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Representation theory of three-dimensional Sklyanin algebras.

We determine the dimensions of irreducible representations of the three-dimensional Sklyanin algebras. This contributes to the study of marginal deformations of the N=4 super Yang-Mills theory in four dimensions in supersymmetric string theory. Namely the classification of such representations is equivalent to determining the vacua of the aforementioned deformed theories. However the title and material of this talk are subject to change. (Received December 08, 2011)