Statistical properties and Hurst-Kolmogorov dynamics in climatic proxy data and temperature reconstructions

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The statistical properties of over 300 different proxy records of the last two thousand years derived from the PAGES 2k database years are stochastically analysed. Analyses include estimation of their first four moments and their autocorrelation functions (ACF), as well as the determination of the presence of Hurst-Kolmogorov behaviour (known also as long term persistence). The data are investigated in groups according to their proxy type and location, while their statistical properties are also compared to those of the final temperature reconstructions.