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Method of resurgent analysis in atomic collision theory. (English. Russian original)

[Zbl 0978.81506](#)

Theor. Math. Phys. 112, No. 2, 1043-1055 (1997); translation from *Teor. Mat. Fiz.* 112, No. 2, 308-323 (1997).

Summary: We consider the atomic collision problem in the adiabatic approximation. We show that the transition probabilities can be evaluated in this approximation using the tools of resurgent analysis. We suggest a computational algorithm for the transition probabilities and give the mathematical foundation of this algorithm. The analysis is carried out using the example of two-level Landau-Zener model.

MSC:

- 81Q20** Semiclassical techniques, including WKB and Maslov methods applied to problems in quantum theory
- 34E20** Singular perturbations, turning point theory, WKB methods for ordinary differential equations
- 81V45** Atomic physics

Full Text: [DOI](#)

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