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Bloch electrons in an external electric field. (English) [Zbl 0725.34097](#)

Schrödinger operators, standard and non-standard, Proc. Conf., Dubna/USSR 1988, 103-129 (1989).

Summary: [For the entire collection see [Zbl 0722.00018](#).]

The operator $H_0 = H - \epsilon x_0$, H being the Schrödinger operator with a periodic potential, is considered. Analytical properties and asymptotic behaviour of the reflectance at $\epsilon \rightarrow 0$ are studied. The relation between resonance asymptotics and quantization conditions characterizing Stark-Wannier ladders is discussed. The connection of “non-eigen” projectors corresponding to resonance states with spectral projectors of the operator H_0 is revealed.

MSC:

- [34L40](#) Particular ordinary differential operators (Dirac, one-dimensional Schrödinger, etc.) Cited in **3** Documents
- [81Q05](#) Closed and approximate solutions to the Schrödinger, Dirac, Klein-Gordon and other equations of quantum mechanics

Keywords:

Schrödinger operator; Analytical properties; asymptotic behaviour of the reflectance; resonance asymptotics; Stark-Wannier ladders