



**Rutherford
Laboratory**

13-27 May 1974

**10
bulletin**

OLD 'ONE EYE' RETIRES

CYCLOPS ("ROUND EYE"), a word having several uses in Greek legend and history also known as 'one eye', as in Homer, the Cyclopes are one eyed cannibal giants. Our own CYCLOPS started life in 1965 and to those not familiar with this modern version it is a film measuring machine built around a high precision cathode ray tube. We are grateful to Alan Oxley for the following note on some of CYCLOPS achievements.

On 7 May the last CYCLOPS grid measurement for the K13C experiment was made, and the machine switched off. There may be some delayed remeasurements, but all new work will go on HPD's. From February to October last year all 880,000 events for K13C were measured, with a peak of over 45,000 one week. Since October some 250,000 events on difficult film or faulty in some way were remeasured, and 75 sets of grids measured.

Measurements in previous years included 400,000 events for a photoproduction experiment and 100,000 for an e-p scattering experiment by Glasgow/Sheffield Universities at Daresbury, and over 500,000 for the K13 experiment plus initial measurements on film from Oxford University of action potentials in nerve cells.

RUTHERFORD LABORATORY LECTURE

As mentioned in Bulletin 8 the next lecture in this series

is to be given by Dr G Manning, the Rutherford Laboratory's Deputy Director and Head of the High Energy Physics Division, at 15.15 on Thursday 23 May in the Lecture Theatre.

The title chosen by Dr Manning for his talk is "What's happening in High Energy Physics and is it exciting" and he has kindly supplied the following summary:-

An attempt will be made to explain our current understanding of the basic interactions of physics and what new understanding we are obtaining from high energy experiments. No prior knowledge will be assumed. Experts will be suffered providing they remain silent.

TRAGIC ACCIDENT NEAR DARESBURY

Many people at the Laboratory will be saddened to hear of

the death of Frank Snow on Friday 26 April. Frank, who was in his early forties, had worked at the Daresbury Laboratory since leaving the Rutherford Laboratory in 1965. Vacuum was of course his prime interest but he was also very interested in staff side matters and was mainly responsible for forming the Daresbury Branch of the IPCS and was its Chairman for 6 or 7 years. The accident occurred at the junction of the nearby dual carriage-way and three other members of the staff travelling with Frank were injured, one seriously; all these are however making a good recovery. We are sure that all his old colleagues and friends at the Rutherford Laboratory will join in sending our deepest sympathy to Frank's wife and three children.

BULLETIN NOTICE

The Editor will be on leave for two

weeks commencing Monday 13 May. Contributions for the Bulletin, should be sent to Room 42, R20 but telephone enquiries and Lecture Theatre bookings should be directed to Mr F Harden, Ext. 6114.

FILM BADGE NOTICE

It is Period 5, Colour Strip - BLUE for 8y films and neutron packs.

Please check that you are wearing the correct dosimeters and that all the old ones are returned. The next film issue is on Monday 20 May.

LOCAL SUGGESTIONS AWARDS

At a meeting of the Local Suggestions Awards Committee held on 3 April, the following awards were approved:-

Mr A Dunn	Admin	R59	£5
Mr R F Childs) Joint	Atlas Lab.		£200
Mr K C Moye) Award			
Mr C Johnson	Engineering	R7	£5
Mr N Martindale	Engineering	R18	£5
Mr T Morgan	Engineering	R18	£5
Mr H Webb	Engineering	R9	£5
Mr H Webb	Engineering	R9	£5
Mr W H Dormer	Nimrod	R2	£25
Mr B J Smith	Nimrod	R2	£45
Mr E G Starr	Nimrod	R3	£20
Mrs J A Coates	Rad. Prot.	R20	£20

We hope to report in the next Bulletin on the Joint Award of £200, the highest made to date in the new SRC Suggestions Awards Scheme.

SRC SUGGESTIONS SCHEME POSTER COMPETITION

This competition attracted 34 entries from staff at the Rutherford and Atlas Laboratories and 5 awards were made as follows

Mr B E Kingdon	Admin	£10
Mr A Grant	Nimrod	£10
Mr D Jones	HEP	2 awards of £5 each
Mr B J Smith	Nimrod	£5

The prize winning posters will now go forward to the co-ordinating committee for consideration for further awards as of course local awards winning posters from the other SRC Establishments will be included in this exercise.

LABORATORY FORMS

Revisions to Laboratory Forms have been made in the past and the following are the current editions:-

Despatch Instructions N476 (4/72)

Request for Transfer to Care and Custody N475 (9/67)

Earlier issues of the same forms are obsolete and should be discarded.

UNIVERSITY POSITIONS

The University of Wuppertal, Germany is building up a research group that will by 1975 comprise

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INTERNAL EVENTS,

NIMROD LECTURE SERIES

Monday 13 May
11.30
Lecture Theatre

New Results on Generalized Vector Dominance.

Dr D Schildknecht/DESY

APPLIED PHYSICS LECTURE

Monday 13 May
14.15
Lecture Theatre

Progress on the 15 foot Bubble Chamber at NAL.

Dr W Smart/National Accelerator Laboratory, USA

CHRISTIAN AID FILM SHOW

Wednesday 15 May
12.40
Lecture Theatre

A Trade Union of the Third World - a 35 minute film, written, narrated and produced by Jonathan Power.

There has always been poverty in the world. Men have always fought against it, but now the poverty of Latin America, Africa and Asia - the Third World - is part and parcel of our global economic system. And we are all unavoidably in it. Today the rising economic interests of the Third World directly effects our own economic interests, our own standard of living. WE have got what THEY want. The question is: how will this tension be resolved? By violence? That is possible. But this film explores an alternative. Just as impoverished workers of nineteenth century Europe organised collectively to battle for an improved standard of living and a greater share in economic decision making, so might the poor countries collectively organise today - a Trade Union of The Third World.

H.E.P SEMINAR

Thursday 16 May (note change
11.00 of day)
Lecture Theatre

Serious Ambiguities in Inelastic Phase Shift Analysis.

H Burkhardt/Birmingham

PROGRESS REPORT MEETING

Thursday 16 May
14.30
Lecture Theatre

Progress reports will be given on the following:-

1. Large Angle μ Production at the CERN I.S.R (Proposal 72 - Bristol/UCL/RL).
Report by *P H Sharp*
2. Differential Cross Sections $\pi^+ p \rightarrow \pi^+ n$, 0.6 - 3.5 GeV/c (Proposal 101 - RL Group C)
Report by *A G Clark*

SEMINAR IN COMPUTING

Friday 17 May
11.00
Conference Room, Building R12

General Meeting

Progress reports will be given on various aspects of C & A Division's work.

NIMROD LECTURE SERIES

Monday 20 May
11.30
Lecture Theatre

Why Study Decays of the $(K^0 \bar{K}^0)$ Pair-State?

Dr G V Dass/RL

ATLAS SEMINAR

Wednesday 22 May
10.30 - 17.00
Lecture Theatre

Cleaning of Computer Establishments - Brief summary of program follows:-

Morning Session		Afternoon Session	
10.30	Coffee	14.00	Basic Floor Maintenance
10.45	Opening Address, Dr J Howlett	15.00	Tea
10.55	Planned Action Cleaning	15.15	Carpet Care and Maintenance
11.50	Cleaning of Computer Establishments	16.15	Discussion on Seminar Papers and other matters of interest
13.00	LUNCH		

There will be plenty of room in the Lecture Theatre for members of staff wishing to attend any particular lecture - further details from the Editors.

HEP SEMINAR

Thursday 23 May (note change
11.00 of day)
Lecture Theatre

Improved Renormalisation Group Equations and Critical Phenomena.

A Love/Sussex

RUTHERFORD LABORATORY LECTURE

Thursday 23 May
15.15
Lecture Theatre

What's Happening in High Energy Physics, and is it Exciting.

Dr G Manning/RL

EXTERNAL EVENTS

ELEMENTARY PARTICLE PHYSICS SEMINAR, OXFORD - 1430 hrs
16 May: Prof R H Dalitz - e^+e^- Interactions at SPEAR.

COLLOQUIA AT CLARENDON LAB OXFORD - 1615 hrs
17 May: Prof D H Wilkinson/NP Dept - The β -Decay of Bound Nucleons.
24 May: Dr W Zawadzki/Paris-Semi-Relativity in Semi-conductors.

LOW TEMPERATURES & SOLID STATE PHYSICS SEMINAR - 1430 hrs
16 May: Dr C E Webb - Symposium on Dye Lasers.

DARESBUURY THEORETICAL PHYSICS SEMINARS - 1400 hrs
13 May: Prof S Brodsky/SLAC - Hadron Processes at Large Transverse Momentum.
20 May: Dr E Corrigan/Durham - Title to be announced.

SEMINARS AT QMC LONDON - 1615 hrs
13 May: Dr M F Sykes/King's - An Elementary Approach to Random Mixtures and Percolation Processes.
20 May: Prof D J Thouless/Birmingham - Two-Dimensional Solids and Superfluids.

COLLOQUIA AT READING UNIVERSITY - 1630 hrs
15 May: Richard Southall/Reading - Graphic-Arts Quality Character Displays on CRT's.
22 May: Prof P B Fellgett/Reading - Ambionic Sound.

PHYSICS & GEOPHYSICS COLLOQUIA AT BRISTOL U. - 1700 hrs
13 May: Jon Ogborn/Chelsea - Problems of 'Improvement' in University Physics Teaching.
20 May: Dr J W Matthews/IBM, N.Y. - Misfit Dislocations.

THEORETICAL & HEP SEMINARS AT SOUTHAMPTON - 1430 hrs
17 May: Dr A J Leggett/Sussex - The New Phases of He^3 .
24 May: Dr D J Wallace/Southampton - The Potential of the Renormalisation Group.

THEORETICAL PHYSICS SEMINARS, MANCHESTER U. - 1430 hrs
17 May: Prof H Frohlich/Salford - Vibrational and Dielectric Collective Phenomena in Biological Materials.
21 May: Dr M J Jamieson/Glasgow - Time Dependant Hartree-Fock Theory and the Random Phase Approximation.

THEORETICAL PHYSICS SEMINAR, SUSSEX U. - 1615 hrs
23 May: Dr G W Gibbons/Cambridge - The Current Situation with Respect to Weber's Gravitational Waves.

ATOMIC, LASER, PLASMA PHYSICS SEMINARS, SUSSEX - 1415 hrs
16 May: Dr S Alpert/UMIST - Laser Light Scattering from Macro-Molecules.
23 May: Prof A F Gibson/Essex - Germanium Components and Devices for use with CO_2 Lasers.

THEORETICAL PHYSICS SEMINARS, CONF.RM, BLDG 8.9, AERE - 1400 hrs
14 May: Prof J Meadows/Leicester - The Evolution of Planetary Atmospheres.
21 May: Dr J W White/Oxford - Physico-Chemical Aspects of Inelastic Neutron Scattering Spectroscopy.

NUCLEAR PHYSICS COLLOQUIA, CONF.RM, H8, AERE - 1530 hrs
16 May: Dr G Dearnaley/NP Div. - Use of Ion-Beams in Corrosion Studies.

NIMROD SCHEDULE

CYCLE 2 7.5.74 - 28.5.74

MACHINE PHYSICS

HIGH ENERGY PHYSICS

Team	Beam	Experiment	State
CERN/ORSAY/OXFORD	P81	Hadron-Proton Spin	Setting up
RUTHERFORD LABORATORY	$\pi 11$	Beam Measurements	Setting up
IMPERIAL COLLEGE/RL	$\pi 8A$	Experiments on Narrow Bosons X^0 (958) S^* and Cross-Section Measurements	Setting up
BRISTOL/RL	K15A	K^-p Differential Cross-Sections	Setting up
COUNTER GROUP B/ CAMBRIDGE UNIVERSITY	$\pi 12$	$\pi^-p \rightarrow K^0 \Lambda^0$ in the Range 1.4 - 2.0 GeV/c	Setting up
RUTHERFORD LABORATORY	$\pi 9$	Polarisation in $\pi^-p \rightarrow \pi^0 n, \eta n$	Setting up
BIRMINGHAM/SURREY/ RL	K17	Stopping Kaons	Setting up
OXFORD	P71	Chamber Tests	Setting up

RUTHERFORD LABORATORY BULLETIN

Published by the Scientific Administration Group

Editor: H F NORRIS

Deadline
for
Insertions

GENERAL & SOCIAL NEWS
Tuesday 1600

INTERNAL & EXTERNAL EVENTS
Wednesday 1200

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Rutherford Laboratory
Chilton Didcot Berks
Abingdon 1900 Ext 484

some ten senior staff members and about fifteen research fellows in experimental and High Energy Physics. Within the Theoretical Group they have the following open positions:-

One Full Professorship (H4), one Associate Professorship (A3) and two Research Fellowships (H2/H1).

Further details can be obtained from the Editor.

"FRED" For a man who has given so much in so many ways, and, one is absolutely certain, will continue to do so, it becomes very difficult to think of a suitable caption for a 'write up' on his retirement from the Laboratory at the end of April.

Jones C F Non-Tech IV, known to everyone as Fred, joined Harwell 17 years ago and after some 5 years came over to the Rutherford Laboratory where for the past 12 years he has worked for Joe Marsh in Technical records.

Fred who says "it has been a pleasure to come to work" is a man of many parts. He is rightly proud of his many achievements in First Aid in which he is a trained instructor. Shortly after joining Harwell he became a member of the First Aid team which won the UKAEA Championship. He has continued his First Aid work at the Rutherford Laboratory, has, and will continue to give First Aid instruction at Abingdon School and with local Scout Groups.

One hears more and more about handicapped people - Fred has given freely of his time in this field helping polio victims by teaching them to swim. By the way he also has a large garden! As regards First Aid for himself, he has gone from the age of 14 to 65 without ever having a day off sick - he doesn't count the odd motorcycle accident as sickness!

Turning to his work at the Lab, one quickly realises that he supplied a lot of the lubricant that kept things working smoothly, but his contribution to the work of the Nuclear Physics Apparatus Department can best be

assessed by the thought and Ingenuity put into some of those 'additional' presents; the 3' x 3' crossword which when completed, an overlay exposed the words 'HAPPY RETIREMENT FRED', the 'Chelsea' shirt and shorts with unmentionable captions and the large teaspoon - well - large - about 6' long, from the 'tea swindle'. His colleagues also gave Fred a handsome barometer which was presented by the Head of the Department - Joe Marsh.

Fred, everyone will join with us in wishing you a very happy retirement although it appears that retirement in your case really means more time to help others.

For a man who jokingly insisted on calling himself the 'office boy', one can only conclude by saying - what an 'office boy'!

OVERSEAS VISITS Mr D C Salter, to ILL Grenoble 13-17 May for technical liaison with staff.

Mr J H Foster and Mr E W Fitzharris, to the USA, 15 May - 7 June, to participate in Neon-Hydrogen tests on 12 ft chamber at ANL, to NAL for discussions on Neon-Helium separation and for discussions on experimental facilities at BNL.

Dr J Barlow and Dr B Franck, to CERN, 15-18 May, and Dr D J Crennet, to CERN 16-17 May, to attend HYDRA Application Group meeting.

Mr P J Bowles, to Philips, Eindhoven, Holland, 17-22 May for discussions with senior staff members.

Dr J B Forsyth, to ILL Grenoble, 20-25 May to liaise on progress with D3 installation.

Mr G E Simmonds, to CERN, 29-31 May for discussions on various services to building and in the 300 GeV Tunnel.

Dr C J Batty, to Czechoslovakia, 26 May - 1 June, to visit the Charles University and to attend Symposium on the Theory of Light Nuclei at Liblice.

SOCIAL NEWS

SRC SPORTS DAY Rutherford Lab Personnel wishing to take part in this year's Sports Day to be held at the Civil Service Sports Ground, Chiswick on Wednesday 19 June should contact the representative for their sport shown below.

Football - G Howard, Bldg R18 Ext 6115

Netball - Mrs M Stoker, Bldg R1 Ext 414 or Mrs J Page, Bldg R1 Ext 333

Cricket) - P Craske, Bldg R2 Ext 232

Chess) - N Ferguson, Bldg R2 Ext 438

Bowls - P Craske, Bldg R2 Ext 232

Tennis - P Craske, Bldg R2 Ext 232

Atlas Personnel should contact G Holt or R Brandwood Ext 6384/6388

Names must be in by 3 June at the latest. All staff must have permission from their supervisor before submitting name.

CHRISTIAN FELLOWSHIP May 17, David Heaven of the Ebenezer Church Didcot will be leading a Bible Study on

Ephesians Chapter 6. All welcome to come along, Conference Room R12 at 12.30.

24 May. John Hogstoh of Bldg R35 will be leading a Book Review at 12.30 in the R12 Conference Room. All welcome to come along.

SEVEN-A-SIDE SOCCER LEAGUE Fixtures for the two weeks beginning Monday 13 May -

13 May Trans	v C A	17 May Atlas	v R9
14 May R25	v Admin	21 May Trans	v G O
15 May Nomads	v R H G	23 May R25	v Bldg 353

LEAGUE TABLES

Division 1							
Teams	P	W	D	L	F	A	Pts
353	3	3	0	0	10	3	6
Rovers	5	2	2	1	11	8	6
Admin	2	1	1	0	4	2	3
R25	3	1	1	1	5	5	3
C A Div	2	0	1	1	3	4	1
Trans	2	0	1	1	2	3	1
G O	3	0	0	3	4	14	0

Division 2

Teams	P	W	D	L	F	A	Pts
Taylors	4	3	0	1	10	9	6
R9	4	2	1	1	11	6	5
Atlas	3	2	0	1	9	2	4
Nomads	4	2	0	2	4	7	4
Apprentices	4	1	1	2	8	8	3
R H G	3	0	0	3	5	15	0