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## **Geomagnetic patterns along the Neogene to Quaternary volcanism of East Carpathians**

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The post-collision volcanism located along the inner side of East Carpathians represents a challenge in the context of its spatially-related age and debated genesis.

The new acquisition of geomagnetic data, and their integration into the results of the previous surveys offers an improved tool for revealing hidden trends in magmatic processes in the study area. The paper is aimed at presenting some preliminary results.

Basically, a two-fold approach has been employed. It combines (i) a large scale-analysis based on an overall geomagnetic view (including consistent cross-border geomagnetic images northernmost Romania, where the volcanic chain extends on the Ukrainian territory), with (ii) some detailed investigations within the youngest magmatic structures located southernmost of the study area.

To provide consistency to the composite geomagnetic map, data were brought to the same geomagnetic epoch and reference altitude, and checked for the merging quality.

Various filters have then been applied for improving the signal/noise ratio, in order to better outline the volcanic structures, and emphasize regional tectonic/magmatic lineaments.

Additionally, rock magnetism lab determinations were performed on samples collected from the main geological formations, and their results were compared with direct observations on the total intensity scalar of the geomagnetic field, especially in the areas where paleomagnetic data had revealed reverse magnetisations.

In the detailed perimeters, tentative attempts for the interpretation of geomagnetic information through forward modelling have been performed, revealing the in-depth development of some volcanic edifices.

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