



Magnetic field reversals: the geodynamo, laboratory experiments and models (Lewis Fry Richardson Medal Lecture)

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I will first compare reversals of Earth's magnetic field known from palaeomagnetic data to the ones observed in a laboratory experiment for the magnetic field generated by a turbulent flow of liquid sodium (VKS experiment). Despite major differences between the flow in Earth's core and in the experiment, both systems display reversals that share a lot of similar properties. I will understand them using a simple model in the framework of low dynamical system theory. Finally, I will discuss what can be learnt from numerical simulations.