

CONTENTS.

	PAGE
<i>Geodetic and dynamical principles, a comparison and connexion.</i> By Mr R. HARGREAVES, St John's College	493
<i>On the figure of Pappus' theorem.</i> By Mr C. V. HANUMANTA RAO, Trinity College. (Communicated by Professor H. F. BAKER)	496
<i>On a group of order 25920 and the projective transformations of a cubic surface.</i> By Mr W. BURNSIDE, Pembroke College	498
<i>The Compton effect in wave mechanics.</i> By Dr P. A. M. DIRAC, St John's College	500
<i>On the polarisation of mercury lines emitted from a discharge tube in a magnetic field.</i> By Dr H. W. B. SKINNER, Trinity College. (With Three Text-figures)	508
<i>Note on the effect of alpha particles on paraffin.</i> By WILLIAM T. RICHARDS, Ph.D. (Communicated by Prof. Sir E. RUTHERFORD.) (With Two Text-figures)	516
<i>The application of the method of the magnetic spectrum to the study of secondary electronic emission.</i> By C. F. SHARMAN, B.A., King's College. (Communicated by Prof. Sir E. RUTHERFORD.) (With Four Text-figures)	523
<i>Some investigations of gas discharges by means of an exploring electrode.</i> By Dr K. G. EMELÉUS, St John's College. (Communicated by Mr E. V. APPLETON.) (With Three Text-figures)	531
<i>The calculation of atomic fields.</i> By L. H. THOMAS, B.A., Trinity College. (With One Text-figure)	542
<i>The tensile deformation of large aluminium crystals at crystal boundaries.</i> By R. L. ASTON, M.Sc., Barker Graduate Scholar of the University of Sydney, Dominion Exhibitioner of Trinity College. (Communicated by Mr G. I. TAYLOR.) (With Nine Text-figures and Plate IV)	549
<i>Some developments in the X-ray analysis of single-crystals.</i> By R. L. ASTON, M.Sc., Barker Graduate Scholar of the University of Sydney, Dominion Exhibitioner of Trinity College. (Communicated by Mr G. I. TAYLOR.) (With Eleven Text-figures)	561
<i>Contribution to the theory of the diffusion pump.</i> By L. WERTENSTEIN, D.Sc., Professor of Radiology at the Free-University, Warsaw. (Communicated by Professor Sir E. RUTHERFORD.) (With One Text-figure)	578
<i>On the addition of the primary aberrations.</i> By Mr G. C. STEWARD, Gonville and Caius College	584
<i>The absorption spectra of "saturated" and "unsaturated" organic substances.</i> By Mr J. E. PURVIS. (With One Text-figure)	588
<i>Surface adsorption and the velocity of chemical action at gas-solid interfaces.</i> By Dr F. HURN CONSTABLE, Fellow of St John's College. (With Three Text-figures)	593
<i>A mathematical theory of natural and artificial selection. Part IV.</i> By Mr J. B. S. HALDANE, Trinity College	607