TWO-FERMION COMPOSITE QUASI-BOSONS AND DEFORMED OSCILLATORS

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S u m m a r y

The concept of quasi-bosons or composite bosons (like mesons, excitons, *etc.*) has a wide range of potential physical applications. Even composed of two pure fermions, the quasi-boson creation and annihilation operators satisfy non-standard commutation relations. It is natural to try to realize the quasi-boson operators by the operators of a deformed (nonlinear) oscillator, the latter constituting a widely studied field of modern quantum physics. In this paper, it is proven that the deformed oscillators which realize quasi-boson operators in a consistent way really exist. The conditions for such realization are derived, and the uniqueness of the family of deformations under consideration is shown.