford U.

Asymmetry Measurements and Pick-up Reactions on Si^{20} and Pb^{208}

16 - 21 May

Q.M.C. and Queen's Univ. Belfast.

"D" Parameter Measurement at 50 MeV.

Internal Events

Mon., 13 May, 11.45 a.m., Lecture

Nimrod Lecture Dr. R. A. Carrigan (Carnegie and DESY)

Mesic X-Rays

Tues., 14 May 12 - 1.15 p.m.,

Lecture for Experimentalists Dr. B. G. Kenny

Weak Interactions: Part 6

Lecture Theatre Wed., 15 May, 11 p.m.,R.1

Disc Group R. C. Field (Oxford)

Measurement of the Branching Ratio Ke3/Ku3

Thurs., 16 May, 2 p.m., R.12 Conf. Rm.

P.L.A. Nuclear Phys. Disc. Grp.

Dr. L. E. Williams

Report on the Washington Meeting

External Events

3.45 p.m., Queen Mary Coll. London.

Theor. Phys. Seminar Dr. R. J. Elliott (Oxford)

Interactions Between Spin Waves.

Court, London.

Tues., 14 May - Fri., 24 May. Tickets from H. F. Norris, R.20, Ext. 484

Mcn., 13 May - Sat. 18 May. Tickets from H. F. Norris, R.20, Ext. 484.

4.15 p.m., Univ.

Particle Physics Seminar

Dr. H. Osborn (Sussex)

Relativistic Corrections to Two-Particle Calculations and how to get the Correct Answer from a Sum Rule.

Mechanical Handing Exhibition, at Earls

I.E.A. Exhibition, at Olympia, London.

Wed., 15 May 4.45 p.m., Royal Fort, Bristol

Phys. and Collog. Geophys.

Prof. A.D. Buckingham (Bristol)

Molecules in the Electric Fields.

EVENTS AT THE ATLAS LAB.

Wed., 15 May, 2.30 p.m., Conf. Room.

Talk

Janet E. Armitage (Sheffield U.)

The Automatic Generation of Subject

Indexes

Thurs., 16 May., 2.30 Conf. Rm.

Talk

Prof. J. C. Lingoes (U. of Michigan)

Non-Parametric Transformation Analysis for Co-ordinate Representation of Data. Some General Techniques.

EVENTS AT A.E.R.E.

Tues., 14 May, 2 p.m., Conf. Rm. B8.9

Theor. Phys.Div. Seminar

Dr. J. S. Dowker (Manchester U.) Gravitational Analogues of Some Electromagnetic Effects.

Thurs., 16 May 3.30 p.m., Conf. Rm. H.8

Nuclear Phys. Div. Collog.

Dr. F. M. Russell (S.R.C.)

Observations on Marking in Mica.

Social News

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A charge of £1 will be made for each team entered but all guests are welcome at no extra charge. Prizes will be given to all winners and runners up of the final games.

Any section wishing to enter a team, or requiring further information, should contact Joe Hoskins or Bill Russet, R.12 Electrical Workshop, Ext. 6198.

The names of team players and entrance fee are required by Friday 18 May and names of any guests are required by Wednesday 22 May.

CHRISTIAN FELLOWSHIP. Fri., 17 May, P.L.A. Conf. Rm., R.12, at 12.30 p.m.

Bible Study on "The Gospel", led by B. E. Kingdon.

All are welcome.

DATES FOR YOUR DIARY: 21 - 24 May. Chelsea Flower Show (21 May - Members only).

Oxford & District Brass Bands Association Contest, Sunday 12 May, 1 p.m. to 7 p.m. approx., in the Abbey Hall, Abingdon.

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

Rutherford Laboratory 10.5.68

STOP PRESS:

Mon., 20 May, 11.45 a.m. Lecture Theatre

Nimrod Lecture Series

. Dr. N. Byers

Title to be announced.





Rutherford Laboratory

General News

RADIATION PROTECTION NOTICE - FILM ISSUE. Period 6 commences Monday, 20 May. Colour Strip - GREY for \$8 and fast neutron films. Please change your films promptly and return all old films as soon as possible.

OVERSEAS VISITS. Mr. J.M. Dickson, to the U.S.A, 18 May - 3 June, to attend the Brookhaven International Linac Conference. Mr. A. Carne, to the U.S.A. & Canada, 18 May - 14 June, to attend the Brookhaven International Linac Conference; to visit various Laboratories and to attend the Brookhaven Working Party on Superconductivity

Mr. W. Turner, to CERN, 19 May, for discussions on the optics of large bubble chambers.

SCIENTIFIC ADMIN NOTICE. Due to the Whitsun holiday, the next Bulletin No. 20/68 will cover two weeks. Items for inclusion in this issue should be sent to H.F. Norris Rm. 42, Bldg. R.20 by Wednesday mid-day May 22, or earlier if possible.

Machine Schedules NIMROD Cycle 7 (21.5.68 - 11.6.68) Machine Physics

Devices.

High Energy Physics

Beam	Experiment		
x1/k9	Beam Studies	Setting up	
π4	A Study of the ≥ Beta Decay	Data	
к8	K p Differential Cross-sections from 0.85 to 2.2 GeV/c	Setting up	
Klos	Study of K p → Neutral States	Setting up	
Kll	K Interactions in the Heavy Liquid / Bubble Chamber	Setting up	
K12	K p Differential Cross-sections from 0.45 to 0.85 GeV/c	Setting up	
K1.3	Test of $\triangle S = \triangle Q$ Interactions in the Decay of K^{O} Mesons		
K14	Measurement of the Non-leptonic Decay of the Parameter of the Σ	Setting up	
K14A	Study of the Polarization Effects in $\pi^{-1}p$ Scattering	Setting up	
	X1/K9 TT 4 K8 K10S K11 K12 K13	X1/K9 Beam Studies X1/K9 A Study of the Σ Beta Decay K8 Kp Differential Cross-sections from 0.85 to 2.2 GeV/c K10S Study of Kp → Neutral States K1 K Interactions in the Heavy Liquid Bubble Chamber K12 Kp Differential Cross-sections from 0.45 to 0.85 GeV/c K13 Test of ΔS = ΔQ Interactions in the Decay of K Mesons K14 Measurement of the Non-leptonic Decay of the Parameter of the Σ K14 Study of the Polarization Effects in	

P.L.A.

Date			Team	
20-21 M	ау	OMC	Queens'	Univ.

22-23 May

24-30 May Prof. Greenlees.

Experiment

"D" Parameter Measurement at 50 MeV

Maintenance

Polarization Measurements in Elastic Scattering

Internal Events			
Mon, 20 May, 11.45 a.m. Lecture Theatre	Nimrod Lecture Series	Dr. Nina Byers (Clarendon)	Droplet Model Fits to Recent Experimental Results
Mon, 20 May 2.15 - 5 p.m. Lecture Theatre	Nimrod Users Meeting		
Tues, 21 May, 12-1.15 p.m. Lecture Theatre	Lecture for Experimentalists	Dr. J.E. Paton	Introduction to SU3: Part 1.
Wed, 22 May, ll a.m. Conf. Rm, Rl	H.E.P. Disc. Grp	Dr. J.E. Paton	Nuclear Bremsstrahlung
Mon, 27 May, 11.45 a.m. Lecture Theatre	Nimrod Lecture Series	Dr. P. Schublin (CERN)	Operation of Wide-gap Wire Chambers and Initial Results from the CERN
External Events			Boson Spectrometer.
Mon, 20 May, 4.15 p.m. Queen Mary Coll. London	Theor. Phys. Seminar	Prof. R. Penrose (Birkbeck Coll)	Twistors
Mon, 20 May, 5 p.m. Univ. of Reading	Colloq	Dr. H.G. Jerrard (Southampton)	Physical Techniques for the Determination of Molecular Parameters

Wed, 22 May, 2.15 p.m. Univ. Coll. London Wed, 22 May, 4.45 p.m. Royal Fort, Bristol

Thurs, 23 May, 4.15 p.m. Univ. Coll. London

EVENTS AT A.E.R.E.

Tues, 21 May, 2 p.m. Conf. Rm, B 8.9

Thurs, 23 May, 3.30 p.m. Conf. Rm. H.8

Inst. of Maths Meeting

> Phys & Geo-Phys Colloq

Elementary Particle Physics Seminar

Theor Phys Div. Seminar

Nucl. Phys. Div.

The Dainton Report on "Inquiry into the flow of candidates in science and technology in higher education" (Admission by ticket - details only from H.F. horris Ext. 484)

Dr. J. Malos (Bristol)

Dr. G. Immirzi (U.C.L.)

Semi-phenomenological Approach to Multichannel Scattering

Looking for Quarks

Prof N.H. March (Sheffield U.) Vacancies and the Theory of Melting

Visit to Australia and Pakistan

Social News

CRICKET - LOVELY CRICKET. The Curtis Bennett Shield match between Travaux and the S.R.C. will be held on Wednesday, 22 May, at A.E.R.E. Harwell, starting at 2 p.m. The team selected to represent the SRC is captained by Barry Briscoe. The Rutherford Lab is represented by three players plus a reserve, the Atlas Lab by two players plus two reserves. We wish Barry and the team good luck and good weather.

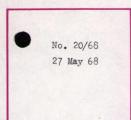
Dr. B. Rose

CHRISTIAN FELLOWSHIP. Fri, 24 May, PLA Conf. Rm. R.12 at 12.30 p.m.

Prayer Meeting led by Ray Powell. All are welcome.

Rutherford Laboratory.

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





General News

VISITORS. Thirty members of the ASLIB Electronics Group will visit the Laboratory on Tuesday 28 May.

NEW COMPUTERS AT THE LABORATORY. Two new small computers have recently been installed at the Laboratory, an IBM 1130 and

a D.D.P. 516.

The D.D.P. 516 is now operational, testing future programs etc., however it will eventually be used on-line to experiments. The computer has a D.M.C. (Direct Multiplexed Control) for communication with experimental apparatus whilst computation is taking place. The date received from experiments will be stored on magnetic tape for processing by the large IBM 360

taking place. The date received from experiments will be scored on magnetic tape for processing by the large 1DM 200 computer. In addition, provision is available for simple on-line checks of data from spark chamber and counter experiments. The D.D.P. 516 has a core store of 8192 - 16 bit works, with a core memory cycle time of 0.96 u.sec. In addition to the magnetic tape unit referred to above, other facilities include a fast paper tape reader, input/output tele-tape unit and digital to analogue converters for use in providing an oscilliscope display of data, which all adds up to a fairly small but very fast, versatile computer.

The IBM 1130 computer which is situated in R.1 and is also operational has a core store of 16 K (ie 16384) - 16 bit words with an access time of 2.2 u.sec. In addition, it has a disc stare of 512 K - 16 bit words, a card reader punch and it's own monitor system. In use it will be connected to six rough digitizers (to feed H.P.D. flying spot scanners), four scanning tables for data collection, and four precision measuring tables for bubble chamber film. In the case of the measuring machines, two dimensional fitting will be carried out as each frame is measured. In all cases, operators will receive back information on the velidity of their measurements via a typewriter, corrective section can then be taken before moving action can then be taken before moving

two dimensional fitting will be carried out as each frame is measured. In all cases, operators will receive back information on the validity of their measurements via a typewriter, corrective action can then be taken before move on to the next frame. Operators can also ask for data to be sent back from the computer for checking.

The IBM 1130 will be connected to the large central computer (the IBM 360) via a parallel data adapter in the 2701 unit. Data transfer will however only take place at intervals of a few hours due to the large disc storage system on the

1130 of over half a million words. This of course differs from the D.D.P. 224 Daedalus system, (a unique method of time sharing) which communicates with the '360' at the milli-second level.

RADIATION PROTECTION NOTICE - FILM ISSUES. Period 6 commenced Monday, 20 May. Colour Strip - GREY for and fast

neutron films. Please check that the film is warn correctly in the blue holder, both colour strip and number must be showing in the open window and worn facing away from the body.

LIQUID HELIUM SUPPLIES. Will people who require liquid helium supplies early on Mondays, please order from A.E.R.E. before 10.30 a.m. on the previous Friday.

IFIP CONGRESS. Information has now been received on the International Federation for Information Processing Congress to be held at Edinburgh, from 5-10 August 1968. Application forms and futher information from H. F. Norris, R.20, Ext 484. OVERSEAS VISIT. Dr. G. H. Stafford to CERN, 4-5 June, to attend a meeting of the Nuclear Physics Research Committee.

Machine Schedules

NIMROD Cycle 7 (21.5.68 - 11.6.68) Machine Physics: High Energy Physics (X1/K9, 4, K8, K10S, K11, K12, K13, K14 and K14A). Full details of Cycle 7 were given in Bulletin No. 19/68.

P.L.A.

Date Team Experiment 27-30 May Prof. Greenlees Polarization Measurements in Elastic Scattering 31 May-4 June Oxford Univ. Asymmetry Measurements and Pick-up Reaction on Si²⁸ an Po²⁰⁸ 5-6 June 7-14 June Kings' College London Asymmetry and Polarization Studies on Ar 40 at 30 and 50 MeV

Internal Events Mon, 27 May, 11.45 a.m. Nimrod Lecture Dr. P. Schublin Operation of Wide-gap Wire Chambers and Initial Results from the CERN Lecture Theatre Series (CERN) Bason Spectrometer Tues, 28 May, 12 -1.15 p.m. Lecture Theatre Lecture for Dr. J. E. Paton Introduction to SU3 : Part 2 Experimentalists Wed, 29 May, 11 a.m. Conf. Rm, R.1 H.E.P. Disc Grp. Dr. A. Astbury Decay and the Status of the Cabibbo Theory Wed, 5 June, 11 a.m. H.E.P. Disc Crp. Dr. T. Bacon Experiments on Ko Decay Conf. Rm., R.1 Mon, 10 June, 11.45 a.m. Lecture Theatre Nimrod Lecture Series Prof P. T. Matthews Particle Production at Intermediate (Imp. Coll.) Energies **External Events** Mon, 27 May, 4.15 p.m. Prof. C. A. Coulson Theor. Phys Seminar Commutator Relations and the Wave Queen Mary Coll.London

(Oxford) Equation Wed. 29 May, 10.15 a.m. Inst. of Maths The Mathmatics of Hydrology. Carlton House Terrace, S.W.1. S mposium Thurs, 30 May, 2.30 p.m. Low Temp. and Solid Dr. R. M. Bozorth Magnetism in Single Crystals of Rare Clarendon Lab., Oxford State Phys. Seminar

Earth Metals and Alloys

Thurs, 30 May, 4.15 p.m. Clarendon Lab., Oxford Fri, 31 May 4.15 p.m. Clarendon Lab., Oxford EVENTS AT A.E.R.E.

Tues, 28 May, 2 p.m. Conf. Rm., B.8.9

Thurs, 30 May 3.30 p.m. Conf. Rm., H.8

Theor. Phys. Seminar

Collog.

Theor. Phys. Div. Seminar

Nucl. Phys. Div. Collog.

Prof. W. E. Lamb (Yale & Sussex U.)

Prof. W. E. Lamb (Yale & Sussex U.) The Theory of the Laser

The Physics of Lasers

Dr. M. Child (Physical Chem. Reactions Inst. Oxford)

Mr. D. L. Allen

Adiabatic Theory of Chemical

Connexions Between States of Odd and Even Mass Nuclei

Social News

CRICKET. The Curtis Bennett Shield match between an SRC team and Travaux (Ministry of Public Buildings and Works),

played at A.E.R.E. Harwell on Wednesday last resulted in an easy victory for Travaux.

SRC batting first, were all out for 48, Travaux replying with 52 for 2. J. Kershaw (Travaux), a very good fast bowler, caused the SRC team considerable trouble as his figures of 8 wickets for 19 runs prove. Top scorer for the SRC team was Ray Smith with 11 runs. SRC were perhaps unfortunate in drawing Travaux in the first round, a team who were beaten in the final two years ago.

EVENING CRICKET FRIENDLY. At a match played on Thursday, 16 May, H.E.P. Physicists beat the Mechanical Drawing Office by 7 wickets. Scores, - Physicists 15 for 3 and Drawing Office, 14 all out.

DARTS TOURNAMENT. Owing to school examinations and (it is said) nice gardening weather, only three teams were entered for the Annual Darts Tournament. It has therefore been decided to postpone this event until the Autumn.

PUTTING GREEN. The putting green will be available, after Whitsun for use by all personnel at a charge of sixpence, per putter per lunch break. The charges are reduced for members of the Recreational Socity so join now if you are not already a member. Putters and balls will be issued each day by Mr. K. L. Yeo, R2, Ext 280.

CHRISTIAN FELLOWSHIP. Fri, 31 May, P.L.A. Conf. Rm., R.12 at 12.30 p.m. A recording of a Billy Graham Sermon.

Fri, 7 June, P.L.A. Conf. Rm., R.12 at 12.30 p.m. A talk on "Evangelism" to be given by Pastor Eric Lavender from Northampton.

All are welcome.

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

Rutherford Laboratory.

24.5.68.