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. In the revised manuscript we use a more general formalism by defining . In our manuscript all the 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 and Drummond’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. We also note that the Ficek-Drummond proposal may encounter another obstacle when applied in experiments. 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:

1, We replaced with M bounded by in Eq. (8) and all associated derivations. We also explicitly stated that our results are for the case where .

2, We discussed the drawbacks in Ficek-Drummond’s proposal at the end of the first paragraph in the introduction section.

3, We explained the reason why we our result is different from that in Ficek-Drummond’s proposal at the end of the first paragraph in section III.