# Zircon from Polish Lowland rhyolites as a fingerprint of magma processes and sources in Eastern margin of Central European LIP

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The Central European Basin LIP extends from the North Sea across northern Germany into Poland [1]. Strong magmatic activity occurred in this area at the Carboniferous – Permian transition and produced about 70 000 – 80 000 $km^3$ of volcanic material. The majority of the material consists of felsic rocks (48 000 $km^3$) [2] which are covered by thick sediments. Hundreds of deep hydrocarbon exploration wells exposed the Late Paleozoic volcanic province with different regions being now under detailed examination.

In this study we focused on the comparison of zircons from the NE German Basin [3] and the Halle Volcanic Complex [in prep] with new samples from the Polish Lowland. We investigated three samples from ignimbrite (Daszewo Wysoka,. Pniewy), which were dated respectively: 293 Ma, 294 Ma and 298 Ma [1] and two undated samples from Chrzypsko (from rhyolite and underlying granite). The analyses of zircon include dating, O and Hf isotopes as well as detailed measurements of Hf concentration. The basement in the Polish Lowland is hidden by a thick sedimentary cover and zircons are the only grains that provide information on the structure and composition of Permain magmatism in this area as well as on the pre-Permian evolution of the continental crust on the boundary between several important crustal fragments.

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