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Global gauge anomalies in coset models of conformal field theory. (English) Zbl 1292.81124
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Summary: We study the occurrence of global gauge anomalies in the coset models of two-dimensional conformal field theory that are based on gauged WZW models. A complete classification of the non-anomalous theories for a wide family of gauged rigid adjoint or twisted-adjoint symmetries of WZW models is achieved with the help of Dynkin's classification of Lie subalgebras of simple Lie algebras.

MSC:

81T40 Two-dimensional field theories, conformal field theories, etc. in quantum mechanics
81T50 Anomalies in quantum field theory
81R10 Infinite-dimensional groups and algebras motivated by physics, including Virasoro, Kac-Moody, W-algebras and other current algebras and their representations

Keywords:

gauge anomalies; coset models; conformal field theory; gauged rigid adjoint symmetries; gauged twisted-adjoint symmetries; Lie subalgebras of simple Lie algebras

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