

Seminarium Zakładu Fizyki Teoretycznej

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NCBJ, sala 404, Pasteura 7

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„POSSIBLE UNITARITY OF BLACK HOLE EVAPORATION”

ABSTRACT:

In the framework of finite-dimensional Fock space models, for a fixed given mean number of particles \bar{n}_k , blackbody-like or another, it is shown that there are, in the space \mathcal{S} of all pure states, a multi-dimensional subspace $\mathcal{S}_{\bar{n}_k}$ of initial pure states and a corresponding multi-dimensional subspace $\mathcal{S}'_{\bar{n}_k}$ of final pure states yielding \bar{n}_k , which are mutually related by a unitary transformation. In consequence, in particular, as an example, it follows that the blackbody form itself of the Hawking spectrum does not contradict unitarity of black hole evaporation.

Serdecznie zapraszamy,

M. Kowal, W. Piechocki, J. Skalski, L. Szymanowski