

## **GEOMAGNETIC INDICES**

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Geomagnetic variation is an extremely complicated phenomenon with multiple causes operating on many time scales. 250 years Hjorter noticed its 'regular irregularity, and irregular regularity'. The immense complexity of geomagnetic variations becomes tractable by the introduction of suitable geomagnetic indices on a variety of time scales, some specifically targeting particular mechanisms and physical causes. We review the historical evolution of the 'art of devising indices'. Different indices [by design] respond to different combinations of solar wind and solar activity parameters and in Bartels' [1932] words "yield supplemental independent information about solar conditions" and , in fact, have allowed us to derive quantitative determination of solar wind parameters over the past 170 years. Geomagnetic indices are even more important today as they are used as input to forecasting of space weather and terrestrial responses.

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