

ATELIER SUR LES SYSTÈMES QUANTIQUES À N CORPS  
28 MAI - 1 JUIN, 2012

WORKSHOP ON QUANTUM MANY-BODY SYSTEMS  
MAY 28 - JUNE 1<sup>ST</sup>, 2012

## Leaky photon cavity pumped by atomic beam

Valentin A. Zagrebnov<sup>\*</sup>

Valentin.Zagrebnov@cpt.univ-mrs.fr

---

Non-equilibrium state is constructed for a system, which consists of a beam of two-level atoms interacting with a one-mode photon cavity. For stationary beam of randomly excited atoms this state is not stationary. For a leaky cavity (Kossakowski–Lindblad dissipation) the corresponding open system yields a non-equilibrium steady state.

*France-Berkeley Project N201013308 with B. Nachtergaele, and A. Vershynina (University of California - Davis).*

---

<sup>\*</sup>Centre de Physique Théorique, Université de la Méditerranée/Aix-Marseille II UMR 6207, Luminy - Case 907 13288 Marseille Cedex 09 FRANCE.