



New millennium long oak tree-ring width chronology and its potential for climate reconstruction for the Czech Lands

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This contribution provides basic information about a newly created oak (*Quercus* sp) tree ring width (TRW) chronology spatially covering the territory of the Czech Republic (CR) in the 761–2012 period. The series was completed from more than 3000 oak TRW samples of living, historical and sub-fossil material. At first variability in age structure, number of replications and common signal strength through time are discussed. Then we introduce a methodology how positive and negative extremes may be defined from high-pass filtered TRW oak series. Based on an assumption that positive/negative extremes indicate an occurrence of extremely wet/dry seasons in a moisture sensitive oak TRW chronology we verify this hypothesis against extremely wet/dry seasons that are known from various types of documentary evidence for the territory of CR. Degree of agreement in extremes found in both oak TRW series and documentary based precipitation index series is discussed. Finally mean CR precipitation series completed from 14 long homogenized station measurements and starting at 1803 is used to test a potential of the newly created oak TRW series for quantitative reconstruction of precipitation and drought characteristics of millennium lengths.