

contribute 130 papers, relating to elastic and inelastic collision processes involving atoms, simple molecules, electrons and photons. The growth of interest in this field during the past few years, perhaps four-fold, is in part stimulated by power generation, magneto-hydrodynamics and fusion, by the discovery of lasers, and by the need to understand ionizing phenomena in the Earth's atmosphere and in space exploration, as well as problems in astrophysics. However, the central interest remains the development and testing of our understanding of the quantum theory of collisions. In this context it is interesting to note the present spheres of emphasis; the newly discovered narrow resonances in the scattering of electrons by atoms; the anomalous polarization of radiation excited by collision; the exploration of energy-levels in the continuum; the numerous inelastic processes undergone in energetic collisions between two atomic systems; the study of chemical reactions by refined scattering technique; the electron-ion recombination processes in highly ionized gases; and the conditions for the excitation of gases to a state where stimulated emission dominates and the production of coherent radiation by laser action becomes possible. Review papers will be presented by: Sir Harrie Massey, Dr. D. W. O. Heddle and Dr. M. J. Seaton (England); Prof. D. R. Bates and Prof. A. Dalgarno (Northern Ireland); Dr. M. A. Biondi, Prof. R. B. Bernstein, Dr. V. W. Hughes and Dr. C. K. Patel (United States); Prof. C. A. McDowell (Canada). Further information can be obtained from the conference secretaries, Dr. J. B. Hasted and Dr. D. W. O. Heddle, Department of Physics, University College, Gower Street, London, W.C.1.

### The Night Sky in August

FULL moon occurs on Aug. 5d. 09h. 31m. U.T. and new moon on Aug. 19d. 07h. 35m. The following conjunctions with the Moon occur: Aug. 5d. 23h., Saturn  $1^{\circ}$  N.; Aug. 10d. 02h., Jupiter  $4^{\circ}$  N.; Aug. 23d. 05h., Mars  $5^{\circ}$  S. In addition to these conjunctions with the Moon, Mercury is in conjunction with Regulus on Aug. 2d. 20h., Mercury being  $0.6^{\circ}$  N. Mercury, Venus and Mars are too close to the Sun for observation. Jupiter rises at 22h. 00m., 21h. 05m. and 20h. 00m. on Aug. 1, 15 and 31, respectively. It is in Pisces, its stellar magnitude is  $-2.3$  and its distance from the Earth on August 15 is 400 million miles. Jupiter is stationary on August 10, after which its motion is retrograde among the stars. Saturn is above the horizon most of the night. It is in Capricornus, reaching opposition on August 13. Its stellar magnitude is  $+0.5$  and its distance from the Earth on August 15 is 825 million miles. There are no occultations of stars brighter than magnitude 6 visible at Greenwich. The Perseid meteors are active during July 27–August 17, with maximum on August 12, but conditions for observation are unfavourable.

### University News:

Two additional chairs, of statistics and education, have been established and will be occupied by the present heads of the departments concerned, namely, Dr. D. J. Finney and Dr. J. D. Nisbet, respectively. The following promotions from lecturer to senior lecturer have been announced: Mr. P. W. Davis (forestry); Dr. W. E. Fraser (geology).

### Aberdeen

### Sheffield

DR. W. BARTLEY, at present University demonstrator in biochemistry in the University of Oxford, has been appointed to the chair of biochemistry from a date to be arranged. Dr. A. R. Entwisle has been appointed senior lecturer in metallurgy, and Dr. E. Rothwell senior lecturer in fuel technology and chemical engineering. Dr. I. O. Sutherland has been appointed lecturer in chemistry.

### Announcements

MR. A. SIMPSON, recently appointed lecturer in aeronautical engineering in the University of Bristol, has gained a Ph.D. degree at the University of Bristol. In so doing he becomes the first holder of the diploma in technology to obtain the Ph.D. of a university.

THE second European Anatomical Meeting will be held in Brussels during September 1–5. Further information can be obtained from Prof. P. Dustin, 97 rue aux Laines, Brussels 1.

THE conference of the Society for Folk Life Studies will be held in the University of Leeds during September 6–9. Further information can be obtained from J. Geraint Jenkins, c/o Welsh Folk Museum, St. Fagan's Castle, near Cardiff.

THE fourth International Congress on Surface Active Substances will be held in Brussels during September 7–12, 1964. Further information can be obtained from the General Secretariat, Fourth International Congress on Surface Active Substances, 49 Square Marie-Louise, Brussels 4, Belgium.

THE ninth conference on the European Meat Research Workers, organized this year by the Hungarian Meat Research Institute, will be held in Budapest during September 4–12. Further information can be obtained from the Hungarian Meat Research Institute, Herman Otto ut 15, Budapest 2.

THE fourth international conference on "Non-Destructive Testing", sponsored by the British National Committee for Non-Destructive Testing and arranged by the Institution of Mechanical Engineers, will be held in London during September 9–13. Further information can be obtained from the Institution of Mechanical Engineers, 1 Birdeage Walk, London, S.W.1.

THE fifth international Biometric Conference will be held in Cambridge during September 9–14. The programme will include sessions on: biometrical genetics; problems of experimentation, mathematical models in biology; multivariate analysis; medicine and bioassay; statistical methods. Further information can be obtained from Dr. R. C. Campbell, School of Agriculture, Cambridge.

THE Centennial of Entomology in Canada, sponsored jointly by the Entomological Society of Canada and the Entomological Society of Ontario, will be held at Carleton University, Ottawa, during September 3–6. Further information can be obtained from the Centennial Executive Committee, Centennial of Entomology in Canada, K. W. Neatby Building, Carling Avenue, Ottawa.

A FOUR-WEEK practical course in "Administration and Management of Research and Development", arranged by the Comparative Administration Trust, will be held at Queen's College, Oxford, during September 1–28. The three main topics to be considered are: the nature of the individual and of the team; the teams in their wider context; special problems of science and technology. Further information can be obtained from the Comparative Administration Trust, 30 St. George Street, Hanover Square, London, W.1.

THE International Union of Crystallography will be holding its sixth general assembly, international congress and symposia in Rome during September 9–18. The programme will include: a special congress discourse entitled "Crystallography: the Old and the New"; four general lectures; sessions for the presentation and discussion of contributed papers; an exhibition of apparatus and books; symposia on: problems and methods in crystallographic computing; phase transitions in solids; some aspects of lattice dynamics. Further information can be obtained from Dr. W. H. Taylor, Crystallographic Laboratory, Cavendish Laboratory, Cambridge.