

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 "A Moist Quasi-Geostrophic Coupled Model: MQ-GCM2.0" 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 ocean-atmosphere 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.