

単純な2次元比抵抗構造における地磁気変換関数の定量的解釈

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A quantitative interpretation of the geomagnetic transfer function for a simple 2D electrical conductivity structure

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The present study shows the spatial distribution of the geomagnetic transfer function for a 2D case with which the conductivity anomaly exposed to the surface of which the electrical conductivity is assumed to be infinite, with a finite depth and an infinite area is considered in a uniform conductive half space. At the surface, as the distance from the anomaly increases, the amplitude of the geomagnetic transfer function decays slowly to a certain distance and then decays inversely proportional to the square of the distance. At the transition distance, the sign of the real part of the geomagnetic transfer function changes, which causes the induction vector pointing to the opposite direction to the conductivity anomaly, while the sign of the imaginary part does not change.