

CONTENTS

Page

Corrigenda	iv
----------------------	----

First Session-LIQUID HELIUM II

The present state of the theory of liquid helium. By F. LONDON	1
Determination of the velocity of propagation of the second sound in helium II. By V. PESHKOV	19
Surface films of liquid helium II. By J. DE BOER	32
Frictionless transport. By K. MENDELSSOHN	35
Experiments on the formation of the helium film. By K. MENDELSSOHN.	41
The thermo-mechanical effects in helium II. By J. H. MELLINK and L. MEYER	43
The superfluid flow of liquid helium II. By H. LONDON	48
Some speculations on the constitution of helium II. By J. REEKIE	52

Second Session-EXPERIMENTAL TECHNIQUE

Low-temperature bolometers. By DONALD H. ANDREW.	56
The technique of adiabatic demagnetization. By R. A. HULL	72
Magnetic measurements. By D. SHOESBERG	85
Metal-topped glass dewars. By J. F. ALLEN	87
A coil without iron to produce intense magnetic fields. By B. Tsai	89

Third Session-SUPERCONDUCTIVITY

The interpretation of the theory of superconductivity. By M. VOON LXX	90
Size effects in superconductivity. By D. SHOESBERG	93
Resistance in the intermediate state. By E.R. ANDREW	101
The thermal properties of superconductors. By J. G. DAUNT	104
The high-frequency resistance of superconducting tin. By H. LONDON	109
Resistance of superconductors at microwave frequencies. By A. B. PIPPARD	113
Some measurements of the electrical resistance of thin metallic films. By A. VAN ITTERBEEK	118
Calorimetric measurements on normal and superconductive tantalum. By MAURICE DESIRANT	124
Discussion of papers on superconductivity. By K. MENDELSSOHN	127

Fourth Session-PARAMAGNETICS

Nuclear ferromagnetism. By H. FROHLICH and F. R. NABARRO	129
Pseudo-ferromagnetic phenomena in paramagnetic crystals at low temperatures. By: JEAN BECQUEREL and YVES LE GRAND	134
Transition points. By LARS ONSAGER and BRURIA KAUFMAN	137
Relaxation and hysteresis effects in paramagnetic salt. By H. N. V. TEMPERLEY	144