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Sommario/riassunto

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