

## THE CORE FIELD – SEEN BY VON HUMBOLDT

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A. von Humboldt and C. F. Gauss were the most prominent German scientists of their time: one being the last universally educated scientists, involved in describing all kinds of natural phenomena and one being the modern mathematician and physicist, interested in the deductive analysis. The study of the Earth's magnetic field was one of their common interests. In his research on geomagnetism von Humboldt was interested in the method developed by Gauss to represent the geomagnetic fields in terms of potentials and to provide a separation of sources in internal and external ones. Gauss' pioneering modeling efforts with their developments to the modern time can be seen as a more fundamental contribution than von Humboldt's work in organising a worldwide cooperation to gather magnetic data. However, the first quart of the 19<sup>th</sup> century brought tremendous improvements in measuring and describing the magnetic field, and both the A. von Humboldt and C. F. Gauss measurements and studies were crucial. The maps describing the global behaviour of the declination, inclination and total intensity of the geomagnetic field at that time, is the most convincing argument.

Core field mapping, ancient magnetic measurements

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