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Resurgent Theta-functions: a Conjectured Gateway into Dimension D>1 Quantum Mechanics

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Resurgent analysis of the stationary Schrödinger equation (exact-WKB method) has remained exclusively confined to 1D systems due to its underlying linear-ODE techniques.
Here, building on a solvable 2D case (a Selberg trace formula, as analyzed with P. Cartier), and on a Balian–Bloch abstract quantum framework in any dimension using complex orbits, we isolate a very special generalized-heat-trace function as best candidate to start some resurgent description of quantum mechanics in general dimension.
The latter statement is still quite embryonic and speculative - our main hope is to encourage future research.

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