

# Extracts from College Annual Report 1952-1953

## DEPARTMENTAL REVIEW

Following the retirement of Professor Robinson, Professor G. O. Jones took up his duties at the beginning of the session. He delivered his Inaugural Lecture, entitled "Boundaries of Physics," on 2nd March. Mr. P. Doidge was appointed Assistant Lecturer in the Department and Dr. M. J. M. Bernal has been temporary Assistant Lecturer for the session.

Professor Jones was invited to the Third International Conference on Low-Temperature Physics held at the Rice Institute, Houston, Texas, in December 1953, when he read two papers and acted as Chairman of one of the sessions. During his visit he was able to visit other laboratories and spent some time at the Naval Research Laboratories, Washington. Professor Jones has been elected to the Council of the Physical Society.

Dr. Eisenschitz attended the Herbert Freundlich Memorial Congress of the German Rheological Society (5<sup>th</sup>-8th May, 1954) at Berlin, where he read a paper on certain aspects of the molecular theory of liquids.

Dr. Irons has been elected to the Committee of the Acoustics Group of the Physical Society. He was able to visit a number of Physics departments in the U.S.A. in July 1953 on his return journey from Jamaica, where he had acted as Examiner at the University College of the West Indies.

Dr. Leech read a paper at a conference on "Ionisation" held at the Clarendon Laboratory, Oxford, during the summer of 1953.

Dr. Barker and Dr. Dobbs spent periods as Vacation Consultants at the Admiralty Research Laboratories, Teddington, and the Royal Aircraft Establishment, Farnborough, respectively during the long vacation, 1953.

Dr. Davies took part in a Royal Society symposium on the second coefficient of viscosity held in April 1954.

Miss Roberta Scott, who is on leave from the Commonwealth Scientific and Industrial Research Organisation, Australia, has started work in the Department.

A number of changes have been made in the teaching arrangements, especially where they concern the First Year Honours class. The number of students in this class is now over twenty-five and they have been given an entirely new course of lectures and a separate laboratory. The course for Part I of the B.Sc. Special degree is now conducted as a continuous course over two years and it has been planned in a novel way in order to introduce as many generalised methods and topics as possible early in the course.

Advanced lectures given during the session have included courses on the Theory of Metals by Dr. Bernal, on Magnetism by Dr. Leech, and on the Theory of Liquids by Drs. Eisenschitz, Dobbs and Davies.

During the Long Vacation of 1953 the Department was able to gain a number of rooms by the erection of partitions in the former east corridor on the ground floor. Besides making possible the alteration in teaching arrangements already mentioned, this has provided much needed accommodation for a full-time typist in the Department, and a slight easing of congestion throughout.

Services to the low-temperature research laboratories have been improved, following the completion of the outdoor store for hydrogen cylinders, and hydrogen and helium are now piped round the laboratories extensively. A novel service which has been introduced is an accurately controlled electrical time-switch circuit which is run to many rooms in the Department for use in accurate calorimetry.

Among new researches started in the Department since last year's Report are investigations into the viscosity of liquid argon at high pressures, and preliminary work on cyclic processes for the production of "cold" below  $1^{\circ}$  absolute.

An innovation has been the holding of "Open Days" (in conjunction with the Department of Chemistry) for science masters and headmasters. These seem to have proved very effective in that the numbers applying for admission have increased sharply and we have been more advantageously placed in the selection of students.

The students' Physical Society has had a very successful year and has been addressed by a number of distinguished speakers.

## DEGREES AWARDED

### Ph.D

P.F. CHESTER Aug 1953

M.O. BRYANT Dec 1953

A. SUDDEABY June 1954

### M.Sc

A.N. RAPSEY Feb 1954

### B.Sc. SPECIAL EXAMINATION PHYSICS

First Class Honours:

P. DEAN

P. GRAY

R. E. TURNER

Second Class Honours (Upper Division):

A. L. KOSMALA

Second Class Honours (Lower Division)

R. DIGNUM

D. EYN. KING

M. W. LARKIN

R. LEONARD

J. R. N. MILES

R. V. WILLIAMS

Third Class Honours:

P. R. Mc. I. COLE

C. M. PEARSON

G. PETERS