
Semiclassical resolvent estimates for bounded potentials

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Abstract

We will present an estimate for the cut-off resolvent at real energies of the semiclassical Schrödinger operator with a potential which is assumed to be compactly supported and bounded. Our approach relies on combining suitable Carleman estimates near and away from the support of the potential. The estimate of the cut-off resolvent implies a resonance free region close to the real axis and yields a lower bound on the decay of the eigenfunctions of the classical Schrödinger operator with bounded potential. This is joint work with Frédéric Klopp.

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