EQUIVALENT MONOPOLE SOURCE OF THE GEOMAGNETIC SOUTH ATLANTIC ANOMALY

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The South Atlantic magnetic Anomaly (SAA) is an important feature of the present geomagnetic field. In this paper we model the space-time evolution of this anomaly in terms of the resultant between a decrease of a global axial dipole and an increase of a local monopole source. Some characteristics of this evolution are investigated and some considerations are made on the light of a possible special state of the global geomagnetic field dynamical regime. Among the possible speculations, one is made regarding the topography of the core-mantle boundary (CMB) and its possible aspect underneath the SAA region in terms of simple sinusoidal undulations met by the monopole source during its centennial motion.

South Atlantic Anomaly; equivalent monopole source; Earth core topography

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