

**Nosmas, Jean Clarence**

**Approximations semi-classiques du spectre de systèmes différentiels asymptotiques.** (French)

[Zbl 0535.58040](#)

C. R. Acad. Sci., Paris, Sér. I 295, 253-256 (1982).

The author generalizes results on spectral properties of selfadjoint asymptotic differential equations [see the author, Journ. "Equations Dériv. Partielles", St.-Jean-De-Monts 1982, Conf. No.14 (1982; [Zbl 0497.58023](#))] to asymptotic systems. At first a brief survey on the symbol calculus is given. Then this calculus is adapted to selfadjoint asymptotic differential systems. The author derives asymptotic approximations of their spectrum. As an example a  $(2 \times 2)$ -system, namely the reduced Dirac-equation for the atom with one electron in a constant magnetic field, is treated.

Reviewer: [K.H.Jansen](#)

**MSC:**

[58J50](#) Spectral problems; spectral geometry; scattering theory on manifolds

[58J40](#) Pseudodifferential and Fourier integral operators on manifolds

[35P15](#) Estimates of eigenvalues in context of PDEs

Cited in **3** Documents

**Keywords:**

symbol calculus; spectral properties of asymptotic differential systems; Dirac-equation