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Recurrence time of DO events and limits on the possible periodic forcing

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High resolution paleoclimatic records show a series of rapid changes between quasi-stationary climate states. From analysis of the waiting time statistics and the fast timescale fluctuations it is most probable that these jumps are induced by the internally generated stochastic noise. A statistical test comparing the GRIP and GISP2 ice-core data with stochastic resonance models gives an upper bound on the strength of a possible external periodic forcing of the climatic shifts. Comparisons between the ice-core dust record and a governing stochastic differential equation indicates that the extreme events statistics could be important for the climate dynamics.