



## **A Modeling Approach to Separating Core and Crustal Fields in Geomagnetism**

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In this talk we address the problem of separating the signal of the Earth's core magnetic field and the lithospheric magnetic field signal if only the superposition of the two fields is known. Given a spherical harmonic expansion of the magnetic field, it is a generally accepted procedure to account all contributions of spherical harmonic degree smaller than 15 to the core and all other contributions to the lithosphere. However, it is clear that there are lithospheric signals hidden in the lower degrees. Addressing these lower degrees is the topic of the presentation at hand. The assumption that we need to make for this to work is that one knows the true magnetization in a small region of the lithosphere. A numerical example is presented as a proof of concept.

This is joint work with L. Baratchart, INRIA, Sophia-Antipolis.