



ASTROPHYSICS SEMINAR

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Quantum black hole models and Schroedinger-like equations in finite differences

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Abstract. It is shown that the quantization of the self-gravitating spherically symmetric thin dust shells leads to the stationary Schroedinger-like equations in finite differences. The method is elaborated for extracting the discrete mass (energy) spectra without solving the wave equations but using, instead, the analytical properties of the "correct" solutions and non-trivial causal structure of the geodesically complete space-times.