Interaction between QBO and MJO simulated by QBOi models

Jack Chen¹, Jadwiga Richter²

¹NCAR/CGD, Boulder CO, USA ²NCAR/CGD, Boulder CO, USA

Several previous studies indicate that significant connection between the quasi-biennial oscillation (QBO) and the Madden-Julian Oscillation (MJO) exists. Observational studies suggest that stronger MJO activities were found during the QBO easterly phase.

Recently, several general circulation models capable of simulating QBO participated in a quasi-biennial oscillation (QBOi) with the primary goal of comparing QBOs between general circulation models (GCMs). In this study, we examine the MJO-QBO connection simulated by the QBOi models.

Preliminary results indicate that ECHAM5 simulates much stronger MJO in the boreal winter during the westerly phase of QBO, than the easterly phase of QBO. All other QBOi models will also be examined and the results will be presented. This study could lead to better understanding of the QBO-MJO connection.

Key words: MJO, QBO, teleconnection