Mathematics > Spectral Theory

Absolute continuity of the spectrum of the periodic Schrödinger operator in a layer and in a smooth cylinder

Nikolay Filonov, Ilya Kachkovskiy

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We consider the Schr\"odinger operator $H = -\Delta + V$ in a layer or in a d-dimensional cylinder. The potential V is assumed to be periodic with respect to some lattice. We establish the absolute continuity of H, assuming $V \in L_{p, \loc}$, where p is a real number greater than $d/2$ in the case of a layer, and $p > \max (d/2, d-2)$ for the cylinder.

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