

# MEETINGS

## *Polarons and Excitons*

The Scottish Universities held their third summer school in August 1962 in St Andrews, under the directorship of R. B. Dingle. As in previous years, the summer school was sponsored by NATO. The subject "polarons and excitons" was studied in depth by over seventy participants (including the lecturers). In a course of introductory lectures, Fröhlich (Liverpool) suggested that the polaron was now very largely a "proving ground" for new theoretical techniques, and during a most interesting summer, we were shown how several different approaches had been developed, each with its own range of validity. David Pines (Illinois) and G. R. Allcock (Liverpool) discussed the intermediate-coupling solution of Lee, Low, and Pines and the strong-coupling solution of Landau and Pekar respectively. T. D. Schultz (IBM, Yorktown) and P. M. Platzman (Bell Telephone Labs) gave an account of Feynman's variational principle and its application to the polaron problem. R. J. Elliott (Oxford) and H. Haken (Stuttgart) lectured on exciton theory, Elliott starting from the concepts of band theory and Haken taking account of many-body and polaron effects. Pines and G. D. Whitfield (Illinois) discussed Green's-function techniques and recent attempts to apply these techniques to the polaron. F. C. Brown (Illinois) reviewed the experimental evidence for polarons. Toyozawa (Tokyo) showed how self-trapping of electrons might result as a consequence of interaction with acoustic phonons.

The lectures were supplemented by about eight seminars, and by a full social program. Members enjoyed the golfing facilities (when the weather permitted), as well as attempting Scottish country dancing, and visiting a Scotch whiskey distillery. It is believed that some even went so far as to eat a haggis!

In all it proved a most enjoyable and interesting summer school. It ended just in time to avoid a clash with the Edinburgh Festival; during the ensuing weeks many of our members could be seen exploring Edinburgh, listening to the music of Shostakovich, and recovering from the mental exhaustion of the school.

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## *AAPT-APS Joint Meeting*

The American Association of Physics Teachers and the American Physical Society will hold their combined annual meeting in New York City from January 23 to 26. Headquarters for the meeting will be the

Statler Hilton Hotel, where the registration desk and message center will be located. Sessions will be held both at the Statler Hilton and at the Hotel New Yorker. The Physical Society, in addition to an extensive program of contributed papers, will present a number of half-day special sessions devoted to invited papers on such topics as neutrinos, new and proposed accelerators, ancillary apparatus of nuclear physics, strange particles, nuclear structure, and various phases of solid-state physics. The APS Divisions of Electron Physics and Solid-State Physics have also scheduled symposia.

The AAPT program will include a special session of invited papers on the philosophy of quantum physics, and reports by the Visual Aids Committee, the Committee on Institutes, Conferences, and Symposia, and the Commission on College Physics. The Physics Teachers' Committee on Apparatus for Educational Institutions will present a report on its development program and an exhibition of the entries in the third biennial Apparatus Competition.

The Joint Ceremonial Session of the two societies will be held in Manhattan Center on the afternoon of the 24th. On that occasion, APS President W. V. Houston will deliver the traditional retiring presidential address. His subject will be electrons and atomic nuclei in crystals. The AAPT will present its Oersted Medal, posthumously, to the late Francis Friedman of MIT. The 22nd AAPT Richtmyer Lecture will be delivered by W. K. H. Panofsky on the topic "Photon and Electron High-Energy Physics, Present and Future". William Martin Fairbank will be awarded the Physical Society's Oliver E. Buckley Solid-State Physics Prize at the joint banquet in the Grand Ballroom of the Statler Hilton on the evening of the 25th.

## *Plasmas*

A conference on wave interaction and dynamic non-linear phenomena in plasmas is to be conducted February 4-6 by the Ionosphere Research Laboratory of the Pennsylvania State University. The conference will consider two aspects of linearly interacting waves of physically different kinds: space-charge and magneto-ionic-type waves encountered in plasma amplifying devices, and the production of whistlers by interacting streams. The part of the program concerned with non-linearly interacting waves, normally of the same nature but of different frequencies, will cover high-power and low-power waves in stationary and streaming ionized media, parametric wave interaction as may occur in