



## **Neotectonic analysis of high resolution seismic data, Lake Balaton, Pannonian basin**

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High resolution multichannel and ultra high resolution single channel seismic data acquired on Lake Balaton during the last decade provide an outstanding data set for detailed analysis of neotectonics in the central Pannonian basin. The two data sets image different depth intervals. Single channel data have a 20-50 metres penetration with a decimetre scale resolution. Since a large portion the single channel data were measured in a dense grid, fine details of the different styles of neotectonic deformation can be identified and laterally correlated. Multichannel data provide information down to a depth of 150-200 metres, with a smaller resolving power, and allow identification of larger scale structural features. Combined analysis of the two data sets permits (1) detailed mapping and kinematic interpretation of different neotectonic features and (2) analysis of the connection between older (Miocene) and younger (post-Miocene, i.e. neotectonic) structures, and the reactivation of existing older faults. The neotectonic features identified below Lake Balaton are discussed within the context of active tectonics of Transdanubia in central Pannonia. A special emphasis is put on the timing of fault activity and the kinematics and style of the reconstructed deformation pattern. The results are compared to the present-day stress field and geodynamic habitat of the Pannonian basin. This study was supported by the Hungarian Scientific Research Fund OTKA no. TS044765, K37724, F043715, NK60445.