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**Reviewer:** Znojil, Miloslav

**Reviewer number:**

**Address:**

NPI ASCR, 250 68 Rez,  
Czech Republic  
znojil@ujf.cas.cz

**Author:** Greiter, Martin

**Short title:** On the linear dispersion-linear potential quantum oscillator.

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**Primary classification:** 81Q05

**Secondary classification(s):** 44A15 45C05

**Review text:**

The Fourier-symmetric quantum-Hamiltonian operator  $H = v|p| + F|x|$  (with an immediate relevance in physics of antiferromagnetic spin chains and spinons) is defined and studied. Several interesting mathematical features (e.g., asymptotics) of the model are deduced. Its discretization plus diagonalization numerical solutions are shown to agree with their quasi-classical approximations.