Rutherford Laboratory

17-24 January 1972

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RUTHERFORD LABORATORY THEORETICAL PHYSICS MEETING 1972

Over two hundred high energy theorists from British Universities and elsewhere forgathered at the Laboratory last week for our annual theoretical physics meeting. As in former years, the programme comprised a number of review talks covering a selection of ongoing areas of research. Experiment, phenomenology and high theory were all represented.

For the former we had A N Diddens, bringing us the latest word on high energy experiments at Serpukhov and in the I S R. One continues to marvel at the rapid implementation and precision of the results obtained on the I S R. For phenomenology, we had H Satz on Multiparticle Production, H M Chan on Inclusive Reactions, G Shaw on Electromagnetic Phenomena and R P Worden on High Energy Amplitude Analysis, the latter, an area in which the local theory group has been very active and with considerable bearing on projected experiments. Pure theory was represented by A Salam in insperational vein on the possible role of gravity in particle physics, by Y Frishman on Light Cone Physics, and by S Mandelstam on Dual Resonance Models. The fusion of phenomenology and more fundamental speculation was beautifully illustrated in J C Polkinghornes talk on Deap Inelastic Scattering and the Proton Model.

What message will people be taking away from this year's meeting? For theorists, no new bandwaggon but the old ones rolling well. For experimentalists, polarization in inclusive experiments, polarization and selective R and A measurements in two-body reactions for amplitude analysis - polarization all the way!

JOHN WILKINS AWARDS 1970

At the Staff Meeting on Wednesday 12 January, the Director Dr G H Stafford presented the John Wilkins Awards for 1970.

The Award for the most promising Scientific Assistant in 1969-70 was made to Robert Warden Fraser. Robert who was educated at the Nautical College, Pangbourne joined the Computer Oporations Group at the Laboratory in April 1968. After only 20 months he was appointed Acting Deputy Shift Leader and one year later was promoted to A E O. Having arrived at the Laboratory with seven O-levels and two A-levels, Robert continued his studies at the Reading College of Technology where he was successfull in attaining the Higher National Certificate in Mathematics, Statistics and Computing in 1970.

The Award for the most promising Apprentice alternates year by year between the Student and Craft Apprentice. The Award for 1970 was for the Student Apprentice and was made to Richard Simon Wigley who had taken up a Rutherford Laboratory Apprenticeship in April 1966. When Richard joined the Laboratory he was already assured of a place at Selwyn College Cambridge having obtained eleven O-levels and four A-levels at Leeds Grammar School. Before he went up to Selwyn in October 1967 he received initial practical training in the AERE Apprentice Training School and in various mechanical workshops in the Rutherford Laboratory and at AERE. He also worked on a small development project in the Nimrod Design Group during the Long Vacation of 1969. Those eleven O-levels and four A-levels were signposts of things to come as Richard was awarded First Class Honours in the Mechanical Science Tripos in 1970. He returned to the Laboratory and worked as a Graduate Engineer in the Applied Physics Apparatus Group. In April 1971, Richard became the first ex Student Apprentice to be appointed as a Research Associate in the Laboratory.

We should like to offer our congratulations to both Award winners.

THE BRITISH INSTITUTE OF RADIOLOGY

The Institute is holding a meeting on Friday 21 January at the Reid-Knox Hall, Institute House 32 Welbeck Street London. After a short morning session the long afternoon session will be devoted to four papers on negative pion radiobiology and dosimetry based on experiments carried out on the π11 beam line at Nimrod. It is hoped to tell more about this work in a future article.

FILM BADGE NOTICE

It is Period 1. Colour Strip - ORANGE for βγ films. Next film issue, Monday 24 January.

INTERNAL EVENTS

SEMINAR IN COMPUTING
Friday 14 January
11.00
Conference Room R12

C & A Division General Meeting

Please note that this meeting is in the R12 Conference Room and not R1 as shown in last week's Bulletin.

NIMROD LECTURE SERIES
Monday 17 January
11.30
Lecture Theatre

Lambda Proton Total Cross-Sections.

Dr K Kleinknecht/CERN

HEP DISCUSSION GROUP
Wednesday 19 January
11.00
Conference Room Building R1

Inclusive Reactions for Beginners.

Chan Hong Mo/RHEL

FILM SHOW
Wednesday 19 January
13.15
Thursday 20 January
12.40
Lecture Theatre

Operation Pisces - a 17 minute colour film.

We are grateful to Miss Green of Ace Distributors Ltd (who have made several films for the Laboratory), for the loan of this weeks film. There is little one can write about this film, in fact, all that is known by the Editor is that it is about a one man submarine that can be launched from a boat; it is used to collect things from the sea-bed (probably cables); the under water photography is excellent and that it is quite exciting.

THEORETICAL PHYSICS SEMINAR
Thursday 20 January
14.00
Conference Room Building R1

E M Currents of Dual Hadrons and Applications to Photo-Hadronic Processes.

Professor S Matsuda/CERN

NEUTRON BEAMS MEETING
Friday 21 January
10.30 - 16.45
Lecture Theatre

Neutron Beams in Materials Science and Engineering.

The purpose of this meeting is to bring together users of neutron beams and materials scientists and engineers so that potentially relevant areas of application may be explored.

Attendance at this meeting is by invitation only

NIMROD LECTURE SERIES
Monday 24 January
11.30
Tuesday 25 January
11.30
Lecture Theatre

Part 1 Do Muons Interact anomalously with Hadrons?

Part 2 Longitudinal Mass and Proton-Proton Interactions at the ISR.

Professor S Barshay/Copenhagen

EXTERNAL EVENTS

PHYSICS COLLOQUIM
Monday 17 January
17.00
University of Reading

Photophysics of Eximers

Professor J B Birks/Manchester University

BRITISH COMPUTER SOCIETY - OXFORD BRANCH MEETING
Wednesday 19 January
20.15
Oxford University Mathematical Institute

The Concorde Major Fatigue Tests - A Real Time Monitoring System

The Concorde fatigue test requires the reproduction of the flight environment of a normal Concorde aircraft in all aspects which are considered to be of structural significance.

Typically, this involves the convective heating and cooling of the specimen airframe, together with pressurization and mechanical loading, all of which must be varied in a pre-determined way as the Concorde progresses through its "flight".

This is achieved by a configuration of three computers the largest of which (PDP 10) serves in a monitoring role.

The lecture describes the fail safe techniques employed overall to safeguard the specimen from accidental damage, and discusses some of the software problems which had to be overcome to meet the realtime demands of the monitoring function which were particularly severe.

INSTITUTE OF MECHANICAL ENGINEERS - READING BRANCH MEETING
Thursday 20 January
19.30
Faculty of Letters University of Reading

Explosive Forming and Coating

N M Read

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	Tuesday 1600	Wednesday 1200	Abingdon 1900 Ext 484

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RESTAURANT NOTICE

On Friday 21 January there will be a Symposium at the Laboratory on the use of Nuetron Beams in Materials Science and Engineering. Up to 100 places will be set aside in the Restaurant for the use of guests. Normal lunch service will start at 11.30 a.m. but space will be limited and staff are advised to avoid the busy period (12 noon - 12.45 p.m.) if at all possible.

OVERSEAS VISITS

Mr P Trowbridge and Mr D Booker to the U S A on 15 January, for launch range activities on the S68 experiment. Return date 6 March is provisional dependent on launch date.

Mr D A Gray, Dr D B Thomas, Mr N M King and Mr M Snowden, to Karlsruhe, Germany 16 - 18 January to attend meeting of GESSS (Group for Eruopean Superconducting Synchrotron Studies). Dr G E Kalmus, Dr R L Sekuling and Dr T C Bacon to CERN 18 - 21 January, for discussions on CERN experiment T208 and to attend TCC Meeting.

SOCIAL NEWS

RECORD SOCIETY

Tuesday 18 January at 12.40 p.m. Lecture Theatre

Ray McVay and his Orchestra

A complete change this week with Ray McVay and his Orchestra playing a selection of hit melodies from the very popular T V series - "Come Dancing"

Next week is reserved for all those lovers of brass band music.

CHRISTIAN FELLOWSHIP

All welcome to a Bible Study on the second book of Corinthians, Chapter 2 led by D Ness-Wilson.

The meeting commences at 12.30 p.m. on Friday 21 January in the R12 Conference Room.

HORTICULTURAL SOCIETY A G M

The Annual General Meeting of the AERE Horticultural Society will be held at 12.30 pm on Tuesday 25 January in the Television Room of the Social Club.

All members are asked to attend if at all possible as the Society is in need of more support both in its membership and the committee. In particular nominations are requested for a new Secretary and Chairman.