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Wave Transmission Through a Nano-hole DESIRE MIESSEIN, N.J.M. HORING, Stevens Inst. of Tech. — We have examined the integral equation for scalar wave transmission through a nano-hole modeled as a single point, employing a formal procedure for an exact solution, which is found to involve a divergent integral. Analyzing two distinct cutoff procedures we find them to be in agreement for small nano-holes ($\sim$ 50nm). Furthermore, similar results are obtained using first approximations in the Neumann series and in the Fredholm series solutions for the original integral equation for small nano-holes.

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