

# Upper mantle structure beneath the Southern Rhinegraben based on seismic tomographic imaging and SKS-splitting analysis

U. Achauer and G. Herquel

Institut de Physique du Globe de Strasbourg (UMR 7516 CNRS, Université de Strasbourg/EOST)

In this paper we shall discuss the structure of the upper mantle beneath the Southern Rhinegraben based on a review of research results from seismic tomographic imaging and SKS-splitting analysis.

Over the last two decades a couple of seismic field projects have been carried out across the Southern Rhinegraben and the adjacent Vosges and Black Forrest mountain ranges in the framework of French-German cooperative studies (DECORP-ECORS, Rhinegraben89, Interreg3, Rhine2000) to shed light on the deep seismic structure and its variability across this part of the ECRIS rift and to clarify the existence/non-existence of an earlier proposed plume beneath the graben proper. The analysis of the data from the different projects will be critically reviewed as well as some new results shown. Based on these results one can say that there is no seismic signature of a plume source beneath the Southern Rhinegraben.