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Source field characterization in view of Electromagnetic induction studies

Praveen Kunagu (1), Vincent Lesur (2), and Chandrasekhar Enamundram (3)

(1) GFZ-Helmholtz Center for Geosciences & IIT Bombay, Earth Sciences, Germany (praveen@gfz-potsdam.de), (2) GFZ-Helmholtz Center for Geosciences, Potsdam, Germany (lesur@gfz-potsdam.de), (3) Indian Institute of Technology Bombay, Mumbai, India (esekhar@iitb.ac.in)

Electromagnetic induction (EM) studies are the only geophysical method available to investigate deep Earth electrical conductivity structure. Owing to their adequate spatial and temporal coverage, satellite magnetic data play a major role in such type of studies. In this regard, a good understanding and characterization of the large scale external field is necessary. For the present analysis, we use CHAMP satellite data selected for the year 2001. Using these precise data, we investigate how well we can estimate/characterize the large scale external source field at different frequencies during geomagnetic storm periods. Furthermore, the estimates will be compared with the ground based observations. We investigate, possible local time (LT) dependency in our estimates. Agreement of our model with the ring current symmetric nature has been addressed. Preliminary results of our findings will be discussed.