

THE ROYAL SOCIETY
INTERNATIONAL GEOPHYSICAL YEAR
ANTARCTIC EXPEDITION

HALLEY BAY
COATS LAND, FALKLAND ISLANDS DEPENDENCIES
1955-1959

The Royal Society Expedition to Halley Bay in Antarctica was one of the major British contributions to the International Geophysical Year. An extensive research programme in meteorology, geomagnetism, aurora and airglow, ionospheric physics, radio astronomy, glaciology, and seismology was carried out at this Base.

All the experimental observations and derived data are published in a series of four volumes: size royal quarto ($12\frac{1}{4} \times 9\frac{7}{8}$ in.). Bound in maroon cloth with gold lettering.

Price £7. (\$23.00) each volume.

- VOLUME I. Foreword. Introduction. The establishment and maintenance of the Royal Society Base. Visual and photographic auroral observations. Airglow observations. Geomagnetic observations.
- VOLUME II. Results of ionospheric vertical soundings, absorption and drift measurements. Results of radio-star scintillation measurements and of radio-echo observations of aurorae and meteors.
- VOLUME III. Seismological bulletin and notes. Meteorological observations (upper-air radio soundings and radar wind observations; total, diffuse and net radiation measurements; total, surface and balloon-borne ozone determinations).
- VOLUME IV. Surface meteorological observations. Glaciological observations. Emperor Penguin studies. Appendixes dealing with technical aspects of Base operation.

CONTENTS

	PAGE
Vibrationally excited cyanogen radicals produced in the flash photolysis of cyanogen and cyanogen halides. By N. BASCO, J. E. NICHOLAS, R. G. W. NORRISH, F.R.S and W. H. J. VICKERS. (Plates 1 to 6)	147
Some features of the gas phase oxidation of <i>n</i> -butenes. By R. G. W. NORRISH, F.R.S. and K. PORTER	164
Commentary on a conjecture of Shoenberg's concerning the de Haas-van Alphen effect. By A. B. PIPPARD, F.R.S.	192
Heat flow in the Southern Karroo. By D. I. GOUGH	207
Covariant quantum field theories with indefinite metric, and the Lorentz covariant Lee model. By J. L. MARTIN	231
Cross-current transfer processes in the non-steady state. By F. EVANS and W. SMITH	241
The structure of the Goldstein-Kaplan bands of N ₂ . By P. K. CARROLL. (Plates 7 and 8)	270