Transactions of the Cambridge Philosophical Society

RECENT PAPERS

Vol. XXII.

- No. XXVI. The Escape of Molecules from an Atmosphere, with special reference to the Boundary of a Gaseous Star. By E. A. MILNE, M.A., Trinity College, Cambridge. Pp. 35. Price 5/-.
- "XXVII. Some Problems of Diophantine Approximation:
 The Analytical Properties of Certain Dirichlet's Series Associated with the Distribution of Numbers to Modulus Unity. By G. H. HARDY, M.A., Savilian Professor, University of Oxford, and J. E. LITTLE-wood, M.A., Trinity College, Cambridge. Pp. 16. Price 3/6.
- " XXVIII. Free Paths in a Non-uniform Rarefied Gas with an Application to the Escape of Molecules from Isothermal Atmospheres. By J. E. Jones, 1851 Exhibition Senior Research Student, Trinity College, Cambridge. Pp. 22. With Title-page and Index to Vol. xxII. Price 5/6.

Vol. XXIII.

- No. I. On Approximate Continuity. By M. H. A. Newman, B.A., St John's College, Cambridge. Pp. 18. Price 3/6.
- " II. A Mathematical Theory of Natural and Artificial Selection. By J. B. S. Haldane, M.A., Trinity College, Cambridge. Pp. 23. Price 4/-.
- ", III. On the Form of the Solution of the Equations of Dynamics. By T. M. CHERRY, B.A., Trinity College, Isaac Newton Student. Pp. 28. Price 4/-.
- "IV. On the Motion of Spheres, Circular and Elliptic Cylinders through Viscous Liquid. By W. J. Harrison, M.A., Clare College, Cambridge. Pp. 18. Price 3/-.
- " V. Researches in the Theory of Determinants. By Major P. A. MaoMahon, R.A., F.R.S. Pp. 47. 7/-
- "VI. The Optical Constants of Matter. By C. G. Darwin, M.A., F.R.S., Christ's College, Tait Professor of Natural Philosophy in the University of Edinburgh. Pp. 31. Price 5/-.
- "VII. Some Examples of Trajectories Defined by Differential Equations of a Generalised Dynamical Type. By T. M. Cherry, Ph.D., Fellow of Trinity College, Cambridge. Pp. 32. Price 5/-.
- "VIII. Some Formulae for Scrolls and Line Systems in Ordinary Space. By C. G. F. James, Trinity College, Cambridge. Pp. 34. Price 6/-.
- " IX. The Aberrations of a Symmetrical Optical System. By G. C. Steward, M.A., Fellow of Emmanuel College, Cambridge. Pp. 29. Price 5/-.
- X. The Linear Invariants of Ten Quaternary Quadrics. By H. W. TURNBULL, M.A., Trinity College, Professor of Mathematics in the University of St Andrews, and Alfred Young, Sc. D., sometime Fellow of Clare College. Pp. 39. Price 6/-.
- XI. Mathieu Functions. By S. Goldstein, B.A., St John's College. Pp. 34. Price 6/-.

CONTENTS.

	PAGE
A theorem of Dr P. Zeeman. By Mr J. H. GRACE, Peterhouse	845
The pedal planes of a tetrahedron. By Mr J. H. GRACE, Peterhouse	853
An illustration of the space representation of circles. By Mr J. H. GRACE,	10000
Peterhouse	859
On the generalizations of the theorems of Parseval and Riesz-Fischer.	
By Mr S. Pollard, Trinity College	865
Summation of the integral conjugate to the Fourier integral of finite type.	
By MARGARET ELEANOR GRIMSHAW, Newnham College. (Com-	
municated by Mr S. POLLARD)	871
Simplexes and other configurations upon a rational normal curve. By	
	882
Mr F. P. White, St John's College	004
The specific heat of carbon dioxide and the form of the CO2 molecule.	
By W. H. MCCREA, B.A., Trinity College. (Communicated by Mr R. H. FOWLER.) (With Two Text-figures).	000
Mr R. H. FOWLER.) (With Two Text-ngures).	890
Eddy currents in thin circular cylinders of uniform conductivity, due to	
periodically changing magnetic fields, in two dimensions. By Dr	
F. W. CARTER, St John's College. (Communicated by Mr F. P.	
WHITE)	901
The relation between refractive index and density. By D. Burnett, B.A.,	
Clare College	907
On the distribution of the error of an interpolated value, and on the	
construction of tables. By Dr R. A. FISHER, Gonville and Caius	
College, and Mr J. WISHART	912
A differential retarding potential method for the study of the energy	
distribution of slow electron emissions. By C. F. Sharman, B.A.,	
King's College. (Communicated by Prof. Sir E. RUTHERFORD.)	
(With Five Text-figures)	922
	000
The emission of radiation by a quadripole electric moment on the quantum	
mechanics. By J. A. GAUNT, B.A., Trinity College, and W. H. McCrea, B.A., Trinity College	nen
M'UREA, B.A., Irinity College	930
The amount of energy emitted in the y-ray form by radium E. By	
G. H. Aston, B.A., Trinity Hall. (Communicated by Prof.	-
Sir E. RUTHERFORD.) (With One Text-figure)	935
The specific heat of water vapour and the theory of the dissociation of	
water vapour at high temperatures. By W. H. MCCREA, B.A.,	
Trinity College. (With One Text-figure)	942
A case of double reflexion. By E. T. S. APPLEYARD, B.A., King's College,	
and Dr H. W. B. SKINNER, Trinity College. (With One Text-	
figure)	951
A convenient method of distillation of the alkali metals. By R. J. CLARK,	
Lecturer in Physics and Carnegie Teaching Fellow in the University	
of Edinburgh. (Communicated by Prof. Sir E. RUTHERFORD.) (With	
One Text-figure)	953
A rapid mercury still By R. J. CLARY, Lecturer in Physics and	-
A rapid mercury still. By R. J. CLARK, Lecturer in Physics and Carnegie Teaching Fellow in the University of Edinburgh.	
(Communicated by Prof. Sir E. RUTHERFORD.) (With Three Text-	
	956
figures)	990
Notes on spectrophotometry. By R. W. DITCHBURN, B.A., Trinity C. dece,	040
Isaac Newton Student. (With Seven Text-figures)	959
The absorption and reduction in velocity of \$\beta\$-rays on their passage through matter. By Dr E. Madgwick, M.C., Emmanuel College. (Com-	
matter. By Dr E. MADGWICK, M.C., Emmanuel College. (Com-	1000
municated by Prof. Sir E. RUTHERFORD.) (With Nine Text-figures)	970
The \$\beta\$-ray spectrum of Ra E. By Dr E. Madgwick, M.C., Emmanuel	
College. (Communicated by Prof. Sir E. RUTHERFORD.) (With One	
Text-figure)	982
Proceedings at the meetings held during the session 1926-1927.	985
Statement of Accounts of the Cambridge Philosophical Society, from	
January 1, 1926, to December 31, 1926	994
Index to Vol. xxIII	996