**Phanerozoic history of the Trans-European Suture Zone: a Polish perspective**

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The TESZ is one of the most important tectonic boundaries in Europe, separating Precambrian East European Craton (EEC) in NE from a continental crust accreted during the Phanerozoic.

The Vendian to M.Cambrian deposits studied along the SW margin of the EEC reflect rifting processes and a breakup of the Rodinia continent into Baltica and Amazonia with a formation of the Tornquist Ocean along the present SW margin of Baltica.

The closure of the Tornquist started in M.Ordovician in N-Poland due to a sinistral collision of the E-Avalonia plate with Baltica. Boreholes reveal strongly deformed belt (N-German - Polish Caledonides) with a foredeep to NE. In SE Poland sedimentological and tectonic subsidence studies favour a foredeep development but without a clear evidence of an orogen. Dextral strike-slip movements along the Baltica margin probably are responsible for translation of terranes detached from the plate to SE. In the late E.Devonian the accretion was completed.

During M.Devonian to E. Carboniferous the described area was located near a passive margin, formed after collapse of the Caledonian orogen. Thermal subsidence was partly controlled by crustal blocks with different structure and accretion histories. During L.Carboniferous the blocks differently responded to 2 phases of crustal shortening and foreland compression.

The Permian-Mesozoic evolution of the TESZ included several phases of increased tectonic subsidence and uplift with the most important ones related to L.Permian-E.Triassic rifting.