

## Geomagnetic evidence for torsional waves in the outer core

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### Abstract text:

In 2010 Gillet et al published a paper in which they claim that evidence of a very fast (6 yr) torsional oscillation in the outer core are present in the geomagnetic model gfum1 (Jackson et al, 2000). These waves take the form of an oscillation in the angular velocity of the fluid flows, assumed to be quasi-geostrophic, propagating from the inner core towards the CMB in about 4 yr. We are investigating more direct evidence of this phenomena in the geomagnetic observatories records. In order to get rid of noise, ionospheric effects and magnetospheric effects we tried to apply stacking techniques to these observations. Because of the nature of the phenomena under investigation (axisymmetric and independent of longitude), we wish to enhance a globally coherent periodic signal. The study from Gillet et al is therefore the justification to test data analysis tools that are new to the field of geomagnetism.