

И'ин, E. M.

“Nonsymmetric” variant of the scattering theory for relatively smooth perturbations. (Russian) [Zbl 0599.47015](#)

Probl. Mat. Fiz. 11, 124-138 (1986).

An abstract scheme of investigation of wave operators close to the smooth theory of the Kato-Lavine perturbations is proposed. The asymmetry between H_0 and H , i.e., between the “unperturbed” and “total” Hamiltonians is introduced into the scheme which leads to reduction of requirements for H . This makes it possible to use effectively the direct information on the “perturbed” resolvent. It is assumed that this information can be obtained from the principle of maximum absorption. The tests of existence, isometricity, and completeness of wave operators are obtained and the invariance principle of wave operators is established. Also the scattering for the second order time-dependent equations is considered.

Reviewer: O.Dumbrajs

MSC:

[47A40](#) Scattering theory of linear operators

[47A55](#) Perturbation theory of linear operators

Keywords:

relatively smooth perturbations; Kato-Lavine perturbations; principle of maximum absorption; completeness of wave operators; invariance principle; second order time-dependent equations