

# THE PLANETS TODAY

A SYMPOSIUM ON PLANETARY SCIENCE  
IN CELEBRATION OF THE QUINCENTENARY OF  
NICOLAUS COPERNICUS 1473 TO 1543

## CONTENTS

### PREFACE

Sir Harrie Massey, Sec.R.S. and W. H. McCrea, F.R.S.  
NICOLAUS COPERNICUS (1473 to 1543)

J. R. Ravetz

### SOME ASPECTS OF THE PHYSICS OF THE MOON

S. K. Runcorn, F.R.S.

### MARS AND VENUS

R. M. Goody

### JUPITER AND SATURN

R. Hide, F.R.S.

### THE DYNAMICS OF THE PLANETS AND THEIR SATELLITES

G. A. Wilkins and A. T. Sinclair

### THE WORK OF NICOLAUS COPERNICUS

Sir Fred Hoyle, F.R.S.

114 pages Frontispiece and 15 plates (cloth bound)

Price: £4.50 (U.K. addresses) £4.65 (overseas)

First published in Proceedings Series A. Volume 336 (1974)

---

## FOOD TECHNOLOGY IN THE 1980s

This Royal Society symposium on 'food technology in the 1980s' recognized the important contribution food science and technology has made so far to the feeding of our ever growing urban population. A truly interdisciplinary scientific approach is needed encompassing among others nutrition, biochemistry, microbiology and physical chemistry to advance the multitude of processing and preservation techniques, satisfying at the same time the socio-economic, toxicological, and legal constraints placed on any completely new or improved technology today and more so in the future.

The innovative culinary art and craft of great chefs of the 19th century has moved from the restaurant to the food factory. All the large-scale processing techniques discussed must therefore satisfy the visual, olfactory, gustatory and tactile human senses to find consumer acceptability. Added to this must be suitable transport and storage conditions as a vital part in the chain linking food all the way from being grown on the farm via the processor and distributor to the household table.

Every aspect of this food chain is reviewed and discussed in this book.

198 pages (cloth bound)

Price: £5.50 (U.K. addresses) £5.70 (overseas)

First published in Proceedings Series B. Volume 191 (1975)

ISBN: 0 85403 076 X

The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG



CONTENTS

|  |                   |
|--|-------------------|
| BLEANEY, B., STEPHEN, A. G., WALKER, P. J. & WELLS, M. R.<br>Enhanced n.m.r. of $\text{Cs}_2\text{NaPrCl}_6$ , $\text{Cs}_2\text{NaTbCl}_6$ and $\text{Cs}_2\text{NaTmCl}_6$ | <i>pages</i> 1-16 |
| EDWARDS, S. F. & WILKINSON, D. R.<br>The surface statistics of a granular aggregate  | 17-31             |
| WILKINSON, D. R. & EDWARDS, S. F.<br>Spontaneous interparticle percolation   | 33-51             |
| PENROSE, R.<br>Quasi-local mass and angular momentum in general relativity   | 53-63             |
| HUMBLE, P.<br>The structure and mechanism of formation of platelets in natural type Ia diamond. [Plates 1-4]   | 65-81             |
| BRUCE, J. W., GIBLIN, P. J. & GIBSON, C. G.<br>Source genericity of caustics by reflexion in $\mathbb{R}^3$  | 83-116            |
| EMSLEY, J. W., LUCKHURST, G. R. & STOCKLEY, C. P.<br>A theory of orientational ordering in uniaxial liquid crystals composed of molecules with alkyl chains                  | 117-138           |
| MICHAEL, D. H., WAECHTER, R. T. & COLLINS, R.<br>The measurement of surface cracks in metals by using a.c. electric fields.  | 139-157           |
| EVANS, T. & QI, ZENGDU<br>The kinetics of the aggregation of nitrogen atoms in diamond. [Plate 1]  | 159-178           |
| ALLEN, CATHERINE M.<br>Numerical simulation of contaminant dispersion in estuary flows   | 179-194           |
| CLYENS, S., EVANS, C. R. & JOHNSON, K. L.<br>Measurement of the viscosity of supercooled liquids at high shear rates with a Hopkinson torsion bar                            | 195-214           |
| HOROWITZ, G. T. & SCHMIDT, B. G.<br>Note on gravitational energy   | 215-224           |
| FRYER, J. R. & SMITH, D. J.<br>High resolution electron microscopy of molecular crystals. I. Quaterylene, $\text{C}_{40}\text{H}_{20}$ . [Plates 1-8]                        | 225-240           |
| SMITH, E. R.<br>Effects of surface charge on the electrostatic energy of an ionic crystal  | 241-247           |