

Nontrivial self-consistent backreaction of quantum fields in 2D dilaton gravity

We consider (1+1)-dimensional dilatonic black hole with two horizons, canonical temperatures of which do not coincide. We show that the presence of quantum fields in such a background leads to a substantial backreaction on the metric: 2D dilatonic analog of the semiclassical Einstein equations are solved self-consistently, and we demonstrate that taking into account of backreaction leads to a geometry with two horizons with coinciding temperatures.

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