

**Carlsson, Ulf**

**An infinite number of wells in the semi-classical limit.** (English) Zbl 0727.35094  
*Asymptotic Anal.* 3, No. 3, 189-214 (1990).

This paper analyzes the spectrum of the Schrödinger operator  $-h^2\Delta + V$  on  $\mathbb{R}^n$ . The author extends previous results (finite number of wells) by *B. Helffer* and *J. Sjöstrand* [*Commun. Partial Differ. Equations* 9, 337-408 (1984; [Zbl 0546.35053](#))] to the case of a potential  $V$  with an infinite number of well separated wells. This contains in particular a result obtained by *A. Outassourt* [*J. Funct. Anal.* 72, 65-93 (1987; [Zbl 0662.35023](#))] corresponding to a compact perturbation of a periodic potential.

Reviewer: [B.Helffer \(Paris\)](#)

**MSC:**

- [35P05](#) General topics in linear spectral theory for PDEs
- [81Q20](#) Semiclassical techniques, including WKB and Maslov methods applied to problems in quantum theory
- [35J10](#) Schrödinger operator, Schrödinger equation

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| Cited in <b>1</b> Review     |
| Cited in <b>13</b> Documents |

**Keywords:**

[infinite number of wells](#)