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The 100th anniversary of the discovery of the Mohorovicic Discontinuity: Its geophysical and petrological characteristics (co-organized)

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Session Details:

100 years have passed since Adrija Mohorovicic first discovered the boundary between the continental crust and mantle of south-eastern Europe. Today, the nature of this boundary, or Moho, is largely defined on the basis of seismic refraction/wide-angle reflection and conventional deep reflection datasets. In general petrophysical terms, the continental Moho as imaged by seismic refraction and wide-angle data is interpreted as the transition from intermediate to mafic rocks of the lower crust with P-wave velocities (V_p) of around 6.5 to 7.1 km/s to predominately ultramafic rocks of the upper mantle with V_p greater than 7.6 km/s to 8.0 km/s. Seismic reflection data, on the other hand, has shown that the Moho can have complex reflection geometries, or even to have no reflection character at all. It has therefore been suggested that the reflection character of the Moho may be the result of a wide range of possible structures, compositions, thermal evolutions, and formational processes. Also, the Moho (a geophysically defined feature) does not necessarily coincide with the the petrological/geochemical crust/mantle boundary, which occurs at the contact between the mafic lower crust and mantle peridotite. This session welcomes all contributions dealing with the Moho.