

Geosci. Model Dev. Discuss., referee comment RC1  
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## **Comment on gmd-2021-160**

Anonymous Referee #1

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Referee comment on "The Moist Quasi-Geostrophic Coupled Model: MQ-GCM 2.0" by  
Sergey Kravtsov et al., Geosci. Model Dev. Discuss.,  
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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.