Nuclear Transport at Low Excitations ◇

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Numerical computations of transport coefficients at low temperatures are presented for shapes typically encountered in nuclear fission [1]. The influence of quantum effects of the nucleonic degrees of freedom is examined, with pair correlations included. Consequences for global collective motion are studied for the case of the decay rate. The range of temperatures is specified above which this motion may be described as a quantal diffusion process.

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References

[1] H.Hofmann and F.A.Ivanyuk, Phys.Rev.Lett. **82** (1999) 4603