Special Issue

Extreme Geomagnetic Events

Message from the Guest Editors

Extreme geomagnetic field events are evident in numerous observations over various time scales. Most prominent extreme events are reversals and excursions, which are abrupt transitions of the dipole axis observed in paleomagnetic records that last several millennia and punctuate chrons that last several hundred thousand years.

Extreme events are particularly challenging to explain. Here we invite contributions from all research areas related to geomagnetism to advance the understanding of the underlying core dynamics of extreme geomagnetic events and the consequences of these events on processes outside the solid Earth. These include related geomagnetic observations on various timescales, the analysis of field models, numerical modelling, and theory aiming to explain these enigmatic phenomena. Core dynamics studies may include papers about magnetic induction and diffusion, core–mantle interactions, double-diffusive convection, etc. These contributions may provide insights into the impact of core dynamics on the extreme geomagnetic events from deep in the core, to the core–mantle boundary, through the Earth's surface and up to the ionosphere.

Guest Editors

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Deadline for manuscript submissions

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Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherentset of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientificallybased political decisions.
We are committed to drive *Geosciences* to a position in which it is recognized for its high-quality, cutting-edge research and scientific influence, and strongly encourage and invite your participation and manuscripts.

Editor-in-Chief

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