

burgh too, Born gathered colleagues and students around him for a combined assault on physics. A series of works appeared on the statistical mechanics of condensed systems, the theory of fluids and associated problems. But the great activity of the Göttingen years could not be repeated in the Scottish university city, if only because in the meantime the interest of many physicists had turned to other problems. Nuclear physics was now the chief point of discussion. But Born did not take part in these developments. The possibility of the technical application of nuclear physics and the use of atomic energy became, at the end of the thirties, with Otto Hahn's discovery of uranium fission, the most exciting topic for atomic physicists. Born observed this development with great concern; he was dismayed at the possible consequences of these significant scientific advances and strove to minimize the danger.

Correspondence

X-Ray Stars and Infrared Excess

SIR,—In the course of his article on January 3, your Astronomy Correspondent says that Cowsik and Pal¹ are credited with the observation that "... the infrared flux might also be the cause of the X-ray background in the galactic plane which the Leicester group reported in October. . . ."

The fact is that the first article suggesting this mechanism for X-rays is the *Phys. Rev. Lett.*² article of the undersigned. Furthermore, when the Leicester results were reported in *Nature*, we published a further article (in *Nature*³)—which also pre-dated the Cowsik-Pal article—discussing the anisotropy of the X-rays.

Yours faithfully,

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¹ Cowsik, R., and Pal, Y., *Phys. Rev. Lett.*, **23**, 1467 (1969).

² O'Connell, R. F., and Verma, S. D., *Phys. Rev. Lett.*, **22**, 1443 (1969).

³ O'Connell, R. F., and Verma, S. D., *Nature*, **224**, 505 (1969).

Diffusion in Embryogenesis

SIR,—As an embryologist who started work during the heyday of "fields" and "gradients", I suppose I ought to be grateful to Dr Francis Crick for allowing me a nostalgic look back at these long-discredited concepts which he has now resurrected—or should I say, canonized—with the double halo of his own reputation and some elegant mathematics (*Nature*, **225**, 420; 1970). There is, however, one point that he appears to overlook: the extreme rarity with which sheer diffusion processes occur in living systems. Twenty years ago my better-informed colleagues told me about active transport and permeases. Ever since then, if materials have diffused in and out of my experimental embryos, I have regarded it as a sign that they are dying or dead. A sheet of frozen-dried tissue, extended between source and sink, might fit Dr Crick's formulae, but—alas—it would not differentiate!

Yours faithfully,

ELIZABETH M. DEUCHAR

The Medical School,
University of Bristol.

British Diary

Monday, February 16

Contention or Polling Techniques for Data-Computer Systems (5.30 p.m. discussion) Institution of Electronic and Radio Engineers. Joint IEE/IERE Computer Group, at the Institution of Electrical Engineers, Savoy Place, London WC2.

Insect Hormones and Insect Control (5 p.m.) Dr K. C. Highnam, Society of Chemical Industry, at 14 Belgrave Square, London SW1.

Recent Advances in Medicine, Surgery and Therapy (6 p.m.) Sir Brian Windeyer, Royal Society of Arts, at John Adam Street, London WC2. (First of three Cantor Lectures. Further lectures on February 23 and March 2).

The Treatment and Disposal of Industrial Effluent (all-day symposium) Institution of Mechanical Engineers, at 1 Birdcage Walk, London SW1.

Tuesday, February 17

Acrylates, Their Production and Use (6 p.m.) Dr H. Willersinn, Society of Chemical Industry, at 14 Belgrave Square, London SW1.

Amplification Reactions and their Applications (4.30 p.m.) Professor R. Belcher, Society for Analytical Chemistry; and the Edinburgh University Chemical Society, in the Chemistry Department, University of Edinburgh, West Mains Road, Edinburgh 9.

Casting of Polyurethanes (2.30 p.m.) Plastics Institute, Processing Discussion Circle, at 11 Hobart Place, London SW1.

Cereal Growing in Britain (10 a.m.) Society of Chemical Industry, Agriculture Group, at 14 Belgrave Square, London SW1.

Discriminators for Broadcast FM Transmission (6.30 p.m.) Mr Hugh Mayo, Institution of Electronic and Radio Engineers, at Brighton College of Technology, Brighton.

Experimental Gallstones (5.30 p.m.) Dr I. A. D. Bouchier, University of London, at the Institute of Child Health, 30 Guilford Street, London WC1. (Twelfth of fifteen lectures on "The Scientific Basis of Medicine".)

Ionisation by Coordination (2.30 p.m.) Professor V. Gutmann (Vienna), University of London, in the New Chemistry Theatre, University College London, Gower Street, London WC1. (Further lecture on February 18).

Ocean Resources—Boom or Bubble? (1.20 p.m.) Professor L. J. Rydill and Dr A. J. Smith, University of London, in the Botany Theatre, University College London, Gower Street, London WC1.

System Identification with special reference to Respiration (5.30 p.m.) Dr I. Priban, Institution of Electrical Engineers; the Institute of Measurement and Control; and the Automatic Control Group of the I.Mech.E., at Savoy Place, London WC2.

The Management of Climatic Resources (5.30 p.m.) Professor T. J. Chandler, in the Chemistry Auditorium, University College London, Gower Street, London WC1.

The Volcano at Santorini and the Destruction of Minoan Crete (5.30 p.m.) Professor D. L. Page, University College London, in the Collegiate Theatre, 15 Gordon Street, London WC1. (Further lectures on February 19 and 24).

Wednesday, February 18

Cybernetics (7.30 p.m.) Dr A. M. Andrew, Institution of Electronic and Radio Engineers, at the University of Reading, Whiteknights Park, Reading.

Development and Marketing of New Chemical Engineering Equipment (2 p.m. symposium) Institution of Chemical Engineers, at the Royal Society, Carlton House Terrace, London SW1.

Factors Limiting the Application of Food Science and Technology in Developing Countries (2 p.m.) UK Coordinating Committee for Food Science and Technology, at the Society of Chemical Industry, 14 Belgrave Square, London SW1.

Gravitation and Geometry (5.30 p.m.) Professor P. C. Vaidya (Gijarat), University of London, at Queen Elizabeth College, Campden Hill Road, London W8.

Mass Communication (6 p.m.) Mr Stanhope Shelton, Royal Society of Arts, at John Adam Street, London WC2.

Microscopical Illustration (1 p.m.) Mr G. L'E. Turner, Royal Institution, History of Science Discussion Group, at 21 Albemarle Street, London W1.

Recent Advances in Radar Anti-Clutter Techniques (5.30 p.m.) Dr W. S. Whitlock, Institution of Electrical Engineers, at Savoy Place, London WC2.

Solute-Solvent Interactions (5.30 p.m.) Professor Viktor Gutmann, University of London, at King's College, Strand, London WC2.

Street Lighting (5.30 p.m. discussion) Institution of Electrical Engineers, at Savoy Place, London WC2.

The Measurement of Ships' Velocity (5 p.m.) Mr B. W. Oakley, Institute of Navigation, at the Royal Institution of Naval Architects, 10 Upper Belgrave Street, London SW1.

The Presentation of Data from a Process Control Computer (7.30 p.m.) Institution of Chemical Engineers, in Room G44 Royal Fort, University of Bristol.

The Professional Engineer as an Industrial Tutor (6 p.m. discussion) Institution of Mechanical Engineers, at 1 Birdcage Walk, London SW1.

The Role of The City University (1.10 p.m.) Sir James Tait, City University, at the Graduate Business Centre, Gresham College, Basinghall Street, London EC2.

Use of Computers in Designing Automatic Process Controllers (6 p.m.) Mr D. J. Norton, Institution of Electronic and Radio Engineers; and the Institution of Electrical Engineers, at the University of Bristol.

Thursday, February 19

Amino-Acids and Peptides in Gut and Kidney (5.30 p.m.) Professor M. D. Milne, University of London, at the Institute of Child Health, 30 Guilford Street, London WC1.