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Electrical conductivity in the Earth's mantle: Results of the time-domain approach from 2 years of Swarm data

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A time-domain approach to the global inversion of observatory and satellite data in terms of 3-D electrical conductivity structure of the mantle has been developed in the preparation of the L2 products for the Swarm mission (Velímský 2013). This approach relies on the separation of individual contributions to the total geomagnetic field by means of comprehensive modeling (Sabaka et al. 2013), and inversion of the series of spherical harmonic coefficients of magnetospheric fields and their induced counterparts by regularized quasi-Newton minimization of data misfit. The results based on the inversion of first 2 years of data will be presented.