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## The Association for High-Speed Photography, Autumn 1967

By G. H. LUNN

THE AUTUMN CONFERENCE of the Association for High-Speed Photography was held at the University of Birmingham, September 25-26, 1967, at the invitation of Dr. Majer of the University Chemistry Department. The conference sessions were held in the Haworth Lecture Hall which was kindly provided for members at Gracie Hall of the neighboring University of Aston. As support was also available from the School of Photography and the West Bromwich College of Technology, the Association was made to feel most welcome.

### Varied Program

The program was quite varied. Discussion of camera speeds, applications and techniques reflected the interests of members and ensured that everyone had something to his taste. The duties of chairman were shared by Mr. North and Mr. Thackeray, the past and present chairmen of the British National Committee.

The opening paper was presented by E. F. O'Sullivan (co-authored by D. P. C. Thackeray) of the University of Surrey (previously Battersea College of Technology). Studies of the flames from pyrotechnic compositions were discussed, principally magnesium compounds in oxygen. Films were shown, which were taken at 5,200 pictures/s and clearly illustrated the flames and discharge of incandescent material.

J. Webster of CEBG spoke of an uncapping shutter they are using, whose operation is by the magnetic field produced in overlapping aluminium foils when a high discharge current is passed. An aperture up to 3 in. is uncovered in less than 100 microseconds.

Eric Lucey of Edinburgh University introduced his instructive and entertaining film study of the jump of the flea which showed also the ingenuity and patience needed to handle such lively and unpredictable "performers." The final paper of the first day was a review paper by R. J. Hill of Rolls-Royce, Derby, who spoke of their application of high-speed techniques in gas dynamics. They have made both theoretical studies of sparks, gaseous discharges and shock waves and practical studies of jet engine ignition systems. He showed a drum camera of their own design and the excellent records they have produced with it of the cine-schlieren of the double ignition system of kerosene.

The next morning was begun by M. R. Wall of AWRE, Aldermaston, who dis-

cussed the methods which may solve the problems of underwater viewing with emphasis on the use of lasers in both temporal and spatial discrimination systems. G. H. Lunn, of the same establishment, showed the sequence of color slides which were produced for and used at EXPO 67 to explain the principles of high-speed photography.

Later, members were able to view the products exhibited by Gordon Cameras, John Hadland (P.I.) Ltd., and Telford Products. The cooperation of these firms is much appreciated. The exhibition area was well attended and stimulated a number of lively discussions.

### Final Session

The final session was entirely devoted to image-tubes and was opened in a most refreshing manner by R. A. (Bob) Chippendale of the English Electric Valve, who combines the knowledge acquired as one of the major tube designers with an ability to present a complex subject in a pleasant conversational manner. He had been asked to speak on "Present Trends" which he did by outlining principles and describing the available tubes and their abilities and limitations including fiber optic face plates, intensifiers and channel multipliers.

This was followed by two application papers, the first by J. Webster of CEBG Marchwood, who has used the TRW Camera in studies of electrical problems, and the second by G. H. Lunn of AWRE who described the application of the AWRE E12-pulsed camera system by D. A. Procter to a plasma-jet experiment of J. Watson in which the camera made immediate and direct answer to the physicists' questions. To round off the session G. Foster of J. Hadland (P.I.) Ltd., reported on their Imacon Camera, thus completing the circle of tube-maker, user and camera builder.

The system of two half-days with an intervening night is proving very popular for conferences away from London as the majority find it makes travel easier and the evening provides an excellent opportunity for small-group discussions. The Associations Conferences for 1968 are:

*Spring*—8th April 1968—Regent Street, Polytechnic London

*Autumn*—26-27th September 1968—University of Bath, Bristol

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