Dear Editor,

Thank you for sending us the referee’s report. Our response to the referee’s comments and a list of changes are as follows.

Comment: The correlation functions given in eqs. (3), (8) and (B2) are all for minimum uncer-tainty squeezed vacuum for which and M = sinh(r) cosh(r), as explicitly written below the master equation (4). However, in Fig.2(b) Authors show dependence of atomic populations on where M is different from . How they obtained Fig. 2(b) from the master equation in which ? In my view, the master equation should be more general, with M not related to minimum uncertainty squeezed state. Now the paper is misleading.

Response: Thanks for pointing that out, should be used for a general equation, and all figures except Fig. 2(b) are for the case where .

Comment: Authors do not even try to explain why their result is different from the Ficek

and Drummond result. Of course, this is different model, but one could expect that the

two models should give similar results. If it is not the case, it would be nice to know

why.

Response:

Ficek’s proposal on generating the squeezed vacuum reservoir induced extra damping because a partially transmitting lossless mirror plays the cavity wall. In fact, If we set and , we also get 78% population on the second excited state.

What’s more, Ficek’s proposal may encounter some obstacles when working in practice:

1, All modes interacting with the atom need to be squeezed. In Ficek’s proposal, the atom interacts with all modes parallel to the plates. However, this is a two-dimensional squeezing and it is hard to be achieved by shining a squeezing beam where squeezing only happens in one direction.

2, For parallel-plate waveguides, and mode share the same dispersion relation, so elecric fields are allowed in three directions. Thus, there is no way to control the decay rate by aligning one dipole perpendicular to the electric field.

List of changes: