



## **On the long term variation of geomagnetic activity as described by the aa indices**

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The long term geomagnetic indices data series, and in particular the 140 years long aa data series are well suited to describe the long term variation in the geomagnetic activity. Different quantities, based upon different approaches in the data series analysis and related to different components of the geomagnetic activity can be used to characterize the long term change in the geomagnetic activity. Examples are presented. The characterization of the geomagnetic activity they provide, and their robustness with respect to uncertainty in the index determination are discussed. Implications in terms of long term evolution of the solar activity are also discussed.