

Rutherford Laboratory Bulletin

No. 17/66
2 May 66

General News

SUMMER SCHOOL The Oxford University Computing Laboratory in association with Delegacy for Extra-mural Studies have announced details of a Summer School on Computing Methods for Scientists and Engineers. It will be held at the New Mathematical Institute 24-29 St. Giles', Oxford, from 25-30 July 1966. The fee is £15, and application should be made as soon as possible and in any case not later than 31 May. Further information may be obtained from Mrs. S.A. Fones, Personnel Branch, Bldg R.20, Ext 585.

PRESIDENTIAL ADDRESS. The Institute of Physics and the Physical Society have announced that the Presidential Address this year will be delivered by Sir Gordon Sutherland, F. Inst. P., FRS. His subject will be - "The Organisation and Financing of Research both Nationally and Internationally". Tuesday, 3 May at 4 p.m. at the Royal Aeronautical Society, 4 Hamilton Place, London W.1. Applications to attend should be made to The Meetings Officer, The Inst. of Physics.

OVERSEAS VISIT. Dr. L.C.W. Hobbis, to CERN 1-4 May to attend the ECFA Working Group No.2 Meeting and to have discussions.

Mr. E.W. Kendall, Mr. I.H. Payne and Mr. J.K.M. Gill, to Grenoble and CERN 2-5 May for various discussions

Machine Schedules

P.L.A.

| Date | Team | Experiment |
|---------|---|--|
| 1-7 May | Queens Univ. Belfast and Westfield College | Proton Induced Reactions on Mg ²⁶ |
| 8 May | RHEL & QMC | Counter Collaborations |

Internal Events

| | | | |
|---|------------------------------|---|---|
| Mon, 2 May 11.15 a.m. Lecture Theatre | Nimrod Lecture Series | Dr. P. Stein (Frascati Lab.) | Electro-magnetic Form Factors of the Neutron |
| Wed, 4 May 12.40 p.m. Thurs 5 May 1.15 p.m. Lecture Theatre | | Film | The Gardens of Britian - a 40 min, colour film |
| Wed, 4 May 3.30 p.m. Lecture Theatre | Popular Lecture Series | New Techniques for Spark Chambers (a) "Wire Chambers" by Dr. T.G. Walker (b) "Vidicon Recording Systems" by Dr. P.E. Osmon (Westfield College) | |
| Thurs, 5 May 10.30 a.m. Lecture Theatre | Special Lecture | Dr. H. Brechna (Stanford Linear Accelerator Centre) | The Superconducting Magnet Programme at Stanford |

Owing to the above special lecture, the next Applied Physics Lecture has been postponed but the series will be continued next week.

| | | | |
|---|-----------------------------|-------------------------|--|
| Mon, 9 May 11.15 a.m. Lecture Theatre | Nimrod Lecture Series | Dr. B. Levrat (CERN) | Search for new Resonances by a Missing Mass Experiment at CERN |
|---|-----------------------------|-------------------------|--|

External Events

| | | | |
|--|-----------------------------|------------------------------|---|
| Tues, 3 May, 2.30 p.m. 21 Banbury Rd, Oxford | Nuclear Phys. Seminar | Dr. J. Hardy Oxford | Report on the Tallahassee Isotopic Spin Conference |
| Thurs, 5 May 4.45 p.m. Univ. of Bristol | Phys. Colloq. | Dr. D. Sciama (Cambridge) | "Qausars" |

A.E.R.E.

| | | | |
|--|---------------------------------------|-------------------------------|--|
| Thurs, 5 May 2 p.m. Conf. Rm. Bldg 8.9 | Joint Applied Maths Grp Seminar | Dr. D.E. Williams (R.A.E.) | The Algebraic Eigenvalue Problems and some Applications |
|--|---------------------------------------|-------------------------------|--|

Social News

CHRISTIAN FELLOWSHIP. The next Bible Study meeting on the Epistle to Titus will be led by Mr. J.L. Thomas of the Nimrod General Physics Group, on Thursday 5 May, at 12.30 p.m. in the P.L.A. Conf. Room, R.12. All are welcome. Further details from B.E. Kingdon, R.20 Ext 6297.

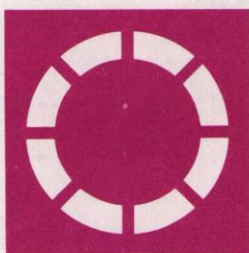
RECORD PROGRAMME. Tuesday, 3 May, 12.30 p.m. Lecture Theatre

Selections from "La Boheme" by Puccini, conducted by Sir Thomas Beecham.

La Boheme is probably the most instantly captivating of not only Puccini's works but also of all operas. It is set in the Latin Quarter of Paris a hundred and twenty years or so ago - the Paris of Balzac. The music is well known and in this brief note it is sufficient to mention the name of just one of the characters, Mimi, whose part in this recording is sung by Victoria de Los Angeles.

Rutherford Laboratory
29.4.66.

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



Rutherford Laboratory Bulletin

No.18/66
9. May 66

General News

VISITS. A party of Sixth Form students from the Commonweal Senior High School, Swindon, will visit the Rutherford Laboratory during the morning of Tuesday, 10 May. They will go to the Atlas Laboratory after lunch.

About 30 members of the Physical Society, Sir John Cass College, will visit the Laboratory on Saturday 14 May.

OVERSEAS VISITS. Mr. W. Walkinshaw and Mr. H. Hurst will go to CERN (10-12 May and 10-11 May respectively) for discussions.

Machine Schedules

P.L.A.

| <u>Date</u> | <u>Team</u> | <u>Experiment</u> |
|-------------|---------------------|---|
| 9-11 May | | Maintenance |
| 12 May | Accelerator Physics | Beam Emittance Tests |
| 13-16 May | Oxford Univ. | Studies of Isobaric Analogue States using (p,t) and (p, He ³) |

Internal Events

| | | | |
|---|-----------------------------|-----------------------------|--|
| Mon, 9 May 11.15 a.m. Lecture Theatre | Nimrod Lecture Series | Dr. B. Levrat (C.E.R.N.) | Search for new Resonances by a Missing Mass Experiment at CERN |
| Wed, 11 May, 12.40 p.m. Thurs, 12 May, 1.15 p.m. Lecture Theatre. | | Film | Coventry Cathedral - a 40 min colour film |

This is the authoritative record of the construction of the new Coventry Cathedral. The film shows progress of construction from earthmoving in 1955 to completion seven years later. This will be the last film to be shown in the present series. It is hoped to commence a new series in the autumn. Any suggestions for future programmes would be welcomed and should be sent to H.F. Norris, Bldg R.20.

| | | | |
|--|------------------------------|----------------------------------|--|
| Thurs, 12 May, 3.30 p.m. Lecture Theatre | Applied Physics Series | Mr. J.F. MacEwen (R.H.E.L.) | Cathode Ray Tube Flying Spot Digitizers |
| Mon. 16 May, 11.15 a.m. Lecture Theatre | Nimrod Lecture Series | Mr. N. Papastamatiou (Oxford) | Experimental results on current algebras. |

SPECIAL ANNOUNCEMENT

On Wednesday, 18th May, the Vacuum Physics Group of the Institute of Physics and the Physical Society will hold a meeting at the Rutherford Laboratory on SPACE CHARGE HIGH VACUUM GAUGES. Visiting members of the Institute will arrive between 10.00 and 10.30 a.m. and the programme will be as follows:

| | | |
|-----------------|-----------------------|--|
| Lecture Theatre | 10.30 a.m. | The physics of space charge vacuum gauges - Dr. H.H. Atkinson (Rutherford Laboratory) |
| | 11.30 a.m. | Coffee |
| | 12 noon | The virtual cathode ionization gauge - Mr. O. Lloyd (C.E.G.B., Marchwood) |
| | 1.00 p.m. | Lunch (waitress service - charge 6/6d per member) |
| | 2.00 p.m. - 4.00 p.m. | Tour of the Laboratory. |

Laboratory staff, and university visitors working at the Laboratory, who wish to attend the morning lectures should notify Mr. R.C. Pepperell, Bldg R.20 (Ext 6286) and say whether they will remain with the party for lunch.

*Tape?
check Bob.*

External Events

| | | | |
|---|-----------------------------------|---|---|
| Fri, 13 May 4.15 p.m. Lindenmann Theatre, Clarendon Lab. | Clarendon Lab. Colloq. | Prof. M. Gell-Mann (Cal. Inst. of Tech) | Elementary Particles |
| A.E.R.E. | | | |
| Thurs, 12 May, 2.00 p.m. Conf. Rm. B. 8.9 | Joint Appd Maths Gp Seminar | Dr. P. Poole (Culham) | On-line computing at Culham |
| ATLAS LABORATORY | | | |
| Mon, 9 May 2.30 p.m. Conf. Rm | Talk | Dr. Calvin C. Elgot IBM Research, New York (at present Univ. of Paris) | Abstract algorithms and diagram closure. |
| Mon, 16 May 2.30 p.m. Conf. Rm. | Talk | Prof. John C. Shepherdson (Bristol) | Mechanical proof procedures. |

Social News

DARTS TOURNAMENT The date - 10 June, Time - 7.30 p.m. Place - Coffee Lounge R.22
More entries are still required especially from the ladies. Several Ladies teams have
already promised to compete and if 2 or 3 more are forthcoming a special Ladies Cup
will be awarded. The closing date is 27 May, and the fee is 5/- per person, i.e. £1
per team. If you wish to enter a team contact any of the following who will be very
pleased to take your money; Brian Goodenough, Ron Hazell, John Short, Bernard Keen
or Eric Kirby.

RECORD PROGRAMME. Tuesday, 10 May, 12.30 p.m. in the Lecture Theatre:

"Spring Symphony" by Benjamin Britten (Stereo)

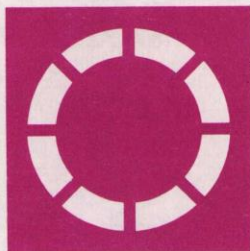
This interesting and colourful work, mainly based on early English poems, portrays
the awakening of life in the countryside at Spring time. The scoring is for soloists,
chorus and large orchestra, including a number of unusual instruments, and in the final
chorus a choir of children's voices is heard singing the ancient canon "Sumer is i-cumen
in" against the massive background of Britten's own music. In this recording the
soloists include Peter Pears, and the work is directed by the composer.

CHRISTIAN FELLOWSHIP. The next meeting will be on Thursday, 12 May at 12.30 p.m. in
the P.L.A. Conference Room R.12, when the Rev. John Johnson of Headington Baptist Church
will speak on "The Grace of God - How to get into it?" All are welcome at any of the
Fellowship meetings. Further details are available from B.E. Kingdon R.20 Ext 6297.

Rutherford Laboratory

6.5.66.

R.C. Pepperell Ext 6287
Scientific Admin Group
Building R.20



Rutherford Laboratory Bulletin

No.19/66
16 May 66

General News

OPEN DAYS, The Rutherford Laboratory will be open to visitors on the following days:

- Thursday 19 May. Morning: Press visit
Afternoon: invited guests from universities and industry
- Friday 20 May. Party of S.R.C. staff; also a party from the Post Graduate Education Centre, High Voltage Technology Course.
- Saturday 21 May. 2.00 - 5.30 p.m., staff and university visitors, their families and friends.

NIMROD SHUT DOWN. Nimrod will be shut down for three weeks from Monday, 16 May.

OVERSEAS VISITS. Messrs V.C. Cloke, A.J.K. Lubbock, B. Boardman, F.S. Gilbert, E. Hartley and C.G. Bonfield, to CERN 17-20 May, to see the CERN P.S. and discuss operational and technical problems.

Machine Schedules

P.L.A.

| Date | Team | Experiment |
|-----------|---|--|
| 16 May | Oxford Univ. | Studies of Isobaric Analogue States using (p,t) and (p,He ³) |
| 17-21 May | Shut down for Maintenance and Open Days | |
| 22 May | RHEL & QMC (2) | Neutron Spectra Measured by Time of Flight Method. |

Internal Events

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|---|-------------------------------------|---|---|
| Mon, 16 May 11.15 a.m. Lecture Theatre | Nimrod Lecture Series | Mr. N. Papastamatiou (Oxford) | Experimental Results on Current Algebras |
| Mon, 16 May 2.15 p.m. Lecture Theatre | Nimrod Proposal Lecture | Dr. J.D. Dowell (Birmingham Univ.) | Proposal to Study K-p Elastic Scattering in the Momentum Range, 450-850 MeV/c |
| Wed, 18 May 10.30 a.m. Lecture Theatre | Inst. of Phys. and Phys. Soc. | Meeting of the Vacuum Physics Group (see previous bulletin for full details) | |
| Mon, 23 May 11.15 a.m., Lecture Theatre | Nimrod Lecture Series | Dr. D. Edwards (Liverpool) | Kaon Physics |

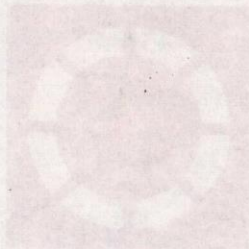
External Events

Tues, 17 May, 11.30 a.m., Electrical Engineering Dept, Room 406 Imperial College London
S.W.7 Seminar in Automatic Control - "Using the 7090 for On-line Control" by Mr. J.
Cunningham (Control Section)

Exhibition: 23-28 May, Olympia, The International Instruments, Electronic and Automation
Exhibition. A limited number of tickets will be available shortly from H. Norris R.20, 484

Atlas Lab

| | | | |
|---|---------------------------------------|--|--|
| Mon, 16 May, 2.30 p.m. Atlas Lab. Conf. Rm. A.E.R.E. | Talk | John C. Shepherdson (Prof. of Pure Mathematics Univ. of Bristol) | Mechanical Proof Procedures |
| Thurs, 19 May 2 p.m. Conf. Rm Bldg 8.9 | Joint Applied Maths Grp Seminar | Mr. T.H. Gossling (Cambridge) | Some Uses of an on-line Computer in Molecular Biology |



Thurs, 19 May
3.30 p.m. Conf.
Rm. H8

Nuclear
Physics
Div. Colloq

Dr. A. Moat
(A.W.R.E.)

Nuclear Explosions as a Source
of Neutrons for Time of Flight
work

Social News

RECORD PROGRAMME. Tuesday, 17 May, 12.30 p.m. Lecture Theatre

"Jazz at the Concertgebouw Amsterdam", with the Dutch Swing College Band
featuring Neva Raphaello as vocalist.

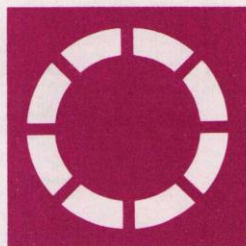
Recorded on 2 April 1958 to celebrate the tenth anniversary of the band and including
such classics as "South Rampart Street Parade" and "When you're smiling", this is a
"must" for Dixieland fans.

Christian Fellowship. In place of the usual Bible Study, our next meeting will consist
of a talk on "A Proposed New Oxford Hostel for Overseas Students", given by Dr. Timothy
Hall, Nimrod General Physics Group, at 12.30 p.m. on Thursday, 19 May, in the P.L.A.
Conference Room R.12. All are welcome. Further details from B.E. Kingdon, Bldg R.20
Ext 6297.

Rutherford Laboratory

13 May 66

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



Rutherford Laboratory Bulletin

No.20/66
23 May 66

General News

OVERSEAS VISITS The Director and Dr. L.C.W. Hobbs to CERN 22-23 May and 22-24 May respectively to attend a meeting of the European Committee for future Accelerators at CERN.

Dr. N.D. West, to Saclay 25-26 May for discussions

Mr. P. Bowles, to CERN 26-27 May for discussions.

Machine Schedules

P.L.A.

| <u>Date</u> | <u>Team</u> | <u>Experiment</u> |
|-----------------|---------------|---|
| 23-26 May | RHEL & QMC(2) | Neutron Spectra Measured by Time of Flight Method |
| 27 May - 2 June | Man. Univ. | Li ⁶ Cross-section Measurements |

Internal Events

| | | | |
|---|------------------------------|--|---|
| Mon, 23 May 11.15 a.m. Lecture Theatre | Nimrod Lecture Series | Dr. D. Edwards (Liverpool) | Kaon Physics |
| Wed, 25 May 2 p.m. Conf Rm Bldg R.12 | PLA Seminar | Dr. B.E.F. Macefield (Oxford Univ.) | The Oxford On-line Computer System |
| Thurs 26 May, 3.30 p.m. Lecture Theatre | Applied Physics Series | Dr. R.H. Thomas | The Berkeley 200 GeV Accelerator Study |

External Events

| | | | |
|--|-----------------------------------|------------------------------|---|
| A.E.R.E. | | | |
| Thurs 26 May 2 p.m. Conf Rm. Bldg 8.9. | Joint Applied Maths Seminar | Dr. K. Wright (Newcastle) | Chebyshev Collocation Methods for Ordinary Differential Equations; Some Extensions on Practical Uses |
| Thurs 26 May, 3.30 p.m. Conf. Rm. H.8 | Nuclear Physics Div Colloq. | Dr. R.J.N. Phillips | The Nucleon-Anti-nucleon potential |

Social News

RECREATIONAL SOCIETY. Application forms for membership of the Rutherford and Atlas Laboratory Recreational Society are now available from building messengers or direct from T. Harper, Bldg R.25 Ext 6116. The form circulated last year and completed by various people was only intended to give an indication of support for the Society. The new form should therefore be completed by all interested and returned to T. Harper.

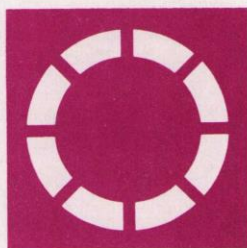
RECORD SOCIETY. Tuesday, 24 May, 12.30 p.m., Lecture Theatre.

Liszt : Piano Concerto No.1 and Hungarian Fantasia: George Cziffra

CHRISTIAN FELLOWSHIP. Prayer Meeting, 12.30 p.m. Thurs, 26 May, PLA Conf. Room R.12.

Rutherford Laboratory
20th May, 1966

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



Rutherford Laboratory Bulletin

No. 21/66
30 May 66

General News

RESEARCH GROUP WELFARE FUND - This fund was founded in 1951 by Sir John Cockcroft. Its object is to assist any employee of the U.K.A.E.A. Research Group in times of domestic distress or when there is need for temporary financial help, by the provision of grants of money or interest-free loans. Employees of the Rutherford and Atlas Laboratories are eligible to participate. More details about the Fund may be obtained from the Welfare Officer in Building R.50. The extent of help the Fund can give is governed by its income from voluntary contributions.

Contributions are made by deductions from pay: in units of 2d a week for weekly-paid and 1/- a month for salaried employees or multiples of these units. Forms to authorise deductions from pay are obtainable from the Welfare Office R.50, the Cash Office R.20 and Personnel Group R.20.

MISSING EQUIPMENT. The following items of equipment have been reported missing:

Avometer Model 8 - Ser. No. 96603-C-959 (it has a PLA Nuclear Physics Label, and "P.D. Wroath" written in yellow paint on the side).

Will anyone with information on this item please contact Mr. P.D. Wroath, Bldg R.35, Ext 6606.

"Kali" photographic gadget bag, black leather with red corduroy lined interior. The bag contains expensive setting-up tools for Hewlett Packard equipment. Will anyone with information on the present whereabouts of this item, please contact Mr. G. Howard, R.18, Ext 6615.

OVERSEAS VISITS. Dr. P.F. Smith to the USA 30 May - 10 June for discussions relating to superconducting magnets at various laboratories.

Mr. M.N. Wilson and Mr. B.F. Colyer to the USA 30 May - 19 June where they will accompany Dr. Smith on his tour of various laboratories, after which they will attend the Cryogenic Engineering Conference, 13-15 June, and the Symposium on Liquid Helium Technology 16-18 June, both being held at Boulder, Colorado.

Mr. E.C. Sedman, to CERN, 1-4 June, for discussions on Bubble Chamber Programmes.

EXTERNAL COURSE. The Borough Polytechnic, London, S.E.1 have announced the following course:

"Digital Circuit Techniques", a one week course of lectures, 20-24 June, 9.30 a.m.-3.30 p.m. daily. The fee for the course is £7 7s 0d.

Further details may be obtained from Mrs. S.A. Fones, Personnel Branch, Bldg R.20 Ext 585.

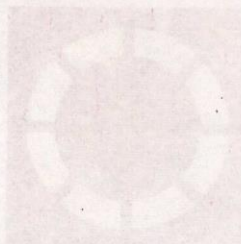
Machine Schedules

P.L.A.

| <u>Date</u> | <u>Team</u> | <u>Experiment</u> |
|--------------------|---------------|--|
| 30 May - 2 June | Man. Univ. | Li ⁶ Cross-section Measurements |
| 3 June | RHEL Chemists | Isomer Ratio Experiment |
| 4 June | | Accelerator Physics |
| 5-8 June | | Maintenance |

Internal Events

| | | | |
|---|------------------------------|--------------------------------|--|
| Wed, 1 June 3.30 p.m. Lecture Theatre | Popular Lecture Series | Dr. M. Jane (RHEL) | The Search for the decay of the ω^0 meson into an electron- positron pair (K2 Experiment) |
| Thurs, 2 June 3.30 p.m. Lecture Theatre | Applied Physics Series | Dr. R. Taylor | Computer Developments at the Rutherford Laboratory |
| Mon, 6 June 11.15 a.m. Lecture Theatre | Nimrod Lecture Series | Dr. P. Sonderegger (Saclay) | The π^-p Charge Exchange Reaction at High Energies |



External Events

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|---|-----------------------------------|-----------------------------------|---|
| Tues, 31 May, 2.30 p.m. 21 Banbury Rd, Oxford | Nuclear Phys. Seminar | Dr. F. Ashton (Durham Univ.) | Cosmic Ray Quark Experiments |
| Mon, 6 June, 4.30 p.m., UCL London. | Astrophysics Seminar | Mr. J.A. Dawe (Astronomy Dept) | Atmosphere of Late Type Stars |
| A.E.R.E. | | | |
| Thurs, 2 June 2 p.m., Conf. Rm. Bldg 8.9. | Joint Applied Maths Seminar | Mr. R.C.F. McLatchie | Reducing Matrices to a Triangular Form by Jacobi Methods. |

Social News

DARTS TOURNAMENT. Now is your last chance to enter for the tournament which will take place at 7.30 p.m., 10 June, Coffee Lounge R.22. More entries would be welcomed, especially from the Ladies. Several ladies teams have already promised to compete and if 2 or 3 more teams are forthcoming a special Ladies Cup will be awarded. The closing date is Friday, 27 May, and the fee is 5/- per person, i.e. £1 per team. If you wish to enter a team, contact any of the following immediately: Brian Goodenough, Ron Hazell, John Short, Bernard Keen or Eric Kirby.

CHRISTIAN FELLOWSHIP. Bible Study meeting on the Epistle to Titus, Thursday, 2 June at 12.30 p.m. P.L.A. Conf. Rm, R.12. Further details from B.E. Kingdon, R.20 Ext 6297.

Rutherford Laboratory
27 May 66

H.F. Norris Ext 484
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