



## **A new Moho map for the entire Alpine region**

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We present a map illustrating the depth of the Moho discontinuity for the European Alpine collision zone compiled from two data sets covering the Western and the Eastern Alps, respectively. While extensive information on crustal structure and Moho depth in the area of the Western Alps has been gathered and presented in previous years, recent seismic refraction experiments focusing on the Eastern Alps now allow to establish a complete map of the Moho depth for the Alpine arc and its surroundings. Both data sets derive the Moho depth from seismic refraction and reflection data only, but use different methodological approaches to obtain an image of the Moho interface. In particular results from 2-D and 3-D methods feature different characteristics with regard to coverage and resolution. With a consistent methodology and quantitative error assignment we control that the two data sets meet the same quality criteria. In the newly compiled map the Moho is represented by the smoothest possible surface passing through the data and their error bars. Vertical offsets are introduced when the curvature of the surface exceeds a certain threshold, and boundaries between individual Moho fragments are defined along those vertical offsets. The image of the crust-mantle boundary in the Alpine collision zone allows for the interpretation of four crustal blocks, namely the European plate north of the Alpine Arc, the Ligurian plate in the southwest, the Adriatic microplate in the south and the Pannonian fragment at the southeastern edge of the Alps. The transition from the Adriatic Moho to the Pannonian Moho is of particular interest and is also discussed in another presentation.