



NEW YORK CITY COLLEGE OF TECHNOLOGY
Physics Department
Center for Theoretical Physics

Can We Move Photons?

Presented by:

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Namm 805 (Conference Room in Dean's Office)

Abstract

The drag effects in the system of spatially separated electrons and excitons in an optical microcavity are predicted and the analytical solution of the quantum three-body restricted problem for this system is presented. It is shown that at low temperature an electron current induces the polariton flow, therefore, a transport of photons along the cavity. However, the superfluid polariton component does not contribute to the electron drag. We discuss possible experiments for the observation of electron–polariton drag effects.

Light refreshments will be served.