

Chaotic string dynamics in deformed ^{1,1}

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Recently, Arutyunov, Bassi and Lacroix have shown that 2D non-linear sigma model with a deformed T_{1,1} background is classically integrable. This background includes a Kalb-Ramond two-form with a critical value. Then the sigma model has been conjectured to be non-integrable when the two-form is off critical. With a winding string ansatz, the system is reduced to a dynamical system described by a set of ordinary differential equations. Then we find classical chaos by numerically computing Poincaré sections and Lyapunov spectra for some initial conditions.

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