



Statistical Mechanics of Stationary Homogeneous Hydromagnetic Turbulence (Classic Reprint)

By Robert H Kraichnan

Forgotten Books, United States, 2015. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****.Excerpt from Statistical Mechanics of Stationary Homogeneous Hydromagnetic Turbulence The statistical mechanics of stationary, homogeneous, hydromagnetic turbulence is treated by a method which does not require the assumption of small departure from a state of detailed balance. The equations of motion under cyclic boundary conditions are expressed in terms of the external driving forces and linearly independent dynamic variables formed from the spatial Fourier coefficients of velocity and magnetic fields. The nonlinear interaction is exhibited as the sum of individually conservative elementary interactions among triads of modes. A functional equation is constructed giving necessary and sufficient conditions for a distribution of time functions to satisfy the equations of motion, it involves only the second-, third-, and fourth-order moments of the distribution functional. By using the fact that each mode interacts with many others, a procedure is developed in which each elementary interaction is introduced as a perturbation on the total motion. The moments appearing in the functional equation are expressed by means of this procedure in terms of the diagonal elements of the covariance matrices of the...



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Reviews

The publication is great and fantastic. It can be filled with knowledge and wisdom You wont truly feel monotony at at any moment of your time (that's what catalogues are for about if you ask me).

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