**Seminarium Zakładu Fizyki Teoretycznej**

**Departament Badań Podstawowych**

**Narodowego Centrum Badań Jądrowych**

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NCBJ, sala 404, **Pasteura 7**

**Prof. dr hab. Bogusław Broda**

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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 $S$ of all pure states, a multi-dimensional subspace $s\_{\bar{n}\_{k}}$ of initial pure states and a corresponding multi-dimensional subspace $S\_{\bar{n}\_{k}}$ 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*