

Extracts from College Annual Report 1954-1955

DEPARTMENTAL REVIEW

Dr. D. H. Martin of Nottingham University was appointed Assistant Lecturer in the Department at the beginning of the session. In April Dr. J. C. Burfoot of Aberdeen University joined the Department as Lecturer. Dr. P. Riley, formerly Research Fellow at the Royal Institution, joined the Department for the session to work with Professor Jones on certain problems of marrying X-ray diffraction and low-temperature techniques.

Several members of staff have taken part in symposia organised by outside societies. Professor Jones and Dr. Dobbs contributed to a symposium on the Properties of Solid Argon organised by the Low-temperature Group of the Physical Society. The Department entertained the British Society of Rheology for a symposium on Relaxation and Flow in Glasses, at which Professor Jones and Dr. Davies were two of the main speakers. Dr. Davies gave a lecture on Radiation Pressure in Acoustics to the Acoustics Group of the Physical Society.

Advanced lectures given during the session have included courses on Magnetic Domains by Dr. Martin, on X-ray Crystallography by Dr. Riley and on Electronic Computers by Dr. Burfoot.

A number of new researches have been started. Following the introduction of the theoretical option in the B.Sc. Special course (Part II). Dr. Eisenschitz is now supervising two of our own students for the Ph.D. degree. Dr. Burfoot has begun work in the field of electronic computing and Dr. Martin is beginning to apply his experience of magnetic domain problems to certain similar problems in superconductivity. The superconducting bolometer developed in the Department has at present the best performance of any known thermal detector of radiation.

The Department has obtained delivery of one of the two special non-contaminating helium compressors ordered to its design. This replaces one of the home-made compressors which have been in use for several years. The original home-made compressor is still giving faithful service. The second new compressor was exhibited at the Physical Society's exhibition and is being exhibited at the Marine and Engineering exhibition.

The introduction of the Revised Regulations for the B.Sc. (Gen.) Degree has caused extensive alterations to be made in the courses given to General students. An entirely new course of lectures and a separate set of experiments have been provided for the First-Year General class, while the Second and Third-Year courses have been thoroughly revised.

The Third-Year Special students have continued to make good use of the facilities available for their research problems, both in their own laboratory and in the private rooms

of members of staff. Their practical problems have included studies in magnetic resonance, hydrogen liquefaction, vibrationless mounting and X-ray crystallography. Some of them have performed nuclear experiments in the Particle Laboratory, while others have been engaged on theoretical problems, for which several calculating machines are available.

The Departmental Workshop is now equipped with sufficient machines for the one technician at present working in the Department. During the Long Vacation a further small internal expansion took place in order to provide a store and a technician's room, at the expense of the space devoted to the Medical Laboratory.

The students' Physical Society has organised numerous lectures by distinguished speakers, a Dinner with a distinguished visitor, and, at the end of the session, a visit to the Royal Observatory and an outing. An informal sale conducted in the research laboratories has provided a fund for a permanent scrap-book, which will contain photographs of interest to future research workers.

DEGREES AWARDED

Ph.D

D.L. MARSTEN
D.G. STEVENSON
J.A. HULBERT
A.J. MANUEL

D.Sc

M. WHITE
J.H. BROWN
V.H. GUY

B.Sc. SPECIAL EXAMINATION PHYSICS

First Class Honours:

K. LUSZCZYNSKI
J. L. WILSON

Second Class Honours (Upper Division):

A. G. BETJEMANN

Second Class Honours (Lower Division):

A. G. CADDICK
R. O. COOMBES

P. B. FOTTE
R. J. HALFORD
T. A. HEPPELL

Third Class Honours

J. H. S. CLOTHER
L. C. HODGES
T. A. MURPHY
J. OVERY
B V. PHILLIPS
E. B. WILKES