

NEW VERSION OF q -DEFORMED
SUPERSYMMETRIC QUANTUM MECHANICS

A.M. Gavrilik, I.I. Kachurik, A.V. Lukash

Bogolyubov Institute for Theoretical Physics,
Nat. Acad. of Sci. of Ukraine
(14b, Metrologichna Str., Kyiv 03680, Ukraine;
e-mail: omgavr@bitp.kiev.ua)

S u m m a r y

A new version of the q -deformed supersymmetric quantum mechanics (q -SQM), which is inspired by the Tamm–Dankoff-type (TD-type) deformation of quantum harmonic oscillator, is constructed. The obtained algebra of q -SQM is similar to that in Spiridonov’s approach. However, within our version of q -SQM, the ground state found explicitly in the special case of superpotential yielding q -superoscillator turns out to be non-Gaussian and takes the form of special (TD-type) q -deformed Gaussian.