

Solving Master Equation for Two-Mode Density Matrices by Virtue of Thermal Entangled State Representation

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Abstract: We extend the approach of solving master equations for density matrices by projecting it onto the thermal entangled state representation (Hong-Yi Fan and Jun-Hua Chen, J. Phys. A35 (2002) 6873) to two-mode case. In this approach the two-photon master equations can be directly and conveniently converted into c-number partial differential equations. As an example, we solve the typical master equation for two-photon process in some limiting cases.

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Key words: thermal entangled state, master equation

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