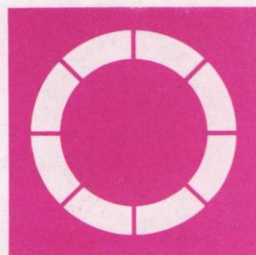


No 38/71
1 Nov. 71



Rutherford Laboratory Bulletin

General News

THE MUON EXPERIMENT (SEARCH FOR THE QUARK AND INTERMEDIATE BOSON)

On Saturday, 15 October, CERN officially inaugurated the Intersecting Storage Ring (ISR) project. This is a large plant that brings opposing beams of protons into direct collision, thereby enabling the full energy to be utilised in creating new particles.

The Rutherford Laboratory is supporting experiments with this new source to search for two particles, the so-called "Intermediate Boson" and the "Quark". The equipment is made up of two assemblies, the Muon detector consisting of a 240 ton magnet and its associated particle detectors, and a wide angle spectrometer.

The major part of the hardware is now installed and is currently being used by the Physicists. One side of the Muon detector was successfully triggered from particles generated by the proton/proton collisions and on cosmic particles. All spark chambers on that side fired showing an overall track length of about 8ft. On the wide angle spectrometer side most of the equipment is in place for a preliminary "Quark" search and provisional data has been taken to test the system.

The groups concerned with the experiments include the Rutherford Laboratory, Liverpool University, University College London, Bristol University and teams from Universities in Scandinavia.

The major part of the equipment has been designed by the Rutherford Laboratory Nuclear Physics Apparatus group and they have been largely responsible for the construction and installation. The project is a large one by any standard and all concerned are to be congratulated on the efforts they have made and the success they have achieved.

RUTHERFORD LABORATORY LECTURE Professor M F H Wilkins, Dept of Biophysics, Kings' College, London will give the next talk in the Rutherford Laboratory Lecture Series at 3.15 p.m. on Thursday 4 November in the Lecture Theatre. Professor Wilkins, the Nobel prizewinner in Medicine for 1962 has chosen to speak on "Social Responsibility in Science" and has suggested the following summary:-

Views on the nature of the scientist's social responsibility range from concentration on personal ethics to concern with direct attempts to change political systems. Understanding the nature of science is basic to social responsibility in science. It is believed necessary to increase inquiry into the nature of science itself. This is a responsibility of scientists since the essence of science is enquiry. Science is seen as a social activity, its nature being moulded by social, political, economic, philosophical and religious factors. The way in which science has developed to its present form is reviewed and that form is compared with the forms taken at other times. Why moral questions were excluded from science is discussed. Today there is a need to broaden science to include social and moral matters. Some indications of how this may take place are given.

MISSING EQUIPMENT The following manual typewriters have been reported missing:-

Imperial 66 Serial No 6F47406 - last known location R2 Room 4.13

Imperial 66 Serial No 6F78321 - last known location R1 Room 2.86

Imperial 66 Serial No 6A73521 - last known location R1 Room 1.36

Anyone with information on the present whereabouts of these machines is asked to contact Mrs M C Gould Ext 238.

FILM NOTICE Period 12 commences Monday 1 November. Colour Strip - GREEN for B_y and fast neutron packs. Six monthly TLD's for people with surnames commencing STUV. Please change your dosimeters promptly and return all old ones.

OVERSEAS VISITS Dr C J Damerell to CERN 31 Oct - 2 Nov to attend open EEC Meeting and for discussions.

Mr P Wilde to CERN 2 Nov for one day to discuss details of Omega TV camera system.

Dr G H Stafford to CERN 2 - 3 Nov to attend meeting of Nuclear Physics Research Committee.

Machine Schedules

NIMROD Cycle 14 (2.11.71 - 23.11.71)

Team	Beam	Experiment	
B'ham U/RHEL	K12 A	K ⁺ n Elastic Scattering and K ⁺ Charge Exchange from 0.45-0.95 GeV/c	Data
Surrey U/B'ham U/RHEL	π^0	Total Reaction Cross-Sections for Pions on Nuclei	Data
Cambridge U/RHEL	K13C	Associated Production Measurements	Setting up
Imp Coll/Soton U	π^7	Studies of the η w and A ₂	Setting up
RHEL	K9	HBC/Target Development Tests	

Internal Events

Mon 1 Nov 11.30 a.m.
Lecture Theatre

Nimrod Lecture Series
Prof G Kane
(Michigan & RHEL)

A Current Review of Regge and Dual Model Physics
(Based on Oxford Meeting Review Talk).

Mon 1 Nov 2.30 p.m. Proposal Lecture Proposal No 101 "A Measurement of the Differential Cross-Sections for the Reactions $\pi^+p \rightarrow \pi^+n$ and $\pi^-p \rightarrow \pi^-n$ in the Momentum Range 0.6 to 3.5 GeV/c". The lecture will be given by Dr J J Thresher.
Lecture Theatre

Mon 1 Nov 9.30 p.m. - 4.30 p.m. R25 Car Park. The Worcester Valve Co Ltd Exhibition Trailer will have on display the full range of their manual and pneumatically actuated industrial ball valves. Further detail from the Editor.

Tues 2 Nov 10.00 a.m. - 4.45 p.m. Lecture Theatre. Honeywell Users Association Meeting.

Wed 3 Nov 11 a.m. HEP Disc Grp Dr S Y Lo Selection Rules for Inclusive Reactions
Conf Room R1 (Glasgow)

Wed 3 Nov 1.15 p.m. Film Show The Summer Game, 33 minutes colour.
Thurs 4 Nov 12.40 p.m. Lecture Theatre.

This very attractive and exceptionally beautiful film traces the history of cricket, which evolved from the yokels two-stump game. It was played by the aristocracy when hounded into seclusion during Cromwell's Commonwealth, emerging after the Restoration as one of their betting sports on which huge sums of money were wagered. The film, in tracing the history right up to Sobers contains rare scenes of such giants as the legendary W G Grace and Ranjitsinhji as well as the later stars such as Hobbs and Sutcliffe. It also relates the game to the social life of England throughout the last three centuries which should make it an interesting film for everyone.

Thurs 4 Nov 3.15 p.m. Rutherford Lab Lecture Prof M F H Wilkins Social Responsibility in Science. (See Gen News for details).
Lecture Theatre (King's College London)

Fri 5 Nov 11 a.m. Seminar in Computing Dr R Taylor What is Good Programming? (This question cannot be discussed without reference to the objectives of the programmer and to modern developments in hardware and software)
Conf Room R12

Mon 8 Nov 11.30 a.m. Nimrod Lecture Series Dr H Hogaasen Regge Cuts in Two-Body Processes
Lecture Theatre (Orsay, France)

External Events

Mon 1 Nov 2 p.m. Daresbury Laboratory	Theor Phys Seminar	A Kamal (Alberta and RHEL)	High Energy Approximations
Mon 1 Nov 4.15 p.m. Queen Mary Coll. London	Theor Phys Seminar	Prof L Radicati (Pisa and Oxford)	Symmetry Breaking in Electromagnetic and Weak Interactions.
Mon 1 Nov 5 p.m. Univ of Bristol	Phys and Geo-Phys Colloq	Dr J E Burke (Gen Electric Research Lab N.Y)	Ceramic Science and Technology
Wed 3 Nov 2.30 p.m. Univ of Manchester	Theor Phys Seminar	Mr J F James (Manchester)	The Revolution in Optics
Fri 5 Nov 2.15 p.m. Clarendon Lab Oxford	Solid State and Many Body Seminar	S Shtrikman (Imp Coll & Jerusalem)	Do Spirals Form by Proper Second Order Phase Transitions?
Fri 5 Nov 2.30 p.m. Clarendon Lab Oxford	Elemt Part Theory Seminar	C S Lam	Single Particle Spectra in Hadron Collisions
EVENT AT AERE Tues 2 Nov 2 p.m. Conf Rm Bldg 8.9	Theor Phys Seminar	Dr J Ranninger (Grenoble)	Theory of Heat Pulses in Ionic Solids

Social News

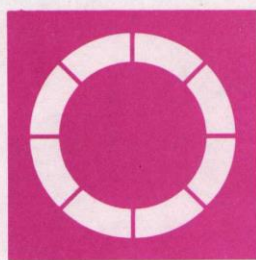
CHRISTIAN FELLOWSHIP All welcome to a prayer meeting led by Ken Potter in the R12 Conf Room at 12.30 p.m. Friday 5 November.

RECORD SOCIETY The Society hopes to commence its regular week lunch time concerts on Tuesday 9 November. Details of the programme will be given in the next Bulletin. Anyone willing to loan records should contact Mr C W Roberts R20 Ext 6323.

H F NORRIS Ext 484
Scientific Admin Grp
Building R20

Rutherford Laboratory

No 39/71
8 Nov 71



Rutherford Laboratory Bulletin

General News

FIFTY UP At 07.52 on Friday, 29 October a total of 50 million pulses was reached on the Nimrod magnet.

BON VOYAGE Norman Garnsey recently left the Laboratory to take up an appointment in the field of non-destructive testing with Lloyd's Register of Shipping.

Norman joined the Nimrod project at the end of 1960 and became the third member of the team that developed into the Nimrod Power Supplies Group. He played a leading role in the development of specialised ultrasonic equipment, and his main interests have always been in the fields of non-destructive testing, metallurgy, and materials inspection techniques.

In September 1969 he noticed the beginning of pole movement on one of the main alternator rotors and it is probable that his vigilance prevented more widespread damage and a major plant shutdown.

On behalf of Norman's colleagues at the Laboratory, Mr H C Brooks presented him with a pewter tankard and a briefcase and wished him every success in his new appointment.

We understand that Norman will be based in Sussex but expects to be dashing off to foreign parts (or ports?) at frequent intervals so we would like to add our wishes for success. Bon Voyage Norman, even if it is not always 'petit voyage d'agrément'!

WEDDING BELLS FOR SHEILA Usage and Abusage (A guide to good English) states that 'retirement' is the act of withdrawal from or surrendering an office.

Sheila Streams, Personal Secretary to Mr P Bowles, the Chief Engineer since she joined the Laboratory in October 1966, is retiring on Friday 5 November and is surrendering an 'office' she has held in many parts of the world.

After attending a Secretarial College, Sheila joined the Ministry of Labour, but because of a desire to travel she transferred to the War Office (now the Ministry of Defence, Army). In her own words she was lucky enough to be selected to serve in a number of British Embassies in various parts of the world. Over a number of years her position as Secretary to Military Attaches took her to Damascus, Moscow and Tokyo. This was a life she obviously enjoyed as apart from her official duties she was able to travel around quite a lot in her own time.

However, all good things come to an end and she returned to this country to work for the Deputy Under Secretary of State at the War Office.

She has enjoyed her time at the Laboratory immensely and the only reason for leaving, and a jolly good reason at that, is to get married.

Sheila wishes to thank all her many friends who contributed to her marvellous presents and extends a warm welcome to anyone to visit her and her husband at their future home in Woking, Surrey. We are sure that everyone will join us in wishing Sheila a very happy future.

CONGRATULATIONS Westfield College has conferred upon Mr P Wilde the title of visiting Professor.

MISSING EQUIPMENT The following item of equipment has been reported missing from Lab 1:-

Avometer, Model 8, Ser No 116957 - C - 161

Anyone with information on the present whereabouts of this item is asked to contact H R Renshall, RI Ext 6292.

The following item of equipment is reported missing from Lab 6:-

Hot Air Blower, AERE No 21000

Anyone finding this item is asked to contact J L Thomas, Lab 6, RI, Ext 389.

The following item of equipment is reported missing from Lab 112, R2:-

Telequipment Serviscope, Ser No 1831

Will the finder please contact N D West Ext 6112

FILM NOTICE It is period 12. Colour Strip - GREEN for β and fast neutron packs. Please check that you are wearing the correct films and that all old ones are returned.

Machine Schedules

NIMROD Cycle 14 (2 11 71 - 23 11 71)
High Energy Physics (K12A, π 10, K13C, π 7 and K9)
Full details were given in Bulletin No 38/71

Internal Events

Mon 8 Nov. 11.30 am Lecture Theatre	Nimrod Lecture Series	Dr H Hogaasen (Orsay, France)	Regge Cuts in Two-Body Processes
Wed 10 Nov. 11 am Conf Rm R1	HEP Disc Grp	Dr B Martin (UCL)	K^+p Partial Wave Dispersion Relations
Wed 10 Nov. 1.15 pm Thurs 11 Nov. 12.40 pm Lecture Theatre	Film Show	Why Asbestos, a 20 minute colour film	

This is a highly informative film that will leave no one in any doubts about the importance of asbestos. It lists the heat and corrosion resistant qualities of asbestos and its consequent application such as aluminised asbestos suits for fire fighting, the use of asbestos-based building parts in system-built housing and the generally unappreciated role it plays in vehicle design. It illustrates very well its indispensability to our every day safety. To summarise - characteristics and uses of the only fibrous mineral.

Mon 15 Nov. 11.30 am Lecture Theatre	Nimrod Lecture Series	Prof S Mandelstam (Berkeley and Imp College)	Qualitative Discussion of Dual Resonance Models
---	-----------------------	--	---

External Events

Mon 8 Nov. 2 pm Daresbury Lab	Theor Phys Seminar	L Lyons (Oxford)	A Comparison of Various K^+p Reactions with Veneziano, Regge and Quark Models
Mon 8 Nov. 4.15 pm Queen Mary Coll. London	Theor Phys Seminar	Prof S Mandelstam (Berkeley and Imp College)	Fermions in Dual Resonance Models
Mon 8 Nov. 5 pm Univ of Bristol	Phys & Geo-Phys Colloq	Prof H H Hopkins (Reading)	Mathematical Methods in Modern Optics
Tues 9 Nov. 2.30 pm Nucl Phys Lab Oxford	Nucl Phys Seminar	Dr M Dost (SACLAY)	Coulomb Excitation of Pb Isotopes
Wed 10 Nov. 7 pm SEB Yarnton, Oxford	IEE District Meeting	B S Townsend (Asst. Chief Eng SEB)	Developments in Distribution Engineering
Wed 10 Nov. 5.30 pm Univ Coll. Cardiff	Inst of Maths Lecture	Prof L Fox (Oxford)	Dodges with Digits
Thurs 11 Nov. 4.15 pm Clarendon Lab. Oxford	Theor Phys Seminar	Prof S Mandelstam (Berkeley and Imp College)	Dual-Resonance Models and the Operator Formalism

EVENT AT AERE

Tues 9 Nov. 2 pm Conf Rm Bldg 8.9	Theor Phys Seminar	Dr S H Liu (Iowa State Univ)	Free Lattice Spin-Wave Modes in Heavy Rare-Earths
--------------------------------------	--------------------	---------------------------------	---

Social News

DARTS TOURNAMENT FRIDAY 26 November. Pairs Night for the Doubles Cup. Entrance fee 30p per pair. Names to Alan Slater or John Ride, Ext 232 before 23 November. Bar extension and supper provided.

CSMA OXFORD GROUP For those who are interested in Holidays, two members of the Association Travel Service will show films taken on CSMA tours and talk about the facilities available to members. Starting at 8 pm on Friday, 12 November at the Duke of York, New Street, Oxford.

CHRISTIAN FELLOWSHIP All welcome to a Bible Study on 1. Timothy, Chapter 6, led by Frank Smith. 12.30pm Conf Rm R12.

RECORD SOCIETY Tuesday 9 November 12.40 pm Lecture Theatre

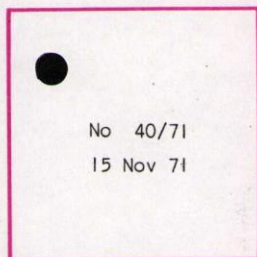
Beethoven Violin Concerto in D Major, David Oistrakh
with the French National Radio Orchestra, conducted by André Cluytens

A stereo recording of a much loved work composed in 1806.

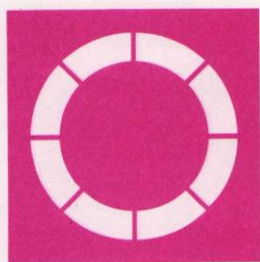
AERE HORTICULTURAL SOCIETY LECTURE Tuesday 16 November in the Lecture Theatre at 7.30 pm, Mr B K Tallersfield will give a talk on 'House and Pot Plants' Tickets at 15p each will be available in a few days from Committee members. More details next week.

Rutherford Laboratory
5 11 71
dg

H F NORRIS Ext 484
Scientific Admin Group
Building R20



No 40/71
15 Nov 71



Rutherford Laboratory Bulletin

General News

VISITORS During the forthcoming week the following will visit the Rutherford Laboratory.

Wednesday 17 November - twenty students from Brunel University.

Thursday 18 November - thirteen students attending the Magnet Design Course at AERE.

Friday 19 November - twelve Laboratory Technicians from the South Berkshire College of Further Education.

MISSING EQUIPMENT The following item of equipment has been reported missing from the Electrical Standards Room R18:-

Monroe Calculating Machine Ser No CS A8 J438783 - together with an envelope folder containing operating handbooks.

Anyone with information on the present whereabouts of this machine is asked to contact Mr J Jones Building R18 Ext 571.

The following items of equipment have been reported missing:-

Avo meter Ser No 17155-565

Scintilla Saw Ser No 14/2090

Anyone with information on these items is asked to contact Dr A M Segar Building R1 Ext 6262.

FILM NOTICE It is Period 12 Colour Strip - GREEN for $\beta\gamma$ and fast neutron packs. Please check that you are wearing the correct dosimeter and that all old ones are returned.

OVERSEAS VISITS Dr L C W Hobbs to Euratom, Ispra, Italy, 14 - 16 November to attend a presentation of the SORA project. Mr D A Gray and Mr A Carne, to CERN 18 - 19 November for discussion on Superconducting separators.

Machine Schedules

NIMROD CYCLE 14 (2 11 71 - 23 11 71)

High Energy Physics (K12A, $\pi 10$, K13C, $\pi 7$ and K9)

Full details were given in Bulletin No 38/71.

Internal Events

Mon 15 Nov 11.30 a.m. Lecture Theatre	Nimrod Lecture Series	Prof S Mandelstam (Berkeley & Imp Coll)	Qualitative Discussion of Dual Resonance Models
Wed 17 Nov 11 a.m. Conf Rm., R1.	HEP DISC Group	Dr L Worden (RHEL)	Regge Models of Pion Photoproduction
Wed 17 Nov 1.15 p.m. Thurs 18 Nov 12.40 p.m. Lecture Theatre	Film Show	'Images' A 22 minute colour film from Kodak Ltd	

To many people the name 'Kodak' is synonymous with cameras and films for the amateur. However in the professional field the often highly specialised and sophisticated needs have to be met. This film is about the uses of photography in some of these widely differing fields such as science, industry, business, medicine, research, education and communications. The film won a silver award at the British Industrial Film Festival in May this year.

Wed 17 Nov 10 a.m. - 4.30 p.m., R 25 Car Park. The Oltronix Demonstration Vehicle will have on view their new range of power supplies which are all the same height - 44 mm., made possible by a new transformer design. Also on show, High Voltage Units with associated resistance divider units. Rack mounting types giving up to 60A and laboratory types are also to be shown. All units are programmable, have external sensing and are totally enclosed. Further information from the Editor.

Fri 19 Nov 11 a.m. Lecture Theatre	Seminar in Computing	R A Lawes	HPD2 Development at RHEL
---------------------------------------	----------------------	-----------	--------------------------

This lecture will discuss aspects of the HPD2 system including the special HPD 2 hardware, its graphics equipment and the DDP 516 satellite computer.

Mon 22 Nov 11.30 a.m. Lecture Theatre	Nimrod Lecture Series	Prof G Giacomelli (Bologna)	Title will be announced in the next Bulletin
--	-----------------------	--------------------------------	--

External Events

Mon 15 Nov 2.30 p.m. Nucl Phys Lab Oxford	Nucl Phys Seminar	Dr T K Alexander	Recent Studies of the $K^{\pi}=0^{+}$ Ground State and $K^{\pi}=2^{-}$ Bands in ^{20}Ne
Mon 15 Nov 4.15 p.m. Queen Mary College London	Theor Phys Seminar	Prof G V Chester (Cornell & Sussex)	Wave Functions for Solid Helium
Tues 16 Nov 2.30 p.m. Daresbury Laboratory	Lecture Series	F Ashton (Durham)	Quark Search Using Neon Flash Tube Chamber
Wed 17 Nov 2.30 p.m. Univ of Manchester	Theor Phys Seminar	Dr W E A Davies	Heterogeneous Materials
Thurs 18 Nov 4.15 p.m. Clarendon Lab Oxford	Theor Phys Seminar	Dr G Unruh (Birkbeck)	Black Holes
Thurs 18 Nov 7.30 p.m. Univ of Bristol	Inst of Maths Lecture	Dr G T Whiteside (Cambridge)	Newton's Numerical Methods
Thurs 18 Nov 8.15 p.m. Oxford U Maths Inst.	B C S Oxford Branch Meeting	Mr A Sutcliffe (I C L Bracknell)	Computer Graphics and Art
Fri 19 Nov 2.15 p.m. Clarendon Lab Oxford	Solid State & Many Body Seminar	S Rushbrooke (Newcastle)	Random Thoughts on Random Lattices
Fri 19 Nov 2.30 p.m. Clarendon Lab Oxford	Elemt Part Theory Seminar	K G Barnes (Q M C)	Title to be announced
EVENT AT AERE Tues 16 Nov 2 p.m. Conf room Building 8.9	Theor Phys Seminar	Dr F S Ham (G E Schenectady) N.Y	Dynamic John-Teller Effects in a ^{5}E State, with Applications to the Acoustic Resonance of Cr^{2+} in MgO

Social News

DARTS TOURNAMENT RESULT About 70 people attended the Darts Tournament held on Friday 22 October and from reports, thoroughly enjoyed themselves. The Team Cup was won by Wignall's Wonders (D Wignall, B Crane, T Stevens and R Wyatt) who beat Pheasant Pluckers (A Slater, J Rice, P Craske and C Wakeford) in the final.

RECORD SOCIETY Tuesday 16 November 12.40 p.m. Lecture Theatre.

Sgt Pepper's Lonely Hearts Club Band

'The Beatles' of course - what else is there to say?

AERE HORTICULTURAL SOCIETY EVENING LECTURE Tuesday 16 November at 7.30 p.m. Lecture Theatre. This, the first lecture in the 1971 - 72 winter season is very appropriately on House and Pot Plants. Mr B K Tattersfield from Culham College who is the lecturer will be talking about the care of plants and his talk will be illustrated by colour slides. Ladies, this in particular is your night so come along and bring all those problems as well, to put to the expert. Tickets available shortly from the Editor or either committee members at 15p which includes refreshments.

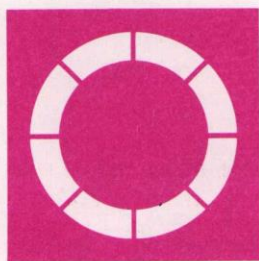
CHRISTIAN FELLOWSHIP All welcome to a lunch-time meeting commencing at 12.30 p.m. on Friday 19 November in the R12 Conf Room.

Rutherford Laboratory

11 November 1971

H F NORRIS Ext 484
Scientific Admin Group
Building R20

No 41 /71
22 /71



Rutherford Laboratory Bulletin

General News

LAD OF YESTERYEAR RETIRES Mr G N Venn, Deputy Head of the Nimrod Division in presenting farewell gifts to Frank Kay last Friday, recalled that Frank came to this part of the Berkshire Downs from the glamorous world of the racing stables.

At the age of 14 he was apprenticed (half a crown a week muttered Frank) to R C Danson's racing stables where the legendary Aga Khan's horses were trained, moving to stables at Lambourn after 11 years where he remained until 1940. Frank then joined the 1st Battalion of the Royal Berkshire Regiment serving in India and Burma and took part in the famous battle of Kohima. During his army life he resumed boxing a sport he had taken up during his years of apprenticeship and as a contrast took part in concert parties.

Peace saw Frank back at the racing stables where he remained until 1955 when, at the age of 50, he joined AERE as a process worker. Since 1961 when he transferred to the Rutherford Lab Frank has worked mainly on the Nimrod Auxiliary Plant until the last 3 years when he has also been associated with the Main Power Supply Plant. During his life at the racing stables he helped to train many famous horses amongst which were winners of all the classics with one exception, the 1000 guineas. His interest in horses is still as great as ever and he hopes to assist in breaking yearlings in his retirement. Mr Venn on behalf of the many friends and colleagues present, handed to Frank a pair of binoculars, and a bottle of scotch to drown his sorrows. In reply Frank stopped searching for a cup of some kind long enough to thank everyone for the presents and was last seen still searching in vain.

We would like to join in wishing Frank a long, busy and enjoyable retirement. We also feel that the successful drowning of these sorrows was not long delayed.

NEW CENTRAL COMPUTER FOR THE RUTHERFORD LABORATORY The IBM 360/195 was accepted from the manufacturer last Monday and the following press notice was released:-
"A new computer, an IBM System/360 Model 195, has been installed in the Rutherford Laboratory, replacing a model 75 which has been in operation for five years. The new computer, which cost about £3M, is six times as powerful as its predecessor. It was successfully commissioned only fifteen days after delivery.

The central processor of the model 195 has a capacity of 2 megabytes; it is supported by a block multiplexor and a fast access fixed head file. The installation will be fitted with a disk store of 800 megabytes and high speed tape units early next year, and will be converted to a System/370 model 195 in 1973.

The Rutherford High Energy Laboratory is the largest laboratory of the Science Research Council. The Laboratory's main research programme is in elementary particle physics using its own 7 GeV proton synchrotron Nimrod and the accelerators at CERN. The new computer will serve the needs of the university scientists involved in this research and in other parts of the Science Research Council's activities."

FOUND A refrigeration calculator has been found on the grass near Building R1. The calculator is made by Refrigerator Components Ltd. Will the owner please contact Mr D Jones, Building R12 Ext 466.

FILM NOTICE It is Period 12 Colour Strip - GREEN - for 8y film and fast neutron packs. Please check that you are wearing the correct dosimeters and that all odd ones are returned. Next film issue - Monday 29 November.

SRC BURSARIES FOR FULL-TIME STUDY AND SANDWICH COURSES Attention is drawn to SRC Training Notice 17/71 which invites applications from staff of the Council for Awards to enable them to undertake full-time study or sandwich courses at a University, Polytechnic, etc., commencing in 1972. The nominal closing date for applications is 11 February 1972 but it should be noted that there is provision for late applications in exceptional cases. Possible late applicants should inform the Training Officer as soon as possible, even if they may eventually withdraw. Further information and application forms from T F Gubbins Building R20. Ext 266.

OVERSEAS VISITS Dr G Manning to CERN, 22 - 25 November for run on ISR experiment.



Internal Events

Mon 22 Nov 11.30 a.m. Lecture Theatre	Nimrod Lecture Series	Prof G Giacomelli (Bologna)	High Energy Hadron Physics
(This lecture is still subject to confirmation)			
Wed 24 Nov 11 a.m. Conf Room R1	HEP Disc Group	Dr H Miettinen (RHEL)	New Results in Diffraction N* Production at High Energies.
Wed 24 Nov 1.15 p.m. Thurs 25 Nov 12.40 p.m. Lecture Theatre	Film Show	'Mytosis' a 20 mm colour film.	

The film booked for this week is not available so we are grateful to AERE for the loan of 'MYTOSIS' a film on the reproductive processes in cell division. It contains some excellent microphotography and is one gathers of interest to non-scientific staff as well as the scientific community.

Mon 29 Nov 11.30 a.m. Lecture Theatre	Nimrod Lecture Series	Dr G C Oades (RHEL) & Dr B Martin (UCL)	Report on Weekend KN Discussion Meeting
--	-----------------------	--	---

External Events

Mon 22 Nov 4.15 p.m. Queen Mary Coll London	Theor Phys Seminar	Prof E Leader (Westfield Coll)	A New Kinematic Variable for High Energy Scattering
Mon 22 Nov 5 p.m. Univ of Bristol	Phys & Geo-Phys Colloq	Mr D J Attfield (ICI Fibres Ltd Pontypool)	Industrial Property - Patents, Inventions and Trademarks
Tues 23 Nov 2.30 p.m. Daresbury Laboratory	Lecture Series	G M Lewis (Glasgow)	Total Photon Cross-sections
Tues 23 Nov 2.30 p.m. Nucl Phys Lab Oxford	Nucl. Phys Seminar	Dr D W Sandford	Experimental Studies of the Cosmic X-Ray Background
Wed 24 Nov 2.30 p.m. Univ of Reading	Dr F S Ham (G E Lab USA) will lecture on the John-Teller Effect. This, the first of three lectures will form a general introduction. The other lectures are on 1 and 8 December.		
Thurs 25 Nov 4.15 p.m. Clarendon Lab Oxford	Theor Phys Seminar	Prof L A Radicati	Physics in Magnetic Fields of the Order of 10^{12} Gauss
Thurs 25 Nov 8.30 p.m. Nucl Phys Lab Oxford	Seminar in Elemt Part Phys	Dr Prevost (Centre Etudes Nucleaires Saclay)	Partial Wave Analysis of $K^-p \rightarrow \pi^+\Sigma^*$ (1385) Between 0.4 and 1.1 GeV/c
Fri 26 Nov 2.30 p.m. Clarendon Lab Oxford	Elemt Part Theory Seminar	R Budny (Oxford)	Models for Deep Inelastic Neutrino-Nuclear Scattering
EVENT AT AERE			
Tues 23 Nov 2 p.m. Conf Room Bldg 8.9	Theor Phys Seminar	Prof W A Little (Stanford & Imp Coll)	The Prospects for High Temperature Superconductivity

Social News

RECREATIONAL SOCIETY DANCE The next dance will be on Friday 3 December, dancing to Billie Collins and her band, 8 p.m. - 1 a.m. Tickets 65p (we regret the increase but costs have risen) on sale soon, more details later.

CSMA OXFORD GROUP Starting at 8 p.m. on Friday 26 November we have a return match with the Oxford Ambulance in a General Knowledge Quiz at the Ambulance Club, Churchill Hospital, Oxford. Come along and support your Group - all welcome. Tickets for the Annual Group Dinner are now available.

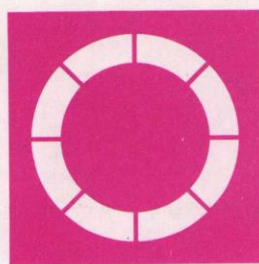
RUTHERFORD AND ATLAS FISHING CHAMPIONSHIP The above championship fished on the Thames at Newbridge on Saturday 13 November was won by Len Willson, with Les Proctor second and Bob Greenwood third; all three from Engineering Servs Dept. Twenty fishermen took part fishing from 8 a.m. until 12 noon. We had the usual hard luck stories, Tony Jeffries caught a large chub but it just was under the Thames size limit for chub (12"). Bill Rouse saw visions of the cup floating past his eyes after hooking a good fish, only to find he had caught a 1 3/4 lb pike, the trouble was that Pike were excluded from the weigh-in, still Bill enjoyed it later. Congratulations to Len Willson on winning the first ever Rutherford Fishing Championship, and thank you to all the fishermen who made it an enjoyable match.

It is proposed to hold a Christmas match on 11 December, water not decided on yet. Names to Peter Claske (232) or Bill Rouse (6223) as soon as possible.

RECORD SOCIETY Tuesday 23 November at 12.40 p.m. Lecture Theatre 'Doctor Zhivago' - played by the Metropolitan Pops Orchestra. Maurice Jarre's Academy Award winning music from the film with the orchestra conducted by Nicolai. It is of interest to note that superb scores composed for such films as "The Longest Day", "The Train", "The Collector" and "Lawrence of Arabia" were also by Maurice Jarre. With no film to distract here is a chance to hear and enjoy fully this very fine music.

CHRISTIAN FELLOWSHIP All welcome to a lunch time meeting in the R12 Conf Room 12.30 p.m. on Friday 26 November.

No 42/71
29 Nov/71



Rutherford Laboratory Bulletin

General News

RUTHERFORD LABORATORY LECTURE The next in this series of lectures is to be given by Dr J W Menter, FRS, Director of Research and Development, Tube Investments Ltd., on Thursday 3 December at 3.15 p.m. in the Lecture Theatre.

Dr Menter was appointed to the Science Research Council in 1967 and is a member of the Engineering Board. He is also President of Institute of Physics and the Physical Society 1970-72. His speciality is the microstructure of materials.

The title of Dr Menter's Lecture is "Physics at work in Industry" and he has kindly supplied the following summary:-

Examples of recent work within Tube Investments will illustrate the manner in which physics is used to support the engineering and metallurgical industries. The topics covered will include the development of electron probe instruments, ultrasonic testing equipment, including a novel Schlieren apparatus for visualising ultrasound, and various devices for on-line measurements of position and dimensions in manufacturing processes.

POPPY APPEAL The Local Collection, based on AERE Harwell, totalled £247-46. The total collected at the Rutherford Laboratory was £39-91½ which was £5-45 up on last years' total. Grateful thanks are conveyed from the Organisers to all who contributed so generously.

CONGRATULATIONS It is with pleasure that we are able to announce the following awards to two employees attending the North Berks College of Further Education.

Fredric Row, Mechanical Engineering Technicians Course Part II, the R W Amey Prize.
Terence Wickens, Mechanical Engineering Technicians Course Part I, the Pressed Steel Fisher Prize.

WORTHINGTON EUROPEAN TECHNICAL AWARD This award is made under the sponsorship of the Commission of the EEC by Worthington Pump International for previously unpublished papers on "pumps and pumping systems for liquids in single or multiphase flow". Further information from Training Section Building R20 Ext 266.

DISPLAY IN RI FOYER A display has been set up in the foyer of Building RI of photographs and text on ACIII- a prototype superconducting magnet, the manufacture of the ACIII magnet, and track sensitive techniques of the 1.5 metre Hydrogen Cryogenic Bubble Chamber. It will be on view until the end of next week.

FILM NOTICE Period 13 commences Monday 29 November 1971 Colour Strip - PURPLE for $\beta\gamma$ films.

NOTE:- There will be no issue of fast neutron packs for the next two periods due to the NIMROD Shutdown. Please retain your present fast neutron pack until the shutdown commences on 6 December and then return it in the usual way. Six monthly TLD change for people with surnames commencing W X Y Z.

OVERSEAS VISITS Dr T C Bacon to CERN 29 November - 2 December to attend collaboration meeting on CERN experiment T-208 and to attend TCC meeting.

Dr G Manning to CERN 30 November - 1 December to attend NRPC meeting.

Dr D B Thomas to CERN 30 November - 1 December for discussion on superconductivity with CERN personnel.

Dr L C W Hobbs and Mr H C Brooks to Grenoble France 30 November - 2 December for discussions on HFBR project.

Mr D A Gray and Mr N M King to CERN 1 - 2 December to attend meeting of the 300 GeV Machine Committee.

Dr G H Stafford to CERN 2 - 3 December to attend ECFA Plenary Meeting.

Internal Events

Mon 29 Nov 11.30 a.m. Lecture Theatre	Nimrod Lecture Series	Dr G C Oades (RHEL) and Dr B Martin (UCL)	Report on Weekend KN Discussion Meeting
Tues 30 Nov 11 a.m. Conf Rm RI	HEP Disc Group	Dr A Q Sarker (QMC)	Electron - Positron Annihilation
Wed 1 Dec 1.15 p.m. Thurs 2 Dec 12.40 p.m. Lecture Theatre	Film Show	Colour Sense, a 21 minute colour film from ICI	

Colour is a part of our everyday life but why are some combinations of colours pleasant and others not? How do we choose colour schemes for buildings and how do designers choose and use colour in decoration? This film shows for example, how both Ancient Greeks and today's designers have made use of optical illusions and colour schemes are shown being built up step by step. Other schemes are analysed showing the reasoning behind the colour designers thoughts.

Fri 3 Dec 11 a.m. Seminar in Mr C Balderson (RHEL) Making use of JCL
Conf Room R12 Computing

This lecture will consist of a series of hints and tips in setting up and using data sets of all types. Some time will also be given to discussing private procedures.

There is no lecture in the Nimrod Series on Monday 6 December; the next lecture will be on Thursday 9 December at 11.30 a.m. in the R1 Conference Room when Prof L Radicati (Pisa and Oxford) will speak on "Electromagnetic and Weak Interaction Symmetry Breaking".

Mon 6 Dec 2.15 p.m.	Nimrod Users	1 Report on latest Selection Panel Meeting - G Manning
Lecture Theatre	Meeting	2 Long Term Schedule - T G Walker
		3 A New Nimrod Injector - D A Gray

External Events

Mon 29 Nov 4.15 p.m. Queen Mary Coll London	Theor Phys Seminar	Prof M J Buckingham (Western Australia and Cambridge)	Thermodynamics of Critical Phenomena
Tues 30 Nov 2.30 p.m. Daresbury Laboratory	Lecture Series	N Booth (Oxford)	Polarisation in Backward Pion - Nucleon Scattering
Tues 30 Nov 2.30 p.m. Nucl Phys Lab Oxford	Nucl Phys Seminar	Prof R E Warner (Oberlin College and Oxford)	Three-Body Final States in the $^3\text{He} + d$ Reaction
Wed 1 Dec 2.30 p.m. Univ of Manchester	Theor Phys Seminar	Prof L A Radicati (Oxford and Pisa)	Symmetry Breaking in Electromagnetic and Weak Interactions
Wed 1 Dec 2.30 p.m. Univ of Reading	The second of a series of three lectures by Dr F S Ham, (G E Lab USA) on the Jahn-Teller Effect. Lecture II - Optical Investigations of Jahn-Teller Ions.		
Thurs 2 Dec 7.30 p.m. Bath Inst of Technology	Inst of Maths Lecture	Dr A T Richardson (Bristol) and Dr K G Major (Bath)	1 A New Approach to Continuum Mechanics 2 The Mathematics of Liquid Helium
Fri 3 Dec 2.30 p.m. Clarendon Lab Oxford	Elemt Part Theory Seminar	G Murtaza (Oxford)	Light Cone Commutators and Deep Inelastic Scattering
EVENT AT AERE Tues 30 Nov 2 p.m. Conf Room Bldg 8.9	Theor Phys Seminar	Prof L A Radicati (Pisa & Oxford)	Neutron Star Models

Social News

RECORD SOCIETY Tuesday 30 November 12.40 p.m. Lecture Theatre

Folk Songs and Ballads - William Clauson and his Guitar with John Gregory and his Group.

William Clauson one of the youngest of the American song travellers has been described as a Viking of song and one of the most colourful and versatile singers of his time. The songs in this Album are nearly all traditional, half British and half American.

CHRISTIAN FELLOWSHIP 12.30 p.m. Friday 3 December Conference Room R12. All welcome to a prayer meeting led by Frank Smith.

H F Norris Ext 484
Scientific Administration Group
Building R20

Rutherford Laboratory
26 11 71

pmr