This is a review text file submitted electronically to MR.

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Review text:

The use of the class of the so called point interactions leads to one of the most efficient constructions of solvable models (definitions and more details may be found in the book by Albeverio et al quoted in the paper as ref. 4). The theory is well developed within the framework of standard quantum mechanics where the phenomenologically desirable reality of the spectrum of energies is guaranteed by the requirement that the Hamiltonian is (essentially) self-adjoint.

Within the slightly more general, so called PT symmetric version of quantum mechanics (say, in the form proposed by Bender and Boettcher in ref. 6, with the most recent innovations just appearing on the web in LANL arXiv: quant-ph/0208076), the class of the 'admissible" Hamiltonians is extended. In this context, there emerges a natural question whether and how one could introduce the corresponding extension of the concept of point interactions which would work beyond the limits of the standard class of the self-adjoint Hamiltonian operators.

Such a step of development is made in the paper. In the absence of the full non-Hermitian version of the abstract von Neumann's extension theory, the authors use the appropriate matching conditions and work out, as an explicit illustration of their general approach, the detailed analysis of the spectrum for the one- and two-point special cases.

The presentation of the material is compact and immediately accessible to broad readership. Marginally, it seems worth noting that the paper also finds its most immediate parallels in some (methodically very closely related) studies of the (non-singular) square-well problems [for a sample I may even offer two of my own two-point studies: M. Z., Phys. Lett. A 285 (2001) 7 - 10 and M. Z and G. Levai, Mod. Phys. Lett. A 16 (2001) 2273 - 2280]. Another recommended

complementary reading may be the series of papers by A. Mostafazadeh (J. Math. Phys. 43 (2002) 205-214, 2814-2816 and 3944-3951, plus one just accepted (LANL arXiv: math-ph/0207009)) who explains the concept of the PT symmetry itself as a special case of the so called pseudo-Hermiticity.