High Energy Physics - Theory

Swaying oscillons in the signum-Gordon model

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We present a new class of oscillons in the (1+1)-dimensional signum-Gordon model. The oscillons periodically move to and fro in the space. They have finite total energy, finite size, and are strictly periodic in time. The corresponding solutions of the scalar field equation are explicitly constructed from the second order polynomials in the time and position coordinates.

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