

SPACE RESEARCH IN THE UNITED KINGDOM

(in continuation of Space Research in United Kingdom Universities)

Published each January. Price 13s. 6d. (U.S. \$2.00) including postage
(1963-64. 80 pp. 6 line drawings)

REPORTS FOR 1963-64

The reports cover in general the period July 1963 to August 1964 although, where available at the time of preparation for press, information later than this has been included. The publication has been divided into two parts. The first part comprises the reports of investigators in University Departments who are in receipt of space research grants. The British Astronomical Association also receives a grant and its report is included. The second part consists of reports by Government establishments carrying out space research programmes.

PART I

Bates, D. R.	Upper atmosphere studies
Beynon, W. J. G.	Ionospheric studies and satellite tracking
Boyd, R. L. F.	Geophysical and astronomical investigations
Bradley, D. J.	Ultra-violet interference spectroscopy with image intensifier detection
Elliot, H.	Energetic particle studies
Groves, G. V.	Neutral atmosphere studies
Hall, S. H.	Geomagnetic studies
Houghton, J. T. and Smith, S. D.	Meteorological investigations from a satellite
Hutchinson, G. W.	Study of extra-terrestrial γ -rays
Ingham, M. F.	Studies of Lyman α and H α radiation from the night sky
Kaiser, T. R.	Ionospheric studies using radio waves
Kopal, Z.	Michelson spectrometry for space astronomy
Lovell, Sir Bernard	Micrometeorite studies and tracking of space vehicles
Marsden, P. L.	Cosmic ray studies
McGee, J. D.	Image transducer research
Ring, J.	Studies of ultra-violet and infra-red techniques for space astronomy
Roy, A. E.	Investigation of the Moon's gravitational field and close lunar satellites
Sayers, J.	Studies of ionization in the upper atmosphere
Sheppard, P. A.	Meteorological investigations
Stewardson, E. A.	X-ray astronomy
Smith, F. G.	Studies of galactic and extra-galactic radiation
Weekes, K.	Investigations on radio waves from satellites
British Astronomical Association	Optical observations on artificial satellites

PART II

The Culham Laboratory (UKAEA)	Spectroscopic studies
Meteorological Office	Studies of the high atmosphere
National Physical Laboratory	Theoretical gravitational studies and ultra-violet spectroscopy
Radio Research Station	Geophysical investigations
Royal Aircraft Establishment	Orbital analysis and geophysical studies
Royal Greenwich Observatory	Satellite tracking by kinetheodolite
Royal Observatory, Edinburgh	Astronomical studies and satellite tracking
Royal Radar Establishment	Satellite tracking

Published by the Royal Society, Burlington House, London, W. 1

PROCEEDINGS OF THE ROYAL SOCIETY, SERIES A

No 1401

20 April 1965

Vol 285

CONTENTS

A DISCUSSION ON LEPTONIC INTERACTIONS

ORGANIZED BY C. F. POWELL, F.R.S. AND A. SALAM, F.R.S.

[Plate 11]

	PAGE
A. ZICHICHI. C.E.R.N. work on weak interactions	175
D. H. PERKINS. High energy neutrino experiments	191
H. H. BINGHAM. Leptonic decays of strange particles	202
P. T. MATTHEWS, F.R.S. Weak interactions	214
R. H. DALITZ, F.R.S. The weak interactions of the muon	229
F. J. M. FARLEY. High energy muon interactions	248
G. FEINBERG. The neutrino in astrophysics	257

Melting and crystal structure: association in nitrate melts. By ELIZABETH RHODES, W. E. SMITH and A. R. UBBELOHDE, F.R.S.	263
The transverse compression of anisotropic fibre monofilaments. By D. W. HADLEY, I. M. WARD and J. WARD	275
Canonical representations for massless particles and zero-mass limits of the helicity representation. By A. MCKERRELL	287
X-ray topographic studies of dislocations in iron-silicon alloy single crystals. By A. R. LANG and MILENA POLCAROVÁ. (Plates 12 to 15)	297
The covariant theory of strong interaction symmetries. II. By A. SALAM, F.R.S., R. DELBOURGO, M. A. RASHID and J. STRATHDEE	312