

Science Research Council
Rutherford Laboratory
Chilton, Didcot, Oxfordshire
OX11 0QX
Telephone Abingdon 21900
Telegrams Rutherford Abingdon
Telex 83159



**WELCOME
TO RUTHERFORD
LABORATORY**



THE ROLE OF THE RUTHERFORD LABORATORY

The Rutherford Laboratory promotes university research and development work by providing facilities which are beyond the means of individual universities.

As well as offering its own extensive resources, the Laboratory provides access to important facilities at the other research centres in the UK and overseas. This results in a significant level of co-operation and collaboration in a wide range of projects at both national and international level.

Set up in 1957 as the first establishment of the National Institute for Research in Nuclear Science, the Laboratory became part of the Science Research Council in 1965.

The Laboratory has from its early days played an important part in co-ordinating the UK particle physics research effort in the use of high energy particle accelerators.

This activity over the years has been extended into other areas of science and engineering where the experience of the Laboratory in supporting particle physics research has provided a basis for establishing similar services to university research communities in other disciplines. The Laboratory is at present actively involved in directly supporting and providing facilities for research in particle physics, neutron beam science, the physics of laser produced plasma, computing and advanced engineering.

LABORATORY ORGANISATION

The Laboratory is organised on a divisional basis. Although the functions of each Division are shown separately, there is a large amount of liaison and shared work on common projects.

Director: **G H Stafford, CBE, FRS**
Deputy Director: **G Manning**

Administration Division

General and administrative services for the Laboratory as a whole, for visiting scientists and for the UK participation in research programmes overseas. Laboratory health and safety services.

Division Head and Laboratory
Secretary: **J M Valentine**

Atlas Computing Division

Computer applications and the provision of interactive computing facilities for universities and other establishments.

Division Head: **F R A Hoggood**

Computing and Automation Division

Operation of the Laboratory's central computers together with all the services and peripheral equipment involved in the processing of experimental data, including the provision and maintenance of telecommunications links between universities and other research centres and the Laboratory. Research and development work in computing and related techniques.

Division Head: **W Walkinshaw, OBE**

Engineering and Building Works Division

Provision of electrical, mechanical, building and environmental services. The Division includes the Council Works Unit which caters for other SRC establishments as well as the Laboratory.

Division Head: **H C Brooks**



ACTIVITIES OF THE LABORATORY

High Energy Physics Division
Experiments in particle physics and nuclear physics in collaboration with university groups. Support for teams of scientists from the UK and abroad, and supervision of UK involvement in the CERN and DESY research programmes.

Division Head: **J J Thresher**

Instrumentation Division

Design and manufacture of special physics apparatus and electronics for use by experimental teams. Control of central workshops and outside manufacture. Support for energy research.

Division Head: **D A Gray**

Laser Division

Experimental and theoretical research in laser-plasma interactions and laser compression in collaboration with university groups. Development of high-power laser systems.

Division Head: **A F Gibson, FRS**

Neutron Beam Research Unit

Support for neutron scattering research by universities using reactors and the electron linac at Harwell and the reactor at the Institut Laue-Langevin, Grenoble. Participation in experiments and the development of instruments and techniques. Preparation for exploitation of the Spallation Neutron Source.

Head of Unit: **L C W Hobbis**

Spallation Neutron Source Division

Development, construction and installation of the Spallation Neutron Source.

Division Head and Laboratory Chief
Engineer: **R G Russell**
Head of SNS Project: **G Manning**

Technology Division

Design, development and construction of major items of experimental apparatus. Exploitation and application of new techniques, especially in cryogenics, superconductivity, electron beam lithography and chemical technology.

Division Head: **D B Thomas**

Theory Division

Research in the theory of elementary particles — their scattering, decay and reaction mechanisms — with special emphasis on phenomenological analysis of experimental data.

Division Head: **R J N Phillips**



The activities of the Laboratory cover a wide range of science, including particle physics and research using neutron beams and high power lasers. The staff actively participate in these various programmes in collaboration with university scientists and provide substantial support for the experiments.

Particle Physics

Particle Physics is the search for and study of the underlying structure of matter, the goal being to discover the basic constituents of matter and relate their existence to the laws of Nature. Physicists have discovered that matter is made up of many types of subnuclear particles and are continuing to explore for new effects using the new particles themselves as "probes". Particles, produced at an accelerator, are fired at different targets and the resulting fragments are studied in detail using large sets of complex apparatus. The recording of the data requires large computing facilities to unravel the results.

The UK experimental particle physics programme, co-ordinated by the Rutherford Laboratory, is based on the extensive use of accelerators at international research centres, particularly at the CERN Laboratory in Geneva and the DESY Laboratory in Hamburg. The Laboratory supervises the UK involvement in these research activities and provides support to the teams of scientists. The Laboratory is also a major centre for the study of the theory of particle physics, and the resulting close contact between the theoretical and experimental physicists yields well-motivated experiments, better understood results and successful theoretical approaches to the subject.

OSI
SIVICA
PROMAFT

Neutron Beam Research

Neutron beams provide a powerful tool for physicists, chemists and biologists to study the structure and properties of matter under a variety of conditions. The Neutron Beam Research Unit at the Laboratory supports neutron scattering research by universities using the reactors and electron linac at Harwell and the reactor at the Institut Laue-Langevin in Grenoble. The Laboratory also develops special instruments and techniques for this work.

A major new facility for neutron scattering research, the Spallation Neutron Source, is currently under construction at the Laboratory. This will provide an intense pulsed source of neutrons, and is scheduled to be available for research in 1983.

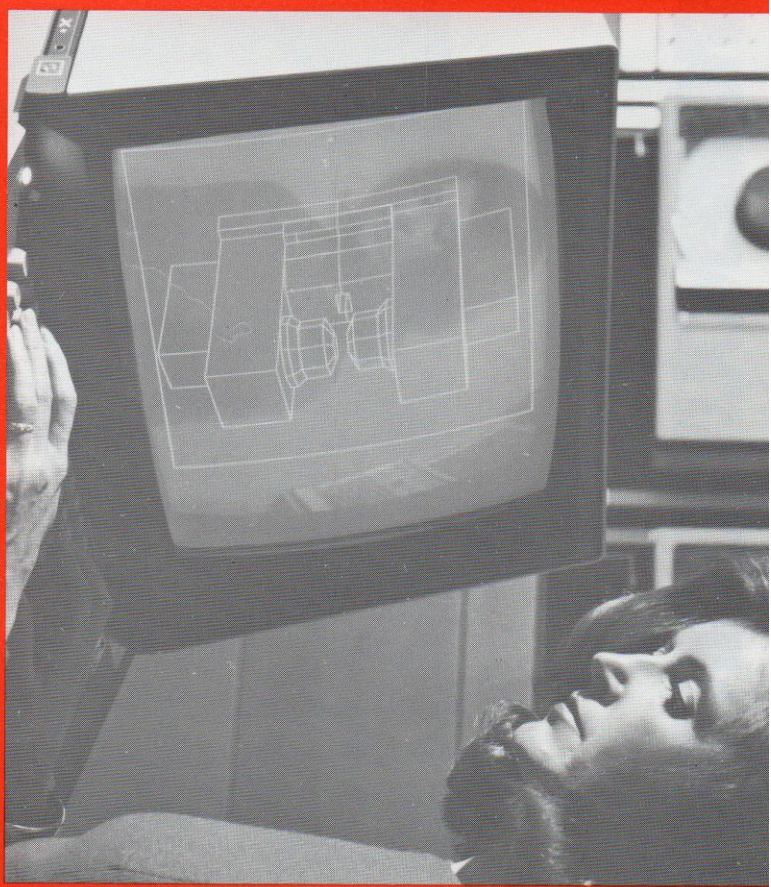
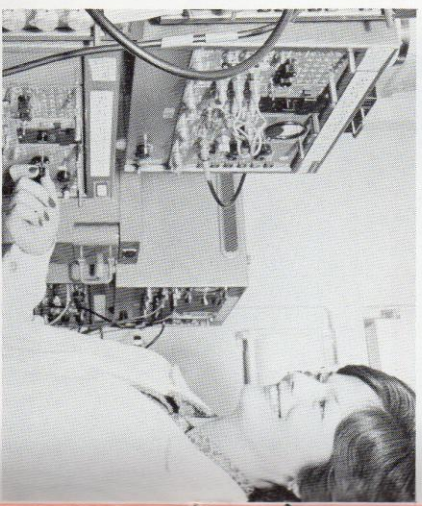
Laser Research

A Central Laser Facility operates at the Laboratory to serve university research into the physics of laser produced plasma. The main equipment is a high-power Neodymium Glass laser system, used for research into laser-plasma interactions and laser compression studies. The work also includes the development of more efficient and new high-power lasers.

Technology and Instrumentation

Underlying the multi-disciplined research at the Laboratory is a strong programme of applied physics research and technological development to provide sophisticated apparatus and special capabilities for a wide range of experiments. This work has resulted in a considerable involvement in superconductivity and cryogenics in instrumentation and data handling and in computing. The Laboratory supports a facility for electron beam lithography.

An energy research support unit offers a service for energy research in the universities. This wide range of activities provides a useful cross-fertilisation between different areas of pure research and provides an additional impetus for industrial development work.



Computing

These research and development programmes are supported by powerful computing facilities. The Laboratory provides one of Europe's most powerful batch-processing computer services based on a linked complex of one IBM 3032 and two IBM 360/195 processors with extensive secondary storage and communications links from workstations and other computers. Besides providing facilities for university users, the Laboratory carries out research and development in various aspects of computing, data communications and network requirements.

The Laboratory manages a national Interactive Computing Facility which links computers distributed amongst several research centres in the UK. The facility provides a good interactive computing service to aid creative research and development, particularly in engineering departments at universities and

polytechnics. The work involves applications programs as well as hardware, systems, networking and graphics software.

Engineering and Building Works

These activities include the design and construction of buildings, both traditional and highly specialised, together with the associated mechanical and electrical engineering services. The Laboratory also provides an architectural, engineering and environmental service to the SRC as a whole.

The Laboratory employs some 1,200 industrial and non-industrial staff. In addition, over 1,500 university scientists work in close collaboration on its range of research and development projects. Fuller details of the work of the Laboratory are available in the Laboratory's Annual Report, copies of which are available from the Library.

ADMINISTRATION AND SERVICES

Many divisions have access to a Divisional Administration Officer (DAO) who will be able to introduce new staff and visitors to the wide range of services at or near the Laboratory. Administration offices are located throughout the Laboratory and can advise on general administrative matters, typing and duplicating services and travelling arrangements. These offices stock a limited range of stationery; there is a large stationery store in the basement of building R1. Queries on the purchasing of supplies and withdrawal of stores should be referred to DAOs. A useful source of information is the internal telephone directory, copies of which are available from DAOs, or from the Accommodation Office in building R1.

Library

The Library in building R61 holds a wide range of books, periodicals and scientific reports related to the work of the Laboratory. Other material not in stock is available through inter-library lending. Arrangements can be made for foreign language translations, abstracts and literature searches. For full information, telephone 6668. A Branch Library, specialising in computing sciences, is located in building R27, telephone 6226.

Technical Services

Maintenance and modifications to main Laboratory services are undertaken by the Engineering and Building Works Division. For the appropriate telephone numbers, consult the internal telephone directory.



Meals and Refreshments

The Restaurant is in building R22, adjacent to the Lecture Theatre, and is open during the following hours:

11.45-13.45 Monday to Friday
17.00-19.00 Monday to Friday

Thursday

There is a coffee lounge in building R22 with a snack bar serving light refreshments. Coffee is also served in the lounge on the first floor of building R1, near the Library.

Shops

The Rutherford Laboratory Shop, next to the Restaurant, sells newspapers, periodicals, confectionery, stamps, cigarettes, tobacco and some grocery items. It is open from 08.15-09.30 and 11.30-13.45 Monday to Friday.

The AERE shopping centre includes a newsagent, general supermarket, butcher, post office, dry cleaners, harddressers (appointment only) and a branch of Lloyd's Bank which provides a full range of banking services. A bus runs between the shopping centre and Laboratory during the lunch break. It leaves the rear entrance of building R1 at 20-minute intervals from noon until 13.20 hours. A routine bank service is provided by Lloyd's Bank at the Cash Office in building R20 every Wednesday from 12.15-13.45 hours.

Lectures and Conferences

The Lecture Theatre in building R22 is used for major lectures, seminars and presentations including film shows and the regular Rutherford Laboratory Lectures on subjects of general scientific interest. There are conference rooms in several buildings and some special events are arranged at The Cosener's House in Abingdon. Details of all forthcoming events are given in the *Laboratory Bulletin*, published fortnightly.

CONDITIONS OF SERVICE

Recreation

Clubs and societies which cater for a wide range of sporting, cultural and leisure activities are active in or near the Laboratory. A full list with names and telephone numbers of club organisers is available from the Personnel Group in building R20.

Car Parking

Ample car parking space is provided in the sites on the perimeter of the Laboratory.

Publications

The Rutherford Laboratory *Bulletin* — published fortnightly — contains current news of scientific and general interest to people working in or associated with the Laboratory and includes a full list of forthcoming seminars, meetings and social events.

Accommodation

The Cosener's House in Abingdon provides accommodation for use by visitors, and bookings are arranged by the Manageress, telephone Abingdon 23198. Individual hotel bookings, when required, are handled by Divisional Personal Secretaries.

Other hostels at Abingdon (Rush Common) and at AERE Harwell are available for Laboratory staff requiring accommodation. Bookings are arranged through the Personnel Group, in building R20, or through the Accommodation Office in building R1.

Some furnished and unfurnished accommodation is available to certain eligible staff to rent; further details can be obtained from the Accommodation Office in building R1.

Travel

Extensive bus services are provided by arrangement with AERE for staff travelling to and from work. Services cover a wide radius and include most local towns and villages and timetables are arranged to fit in with Laboratory working hours.

Full details of these services can be obtained from the Transport Section in building R54 or from the Personnel Group in building R20. Bus season tickets can be arranged through the Personnel Group in building R20, and occasional tickets for single journeys can be bought at the Cash Office in building R20. Tickets cannot be bought on the buses. There are services outside standard hours for shift, overtime and weekend working, and details are available from the Transport Section in building R54.

Post

Messengers collect and deliver both internal and external mail. Private mail will be accepted for the post but must be stamped by the sender. The internal mail service provides several collections and deliveries throughout the day.

Telephones and Telex

Full details of telephone and telex services, including the lines to other establishments, are described in the Laboratory's internal telephone directory.

Copies of the SRC Conditions of Employment for both Industrial and Non-Industrial employees are available for reference in the Library and in the Personnel Group.

The Personnel Group is situated in building R20 and is divided into sections dealing with the following subjects:

- (a) Conditions of Service; Superannuation; Annual, Sick and Special Leave; etc. (telephone 495)
- (b) Recruitment; Probation; Promotion Reviews; Council Vacancy Notices; etc. (telephone 510)
- (c) Travel within the UK and overseas (telephone 575)
- (d) Claims for travel and subsistence (telephone 585)

Advice on any of the above subjects may be obtained by telephoning the extension quoted or by a personal visit to the Group. Personnel Group staff are also available to discuss personal problems at any time.

Hours

Normal Laboratory working hours are:

- (a) Industrial employees:
0745-1630 Monday to Friday
- (b) Non-Industrial employees:
0830-1710 Monday to Wednesday
0830-1700 Thursday
0830-1600 Friday

Some employees may be required to work different hours.

Leave

The annual leave year runs from March to February.

Your annual leave allowance is stated in your letter of appointment. Application for any period of leave is made on a leave card (usually kept in Divisional Administration Offices or by Supervisors) and must be approved by your immediate Supervisor or Group Leader before any leave is taken. The procedure regarding certificated sick leave will be explained to you on arrival. Uncertificated sick leave for minor illness is allowed up to 10 days in any 12 months in periods not exceeding 5 days (including weekends) at any one time. On returning to work after uncertificated sick leave, Form 523 (Industrial) or Form N135 (Non-Industrial) must be completed. These forms can be obtained from Divisional Administration Offices or from Supervisors. In all cases of illness or incapacity, staff are asked to inform their Supervisor as soon as possible.

Special leave may be granted in exceptional circumstances. Applications should be made to the Personnel Officer.

Pay

Your rate of pay is given with your letter of appointment. Queries should be referred to Salaries Section (telephone 395) for monthly paid employees and to Wages Section (telephone 385) for weekly paid employees. Pay cards for weekly paid employees should be signed by your Supervisor and handed in to your nearest collecting point by 0900 hours each Friday morning. Special arrangements are made prior to public and privilege holidays.

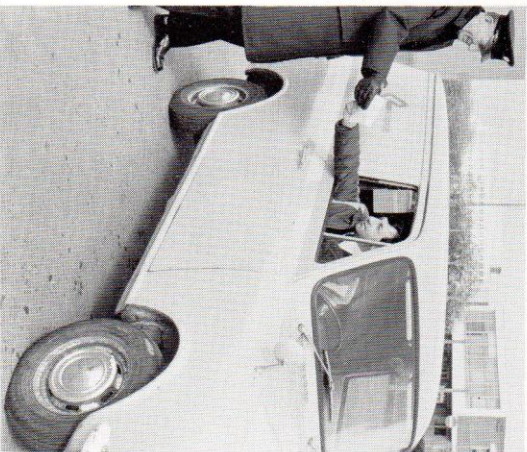
Official Travel

For local journeys, self-drive cars and vans are available to permit holders, who must have had a full driving licence for twelve months. Applications to become a permit holder are made through Group Leaders to the Transport Officer, building R54. Booking sheets are held in DAO offices for allocated divisional vehicles and in the Transport Office for all other vehicles.

In certain circumstances, employees may use their private cars for official business and claim a mileage allowance. The conditions under which the allowance is paid are set out in official SRC notices available in Divisional Administration offices.

Airline tickets, foreign hotel reservations, visas and other foreign travel arrangements are handled by Travel Section in building R20, telephone 575.

There are fixed rates of payment of travel and subsistence expenses to staff required to travel on official business or who have to work away from the Laboratory. Further details, rail travel warrants and claim forms are available from DAOs. All claims should be submitted within one month to the Claims Officer in building R20, telephone 585.



Training

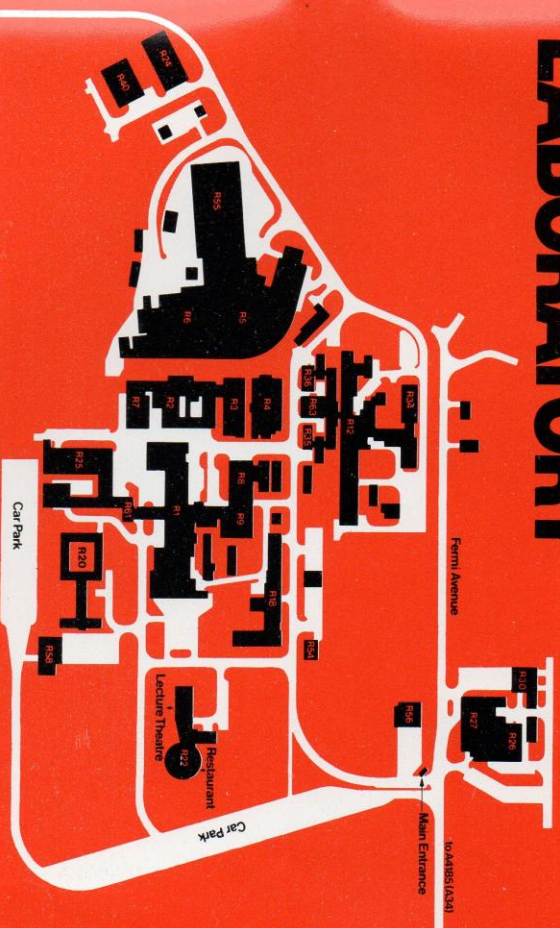
Arrangements are made for staff to attend, when appropriate, a wide range of technical and managerial courses organised by SRC, the UKAEA, government departments, colleges and other bodies. Younger members of staff are encouraged to continue their vocational and general education by day-release and evening classes. The Training Officer (building R20, telephone 266) is available to provide expert advice and your Supervisor can arrange for you to consult him.

Safety

Safe working practices and safe systems of work are regarded as pre-requisites of good management. All staff are encouraged through publicity, training, safety codes, etc. to develop safety awareness as an essential ingredient of their every-day work.

All employees are required by law to take reasonable care for the health and safety of themselves and of other persons at work, and to co-operate with the employer in their safety duties. All new entrants are required to attend a safety course run by the Safety Officer. The primary responsibility for safety is vested in line-management, safety committees monitor safety performance and the Health and Safety Group advises on safety and radiation protection. Further information is available from the Safety Officer, telephone 329, and the Radiation Protection Officer, telephone 253.

SITE PLAN OF THE LABORATORY



Building Description

- R1 Main Building offices, laboratories and conference rooms 1 and 2.
- R2 Offices and workshops.
- R5 Accelerator.
- R6 Assembly hall.
- R8, R9, R18 Workshops.
- R12 Offices, laboratories and workshops.
- R20 Offices.
- R22 Lecture theatre and restaurant.
- R24, R40, R56 Stores.
- R25 Offices and heavy duty laboratory.
- R26, R27, R30 Computer laboratory.
- R34 Offices and laboratories.
- R54 Transport.
- R55 Spallation Neutron Source hall.
- R58 Photography.
- R61 Library and conference room 3.

Welfare

The Senior Welfare Officer is Mr. R. A. Pheips at AERE Harwell (telephone 72-3061) and the Welfare Officer, with special responsibility for Rutherford Laboratory staff, is Mrs. B. Cairns (telephone 72-2128). The Welfare Branch provides a comprehensive welfare service for all Rutherford Laboratory employees. The Welfare Officer is available for consultation at all times. Close contact is maintained with all local authorities, social services and voluntary organisations.



Trade Unions and Staff Associations

All employees are encouraged to become members of their appropriate Trade Union or Staff Association. The telephone extensions of the local representatives are listed in the internal telephone directory. The following Trade Unions and Staff Associations are recognised:

Industrial Trade Unions

Amalgamated Union of Engineering Workers (AUEW),
Electrical, Electronic Telecommunication and Plumbing Union (EETPU),
General and Municipal Workers' Union (GMWU),
Transport and General Workers' Union (TGWU).

Non-Industrial Staff Associations

Association of Government Supervisors and Radio Officers (AGSRO),
Civil and Public Servants Association (CPSA),
Civil Service Union (CSU),
Institution of Professional Civil Servants (IPCS),
Society of Civil and Public Servants (SCPS).

All the Trade Unions are represented on the Rutherford Laboratory Joint Consultative Committee. Similarly all the Staff Associations have representatives on the Rutherford Laboratory Whitley Committee. Both Committees meet regularly and are the main channel for communication and discussion between Employees and Management.