DESCRIPTION

In this work the authors draw upon their expertise in geophysical and astrophysical MHD to explore the motion of electrically conducting fluids, the so-called dynamo effect, and describe the similarities and differences between different magnetized objects. They also explain why magnetic fields are crucial to the formation of the stars, and discuss promising experiments currently being designed to investigate some of the relevant physics in the laboratory. This interdisciplinary approach will appeal to a wide audience in physics, astrophysics and geophysics.

This second edition covers such additional topics as small-scale dynamos, while also presenting the latest results and experiments.

ABOUT THE AUTHOR

Günther Rüdiger is Professor at the Leibniz Institute for Astrophysics Potsdam, and lectured at the University of Potsdam. He has also worked at the University of Göttingen and is a former Visiting Professor at the University of Newcastle upon Tyne. For the successful collaboration with the Helmholtz-Center Dresden-Rossendorf regarding the magnetorotational instability experiment PROMISE he was awarded the 2008 Science Prize of the Donor Federation of German Science.

Rainer Hollerbach received his Ph.D. from the University of California, San Diego. He is currently Visiting Professor in the Institute of Geophysics at ETH
Zürich, as part of the European Research Council project “Magnetostrophic Flow in Experiments and the Core of the Earth”. He is permanently based in the Department of Applied Mathematics at the University of Leeds, England. He is a Fellow of the American Geophysical Union and the UK Institute of Physics.

Leonid L. Kitchatinov received his Ph.D. from the Ioffe Physical Technical Institute, St Petersburg. He is permanently affiliated to the Institute of Solar-Terrestrial Physics, Irkutsk, and to the Pulkovo Observatory, St Petersburg. He has repeatedly worked at the Leibniz Institute for Astrophysics Potsdam, supported by both the Deutsche Forschungsgemeinschaft and by the Alexander von Humboldt Foundation as a Research Fellow for a year. He has also worked at the University of St Andrews, UK.

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