

## **JERKS: THE MISCONSTRUCTION OF EARTH'S MAGNETISM**

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The jerks are recurring topics in the geomagnetic literature. The author analyzed the jerk model from point of view of signal processing. Regardless the renewed popularity of the jerks, he dares to state, that the model and the reality are mistaken in unlucky manner. The fitted straight-line segments in the 1<sup>st</sup> time-derivatives of magnetic time series form the model. The observed time series are the part of the reality. Computing further time-derivatives of the model led to the concept of magnetic impulse or jerk, while computing the time-derivatives of real-world data led to an ill-posed problem, no unique solution exists. Therefore we cannot come to know the jerks. A possible connection between the jerk model and the length of day (LOD) was found as well.

Magnetic jerk, DSP

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