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Boris Shapiro* (shapiro@math.su.se), Department of Mathematics, Stockholm University, Stockholm University, S-10691 Stockholm, Sweden. *Spectral asymptotic for sequences of matrices originating from quasi-exactly solvable models in quantum mechanics*. Preliminary report.

Title: Spectral asymptotics for sequences of matrices appearing in quantum quasi-exactly solvable models

Boris Shapiro Department of Mathematics, Stockholm University

We present results of theoretical and numerical study of the algebraic part of the spectrum of the classical quasi-exactly solvable quartic and sextic potentials. In mathematical terms, we study the spectral asymptotics of certain intriguing sequences of 3- and 4-diagonal matrices depending on an additional parameter. (Received August 27, 2015)