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Books of Paul Roberts Page 1

1. P.H. Roberts, *Magnetism and the Cosmos*. Edited jointly with W. Hindmarsh, F.J. Lowes and S.K. Runcorn. Oliver and Boyd, 1966, BOOK (Prev. Pub. Work #48).
2. P.H. Roberts, *An Introduction to Magnetohydrodynamics*. Longmans, Green and Co., 1967, BOOK (Prev. Pub. Work #49).
3. P.H. Roberts, *Rotating Fluids in Geophysics*. Edited jointly with A.M. Soward. Academic Press, 1978, BOOK (Prev. Pub. Work #156).
4. P.H. Roberts, *Magnetohydrodynamics of the Earth's core. Selected Works of Paul Roberts*. Edited by Andrew Soward. *The Fluid Mechanics of Astrophysics and Geophysics*, Taylor & Francis, London, 10, 2003, BOOK.

Since
Last Review

Publications of Paul Roberts Page 2

1. P.H. Roberts, *On the reflection and refraction of hydromagnetic waves.* Astrophys. J., **121**, 1955, 720-730, RESEARCH ARTICLE.
2. P.H. Roberts, *The equilibrium of magnetic stars.* Astrophys. J., **122**, 1955, 508-512, RESEARCH ARTICLE.
3. P.H. Roberts, *Hydromagnetic disturbances in a fluid of finite conductivity.* Astrophys. J., **122**, 1955, 315-326, RESEARCH ARTICLE.
4. J.W. Chamberlain, P.H. Roberts, *Turbulence spectrum in Chandrasekhar's theory.* Phys. Rev., **99**, 1955, 1674-1677, RESEARCH ARTICLE.
5. P.H. Roberts, *Twisted magnetic fields.* Astrophys. J., **124**, 1956, 430-442, RESEARCH ARTICLE.
6. P.H. Roberts, *How old is the Earth?* Streven, **9**, 1956, 512-520, REVIEW ARTICLE.
7. P.H. Roberts, *The Earth's magnetism.* Streven, **9**, 1956, 898-905, REVIEW ARTICLE.
8. P.H. Roberts, *Hydromagnetic disturbances in a fluid of finite conductivity, II.* Astrophys. J., **126**, 1957, 418-428, RESEARCH ARTICLE.
9. P.H. Roberts, *Why a geophysical year?* Streven, **10**, 1957, 850-855, REVIEW ARTICLE.
10. P.H. Roberts, *On the application of a statistical approximation to the theory of turbulent diffusion.* J. Rat. Mech. and Anal., **6**, 1957, 781-800, RESEARCH ARTICLE.
11. F.C. Bertiau, P.H. Roberts, *Distribution of gravitational field at the center of globular and spherical clusters.* Astrophys. J., **128**, 1958, 130-138, RESEARCH ARTICLE.
12. P.H. Roberts, *Propagation of induced fields through the core.* Ann. Geophys., **XV**, 1959, 75-86, RESEARCH ARTICLE.
13. P.H. Roberts, H.D. Ursell, *Random walk on a sphere and on a Riemannian manifold.* Phil. Trans. R. Soc. Lond. A., **252**, 1960, 317-356, RESEARCH ARTICLE.
14. P.H. Roberts, *Characteristic value problems posed by differential equations arising in hydrodynamics and hydromagnetics.* J. Math. Anal. and Applic., **1**, 1960, 195-214, RESEARCH ARTICLE.
15. R. Hide, P.H. Roberts, *Hydromagnetic flow due to an oscillating plane.* Rev. Mod. Phys., **32**, 1960, 799-806, RESEARCH ARTICLE.
16. P.H. Roberts, T. Tatsumi, *The decay of magnetohydrodynamic turbulence.* J. Math. & Mech., **9**, 1960, 697-714, RESEARCH ARTICLE.
17. P.H. Roberts, *Analytical theory of turbulent diffusion.* Courant Institute Rep., **HSN-2**, 1960, RESEARCH ARTICLE.
18. P.H. Roberts, *Analytical theory of turbulent diffusion.* J. Fluid Mech., **11**, 1960, 257-283, RESEARCH ARTICLE.

19. R. Hide, P.H. Roberts, *The origin of the main geomagnetic field.* Phys. and Chem. of the Earth, Pergamon Press, **4**, 1961, 25-98, REVIEW ARTICLE.
20. P.H. Roberts, F.J. Lowes, *Earth currents of deep internal origin.* J. Geophys. Research, **66**, 1961, 1243-1254, RESEARCH ARTICLE.

21. P.H. Roberts, *On Bouret's hypothesis concerning turbulent diffusion*. Can. J. Phys., **39**, 1961, 1291-1299, RESEARCH ARTICLE.
22. P.H. Roberts, A.D. Boardman, *The effect of a vertical magnetic field on the propagation of gravity waves along the plane surface of a semi-infinite viscous, electrically conducting fluid*. Astrophys. J., **135**, 1962, 552-592, RESEARCH ARTICLE.
23. T. Chamalaun, P.H. Roberts, *The theory of convection in spherical shells and its application to the problem of thermal convection in the Earth's mantle*. Continental Drift. International Geophysics Series, Academic Press, **3**, 1962, 177-194, RESEARCH ARTICLE.
24. P.H. Roberts, *On the superpotential and supermatrix of a heterogeneous ellipsoid*. Astrophys. J., **136**, 1962, 1108-1114, RESEARCH ARTICLE.
25. R. Hide, P.H. Roberts, *Some elementary problems in magneto-hydrodynamics*. Advances in Applied Mechanics. Academic Press, **4**, 1962, 215-316, RESEARCH ARTICLE.
26. P.H. Roberts, *The effect of a vertical magnetic field on Rayleigh-Taylor instability*. Astrophys. J., **137**, 1963, 679-689, RESEARCH ARTICLE.
27. P.H. Roberts, K. Stewartson, *On the stability of a Maclaurin spheroid of small viscosity*. Astrophys. J., **137**, 1963, 777-790, RESEARCH ARTICLE.
28. P.H. Roberts, *On highly rotating polytropes I*. Astrophys. Journal, **137**, 1963, 1129-1141, RESEARCH ARTICLE.
29. K. Stewartson, P.H. Roberts, *On the motion of a liquid in a spheroidal cavity of a precessing rigid body*. J. Fluid. Mech., **17**, 1963, 1-20, RESEARCH ARTICLE.
30. P.H. Roberts, *On highly rotating polytropes II*. Astrophys. J., **138**, 1963, 809-819, RESEARCH ARTICLE.
31. S. Chandrasekhar, P.H. Roberts, *The ellipticity of a slowly rotating configuration*. Astrophys. J., **138**, 1963, 801-808, RESEARCH ARTICLE.
32. P.H. Roberts, S. Scott, *Truncation errors in the spherical harmonic analysis of the geomagnetic field and the problem of downward extrapolation*. J. Geomag. and Geoelec., **XV**, 1964, 148-160, RESEARCH ARTICLE.
33. P.H. Roberts, *The stability of hydromagnetic Couette flow*. Proc. Camb. Phil. Soc., **60**, 1964, 635-651, RESEARCH ARTICLE.
34. M. Hurley, P.H. Roberts, *On highly rotating polytropes III*. Astrophys. J., **140**, 1964, 583-598, RESEARCH ARTICLE.
35. P.H. Roberts, *The figures of the Earth and other rotating bodies*. University of Newcastle upon Tyne, 1964, REVIEW ARTICLE.
36. P.H. Roberts, K. Stewartson, *On the motion of a liquid in a spheroidal cavity of a precessing rigid body, II*. Proc. Camb. Phil. Soc., **61**, 1965, 279-288, RESEARCH ARTICLE.

37. R.J. Donnelly, K.W. Schwartz, P.H. Roberts, *Experiments on the stability of viscous flow between rotating cylinders, VI: Finite-amplitude experiments*. Proc. R. Soc. Lond. A., **283**, 1965, 531-546, RESEARCH ARTICLE.
38. M. Hurley, P.H. Roberts, *On highly rotating polytropes IV*. Astrophys. Journal Supplement, **XI**, 1965, 95-119, RESEARCH ARTICLE.

39. P.H. Roberts, *On the thermal instability of a highly rotating fluid sphere*. *Astrophys. Journal*, **141**, 1965, 240-250, RESEARCH ARTICLE.
40. D.N. Limber, P.H. Roberts, *On highly rotating polytropes V*. *Astrophys. J.*, **141**, 1965, 1439-1442, RESEARCH ARTICLE.
41. P.H. Roberts, S. Scott, *On analysis of the secular variation, 1. A hydromagnetic constraint: Theory*. *J. Geomag. and Geoelec.*, **17**, 1965, 137-151, RESEARCH ARTICLE.
42. P.H. Roberts, *Convection in a self-gravitating fluid sphere*. *Mathematika*, **12**, 1965, 128-136, RESEARCH ARTICLE.
43. M. Hurley, P.H. Roberts, K. Wright, *The oscillations of gas spheres*. *Astrophys. J.*, **143**, 1966, 535-551, RESEARCH ARTICLE.
44. P.H. Roberts, *On the relationship between Galerkin's method and the local potential method*. *Non-Equilibrium Thermodynamics, Variational Techniques and Stability*. University of Chicago Press, 1966, 299-302, RESEARCH ARTICLE.
45. P.H. Roberts, *On non-linear Bénard convection*. *Non-Equilibrium Thermodynamics, Variational Techniques & Stability*. University of Chicago Press, 1966, 125-157, RESEARCH ARTICLE.
46. P.H. Roberts, *Frozen fields, core motions and the secular variation*. *Magnetism and the Cosmos*. Oliver and Boyd, 1966, 95-107, RESEARCH ARTICLE.
47. R.D. Gibson, P.H. Roberts, *Some comments on the theory of homogeneous dynamos*. *Magnetism and the Cosmos*. Oliver and Boyd, 1966, 108-120, RESEARCH ARTICLE.
48. P.H. Roberts, *See Books #1*.
49. P.H. Roberts, *See Books #2*.
50. P.H. Roberts, *Singularities of Hartmann Layers*. *Proc. R. Soc. Lond. A.*, **300**, 1967, 94-107, RESEARCH ARTICLE.
51. P.H. Roberts, *Geomagnetic dynamos*. *Proceedings of Woods Hole Geophysical Summer School*, **1**, 1967, REVIEW ARTICLE.
52. P.H. Roberts, *Convection in horizontal layers with internal heat generation: Theory*. *J. Fluid Mech.*, **30**, 1967, 33-49, RESEARCH ARTICLE.
53. P.H. Roberts, *On the thermal instability of a rotating-fluid sphere containing heat sources*. *Phil. Trans. R. Soc. A.*, **263**, 1968, 93-117, RESEARCH ARTICLE.
54. J.G. Tough, P.H. Roberts, *Nearly symmetric hydromagnetic dynamos*. *Phys. Earth Planet. Int.*, **1**, 1968, 288-296, RESEARCH ARTICLE.
55. W.I. Glaberson, R.J. Donnelly, P.H. Roberts, *Hydromagnetic duct flow: Theory and experiment*. *Physics of Fluids*, **11**, 1968, 2192-2199, RESEARCH ARTICLE.
56. R.D. Gibson, P.H. Roberts, *The Bullard-Gellman dynamo*. *Appl. of Mod. Phys. to Earth Planet. Int.* Wiley, 1969, 577-602, RESEARCH ARTICLE.
57. P.H. Roberts, *Electrohydrodynamic convection*. *Quart. J. Mech. & Appl. Math.*, **22**, 1969, 211-220, RESEARCH ARTICLE.
58. R.J. Donnelly, P.H. Roberts, *Stochastic theory of the interaction of ions and quantized vortices in helium II*. *Proc. R. Soc. Lond. A.*, **312**, 1969, 519-551, RESEARCH ARTICLE.

59. R.J. Donnelly, P.H. Roberts, *Roton-phonon relaxation times in helium II*. Phys. Lett. A., **30**, 1969, 468-469, RESEARCH ARTICLE.
60. R.J. Donnelly, P.H. Roberts, *Nucleation of quantized vortex rings by ions in helium II*. Phys. Rev. Lett., **23**, 1969, 1491-1495, RESEARCH ARTICLE.
61. P.H. Roberts, R.J. Donnelly, *Theory of the onset of superflow*. Phys. Rev. Lett., **24**, 1970, 367-371, RESEARCH ARTICLE.
62. P.H. Roberts, R.J. Donnelly, *Dynamics of vortex rings*. Phys. Lett., **31**, 1970, 137-138, RESEARCH ARTICLE.
63. P. Baldwin, P.H. Roberts, *The critical layer in stratified shear flow*. Mathematika, **17**, 1970, 102-119, RESEARCH ARTICLE.
64. A.E. Cook, P.H. Roberts, *The Rikitake two-disc dynamo system*. Proc. Camb. Phil. Soc., **68**, 1970, 547-569, RESEARCH ARTICLE.
65. I.A. Eltayeb, P.H. Roberts, *On the hydromagnetics of rotating fluids*. Astrophys. J., **162**, 1970, 699-701, RESEARCH ARTICLE.
66. P.H. Roberts, *Thomas Henry Havelock*. Bull. Lond. Math. Soc., **2**, 1970, 221-232, REVIEW ARTICLE.
67. R.J. Donnelly, O.H. Roberts, *Stochastic theory of the nucleation of quantized vortices in superfluid helium*. Phil. Trans. R. Soc. Lond. A., **271**, 1971, 41-100, RESEARCH ARTICLE.
68. P.H. Roberts, J. Grant, *Motions in a Bose condensate. I: The structure of a large circular vortex*. J. of Physics, **4**, 1971, 55-72, RESEARCH ARTICLE.
69. D.M. Strayer, R.J. Donnelly, P.H. Roberts, *Motion of ions at finite velocities in helium II*. Phys. Rev. Lett., **26**, 1971, 165-169, RESEARCH ARTICLE.
70. P.H. Roberts, *Dynamo theory of geomagnetism*. World Magnetic Survey 1957-1969, IUGG Publ., 1971, 123-131, REVIEW ARTICLE.
71. P.H. Roberts, M. Stix, *The turbulent dynamo. A translation of a series of papers by F. Krause, K.H. Radler and M. Steenbeck*. NCAR Tech. Note TN/1A-60, 1971, TRANSLATION AND COMMENTARY.
72. P.H. Roberts, *A transformation of the stellar wind equations*. Astrophys. Lett., **9**, 1971, 79-80, RESEARCH ARTICLE.
73. A.M. Binnie, P.H. Roberts, *Thomas Henry Havelock 1877-1968*. Biograph. Not. R. Soc. Lond., **17**, 1971, 327-377, REVIEW ARTICLE.
74. P.H. Roberts, *Dynamo theory*. Lectures in Appl. Math. & American Math. Soc., **14**, 1971, 129-206, REVIEW ARTICLE.
75. B. Durney, P.H. Roberts, *On the theory of stellar winds*. Astrophys. J., **170**, 1971, 319-323, RESEARCH ARTICLE.

76. P.H. Roberts, A.M. Soward, *Stellar winds and breezes*. Proc. R. Soc. Lond. A., **328**, 1972, 185-215, RESEARCH ARTICLE.
77. P.H. Roberts, M. Stix, *α -effect dynamos, by the Bullard-Gellman formalism*. Astron. & Astrophys., **18**, 1972, 453-466, RESEARCH ARTICLE.

78. P.H. Roberts, *Kinematic dynamo models*. Phil. Trans. R. Soc. Lond. A., **272**, 1972, 663-703, RESEARCH ARTICLE.
79. P.H. Roberts, A.M. Soward, *Magnetohydrodynamics of the Earth's core*. Ann. Rev. Fluid Mech., **4**, 1972, 117-154, REVIEW ARTICLE.
80. P. Baldwin, P.H. Roberts, *On resistive instabilities*. Phil. Trans. R. Soc. Lond. A., **272**, 1972, 303-330, RESEARCH ARTICLE.
81. R.N. Hills, P.H. Roberts, *On Landau's two-fluid model for helium II*. J. Inst. Math. Applics., **9**, 1972, 56-67, RESEARCH ARTICLE.
82. P.H. Roberts, *Electromagnetic core-mantle coupling*. J. Geomag. & Geoelec., **24**, 1972, 231-259, RESEARCH ARTICLE.
83. P.H. Roberts, R.J. Donnelly, *Dynamics of rotons*. Phys. Lett., **43A**, 1973, 1-2, RESEARCH ARTICLE.
84. R.J. Donnelly, P.H. Roberts, *An analogy between the theory of superfluidity and the theory of dielectrics*. Phys. Lett., **43A**, 1973, 199-200, RESEARCH ARTICLE.
85. P.H. Roberts, *A Hamiltonian theory for weakly interacting vortices*. Mathematika, **19**, 1972, 169-179, RESEARCH ARTICLE.
86. F. Krause, P.H. Roberts, *Some problems of mean field electrodynamics*. Astrophys. J. , **181**, 1973, 977-992, RESEARCH ARTICLE.
87. P.H. Roberts, R.J. Donnelly, *Superfluid mechanics*. Ann. Rev. Fluid Mech., **6**, 1974, 179-225, REVIEW ARTICLE.
88. F. Krause, P.H. Roberts, *Bochner's theorem and mean-field electrodynamics*. Mathematika, **20**, 1973, 24-33, RESEARCH ARTICLE.
89. F. Krause, P.H. Roberts, *Comments on the paper: "On the application of Cramer's Theorem to axisymmetric in compressible turbulence", by I. Lerche*. Astrophys. & Space Science, **22**, 1973, 193-195, RESEARCH ARTICLE.
90. P.H. Roberts, *Dynamo effect in mirror-symmetric turbulence in the Kraichnan direct interaction approximation*. Magnetrnaya gidrodinamik, **2**, 1975, 3-8, RESEARCH ARTICLE.
91. P.H. Roberts, R.J. Donnelly, *Scattering and binding of rotons*. J. Low Temp. Phys., **15**, 1974, 1-27, RESEARCH ARTICLE.
92. J. Grant, P.H. Roberts, *Motions in a Bose condensate III. The structure and effective masses of charged and uncharged imparities*. J. Phys. A., **7**, 1974, 260-279, RESEARCH ARTICLE.
93. P.H. Roberts, W.J. Pardee, *Bound states of the two-roton Schrödinger equation*. J. Phys. A., **7**, 1974, 1283-1292, RESEARCH ARTICLE.
94. P.H. Roberts, *Concepts in hydrodynamic stability theory*. Advan. in Chem. Phys., **32**, 1975, 17-35, REVIEW ARTICLE.
-
95. P.H. Roberts, K. Stewartson, *On finite amplitude convection in a rotating magnetic system*. Phil. Trans. R. Soc. Lond. A., **277**, 1974, 287-315, RESEARCH ARTICLE.
96. P.H. Roberts, *Magnetic core-mantle coupling by inertial waves*. Phys. Earth & Planet. Int., **8**, 1974, 389-390, RESEARCH ARTICLE.

97. P.H. Roberts, A.M. Soward, *A unified approach to mean field electrodynamics*. Astron. Nachr., **296**, 1975, 49-64, RESEARCH ARTICLE.
98. S. Kumar, P.H. Roberts, *A three-dimensional kinematic dynamo*. Proc. R. Soc. Lond. A., **344**, 1975, 235-258, RESEARCH ARTICLE.
99. P.H. Roberts, K. Stewartson, *On double-roll convection in a rotating magnetic system*. J. Fluid Mech., **68**, 1975, 447-466, RESEARCH ARTICLE.
100. P.H. Roberts, A.M. Soward, *On first order smoothing theory*. J. Math. Phys., **16**, 1975, 609-615, RESEARCH ARTICLE.
101. P.H. Roberts, *Geophysical magnetohydrodynamics*. in Geodynamics today. A review of the Earth's dynamic process. Publ. of R. Soc. Lond., 1975, 133-140, REVIEW ARTICLE.
102. P.H. Roberts, *Stellar winds*. Solar Wind 3, Ed. C.T. Russell. Inst. Geophys. & Planet. Phys. Univ. of California, 1976, 231-242, REVIEW ARTICLE.
103. D.L. Goodstein, J.S. Brooks, R.J. Donnelly, P.H. Roberts, *Quasi-particles and thermal expansion*. Phys. Lett., **54A**, 1975, 281-282, RESEARCH ARTICLE.
104. S.I. Braginsky, P.H. Roberts, *Magnetic field generation by baroclinic waves*. Proc. R. Soc. Lond. A., **347**, 1975, 125-140, RESEARCH ARTICLE.
105. A.M. Soward, P.H. Roberts, *Recent developments in dynamo theory*. Magnitnaya Gidrodinamika (also appeared in Corrigendum, 1977, Vol.1, p. 146-147), **1**, 1976, 3-51, REVIEW ARTICLE.
106. P.H. Roberts, R.J. Donnelly, *A simple theory of temperature dependent energy levels: application to He II*. Phys. Lett., **55A**, 1976, 443-445, RESEARCH ARTICLE.
107. P.H. Roberts, M. Stix, *On Vainshtein's simplest dynamo instability*. Phys. Earth & Planet. Int., **12**, 1976, 19-21, RESEARCH ARTICLE.
108. F. Krause, P.H. Roberts, *The high conductivity limit in mean field electrodynamics*. J. Math. Phys., **17**, 1976, 1808-1809, RESEARCH ARTICLE.
109. R.J. Donnelly, P.H. Roberts, *A theory of temperature-dependent energy levels: Thermodynamic properties of He II*. J. Low. Temp. Phys., **27**, 1977, 687-736, RESEARCH ARTICLE.
110. R.N. Hills, P.H. Roberts, *Healing and relaxation in flows of Helium II. I: Generalization of Landau's equations*. Int. J. Eng. Sci., **15**, 1977, 305-316, RESEARCH ARTICLE.
111. R.N. Hills, P.H. Roberts, *Superfluid mechanics for a high density of vortex lines*. Archiv. Rat. Mech. & Anal., **66**, 1977, 43-71, RESEARCH ARTICLE.
112. D.E. Loper, P.H. Roberts, *On the motion of an iron-alloy core containing a slurry. I: General Theory*. Geophys. & Astrophys. Fl. Dynam., **9**, 1978, 289-321, RESEARCH ARTICLE.
113. P.H. Roberts, K. Stewartson, *The effect of finite electrical and thermal conductivities on magnetic buoyancy in a rotating gas*. Astr. Nachr., **298**, 1977, 311-318, RESEARCH ARTICLE.

114. P.H. Roberts, *Magnetohydrodynamics*. Invited Survey Article in Encyclopedia of Physics. Ed. R.G. Lerner & G.L. Trigg, Addison-Wesley Co., 1981, 555-561, REVIEW ARTICLE.
115. P.H. Roberts, *The electron bubble in liquid helium*. Proc. Int. Coll. on Drops and Bubbles, Their Science and the Systems they Model. JPL publication, **I**, 1974, RESEARCH ARTICLE.

116. P.H. Roberts, *Diffusive instabilities in magnetohydrodynamic convection*. Proceedings of Conference: "Instabilities Hydrodynamiques en Convection Libre, Forcée et Mixte," Brussels, J. Cl. Legros & J.K. Platten, eds. Springer, 1977, 27-29, REVIEW ARTICLE.
117. R.N. Hills, P.H. Roberts, *Healing and relaxation in flows of Helium II. II: First, Second and Fourth Sound*. J. Low Temp. Phys., **30**, 1978, 709-727, RESEARCH ARTICLE.
118. P.H. Roberts, R.W. Walden, R.J. Donnelly, *Bound states of rotons to impurities in He II*. J. Low Temp. Phys., **31**, 1978, 389-408, RESEARCH ARTICLE.
119. R.J. Donnelly, R.W. Walden, P.H. Roberts, *Dielectric model of roton interactions in dilute solutions of ^3He in ^4He* . J. Low Temp. Phys., **31**, 1978, 375-387, RESEARCH ARTICLE.
120. R.J. Donnelly, P.H. Roberts, *Need for more precise thermodynamic & neutron scattering data on liquid helium*. J. Phys. C., **10**, 1977, 683-685, RESEARCH ARTICLE.
121. P.H. Roberts, D.E. Loper, *On the diffusive instability of some simple steady magnetohydrodynamic flows*. J. Fluid Mech., **90**, 1979, 641-668, RESEARCH ARTICLE.
122. P.H. Roberts, R.J. Donnelly, R.N. Hills, *Calculation of the static healing length in helium II*. Phys. Lett., **70A**, 1979, 437-440, RESEARCH ARTICLE.
123. P.H. Roberts, R.N. Hills, *On the interface conditions between a liquid and its vapour with application to helium II*. Non-equilib. Thermodyn, **4**, 1979, 131-142, RESEARCH ARTICLE.
124. P.H. Roberts, *MAC waves*. Geofluidodynamical Wave Mechanics Research. Ed. W. Criminale. Publ. of Applied Math. Dept. Univ. of Wash. Seattle, 1977, 218-225, REVIEW ARTICLE.
125. R.N. Hills, P.H. Roberts, *Healing and relaxation in flows of helium II. III: Pure superflow*. J. Phys. C., **11**, 1978, 4485-4499, RESEARCH ARTICLE.
126. R.J. Donnelly, R.N. Hills, P.H. Roberts, *Superflow in restricted geometries*. Phys. Rev. Lett., **42**, 1979, 725-728, RESEARCH ARTICLE.
127. P.H. Roberts, *Magneto-convection in a rapidly rotating fluid*. P.H. Roberts, A.M. Soward, eds. in Rotating Fluids in Geophysics. Academic Press, 1978, 421-435, REVIEW ARTICLE.
128. C.A. Jones, P.H. Roberts, *The boundary layer method for pulsating stars*. Geophys. & Astrophys. Fluid Dynam., **14**, 1979, 61-101, RESEARCH ARTICLE.
129. R. Hide, P.H. Roberts, *How strong is the magnetic field in the Earth's liquid core?* Phys. Earth Planet. Int., **20**, 1979, 124-126, REVIEW ARTICLE.
130. R.N. Hills, P.H. Roberts, *Healing and relaxation in flows of Helium II. IV: Comparison with Khalatnikov-Lebedev theory*. J. Low Temp. Phys., **40**, 1980, 117-134, RESEARCH ARTICLE.
131. D.E. Loper, P.H. Roberts, *Are planetary dynamos driven by gravitational settling?* Phys. Earth Planet. Int., **20**, 1979, 192-193, RESEARCH ARTICLE.
132. R.W. James, P.H. Roberts, D.E. Winch, *The Cowling anti-dynamo theorem*. Geophys. & Astrophys. Fluid Dynam., **15**, 1980, 149-160, RESEARCH ARTICLE.
133. D.E. Loper, P.H. Roberts, *On the motion of an iron-alloy core containing a slurry. II: A simple model*. Geophys. & Astrophys. Fluid Dynam., **16**, 1980, 83-127, RESEARCH ARTICLE.
134. D.E. Loper, P.H. Roberts, *A study of conditions at the inner core boundary of the Earth*. Phys. Earth Planet. Int., **24**, 1981, 302-307, RESEARCH ARTICLE.

135. P.H. Roberts, *On the Flowers-Ruderman instability mechanism*. Astr. Nachr., **302**, 1981, 65-70, RESEARCH ARTICLE.
136. F. Krause, P.H. Roberts, *Strange attractor character of large-scale non-linear dynamos*. Adv. Space Res., **1**, 1981, 231-240, RESEARCH ARTICLE.
137. P.H. Roberts, *Equilibria & stability of a fluid type II superconductor*. Quart. J. Mech. & Appl. Math., **34**, 1981, 327-343, RESEARCH ARTICLE.
138. D.R. Fearn, D.E. Loper, P.H. Roberts, *Structure of the Earth's inner core*. Nature, **292**, 1981, 232-233, RESEARCH ARTICLE.
139. D.E. Loper, P.H. Roberts, *Compositional convection and the gravitationally powered dynamo*. Stellar & Planetary Magnetism (Ed. A.M. Soward). Gordon & Breach, 1983, 297-327, REVIEW ARTICLE.
140. P.H. Roberts, D.E. Loper, *Towards a theory of the structure and evolution of a dendrite layer*. Stellar and Planetary Magnetism (Ed. A.M. Soward). Gordon & Breach, 1983, 329-349, RESEARCH ARTICLE.
141. C.A. Jones, P.H. Roberts, *Motions in a Bose condensate. IV. Axisymmetric solitary waves*. J. Phys. A, **15**, 1982, 2599-2619, RESEARCH ARTICLE.
142. S.J. Putterman, P.H. Roberts, *Non-linear hydrodynamics and a one fluid theory of superfluid He⁴*. Phys. Lett., **89A**, 1982, 444-447, RESEARCH ARTICLE.
143. S.J. Putterman, P.H. Roberts, *Classical non-linear waves in dispersive nonlocal media, and the theory of superfluidity*. Physica, **117A**, 1983, 369-397, RESEARCH ARTICLE.
144. P.H. Roberts, *Random non-linear electromagnetic waves in vacuo*. Physics, **119**, 1983, 274-290, RESEARCH ARTICLE.
145. P.H. Roberts, A.M. Soward, *The effect of a weak magnetic field on stellar oscillations*. Mon. Not. R. Astr. Soc., **205**, 1983, 1171-1189, RESEARCH ARTICLE.
146. R.N. Hills, D.E. Loper, P.H. Roberts, *A thermodynamically consistent model of a mushy zone*. Quart. J. Mech. & Appl. Maths., **36**, 1983, 505-539, RESEARCH ARTICLE.
147. P.H. Roberts, D.E. Winch, *On random rotations*. Adv. Appl. Prob., **16**, 1984, 638-655, RESEARCH ARTICLE.
148. M. Stix, P.H. Roberts, *Time-dependent electromagnetic core-mantle coupling*. Phys. Earth Planet. Int., **36**, 1984, 49-60, RESEARCH ARTICLE.
149. P.H. Roberts, *The effect of a weak magnetic field on stellar oscillations*. Astronom. Nachr., **305**, 1984, 245-249, REVIEW ARTICLE.
150. S.J. Putterman, P.H. Roberts, *Random waves in a classical nonlinear Grassmann field. I: Boltzmann equation and scalar field coupling*. Physica, **131A**, 1985, 35-50, RESEARCH ARTICLE.
151. S.J. Putterman, P.H. Roberts, *Random waves in a classical nonlinear Grassmann field. II: Scattering by zero point noise and the transition to Fermi statistics*. Physica, **131A**, 1985, 51-63, RESEARCH ARTICLE.
-
152. A. Larraza, S.J. Putterman, P.H. Roberts, *A universal $1/f$ power spectrum as the accumulation point of wave turbulence*. Phys. Rev. Lett., **55**, 1985, 897-900, RESEARCH ARTICLE.

153. C.A. Jones, S.J. Putterman, P.H. Roberts, *Motions in a Bose condensate. V: Stability of solitary wave solutions of the non-linear Schrödinger equations in two and three dimensions.* J. Phys. A., **19**, 1986, 2991-3011, RESEARCH ARTICLE.
154. P.H. Roberts, *Dynamo theory.* Proc. NATO Advance Study Institute on "Irreversible Phenomena and Dynamical Systems Analysis in Geosciences," Eds., C. Nicolis and G. Nicolis. Reidel, 1987, 73-133, REVIEW ARTICLE.
155. P.H. Roberts, *Convection in spherical systems.* Proc. NATO Advanced Study Institute on "Irreversible Phenomena and Dynamical Systems Analysis in Geosciences," Eds., C. Nicolis and G. Nicolis. Reidel, 1987, 53-71, REVIEW ARTICLE.
156. P.H. Roberts, *See Books #3.*
157. C.A. Jones, P.H. Roberts, *What happens to vortex rings that shrink?* in "75th Jubilee Conference on Helium-4" (editor J.G.M. Armitage). World Scientific Press, 1983, 113-114, REVIEW ARTICLE.
158. R.N. Hills, P.H. Roberts, *Relaxation effects in a mixed phase region. I: General theory.* J. Nonequilib. Thermodynam., **12**, 1987, 169-181, RESEARCH ARTICLE.
159. R.N. Hills, P.H. Roberts, *Relaxation effects in a mixed phase region. II: Illustrative Examples.* J. Nonequilib. Thermodynam., **12**, 1987, 183-195, RESEARCH ARTICLE.
160. D. Gubbins, P.H. Roberts, *Magnetohydrodynamics of the Earth's core.* Geomagnetism, Vol. 2, Ed. J.A. Jacobs, Academic Press, **2**, 1987, 1-183, REVIEW ARTICLE.
161. P.H. Roberts, D. Gubbins, *Origin of the main field: Kinematics.* Geomagnetism, Ed. J.A. Jacobs, Academic Press, **2**, 1987, 185-249, REVIEW ARTICLE.
162. P.H. Roberts, *Origin of the main field: Dynamics.* Geomagnetism, Ed. J.A. Jacobs, Academic Press, **2**, 1987, 251-306, REVIEW ARTICLE.
163. P.H. Roberts, D.E. Loper, *Dynamical processes in slurries.* Proceedings of Workshop on Structure and Dynamics of Partially Solidified Systems. Editor D.E. Loper & Martinus-Nijhoff, 1987, 229-290, RESEARCH ARTICLE.
164. D.E. Loper, P.H. Roberts, *A Boussinesq model of a slurry.* Proceedings of Workshop on Structure and Dynamics of Partially Solidified Systems. Editor D.E. Loper & Martinus-Nijhoff, 1987, 293-323, RESEARCH ARTICLE.
165. R.N. Hills, P.H. Roberts, *Towards a non-local theory of helium II.* Quart. J. Mech. & Appl. Math., **40**, 1987, 279-301, RESEARCH ARTICLE.
166. S.I. Braginsky, P.H. Roberts, *A model-Z geodynamo.* Geophys. and Astrophys. Fluid Dynam., **38**, 1987, 327-349, RESEARCH ARTICLE.
167. D.E. Loper, P.H. Roberts, *A simple mathematical model of slurry.* Hydrodynamical Behavior and Interacting Particle Systems, Ed. G. Papanicolaou. Springer, 1987, 113-116, RESEARCH ARTICLE.
168. R.N. Hills, P.H. Roberts, *On the use of Fick's law in regions of mixed phase.* Int. Comm. Heat Mass Transf., **15**, 1988, 113-119, RESEARCH ARTICLE.
169. D.R. Fearn, P.H. Roberts, A.M. Soward, *Convection, stability and the dynamo.* Energy, Stability and Convection, Eds. G.P. Galdi and B. Straughan, Longmans, 1988, 60-324, REVIEW ARTICLE.
170. P.C. Pal, P.H. Roberts, *Long term polarity stability and strength of the geomagnetic dipole.* Nature, **331**, 1988, 702-705, RESEARCH ARTICLE.

171. S. Putterman, P.H. Roberts, W. Fiszdon, *Theory of 2D plasma waves as a sensitive probe of nonlinear effects due to compressibility of ^4He* . Phys. Letters, A, **128**, 1988, 203-206, RESEARCH ARTICLE.
172. R.N. Hills, P.H. Roberts, *On the formulation of diffusive mixture theories for two-phase regions*. J. Engng. Math., **22**, 1988, 93-106, RESEARCH ARTICLE.
173. M.A. Berger, P.H. Roberts, *On the winding number problem with finite steps*. Adv. Appl. Prob., **20**, 1988, 261-274, RESEARCH ARTICLE.
174. S. Putterman, P.H. Roberts, *Fokker-Planck equation for interacting waves. Dispersion law renormalization and wave turbulence*. Phys. Rpts., **168**, 1988, 209-263, RESEARCH ARTICLE.
175. R.N. Hills, P.H. Roberts, *A generalized Scheil-Pfann equation for a dynamical theory of a mushy zone*. Int. J. Non-Linear Mech., **23**, 1988, 327-339, RESEARCH ARTICLE.
176. P.H. Roberts, *Future of Geodynamo Theory*. Geophys. & Astrophys. Fluid Dynam., **44**, 1988, 3-31, REVIEW ARTICLE.
177. P.H. Roberts, *On topographic core-mantle coupling*. Geophys. & Astrophys. Fluid Dynam., **44**, 1988, 181-187, RESEARCH ARTICLE.
178. R.N. Hills, P.H. Roberts, *Healing and relaxation in flows of Helium II. V. Thermodynamic Potential and Applications*. J. Low Temp. Phys., **74**, 1989, 185-203, RESEARCH ARTICLE.
179. P.H. Roberts, *From Taylor state to model-Z?*. Geophys. & Astrophys. Fluid Dynam., **49**, 1988, 143-160, RESEARCH ARTICLE.
180. P.H. Roberts, *Core-mantle coupling*. The Encyclopedia of Solid Earth Geophysics, Ed. D.E. James, van Nostrand, 1989, 148-160, REVIEW ARTICLE.
181. R.N. Hills, P.H. Roberts, *A macroscopic model of phase coarsening*. Int. J. Non-Linear Mech., **25**, 1990, 319-329, RESEARCH ARTICLE.
182. C.A. Jones, P.H. Roberts, D.J. Galloway, *Compressible convection in the presence of rotation and a magnetic field*. Geophys. & Astrophys. Fluid Dynam., **53**, 1990, 145-182, RESEARCH ARTICLE.
183. W. Kuang, P.H. Roberts, *Resistive instabilities in rapidly rotating fluids: linear theory of the tearing mode*. Geophys. & Astrophys. Fluid Dynam., **55**, 1990, 199-239, RESEARCH ARTICLE.
184. C.A. Jones, P.H. Roberts, *Magnetoconvection in rapidly rotating Boussinesq and compressible fluids*. Geophys. & Astrophys. Fluid Dynam., **55**, 1990, 263-308, RESEARCH ARTICLE.
185. R.N. Hills, P.H. Roberts, *On the life cycle of a mush*. Stab. & Appl. Anal. Cont. Media, **1**, 1991, 67-94, RESEARCH ARTICLE.
186. J. Bloxham, P.H. Roberts, *The geomagnetic main field and the geodynamo*. Rev. Geophys. Supp. (US National Report to International Union of Geodesy and Geophysics 1987-1990), 1991, 428-432, REVIEW ARTICLE.
187. P.H. Roberts, *Magnetoconvection patterns in rotating convection zones*. The Sun and Cool Stars. I. Tuominen, D. Moss and G. Rüdiger, eds., Springer, 1991, 37-56, RESEARCH ARTICLE.
188. M. Kono, P.H. Roberts, *Small amplitude solutions of the dynamo problem, 1. The adjoint system and its solutions*. J. Geomag. Geoelectr., **43**, 1991, 839-862, RESEARCH ARTICLE.
189. P.H. Roberts, *Dynamo theory*. Chaotic Processes in the Geological Sciences, Ed. D.A. Yuen, Springer, 1992, 237-280, REVIEW ARTICLE.

190. R.N. Hills, P.H. Roberts, *On the motion of a fluid that is incompressible in a generalized sense, and its relationship to the Boussinesq approximation*. Stab. & Appl. Anal. Cont. Media, **1**, 1991, 205-212, RESEARCH ARTICLE.
191. S.J. Putterman, P.H. Roberts, *Elementary excitations of nonlinear classical fields and the theory of superfluid He⁴*. Microscopic Theories of Superfluids, G. Grioli, ed., Cambridge University Press, 1991, 4-21, REVIEW ARTICLE.
192. W. Kuang, P.H. Roberts, *Resistive instabilities in rapidly rotating fluids: linear theory of the g-mode*. Geophys. & Astrophys. Fluid Dynam., **60**, 1991, 295-333, RESEARCH ARTICLE.
193. D.E. Loper, P.H. Roberts, *Core-Mantle System*. Encyclopedia of Earth System Science, Vol. 1, W.A. Nierenberg, ed., Academic Press, 1992, 655-663, REVIEW ARTICLE.
194. P.H. Roberts, *Geomagnetism*. Encyclopedia of Earth System Science, Vol. 2, W.A. Nierenberg, ed., Academic Press,
195. P.H. Roberts, *Geomagnetism, origin*. Encyclopedia of Earth Science System, Vol. 2, W.A. Nierenberg, ed., Academic Press, 1992, 295-309, REVIEW ARTICLE.
196. R.N. Hills, D.E. Loper, P.H. Roberts, *On continuum models for momentum, heat and species transport in solid-liquid phase change systems*. Int. Comm. Heat Mass Transfer, **19**, 1992, 585-594, RESEARCH ARTICLE.
197. B. Denado, A. Larraza, S. Putterman, P. Roberts, *Nonlinear theory of localized standing waves*. Phys. Rev. Lett, **69**, 1992, 597-600, RESEARCH ARTICLE.
198. P.H. Roberts, A.M. Soward, *Dynamo Theory*. Ann. Rev. Fluid Mech., **24**, 1992, 459-512, REVIEW ARTICLE.
199. M. Kono, P.H. Roberts, *Small amplitude solutions of the dynamo problem. 2. The case of α^2 -dynamos*. Geophys. & Astrophys. Fluid Dynam., **67**, 1992, 65-85, RESEARCH ARTICLE.
200. W. Kuang, P.H. Roberts, *Resistive instabilities in rapidly rotating fluids: linear theory of the convective modes*. Geophys. & Astrophys. Fluid Dynam., **67**, 1992, 129-162, RESEARCH ARTICLE.
201. R.N. Hills, P.H. Roberts, *Relaxation effects and the evolution of a mush*. Stab. & Appl. Anal. Cont. Mech., **2**, 1992, 305-321, RESEARCH ARTICLE.
202. M.B. Haeri, S.J. Putterman, A. Garcia, P.H. Roberts, *Quantum wave turbulence*. Phys. Rev. E, **47**, 1993, 739-742, RESEARCH ARTICLE.
203. S. Putterman, P.H. Roberts, *Nonlinear theory of modulated standing waves; domain walls, kinks and breathers*. Proc. R. Soc. London A., **440**, 1993, 135-148, RESEARCH ARTICLE.
204. S. Lan, W. Kuang, P.H. Roberts, *Ideal instabilities in rapidly rotating MHD systems that have critical layers*. Geophys. & Astrophys. Fluid Dynam., **69**, 1993, 133-160, RESEARCH ARTICLE.
205. P.H. Roberts, T.H. Jensen, *Homogeneous dynamos: Theory and practice*. Phys. Fluids B, **5**, 1993, 2657-2662, RESEARCH ARTICLE.
-
206. C.C. Wu, P.H. Roberts, *Shock wave propagation in a sonoluminescing gas bubble*. Phys. Rev. Lett., **70**, 1993, 3424-3427, RESEARCH ARTICLE.
207. R.N. Hills, P.H. Roberts, *A note on the kinetic conditions at a supercooled interface*. Int. Comm. Heat Mass Transf., **20**, 1993, 407-416, RESEARCH ARTICLE.

208. G.A. Glatzmaier, P.H. Roberts, *Intermediate dynamo models*. J. Geomag. Geoelectr., **45**, 1993, 1605-1616, RESEARCH ARTICLE.
209. P.H. Roberts, *The geodynamo*. The Cosmic Dynamo, F. Krause, G. Rüdiger and K.-H. Rädler, eds. A. Reidel, 1993, 431-440, REVIEW ARTICLE.
210. P.H. Roberts, *Dynamo theory*. Astrophysical Fluid Dynamics, J.-P. Zahn and J. Zinn-Justin, eds. Elsevier, 1993, 229-323, REVIEW ARTICLE.
211. C.C. Wu, P.H. Roberts, *A model of sonoluminescence*. Proc. R. Soc. London A., **445**, 1994, 323-349, RESEARCH ARTICLE.
212. P.H. Roberts, *Magnetohydrodynamics*. Encyclopedia of Appl. Physics. Amer. Inst. Phys. G. Trigg editor, **9**, 1994, 111-156, REVIEW ARTICLE.
213. B.P. Barber, C.C. Wu, R. Löfstedt, S.J. Putterman, P.H. Roberts, *Sensitivity of sonoluminescence to experimental parameters*. Phys. Rev. Ltrs., **72**, 1994, 1380-1383, RESEARCH ARTICLE.
214. P.H. Roberts, *Fundamentals of dynamo theory*. Lectures on Solar & Planetary Dynamos, Eds. M.R.E. Proctor and A.D. Gilbert. Cambridge University Press, 1994, 1-58, REVIEW ARTICLE.
215. P.H. Roberts, *The solar dynamo*. The Solar Engine and its Influence on Terrestrial Atmosphere and Climate, Ed. E. Nesme-Ribes. Springer, 1994, 1-26, REVIEW ARTICLE.
216. S.I. Braginsky, P.H. Roberts, *From Taylor state to model-Z*. Geophys. & Astrophys. Fluid Dynam., **77**, 1994, 3-13, RESEARCH ARTICLE.
217. M. Kono, P.H. Roberts, *Kinematic dynamos with anisotropic α -effect*. Geophys. & Astrophys. Fluid Dynam., **77**, 1994, 27-53, RESEARCH ARTICLE.
218. R.D. Gibson, P.H. Roberts, *Solution to a class of integral equations with an application to magnetohydrodynamics*. Meth. & Appl. Anal., **1**, 1994, 421-433, RESEARCH ARTICLE.
219. P.H. Roberts, E. Schatzman, *The solar dynamo mechanism*. Cours de Structure Interne; Production et rôle du champ magnétique. Structure Interne des Étoiles et des Planètes Géantes, Eds. A.M. Hubert, E. Schatzman. Observatoire de Paris, 1994, 61-117, REVIEW ARTICLE.
220. T. Nakajima, P.H. Roberts, *A mapping method for solving dynamo equations*. Proc. R. Soc. Lond., **A448**, 1995, 1-28, RESEARCH ARTICLE.
221. S.I. Braginsky, P.H. Roberts, *Equations governing convection in Earth's core and the geodynamo*. Geophys. & Astrophys. Fluid Dynam., **79**, 1995, 1-97, RESEARCH ARTICLE.
222. P.H. Roberts, *On the ratio of two double integrals*. SIAM Review, **37**, 1995, 244-245, RESEARCH ARTICLE.
223. P.H. Roberts, *Dynamics of the core, geodynamo*. (US National Report to the International Union of Geodesy and Geophysics), Reviews of Geophys., Suppl., 1995, 443-450, RESEARCH ARTICLE.
224. T. Nakajima, P.H. Roberts, *An application of a mapping method to the asymmetric dynamo equations*. Phys. Earth Planet. Int., **91**, 1995, 53-61, RESEARCH ARTICLE.
-
225. G.A. Glatzmaier, P.H. Roberts, *A three-dimensional convective dynamo solution with rotating and finitely conducting inner core and mantle*. Phys. Earth Planet. Int., **91**, 1995, 63-75, RESEARCH ARTICLE.
226. G.A. Glatzmaier, P.H. Roberts, *A three-dimensional self-consistent computer simulation of the geomagnetic field*. Nature, **377**, 1995, 203-209, (and cover), RESEARCH ARTICLE.

227. R.N. Hills, P.H. Roberts, *On the influence of solid-phase volume fraction on the adiabatic coarsening of a mushy zone*. Int. Comm. in Heat Mass Transfer, **22**, 1995, 771-777, RESEARCH ARTICLE.
228. D.E. Winch, P.H. Roberts, *Derivatives of addition theorems for Legendre functions*. J. Austr. Math. Soc., **37**, 1995, 212-234, RESEARCH ARTICLE.
229. R.F. Sinclair, S. Putterman, P.H. Roberts, *Quantum Fokker-Planck equation for interacting waves*. Phil. Trans. R. Soc. Lond., **354**, 1996, 951-978, RESEARCH ARTICLE.
230. N.B. Morley, P.H. Roberts, *Solutions of uniform open-channel, liquid metal flow in a strong, oblique magnetic field*. Phys. Fluids, **8**, 1996, 923-935, RESEARCH ARTICLE.
231. P.H. Roberts, C.C. Wu, *Structure and stability of a spherical implosion*. Phys. Lettrs. A, **213**, 1996, 59-64, RESEARCH ARTICLE.
232. G.A. Glatzmaier, P.H. Roberts, *An anelastic evolutionary geodynamo simulation driven by compositional and thermal convection*. Physica D, **97**, 1996, 81-94, RESEARCH ARTICLE.
233. C.C. Wu, P.H. Roberts, *Structure and stability of a spherical shock wave in a van der Waals gas*. Quart. J. Mech. Appl. Math, **49**, 1996, 501-543, RESEARCH ARTICLE.
234. G.A. Glatzmaier, P.H. Roberts, *Rotation and magnetism of Earth's inner core*. Science, **274**, 1996, 1887-1892, (and cover), RESEARCH ARTICLE.
235. G.A. Glatzmaier, P.H. Roberts, *Magnetic sounding of planetary interiors*. Phys. Earth Planet. Inter., **98**, 1996, 207-220, RESEARCH ARTICLE.
236. P.H. Roberts, *Equations governing convection in Earth's core and the geodynamo*. Mathematical Aspects of Thermal Convection. Inst. of Mathematical Analysis, Kyoto Univ., Japan, 1996, 92-104, REVIEW ARTICLE.
237. G.A. Glatzmaier, P.H. Roberts, *Numerical simulations of the geodynamo*. Acta Astronom. Geophys. Univ. Com., **19**, 1997, 125-143, REVIEW ARTICLE.
238. G.A. Glatzmaier, P.H. Roberts, *Simulating the geodynamo*. Contemp. Phys., **38**, 1997, 269-288, RESEARCH ARTICLE.
239. K. Zhang, P.H. Roberts, *Thermal inertial waves in a rotating fluid layer: Exact and asymptotic solutions*. Phys. Fluids, **9**, 1997, 1980-1987, RESEARCH ARTICLE.
240. M.J. Shearer, P.H. Roberts, *The hidden ocean at the top of Earth's core*. Dynam. Atmos. & Oceans, **27**, 1997, 631-647, RESEARCH ARTICLE.
241. G.A. Glatzmaier, P.H. Roberts, *Computer simulations of Earth's magnetic field*. Geowissenschaften, **15**, 1997, 95-99, RESEARCH ARTICLE.
242. R.N. Hills, P.H. Roberts, *Microstructural coarsening kinetics for a mushy zone of a pure material*. Int. J. Non-lin. Mech., **32**, 1997, 1003-1013, RESEARCH ARTICLE.
243. C.C. Wu, P.H. Roberts, *On rectified diffusion and sonoluminescence*. Theor. & Comp. Fluid Dynam., **10**, 1998, 357-372, RESEARCH ARTICLE.
244. S.J. Putterman, P.H. Roberts, *Comment on "Bubble shape oscillations and the onset of sonoluminescence"*. Phys. Rev. Lettrs., **80**, 1998, 3666-3667, RESEARCH ARTICLE.
245. K. Zhang, P.H. Roberts, *A note on stabilising & destabilising effects of Ekman boundary layers*. Geophys. & Astrophys. Fluid Dynam., **88**, 1998, 215-223, RESEARCH ARTICLE.

246. G.A. Glatzmaier, P.H. Roberts, *Dynamo theory then and now*. Int. J. Engng. Sci., **36**, 1998, 1325-1338, REVIEW ARTICLE.
247. P.H. Roberts, C.C. Wu, *The decay of bubble oscillations*. Phys. Fluids, **10**, 1998, 3227-3229, RESEARCH ARTICLE.
248. C.C. Wu, P.H. Roberts, *Bubble shape instabilities and sonoluminescence*. Physics Letts. A., **250**, 1998, 131-136, RESEARCH ARTICLE.
249. C.C. Wu, P.H. Roberts, *Richtmyer-Meshkov instability and the dynamics of the magnetosphere*. Geophys. Res. Letters, **26**, 1999, 655-658, RESEARCH ARTICLE.
250. M. Matsushima, T. Nakajima, P.H. Roberts, *The anisotropy of local turbulence in Earth's core*. Earth Planets Space, **51**, 1999, 277-286, RESEARCH ARTICLE.
251. N.G. Berloff, P.H. Roberts, *Motions in a Bose condensate VI. Vortices in a nonlocal model*. J. Phys. A. Math. Gen., **32**, 1999, 5611-5625, RESEARCH ARTICLE.
252. R.D. Gibson, P.H. Roberts, *Solution to a class of integral equations with an application to magneto-hydrodynamics*. In *Recent advances in Fluid Mechanics*, Eds. P.L. Sanchez and M. Venkatachalappa, Gordon and Breach, 1999, 35-48, RESEARCH ARTICLE.
253. G.A. Glatzmaier, R.S. Coe, L. Hongre, P.H. Roberts, *The role of the Earth's mantle in controlling the frequency of geomagnetic reversals*. Nature, **401**, 1999, 885-890, RESEARCH ARTICLE.
254. C.A. Jones, P.H. Roberts, *Convection driven dynamos in a rotating plane layer*. J. Fluid Mech., **404**, 2000, 311-343, RESEARCH ARTICLE.
255. N.G. Berloff, P.H. Roberts, *Motions in a Bose condensate VII. Boundary layer separation*. J. Phys. A. Math. Gen., **33**, 2000, 4025-4038, RESEARCH ARTICLE.
256. P.H. Roberts, G.A. Glatzmaier, *A test of the frozen flux approximation using a new geodynamo model*. Proc. R. Soc. Lond., **A358**, 2000, 1109-1121, RESEARCH ARTICLE.
257. P.H. Roberts, Keke Zhang, *Thermal generation of Alfvén waves in oscillatory magnetoconvection*. J. Fluid Mech., **420**, 2000, 201-223, RESEARCH ARTICLE.
258. P.H. Roberts, G.A. Glatzmaier, *Geodynamo theory and simulations*. Rev. Mod. Phys., **72**, 2000, 1081-1124, RESEARCH ARTICLE.
259. P.H. Roberts, C.A. Jones, *The onset of magnetoconvection at large Prandtl number in a rotating layer I. Finite magnetic diffusion*. Geophys. & Astrophys. Fluid Dynam., **92**, 2000, 289-325, RESEARCH ARTICLE.
260. C.A. Jones, P.H. Roberts, *The onset of magnetoconvection at large Prandtl number in a rotating layer II. Small magnetic diffusion*. Geophys. & Astrophys. Fluid Dynam., **93**, 2000, 173-226, RESEARCH ARTICLE.
261. N.G. Berloff, P.H. Roberts, *Roton creation and vortex nucleation in superfluids*. Phys. Rev., **A247**, 2000, 69-74, RESEARCH ARTICLE.
-
262. N.G. Berloff, P.H. Roberts, *Motions in a Bose condensate VIII. The electron bubble*. J. Phys. A. Math. Gen., **34**, 2001, 81-91, RESEARCH ARTICLE.
263. P.H. Roberts, G.A. Glatzmaier, *The geodynamo past, present and future*. Geophys. & Astrophys. Fluid Dynam., **94**, 2001, 47-84, RESEARCH ARTICLE.

264. D.E. Loper, P.H. Roberts, *Mush-chimney convection*. Studies in Appl. Math., **106**, 2001, 187-227, RESEARCH ARTICLE.
265. N.G. Berloff, P.H. Roberts, *Capture of an impurity by a vortex line in a Bose condensate*. Phys. Rev. B, **63**, 2001, 81-91, RESEARCH ARTICLE.
266. M. Kono, P. H. Roberts, *Definition of the Rayleigh number for geodynamo simulations*. Phys. Earth Planet. Interiors, **128**, 2001, 13-24, RESEARCH ARTICLE.
267. N.G. Berloff, P. H. Roberts, *Motions in a Bose condensate: IX. Crow instability of antiparallel vortex pairs*. J. Phys. A. Math. Gen., **34**, 2001, 10057-10066, RESEARCH ARTICLE.
268. P. H. Roberts, N. G. Berloff, *The nonlinear Schrödinger equation as a model of superfluidity*. Quantum Vortex Dynamics and Superfluid Turbulence, eds. C.F. Barenghi, R.J. Donnelly, W.F. Vinen. Springer, Berlin, 2001, 235-257, REVIEW ARTICLE.
269. N. G. Berloff, P. H. Roberts, *Vortices in nonlocal condensate models of superfluid helium*. Quantum Vortex Dynamics and Superfluid Turbulence, eds. C.F. Barenghi, R.J. Donnelly, W.F. Vinen. Springer, Berlin, 2001, 268-275, REVIEW ARTICLE.
270. S.I. Braginsky, P. H. Roberts, *On the theory of convection in the Earth's core*. Advances in Nonlinear Dynamos, Eds. A. Ferriz-Mas & Nuñez, Taylor & Francis, London, 2003, 60-82, REVIEW ARTICLE.
271. M. Kono, P.H. Roberts, *Recent geodynamics simulations and observations of the geomagnetic field*. Rev. Geophys., **40**, 2002, REVIEW ARTICLE.
272. P.H. Roberts, C.C. Wu, *The shock-wave theory of sonoluminescence in Shock Focussing Effect in Medical Science and Sonoluminescence*. Eds. R.C. Srivastava, D. Leutloff, K. Takayama & H. Gronig. Springer, Heidelberg, 2003, 1-27, RESEARCH ARTICLE.
273. P.H. Roberts, C.A. Jones, A.R. Calderwood, *Energy fluxes and ohmic dissipation in the Earth's core*. in "The Fluid Mechanics of Astrophysics and Geophysics", **11**, 2003, 100-129, RESEARCH ARTICLE.
274. P.H. Roberts, D.E. Loper, M. Roberts, *Convective instability of a mushy layer - I: Uniform permeability*. Geophys. & Astrophys. Fluid Dynam., **97**, 2003, 97-134, RESEARCH ARTICLE.
275. P.H. Roberts, *On vortex waves in compressible fluids; the hollow core vortex*. Proc. R. Soc. Lond., **A459**, 2003, 331-352, RESEARCH ARTICLE.
276. P.H. Roberts, *On vortex waves in compressible fluids; the condensate vortex*. Proc. R. Soc. Lond., **A459**, 2003, 597-607, RESEARCH ARTICLE.
277. C.A. Jones, P.H. Roberts, *Turbulence models and plane layer dynamos*. in "The Fluid Mechanics of Astrophysics and Geophysics", **12**, 2004, 295-330, RESEARCH ARTICLE.
278. K. Zhang, M. Weeks, P.H. Roberts, *The effect of electrically conducting walls on rotating magnetoconvection*. Phys. Fluids, **16**, 2004, 2023-2032, RESEARCH ARTICLE.
279. N.G. Berloff, P.H. Roberts, *Motions in a Bose condensate: X. New results on the stability of axisymmetric solitary waves of the Gross-Pitaevskii equation*. J. Phys. A. Math. Gen, **34**, 2004, 11333-11351, RESEARCH ARTICLE.
280. J. Donald, P.H. Roberts, *The effect of anisotropic heat transport in the Earth's core on the geodynamo*. Geophys. & Astrophys. Fluid Dynam., **98**, 2004, 367-384, RESEARCH ARTICLE.
281. P.H. Roberts, P.H. Diamond, *Magnetohydrodynamics*. in "Encyclopedia of Energy", **3**, 2004, 705-732, REVIEW ARTICLE.

282. C.C. Wu, P.H. Roberts, *Shocks in sonoluminescence*. *Comp. Science Enging.*, **7**, 2005, 7-8, RESEARCH ARTICLE.
283. P.H. Roberts, *Magnetohydrodynamics* in *Encyclopedia of Physics*. 3rd Edition, Wiley, 2005, 1401-1412, REVIEW ARTICLE.
284. P.H. Roberts, A.M. Soward, *Covariant description of non-relativistic magnetohydrodynamics*. *Geophys. & Astrophys. Fluid Dynam.*, **100**, 2006, 457-483, RESEARCH ARTICLE.
285. P.H. Roberts, A.M. Soward, *Euler-Lagrangian means in rotating magnetohydrodynamics, I. General results*. *Geophys. & Astrophys. Fluid Dynam.*, **100**, 2006, 485-502, RESEARCH ARTICLE.
286. P.H. Roberts, *How MHD transformed the theory of geomagnetism*, in *Magnetohydrodynamics: Historical Evolution and Trends*. Springer, 2006, 3-26, REVIEW ARTICLE.

Since
Last Review

287. S.I. Braginsky, Ph.H. Roberts, *Anelastic and Boussinesq approximations*. in *Encyclopedia of Geomagnetism and Palcomagnetism*, Springer, 2007, 11-19, REVIEW ARTICLE.
288. P.H. Roberts, *Alfvén's theorem and the frozen flux approximation*. in *Encyclopedia of Geomagnetism and Palcomagnetism*, Springer, 2007, 7-10, REVIEW ARTICLE.
289. P.H. Roberts, *Dynamo, Ponomarenko*. in *Encyclopedia of Geomagnetism and Palcomagnetism*, Springer, 2007, 175-178, REVIEW ARTICLE.
290. P.H. Roberts, *Dynamo, Herzenberg*. in *Encyclopedia of Geomagnetism and Palcomagnetism*, Springer, 2007, 170-173, REVIEW ARTICLE.
291. P.H. Roberts, *Magnetohydrodynamics*. in *Encyclopedia of Geomagnetism and Palcomagnetism*, Springer, 2007, 639-654, REVIEW ARTICLE.
292. E. Dormy, P.H. Roberts, A.M. Soward, *Core, boundary layers*. in *Encyclopedia of Geomagnetism and Palcomagnetism*, Springer, 2007, 111-116, REVIEW ARTICLE.
293. D. Fearn, C. Jones, P.H. Roberts, *Planetary Dynamos*, in *Mathematical Aspects of Natural Dynamos*. Eds. E. Dormy and A.M. Soward, CRC Press, 2007, 257-280, REVIEW ARTICLE.
294. Z. Somogyi, P.H. Roberts, *Stability of an imploding spherical shock wave in a Van der Waals gas II*. *Quart. J. Mech. Appl. Math.*, **60**, 2007, 289-309, RESEARCH ARTICLE.
295. P.H. Roberts, Z.J. Yu, C.T. Russell, *The 60-year signal from the core*. *Geophys. Astrophys. Fluid Dynam.*, **101**, 2007, 11-35, RESEARCH ARTICLE.
296. A.M. Soward, P.H. Roberts, *Taylor's constraint in a deformed spherical cavity*, in *Mathematical Aspects of Natural Dynamos*. Eds. E. Dormy and A.M. Soward, CRC Press, 2007, 419-424, RESEARCH ARTICLE.

Unpublished Work of Paul Roberts Page 18

1. S.J. Putterman, P.H. Roberts, *Fluctuation-dissipation theorem for wave turbulence*. 1995,

Since
Last Review

15. *See Unpublished Works #1.*
16. *See Published Work #228.*
17. *See Published Work #192.*
18. *See Published Work #190.*
19. *See Published Work #193.*
20. *See Published Work #194.*
21. *See Published Work #195.*
22. *See Published Work #187.*
23. *See Published Work #189.*
24. *See Published Work #188.*
25. *See Published Work #198.*
26. *See Published Work #218.*
27. *See Published Work #229.*
28. *See Published Work #233.*
29. *See Published Work #247.*
30. *See Published Work #230.*
31. *See Published Work #264.*
32. *See Published Work #254.*
33. *See Published Work # 272.*
34. *See Published Work #257.*
35. *See Published Work #259.*
36. *See Published Work #270.*
37. *See Published Work #253.*
38. *See Published Work #256.*
39. *See Published Work #271.*
40. *See Published Work # 269.*

41. *See Published Work # 274.*
42. *See Published Work # 273.*
43. *See Published Work # 275.*
44. *See Published Work # 276.*

45. *See Published Work # 287.*
46. *See Published Work # 288.*
47. *See Published Work # 289.*
48. *See Published Work # 290.*
49. *See Published Work # 291.*
50. *See Published Work # 292.*
51. P.H. Roberts, *Theory of the geodynamo*, in *Treatise on Geophysics*. Elsevier, accepted.
52. D. Fearn, C. Jones, P.H. Roberts, *Planetary dynamos*, in *Mathematical Aspects of Natural Dynamos*. accepted.
53. *See Published Work # 294.*
54. *See Published Work # 295.*
55. A.M. Soward, P.H. Roberts, *On the derivation of the Navier-Stokes alpha equation from Hamilton's principle*. J. Fluid Mechanics, accepted.
56. A.M. Soward, P.H. Roberts, *Euler-Lagrangian means in rotating magnetohydrodynamics II. Small displacements*. Geophys. & Astrophys. Fluid Dynam., accepted.
57. C.C. Wu, P.H. Roberts, *A precessionally-driven dynamo in a plane layer*. Geophys. & Astrophys. Fluid Dynam., accepted.
58. P.H. Roberts, G. Schubert, K. Zhang, X. Liao, F.H. Busse, *Instabilities in a fluid layer with phase changes*. Geophys. J., accepted.

Since
Last Review