

## INDEX

	PAGE		PAGE
Conductivity, Thermal, of Copper at Low Temperatures	397	Electron Tube, A Decimal Counter	96
Conductivity, Thermal, of Graphite .. ..	405	Electrons, Scattering of 1 MeV	245
Copper, Thermal and Electrical Conductivity at Low Temperatures .. ..	397	Energy Levels of $^{24}\text{Mg}$ ..	380
Corrigenda .. ..	124	Errors, Standard, in the Fitting of Polynomials to Unequally Spaced Observations ..	131
Cosmic Rays, Absorption of the Hard Component of, in Water	60	Fluid Motion, Buoyant Motion in a Turbulent Environment	279
Cosmic Rays, Anomalous Absorption in Lead ..	500	Flux, Geothermal, in Tasmania	480
Counter, Decimal, Electron Tube .. ..	96	Gilet, P. M., and Watson, G. S.— Calculation of Accuracy of Results of Graphical Square Intercomparisons ..	155
Counters, Scintillation, Energy Resolution of $\gamma$ -Radiation by	171	Graphite, Specific Heat and Thermal Conductivity of ..	405
Darby, J. F., Hopper, V. D., Laby, Jean E., and Wilson, A. R. W.— Flight Characteristics of Expansible Balloons ..	471	Grouping, Method of, Efficiencies in the .. ..	361
Day, G. A.— Radar Observations of Rain at Sydney, N.S.W. ..	229	Guest, P. G.— Efficiencies in the Method of Grouping .. ..	361
Deacon, E. L.— Climatic Change in Australia since 1880 .. ..	209	On the Standard Errors in the Fitting of Polynomials to Unequally Spaced Observations .. ..	131
Deuterons, Neutrons Emitted in the Disintegration of Beryllium by .. ..	45	Hammer Tracks, $^8\text{Li}(\beta)^8\text{Be}^*(2\alpha)$ , in Photographic Emulsions ..	502
Dielectrics, Maxwell-Wagner Loss and Absorption Currents in .. ..	304	Hamon, B. V.— Maxwell-Wagner Loss and Absorption Currents in Dielectrics ..	304
Distributions, Standard, Factorial Moments of .. ..	498	Heat, Specific, of Graphite ..	405
Dyer, A. J.— The Absorption of the Hard Component of Cosmic Rays in Water .. ..	60	Hill, G. W.— See Pearcey, T. ..	316, 335
Dyer, A. J., and Bird, J. R.— Neutrons Emitted in the Disintegration of Beryllium by Deuterons .. ..	45	Hill, R. D.— See Swan, J. B. ..	371
Efficiencies in the Method of Grouping .. ..	361	Hollway, D. L.— A Decimal Counter Electron Tube .. ..	96
Electromagnetic Equations, Relativistic, in a Material Medium .. ..	1	Hopper, V. D.— See Darby, J. F. ..	471
Integral, Short Table of an Important .. ..	127	Intercomparisons, Graphical Square, Calculation of Accuracy of Results of ..	155
Interferometer, Sea .. ..	420	Ionosphere, Structure of the F Region of the .. ..	291

PAGE		PAGE	
Jacka, F.—		Meteoric Dust, Influence on Rainfall .. . . .	490
The Southern Auroral Zone as Defined by the Position of Homogeneous Arcs ..	219	Mills, B. Y.—	
Jaeger, J. C.—		The Radio Brightness Distributions over Four Discrete Sources of Radio Noise .. . . .	452
The Surface Temperature of the Moon .. . . .	10	Mills, B. Y., and Little, A. G.—	
Jefferies, J. T.—		A High-Resolution Aerial System of a New Type ..	272
Emission of Radiation from Model Hydrogen Chromospheres .. . . .	22	Moments, Factorial, of Standard Distributions .. . . .	498
Kennedy, W. L.—		Moon, Surface Temperature of the .. . . .	10
Anomalous Absorption of Cosmic Rays in Lead ..	500	Mortlock, A. J.—	
Klemens, P. G.—		The Effect of Tension on the Thermoelectric Properties of Metals .. . . .	410
The Failure of Matthiessen's Rule for Heavily Deformed Alloys .. . . .	122	Neutrons Emitted in the Disintegration of Beryllium by Deuterons .. . . .	45
The Specific Heat and Thermal Conductivity of Graphite .. . . .	405	Newstead, G., and Beck, A.—	
L-Subshells, Internal Conversion in the .. . . .	371	Borehole Temperature Measuring Equipment and the Geothermal Flux in Tasmania .. . . .	480
Laby, Jean E.—		Nicholas, J. F.—	
<i>See</i> Darby, J. F. .. . .	471	<i>See</i> Boas, W. .. . .	116
Lead, Anomalous Absorption of Cosmic Rays in .. . .	500	Nitrogen, Angular Distribution of Photoprottons from ..	391
Lithium, $^3\text{Li}(\beta)^8\text{Be}^*(2\alpha)$ Hammer Tracks in Photographic Emulsions .. . .	502	Outbursts, Solar Radio, Estimate of the Density and Motion of Solar Material from Observed Characteristics of ..	67
Lithium, On the Low Excited State of $\text{Li}^7$ .. . .	357	$\alpha$ -Particles, Angular Correlation between, and $\gamma$ -Rays in the $\text{Be}^9(d,\alpha)\text{Li}^{7*}\gamma\text{Li}^7$ Reaction ..	53
Little, A. G.—		Pearcey, T., and Hill, G. W.—	
<i>See</i> Mills, B. Y. .. . .	272	Programme Design for the C.S.I.R.O. Mark I Digital Computer.	
McDonell, J. A.—		I. Computer Conventions .. . .	316
The Scattering of 1 MeV Electrons and Positrons ..	245	II. Programme Techniques .. . .	335
Magnesium, The Reaction $^{23}\text{Na}(p,\gamma)^{24}\text{Mg}$ and the Energy Levels of $^{24}\text{Mg}$ .. . .	380	Photoprottons, Angular Distribution of, from Nitrogen ..	391
Matthiessen's Rule, Failure of, for Heavily Deformed Alloys	122	Polynomials, Standard Errors in the Fitting of, to Unequally Spaced Observations ..	131
Matthiessen's Rule, Validity of, for Cold-Worked Wires ..	116		
Mercury, Surface Tension of ..	86		
Metals, Effect of Tension on the Thermoelectric Properties of	410		
Metals, Validity of Matthiessen's Rule for Cold-Worked Wires	116		

PAGE		PAGE	
Positrons, Scattering of 1 MeV	245	Spicer, B. M.—	
Potts, R. B.—		Angular Distribution of Photoprottons from Nitrogen	391
Note on the Factorial Moments of Standard Distributions .. . . .	498	Stanley, G. J.—	
Priestley, C. H. B.—		See Bolton, J. G. . . . .	434
Buoyant Motion in a Turbulent Environment .. . .	279	Styles, R. S., and Campbell, F. W.—	
Radiation, Cosmic Radio, Brightness Distributions over Four Discrete Sources of Radio Noise .. . .	452	Radar Observations of Rain from Non-Freezing Clouds	73
Radiation, Emission from Model Hydrogen Chromospheres .. . . .	22	Sun, Distribution of Radio Brightness over the Solar Disk .. . . . .	190, 262
Radiation, Galactic, at Radio Frequencies .. . . .	420, 434	Sun, Estimate of the Density and Motion of Solar Material from Observed Characteristics of Solar Radio Outbursts ..	67
Radiation, Multipole, Explicit Matrix Elements for ..	241	Surface Tension, Determination of, by Sessile Drop Measurements, with Application to Mercury .. . . . .	86
Rain from Non-Freezing Clouds, Radar Observations of ..	73	Swan, J. B., and Hill, R. D.—	
Rain, Radar Observations of, at Sydney, N.S.W. .. . .	229	Internal Conversion in the L-Subshells .. . . . .	371
Rainfall, Influence of Meteoric Dust on .. . . .	490	Tanner, N. W.—	
$\gamma$ -Rays, Angular Correlation between $\alpha$ -Particles and, in the $\text{Be}^9(d,\alpha)\text{Li}^{7*}\gamma\text{Li}^7$ Reaction	53	See Uebergang, R. G. . . . .	53
$\gamma$ -Rays, Energy Resolution by Sodium Iodide Scintillation Counters .. . . .	171	Tanner, N. W., and Uebergang, R. G.—	
Scintillations, Low Altitude, of Discrete Sources of Galactic Radio-Frequency Radiation	434	On the Low Excited State of $\text{Li}^7$ .. . . . .	357
Sen, Hari K.—		Tasmania, Geothermal Flux in	480
An Estimate of the Density and Motion of Solar Material from Observed Characteristics of Solar Radio Outbursts ..	67	Taylor, N. W.—	
Slee, O. B.—		The Relativistic Electromagnetic Equations in a Material Medium .. . . . .	1
See Bolton, J. G. . . .	420, 434	Thermoelectric Properties of Metals, Effect of Tension on the .. . . . .	410
Smith, R. C. T.—		Treacy, P. B.—	
Conduction of Heat in the Semi-infinite Solid, with a Short Table of an Important Integral .. . . .	127	Explicit Matrix Elements for Multipole Radiation .. . . . .	241
Sodium, The Reaction $\text{Na}^{23}(p,\gamma)\text{Mg}^{24}$	380	Turner, O. H.—	
		On the Reaction $\text{Na}^{23}(p,\gamma)\text{Mg}^{24}$ and the Energy Levels of $\text{Mg}^{24}$ .. . . . .	380
		Uebergang, R. G.—	
		See Tanner, N. W. . . . .	357
		Uebergang, R. G., and Tanner, N. W.—	
		Angular Correlation between $\alpha$ -Particles and $\gamma$ -Rays in the $\text{Be}^9(d,\alpha)\text{Li}^{7*}\gamma\text{Li}^7$ Reaction .. . . . .	53

PAGE	PAGE
Warburton, J. A.— <i>See</i> Christiansen, W. N. 190, 262	
Water, Absorption of the Hard Component of Cosmic Rays in 60	
Watson, G. S.— <i>See</i> Gilet, P. M. .. . 155	
Weiss, A. A.— The Structure of the <i>F</i> Region of the Ionosphere .. 291	
White, G. K.— The Thermal and Electrical Conductivity of Copper at Low Temperatures .. 397	
Wilson, A. R. W.— <sup>8</sup> Li( $\beta$ ) <sup>8</sup> Be*(2 $\alpha$ ) Hammer Tracks in Photographic Emulsions .. . . 502	
<i>See</i> Darby, J. F. .. . 471	
Ziesing, G. M.— The Determination of Surface Tension by Sessile Drop Measurements, with Appli- cation to Mercury .. 86	





