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*Solitons and instantons in an effective model of CP violation*

CP violation in the standard model is generated in the weak interactions and the CKM mass matrix. However, asymptotic states involved in such processes almost invariably involve hadronic mesonic asymptotic states, for example in recent experiments decays of B mesons to 2 K mesons and 2  $\pi$  mesons are most important. Thus it should be possible to describe CP violation entirely in terms of scalar fields. We, however, study a 1+1 dimensional analog of a 3+1 dimensional model describing CP violating decays entirely in terms of effective scalar fields. Although the equations of motion are non-linear, we find exact soliton and instanton solutions. The solitons are of the Q-ball type and represent particle states in the quantum theory while the instantons have finite action and should mediate tunnelling transitions in the theory. We speculate as to the 3+1 dimensional analogs of the exact solutions that we have found.