

ОГЛАВЛЕНИЕ. CONTENTS

Приглашенные докладчики. Invited Papers

"Macroscopic quantum effects and vortex motion in Superconductors" (J.Bardeen)	II
"Stability in conduction and convection cooled superconducting coils" (Z.J.J.Stekly)	25
"Transport phenomena in type-II superconductors" (Y.B.Kim)	43
"The AC Josephson effect" (B.N.Taylor)	59
"New superconductors" (B.T.Matthias)	77
"Low carrier concentration superconductors" (J.K.Hulm, C.K.Jones, R.C.Miller, T.Y.Tien)	86
S1. The decay of persistent currents in finite superconductors (W.A.Little)	II5
S2. Some elementary remarks on superconductivity theory (R.A.Ferrel)	II9
S3. On Little's proposal for a superconducting organic polymer (C.G.Kuper)	I22
S4. Об электронном механизме сверхпроводимости (Б.Т.Гейликман)	I23
S5. К вопросу о динамике сверхтекучего Ферми-газа (М.П.Кемоклидзе, Л.П.Питаевский)	I27
S6. Time variation of the Ginzburg-Landau order parameter (E.Abrahams and T.Tsuneto)	I28
S7. A time dependent Ginzburg-Landau equation and its application to the problem of resistivity in the mixed state (A.Schmid)	I33
S8. Studies of time dependence in superconductivity (H.Meissner)	I38
S9. On the phenomenological equations for the supercurrent in the London limit (W.Weller)	I43
S10. Penetration depth anisotropy in London type superconductors (D.R.Tilley)	I47

S12. Influence of ferromagnetic exchange interactions on superconductivity (N.F.Berk, J.R.Schrieffer)	I50
S13. К теории сосуществования сверхпроводимости и магнитного порядка (С.В.Вонсовский, М.С.Свирский)	I57
S14. Effect of localized and resonant modes on energy gap function, renormalization parameter, and transition temperature of isotopic superconductors (Appel)	I61
S15. Ultrasonic attenuation in a pure type II superconductor in high magnetic fields (К.Маки)	I70
S16. Свойства сверхпроводников в модели перекрывающихся зон (Б.Т.Гейликман, Р.О.Зайцев, В.З.Кресин)	I73
S17. Overlapped bands and superconductivity (T.Soda, Y.Wada)	I76
S18. Исследование по теории двухзонных сверхпроводников (В.А.Москаленко, Л.З.Кон, М.Е.Палистрант)	I81
S19. Surface effects in a superconductor coated with a normal metal (J.P.Burger, G.Deutscher, J.P.Hurault, A.Martinet)	I86
S20. Pair potential in superimposed normal and superconducting films (J.P.Burger, G.Deutscher, J.P.Hurault, A.Martinet)	I90
S23. The proximity effect between superconducting and normal films (J.J.Hauser)	I95
S24. Investigations of the proximity effect by electron tunneling (C.J.Adkins, B.W.Kington)	202
S25. The surface impedance of thin films of tin on superconducting lead (J.R.Waldram)	207
S26. Measurements using a superconducting galvanometer (J.Clarks)	211
S27. Gapless superconductivity in type II - ferromagnetic film sandwiches (R.P.Groff, R.D.Parks)	216
S28. Proximity effects in a magnetic field (G.Fischer, R.Klein)	221

S29. Proximity effects in superconductors (W.Silvert)	226
S32. Экспериментальное исследование эффекта Джозефсона в сверхпроводниках (И.М.Дмитренко, И.К.Янсон)	228
S33. Evidence for the a-c Josephson effect in superconduct- ing point contacts (J.E.Zimmerman, A.H.Silver)	233
S34. Superconducting tunneling observations using a simple point contact configuration (H.J.Levinstein, J.E.Kunzler)	241
S35: The effect of microwaves on constricted tin films (A.F.G.Wyatt, V.M.Dmitriev, W.S.Moore)	242
S36. Oscillations in the voltage between two weakly connected current carrying superconductors as a function of the applied magnetic field (R. de Bruyn Ouboter, M.H.Omar, Miss A.J.P.T.Arnold, T.Guinau, K.W.Taconis)	246
S37. Flux quantization and metastable states in a super- conducting loop with n Josephson junctions (B.B.Schwartz, E.E.H.Shin)	252
S38. Fluxoid quantization in a multiply-connected super- conductor (R.P.Groff, R.D.Parks)	253
S39. A new effect at superconducting contacts (J.I.Pankove)	257
S40. Possible high-current superconductivity in ionic semiconductors (D.M.Eagles)	261
S41. Geometrical resonance effect in superconducting Sn (W.J.Tomasch)	266
S42. Effect of the temperature and the magnetic field on the capacity of Al-Sn and Al-In tunneling junctions. Some preliminary experiments (N.Sacchetti, G.Sacerdoti, G.Sanna)	270
S43. К теории туннелирования в сверхпроводниках (D.M.Иванченко)	276
S44. К теории туннелирования в сверхпроводниках (А.В.Свидзинский, В.А.Слюсарев)	281

S45.	Туннельный эффект Джозефсона в сверхпроводниках с парамагнитными примесями (Г.А.Барамидзе, А.Г.Квирикадзе, И.О.Кулик)	283
S46.	The effect of the s-f exchange interaction on the superconducting properties of dilute La-alloys (T.Sugawara, H.Eguchi)	288
S47.	Localized states in metals: effect of transition metal impurities on some metallic properties of Al and Zn (G.Boato, C.Rizzuto, J.Vig)	292
S48.	Ordering of magnetic impurities in superconductors (D.K.Finnemore)	298
S49.	Superconducting and magnetic properties of dilute paramagnetic metals (J.E.Crow, R.P.Guertin, R.D.Parks)	301
S50.	The effect of 3d transition metal impurities on the superconducting transition of aluminum (T.Ohtsuka, R.Aoki)	306
S51.	Spatial variation of the order parameter in the vicinity of a paramagnetic impurity (T.Tsuzuki, T.Tsuneto)	311
S52.	Ettingshausen effect in the mixed state of type II superconductors (A.G.van Vijfeijken)	316
S53.	The thermodynamics of vortex flow in superconductors (G.B.Intema)	322
S54.	Thermal forces of vortices and transport of entropy by vortices in superconductors (F.A.Otter, Jr., P.R.Solomon)	328
S55.	Magnetically coupled superconducting films (I.Giaever)	334
S56.	О сверхпроводимости в неравновесной системе (Э.Г.Батнев)	339
S57.	О механизме фазового перехода из сверхпроводящего состояния в смешанное в сверхпроводниках II рода и о движении вихревых нитей (В.П.Галайко)	340
S58.	On the lower critical field of the mixed state in Ginzburg-Landau theory (P.M.Marcus)	345

S59. Some theoretical results for the tunneling density of states of superconducting alloys in the mixed state (L.Tewordt)	350
S60. Экспериментальные исследования резистивных эффектов в тонких сверхпроводящих пленках (И.М.Дмитренко, А.А.Шабло, Л.Е.Колинько)	355
S61. Experiments on the distribution of current in a type-II superconductor (R.G.Jones, A.C.Rose-Innes)	360
S63. An electron mirror microscope study of the Abrikosov vortex structure of superconductors (S.T.Wang, L.J.Challis, W.A.Little)	364
S64. Anisotropy of H_{c2} in type II superconductors (W.A.Reed, E.Fawcett, P.P.M.Meincke, P.C.Hohenberg, N.R.Werthamer)	368
S65. Low temperature thermodynamic properties of vanadium in normal, superconductive and mixed state (P.H.Keesom, R.Radebaugh)	372
S66. Magnetization studies of single crystals of Nb_3Sn (J.J.Hanak, J.J.Halloran, G.D.Cody)	373
S67. On the mixed superconductive state and its boundaries (C.J.Gorter)	378
S68. R.F. studies of flow and flux pinning (J.I.Gittleman, B.Rosenblum)	380
S69. Nuclear spin relaxation time and line shape of vanadium in the mixed state (W.Fite II, A.G.Redfield)	384
S70. Нестационарные явления в смешанном состоянии сверхпроводников II-го рода (И.О.Кулик)	388
S71. Quantized flux flow in superconducting vanadium foils (G.J.van Gorp, D.J.van Ooijen)	392
S72. Thermal conductivity (type II superconductors in the gapless region. Part I: Bulk specimens (P.Lindenfeld, E.A.Lynton, R.Soulen). Part II: Thin films (P.Lindenfeld, R.D.McConnell)	396
S73. Magnetization and heat conductivity of type II superconductors (J.Lowell, K.Mendelssohn)	402

S74. Magnetic properties and thermal conductivities of second-kind superconductors: In-Pb alloys (Y.Muto, Moto, T.Mamiya, T.Fukuroi)	407
S75. On the thermal conductivity of type II superconductors in the mixed state (M.R.Chowdhury, E.Canel)	412
S76. The attenuation of sound in the mixed state of niobium (E.M.Forgan, C.E.Gough)	414
S77. Ultrasonic attenuation in type II superconductors (R.Kagiwada, M.Levy, I.Rudnick)	419
S78. О поглощении ультразвука в сверхпроводящих сплавах в смешанном состоянии (В.П.Галайко, И.И.Фалько)	424
S80. О высокочастотных свойствах токовых сверхпроводников (Г.И.Урушадзе)	429
S81. Acoustic attenuation study of superconducting niobium in the mixed state (A.Ikushima)	431
S82. Experimental verification of the theory of thermal conductivity in the superconducting surface sheath (J.M.Mochel, R.D.Parks)	437
S83. Current flow in type I and type II superconductors (E.J.Thomas, D.J.Sandiford)	444
S84. Magnetization of dilute alloys of Pb: 1 - effects of superconducting surface sheath (J.P.McEvoy, J.G.Park)	448
S86. The alternating field susceptibility of superconducting tantalum (G.J.C.Bots, P.P.J.van Engelen, B.S.Blaisse)	454
S87. Critical surface currents and hysteresis in the magnetisation curves of superconductors (J.G.Park)	460
S88. dHvA oscillations in the critical temperature of type II superconductors (L.Gunther, L.W.Gruenberg)	465
S89. Effect of paramagnetism on upper critical fields of Nb-Zr alloys (S.J.Williamson)	470

S90. The influence of Pauli paramagnetism on the critical field of thin Al films (M.Strongin, O.F.Kammerer) . .	474
S91. Magnetization and resistive behavior of Pauli-paramagnetic superconductors (R.R.Hake)	480
S92. Upper critical fields and magnetization curves for Ti-V alloys (I.Shibuya, T.Aomine)	490
S93. Calorimetric evidence for Pauli-paramagnetic superconductivity (L.J.Barnes, R.R.Hake)	495