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Bohr-Sommerfeld Quantum System

We have shown that geometric quantization applied to a completely integrable system with a Bohr-Sommerfeld polarization leads to complete quantum theory [R.Cushman and J. Sniatycki, ["Shifting Operators in Geometric Quantization", arXiv: 1808.04002v2 [math.SG]]. The original Bohr-Sommerfeld theory constructs the space of states and gives spectra of operators corresponding to functions constant along the polarization. Geometric quantization constructs a family of intrinsic shifting operators acting transitively on the space of states. Our results refute Heisenberg's criticism that in the Bohr-Sommerfeld theory there are not enough operators to describe transitions between states. In fact, these operators exist, but it took quite a while to find them.