Data-driven model for investigation of the mid-Pleistocene transition

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In this work we apply a data-driven model for the analysis of complex spatially distributed geophysical data. We are focused on the investigation of critical transitions on paleo timescales. Namely we investigated mid-Pleistocene transition which led to change of dominate cycles of glacial variability in Pleistocene.

We demonstrate the good performance of applying our data-driven model to analysis of paleoclimate variability. In particular, we discuss the possibility of detecting, identifying and prediction of the mid-Pleistocene transition by means of nonlinear empirical modeling using the paleoclimate record time series.

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