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Diffeomorphism covariance and the quantum Schwarzschild interior

Tuesday 7 May 2024 17:15 (15 minutes)

A notion of residual diffeomorphism covariance in quantum Kantowski-Sachs (KS), describing the interior of a Schwarzschild black hole will be introduced, and the solution for the family of Hamiltonian constraint operators satisfying the condition will be briefly presented.

The result will then be compared to Hamiltonian constraints proposed for Loop Quantum KS in the literature, especially to the recently presented AOS model. In addition, we discuss how the choice of lapse affects the desired quantization.

The presentation is based on the publication "Diffeomorphism Covariance and the Quantum Schwarzschild Interior" (Universe 2024, 10, 89. https://doi.org/10.3390/universe10020089)

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