

High Energy Physics - Theory

Homology of Lie algebra of supersymmetries and of super Poincare Lie algebra

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We study the homology and cohomology groups of super Lie algebra of supersymmetries and of super Poincare Lie algebra in various dimensions. We give complete answers for (non-extended) supersymmetry in all dimensions $D \leq 11$. For dimensions $D=10,11$ we describe also the cohomology of reduction of supersymmetry Lie algebra to lower dimensions. Our methods can be applied to extended supersymmetry algebra.

Comments: New version with some additions and corrections

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