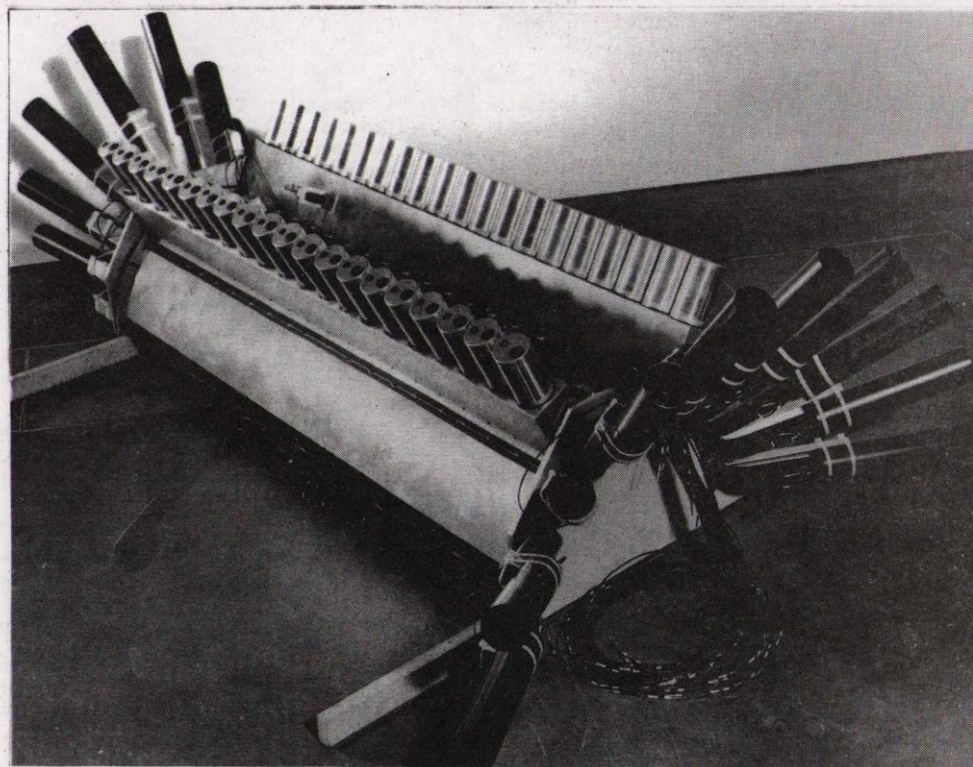




Rutherford
Laboratory

CYLINDRICAL HODOSCOPE FOR
NEW EXPERIMENT AT CERN

Photograph:- One half unit
during the final assembly
stage at the R.L.



The wide angle spectrometer at Intersection 2 of the ISR in CERN is being used by a CERN, Daresbury, Liverpool, Rutherford collaboration, in a new experiment to study high transverse momentum behaviour. To extend the information obtained from the experiment a new cylindrical hodoscope has been installed which covers a large solid angle around the intersection region.

The hodoscope, designed and built by the Nuclear Physics Apparatus Group of the Rutherford Laboratory, contains two layers of scintillation counters. The inner layer consists of 40 axial counters arranged in two cylinders butting together at the centre of the hodoscope. The outer layer consists of 160 pieces of curved scintillation material arranged as 80 quadrant polar counters. Both layers are mounted inside a double walled cylindrical housing made of aluminium alloy. For ease of mounting, the hodoscope was built as two hemi-cylindrical assemblies.

The hodoscope was installed at the ISR early in February and is now being commissioned by the CERN, Daresbury, Liverpool, Rutherford collaboration and by members of the CERN, Holland, Lancaster, Manchester collaboration who work in the same intersection region with a small angle spectrometer. They will also be using the information it provides.

RUTHERFORD LABORATORY LECTURE

The April 1965 issue of ORBIT, the one time Journal of the Rutherford Laboratory, gave the news that Peter Dunn who led the Nimrod RF Group until September 1963, had been appointed to the professorship of applied sciences at the University of Reading. It is therefore with especial pleasure that we welcome him back to give the next Rutherford Laboratory Lecture on 7 March. The title of Professor Dunn's talk is - 'Energy and the Future' and he has kindly supplied the following summary:-

The lecture commences with a resume of the present world energy usage and the total world energy resources. It will discuss the trends in future energy demand and in particular take into account the increasing demands of the developing countries. The lecture will then go on to consider the newer energy resources, the implications of an increased

Continued on page 4

INTERNAL EVENTS

NIMROD LECTURE SERIES

Monday 4 March
11.30
Lecture Theatre

Identifying Secondary Particles at SPS Energies: A New Approach (ISIS)

Dr W Allison/Oxford

HEP SEMINAR

Wednesday 6 March
11.00
Conference Room, Building R1

Progress in Vector Dominance

B Read/Daresbury

PROPOSAL LECTURE

Thursday 7 March
11.30
Lecture Theatre

Proposal No. 147: "A Proposal to Study Y^* Production from π^+p and K^+p Incident States at 6.7 GeV/C using the SLAC Hybrid Facility - Imperial College.

Talk by Dr Dornan/Imperial College

RUTHERFORD LABORATORY LECTURE

Thursday 7 March
15.15
Lecture Theatre

Energy and the Future (See page 1 for summary)

Professor P D Dunn/Reading University

NIMROD LECTURE SERIES

Monday 11 March
11.30
Lecture Theatre

Search for a Neutron Electric Dipole Moment

Professor N F Ramsey/Oxford and Harvard

PROPOSAL LECTURES

Monday 11 March
14.15 and 15.15
Lecture Theatre

Proposal No. 145: "A Proposal to Study Some Exclusive Reactions in πp and Kp Interactions in the Energy Range up to 80 GeV", Amsterdam/CERN/Munich/Oxford/RL.

Talk by Dr B Ratcliffe/RL

Proposal No. 146: "A Proposal to Search for Electrons and to Study π^0 and charged Particle Correlations at High Transverse Momentum on the ISR Using a Solenoid Magnet" - CERN/Columbia/Oxford

Talk by Dr T O White/Oxford

HEP SEMINAR

Wednesday 13 March
11.00
Conference Room, Building R1

The NAL Muon Spectrometer Experiment

T W Quirk/Oxford and NAL

TRADE DEMONSTRATION

Thursday 14 March
09.30 - 16.00
Conference Room, Building R12

Syston-Donner Ltd will be demonstrating electronic instrumentation. Items include Function Generators, Microwave and Frequency Counters, Pulse Generators, Digital Multimeters, Time Code Equipment and a Spectrum Analyser - the last three items in particular having some very new and interesting specifications.

SEMINAR IN COMPUTING

Friday 15 March
11.00
Conference Room, Building R12

Computing at the Lawrence Berkeley Laboratory

J A Baker/LBL

Dr Baker is the Director of Computing at LBL: he will describe the computing facilities they provide for High Energy Physics.

NIMROD LECTURE SERIES

Monday 18 March
11.30
Lecture Theatre

K^+p and pp Charge Exchange

Dr D Websdale/CERN and Imperial College

EXTERNAL EVENTS

OXFORD UNIVERSITY

ELEMENTARY PARTICLE PHYSICS SEMINAR/NP LAB - 14.30 hours
14 March: The Analysis of the Reactions, $\pi N \rightarrow \pi \pi N$ - Dr Cushmore/Oxford.

THEORETICAL PHYSICS SEMINAR/CLARENDON LAB - 16.15 hours
7 March: On the Hypothesis that the Schrodinger Equation is Exact - Dr J S Bell/CERN.
14 March: Electron Mobility in Argon Near the Critical Point - Dr A R Bishop.

NUCLEAR PHYSICS & NUCLEAR ASTROPHYSICS SEMINAR/NP LAB - 14.30 hours
11 March: Heavy Ion Reactions in Nuclear Astrophysics Processes - Dr T W Conlon/AERE.

LOW TEMPERATURE & SOLID STATE PHYSICS SEMINAR/CLARENDON LAB - 14.30 hours
7 March: Conduction in Non-crystalline Systems - Dr E A Davies/Cavendish Lab.

CAMBRIDGE UNIVERSITY

THEORETICAL PHYSICS SEMINARS/SEMINAR ROOM A, DAMTP - 15.00 hours
7 March: PCAC Applied to Electro production - N Dombey/Sussex.
14 March: A Field Theory Model for Fixed Angle Proton-Proton Scattering - I G Halliday/Imp. Coll.

QUEEN MARY COLLEGE

THEORETICAL PHYSICS SEMINARS - 16.15 hours
4 March: Band Theory for Random Metallic Alloys - Dr B L Gyorffy/Bristol.
11 March: Permanent Bound Quarks: New Solutions to all Field Equations - Prof G S Guralnik/Brown U & Imp. Coll.

BRISTOL UNIVERSITY

PHYSICS & GEOPHYSICS COLLOQUIA - 17.00 hours
11 March: Research into Back Pain - Dr M I V Jayson/Dept of Medicine, Bristol.
18 March: Crystallisation of a Biological Mush - Dr E D T Atkins/Bristol.

MANCHESTER UNIVERSITY

THEORETICAL PHYSICS SEMINARS - 14.30 hours
6 March: Review of Gauge Theories of Weak Interactions - Dr J C Taylor/Oxford.
13 March: Title to be announced - Prof R S Berry/Chicago & Oxford.

READING UNIVERSITY

APPLIED PHYSICAL SCIENCES COLLOQUIA - 16.30 hours
13 March: Electrical Control of Combustion Processes - Prof F J Weinberg/Imp. Coll.
PHYSICS COLLOQUIA - 17.00 hours
11 March: The Origin of the Difference Between Past & Future in Physics - Sir R Peierls/Oxford.
18 March: What is the Atomic Nucleus made of? - Prof D H Wilkinson/Oxford.

SOUTHAMPTON UNIVERSITY

THEORETICAL & HIGH ENERGY PHYSICS SEMINARS - 14.30 hours
8 March: Catastrophes in Physics - Dr B W Keck/Soton.
15 March: Two-Dimensional Solids & Superfluids - Prof D J Thouless/Birmingham.

ROYAL HOLLOWAY COLLEGE

HIGH ENERGY PHYSICS SEMINAR - 15.00 hours
12 March: Proton-Proton Scattering in the Range 1000-1500 GeV/c - Dr F D Gault/Durham.

DARESBUURY LABORATORY

DARESBUURY LECTURE SERIES - 14.00 hours
12 March: Measurement of the Charge Asymmetry in η Decay - M R Jane/RL.
THEORETICAL PHYSICS SEMINAR - 14.00 hours
18 March: Progress in Vector Dominance? - Dr B Read/Daresbury.

EVENTS AT HARWELL

THEORETICAL PHYSICS SEMINAR/CONF. RM. BLDG 8.9 - 14.00 hours
19 March: Black Holes and Quantisation - Prof J G Taylor/King's College London.
N.P. DIVISION COLLOQUIUM/CONF. RM. HANGAR 8 - 15.30 hours
14 March: Subject $\pi n p$ Capture - Dr T D Beynon/Birmingham.

RUTHERFORD LABORATORY BULLETIN

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Editor: H F NORRIS

Deadline
for
Insertions

GENERAL & SOCIAL NEWS

INTERNAL & EXTERNAL EVENTS

Tuesday 1600

Wednesday 1200

Room 42 Building R20
Rutherford Laboratory
Chilton Didcot Berks
Abingdon 1900 Ext 484

Summary continued

nuclear programme, and the future potential of solar energy and other renewable energy sources.

In most writing on the subject of energy, there is an implicit assumption that energy demand will continue to increase and that this increased demand should be met. This belief is questioned and it is suggested that our development goal should be directed towards a way of life which is conserving of energy and other resources, which makes maximum use of recycling, and which maximises the use of renewable resources. Such a policy should also take account of environmental and pollution issues.



On Wednesday last, 27 February, Don Bell said farewell to the Lab after 13 years during which time he had been concerned with various aspects of engineering work. Alex Goode, on behalf of his many friends and colleagues presented Don with a portable AM/FM Radio Cassette Recorder and a card containing about 140 signatures. Alex mentioned that Don was joining the prison service where he was sure the fear of redundancy would never arise. Rather than delve into past history, readers may be interested in the new job that Don will be tackling as from 1 March.

Under a new scheme, England and Wales is being split into three regions each under a Home Office Senior Production Training Officer who will be responsible for setting up and the operation of new training schemes to make prison industries more productive. Don will be in charge of the Northern Area and, as he says, he will be joining a growth industry! We are sure that everyone will join in wishing Don every possible success in what must be a unique and challenging job. Don has asked for the following message to be published:- "Thank you to all my friends and colleagues for a wonderful surprise presentation on the occasion of my moving. I am sorry not to have seen all

of you before leaving - I hope I do not meet you again, in my official capacity- Don Bell".

When talking to Don, he told your Editor that Frank Cullen who retired several years ago, is now in very much better health and has retired to a new bungalow in Anglesey - news which a lot of people will be glad to hear.

FILM BADGE NOTICE

Period 3 commenced Monday 25 February. Colour Strip - PURPLE for 8y films. Six monthly TLD change for people with surnames commencing IJKL. Please check that you are wearing the correct dosimeters and that all old ones are returned.

MISSING EQUIPMENT

Weston Clipper AC Volt-Ammeter, Model S248. Anyone with information on the present whereabouts of this item is asked to contact A Hipwell, R18 Electrical W/Shop Ext 573.

OVERSEAS VISITS

The Director, to CERN, 4-7 March, to attend meetings of the CERN Scientific Policy Committee and Committee of Council.
Mr P J Houzago, to ILL Grenoble, 4-7 March for discussions.
Dr J B Forsyth, to ILL Grenoble, 4-11 March to carry out approved neutron experiment.
Dr B H Meardon, to ILL Grenoble, 6-11 March to attend Discussion Meeting on Aluminium Alloys.

SOCIAL NEWS

CHRISTIAN FELLOWSHIP

8 March: All welcome at Bible Study on Paul's letter to the Ephesians, Ch.3, led by John Hogston, Building R35. The meeting is at 12.30 in the Conference Room, R12.

15 March: The Fellowship is helping to support a young missionary, Phillip Ridler who is working amongst the Icelandic people. A tape recording of how Phillip is progressing and the difficulties he is encountering will be heard at 12.30 in the Conference Room, R12.

RUTHERFORD SEVEN-A-SIDE SOCCER LEAGUE 1974

Owing to the number of teams, 2 Divisions will be run this year. Fixtures for next 2 weeks.

Tues. 5 March	Atlas v Apprentices	Tues. 12 March	R25 v G.O
Thurs. 7 March	Rovers v Admin	Weds. 13 March	RHG v Taylors
Fri. 8 March	Bldg 353 v Trans.	Thurs. 14 March	Nomands v R9

FOLK CLUB

The meeting on Friday 1 March has had to be cancelled.

TABLE TENNIS

News of the singles and doubles tournaments are being held over until the next issue.