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Multiple tree-ring proxies (earlywood width, latewood width and δ13C) from a secular pendunculate oak (Quercus robur L.) stand, Nyírség, NE Hungary

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The Nyírség is a relatively elevated region of the Great Hungarian Plain. The natural forest type of this region is the pendunculate oak (Quercus robur L.) dominated forest. However, due to the extensive cropland agriculture the natural forests have been restricted only to a few survival patches. One of these small patches is situated near to the town of Baktalórántháza (N 47.98°, E 22.05°). The environmental information recorded in tree rings has never ever been studied earlier in the forests of Nyírség.
We have collected disk samples from 10 dominant pendunculate oak trees in August 2009.
Earlywood and latewood width were measured separately on each disk and latewood stable carbon isotope composition was also analysed on two radii.
The final record spanned from 1730 to 2008 and more than 3 trees are included from 1786.
Earlywood, latewood and total ringwidth series have been standardized (67% spline) and the average index was calculated as biweigth robust mean for each variable. The δ13C data were corrected by pin-correction method and arithmetic average was computed.
Each chronology has been correlated to monthly mean temperature and monthly precipitation totals to detect the main climatic regulator for the different oak tree-ring proxies.

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