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Session

S16

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S16 Progress in understanding the evolution of the Late Alpine-Quaternary magmatism and geodynamic history of the Carpathian-Balkan region

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This session accepts both full papers and abstracts

The purpose of this session is to bring together scientists from different fields to present new data and models that significantly improve our understanding of the relationship between magmatism and geodynamics in the Carpathian-Balkan area (CBA). CBA is the site of various types of magmas during Late Alpine – Quaternary times, but this magmatic activity is not always appropriately explained in the geodynamic models. We hope that this session will highlight current research in the generation and evolution of magmas in CBA based on new data on geochemistry and petrology and to relate this with geodynamic models based on geological and geophysical data. Suggested topics include (but are not limited to):

- (1) Are we all in agreement that the orogenic setting of CBA is typical for Africa-European collision zone that included a subduction stage characterized by roll-back associated with extensional back-arc volcanism? If not, what are other alternatives?
- (2) Is the temporal and spatial geochemical trend characteristic and fundamental to magma formation in CBA and similar to other areas on the Earth?
- (3) Can seismic tomographic observations provide relevant constraints on geodynamic models to allow understanding the processes in the mantle, subduction zones, including mantle flow patterns, magma production processes, and the cycling of material including volatiles through the system?
- (4) What is the effect of slab-derived fluids and melts on mantle melting and what are the characteristics of the magma differentiation of CBA magmas?
- (5) What are the key geodynamic aspects of the transition from subduction-type magmatism to intra-plate- OIB-like type magma? Etc...