

The Maintenance and Propagation of Intraseasonal Oscillation in a coupled GCM

WEILI¹ and YONGQIANG YU¹

¹LASG, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China

The simulations of intraseasonal oscillation (period of 20-90 days) in boreal winter/spring in Flexible General Coupled Model were examined. Accordant with the distribution of annual mean sea surface temperature (SST), the simulated intraseasonal oscillations of convection have largest variance over the tropical Indian Ocean, Marine Continent and western Pacific Ocean. In terms of the large scale circulation anomaly (velocity potential at 200hPa), the intraseasonal oscillation propagates eastward along the equator, which is consist with the behavior of reanalysis data. The related convective activity, however, is constrained in the Indian Ocean and Marine Continent. Compared with the stand-alone atmospheric GCM, the intraseasonal anomalies of convection and SST have a more coherent structure on the surface. The warm SST tends to lead the move of convection in the coupled simulation. Surface heating terms were also scrutinized to find out the processes that are of importance for the SST variation.