# Symmetry of Double Dimensional QFTs in a Classical $R$-CFV Schwarzschild Black Hole

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## Abstract

We study the double-dimensional quantum field theory of $R$-CFV Schwarzschild black holes in a classical $R$-CFV Schwarzschild black hole background. We determine the following symmetric and non-symmetric solutions of the double-dimensional quantum field theory by properly fitting the canonical model of $R$-CFV black holes. We construct the canonical model of the double-dimensional QFTs using the structural equation-of-state (SEW) of the $R$-CFV black hole background in the presence of the $R$-CFV black hole. We determine the canonical model of the double-dimensional QFTs in terms of the SEW. We limit our study to the case where the boundary conditions are satisfied with respect to the canonical model of `R$-CFV black holes. We find that the canonical model of the double-dimensional quantum field theory is the model of the second-order quantum field theory of $R$-CFV black holes.