



## **Long-period electromagnetic investigation of the Trans European Suture Zone**

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In 2003/2004 several deep EM experiments across the Trans European Suture Zone (TESZ) were conducted along several transects in NW Poland and adjacent areas in NE Germany by a multi-national group from Poland, Germany, Russia, Czech Republic, Sweden, Finland and Ukraine. The TESZ comprises one of the largest tectonic boundaries in Europe separating the East European Platform from the mobile Paleozoic belts of Central and Western Europe. One of the aims of the project is to outline the occurrence of aluminous shales thought to be responsible for major conductivity anomalies which were found in the central and western parts of the North German-Polish Basin.

Although data quality suffered from exceptionally low magnetic activity and the occurrence of DC railway lines, stable magnetotelluric, geomagnetic and magneto-variational transfer functions could be obtained for a large number of sites in a period range from 10s to 10.000s or beyond. They principally image the large sedimentary pile of the Polish trough and the sharp transition to the craton in the NE and, additionally, salt structures on the SW sections of the profiles. However, MT and purely magnetic transfer functions do not fit together completely. The causes of this disagreement as well as first modelling attempts are discussed in this contribution.