

Geosci. Model Dev. Discuss., referee comment RC1 https://doi.org/10.5194/gmd-2021-160-RC1, 2021 © Author(s) 2021. This work is distributed under the Creative Commons Attribution 4.0 License.

## Comment on gmd-2021-160

Anonymous Referee #1

Referee comment on "The Moist Quasi-Geostrophic Coupled Model: MQ-GCM 2.0" by Sergey Kravtsov et al., Geosci. Model Dev. Discuss., https://doi.org/10.5194/gmd-2021-160-RC1, 2021

This manuscript describes very significant upgrade of the Q-GCM model, which is unique and powerful modelling tool for various process studies in the midlatitude coupled oceanatmosphere dynamics. The main new development is inclusion of moist dynamics, but there is a good list of other modifications. The paper is immaculately organized and written, and some interesting model simulations are included. The journal choice is also perfect. This is rare case, when I suggest to accept this manuscript as it is. Being familiar with the previous model version and with many results obtained from its solutions, I am confident that the submitted work is of high quality and scientifically significant. I am looking forward to become one of the users of the new code (named MQ-GCM2) and to read future papers exploring

various coupled flow regimes, as well as parameter and resolution dependencies.