



## **Geomagnetic Crustal field Anomalies over small countries (Austria and Albania) according to regional and global models**

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Austria and Albania are comparably small countries, geographically mostly elongated respectively in longitude and latitude. Using data from repeat stations on these countries and their neighboring countries, the regional spatial-temporal (ST) model for each country is build by polynomial expansion in time, latitude and longitude of the geomagnetic field components. The residuals between the observed values of the components of the magnetic field and those predicted by the model are interpreted as local anomalies of the Crustal/Lithosphere geomagnetic field.

Using different global models (CM5, POMME-9, EMM2015, CHAOS-6), that are expansion in spherical harmonics up to maximum degree  $L_{max}$ , the geomagnetic field contribution of internal sources at any place of the region (Austria or Albania) at any time (within the time interval of the respective model validity) can be calculated. These global models consider the spherical harmonics contribution from degree  $L = 1$  to  $L_c$  as the Core field and the spherical harmonics contribution from the degree  $L = L_c + 1$  to  $L_{max}$  as Crust/Lithosphere static field, i.e. there is not considered the induced magnetization of the Crust/Lithosphere. We have calculated the crustal contribution in each region by different ways: by calculating the residuals between observed values and predicted values by the different models (up to  $L_{max}$ ) and then averaging these residuals; by calculating the residuals between the observed values and values predicted from the nuclear part (contribution from  $L = 1$  to  $L_c$ ) of different models; by the direct calculations of the models (considering contribution from  $L = L_c + 1$  to  $L_{max}$ ). The results from different models and different ways for Austrian and Albanian regions will be compared. Especially the results for the total field ( $F$ ) will be compared with available aeromagnetic and ground anomalies maps of the regions.