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Jan Hospers' defense of field reversals and geocentric axial dipole hypothesis

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When Jan Hospers arrived at Cambridge in 1949 he already had decided to use paleomagnetism as a stratigraphic tool to investigate Icelandic lava flows during summer 1950. He did not, however, plan to work on the problem of reversals. At the time he did not know about reversals.. Although Ben Browne remained Hospers' official supervisor, Keith Runcorn, who arrived at Cambridge in January 1950, became his mentor. He provided key contacts and encouraged Hospers. He returned with 22 samples from his first collecting trip. Observing that approximately half his samples were reversely magnetized and that they appeared to be clustered around the axis of rotation, he realized that he needed a statistical procedure for reducing the observed scatter. Runcorn asked R. A. Fisher to help with the statistics. Fisher developed the statistical analysis, and Hospers (1951) argued for field reversals and the geocentric axial dipole hypothesis (GAD). Runcorn encouraged Hospers to return to Iceland and to obtain samples from Northern Ireland and. Hospers' new work led him to make two firm and important contributions to paleomagnetism. Hospers (1953-1954) offered the first extensive empirical support for serial reversals and GAD. His support for field reversals included a thorough discussion of L. Néel's self-reversal hypotheses. The empirical support he marshaled in favor of GAD, which extend back through the Miocene, provided a firm base on which K. Creer, E. Irving, Runcorn, and other paleomagnetists could present arguments favoring mobilism. He also constructed a rudimentary polarity time scale.