



Convective control of ENSO simulated in MIROC5

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For use of the CMIP5 experiments, we developed a new version of our climate model, MIROC, referred to as MIROC5. Of particular improvement of MIROC5 is the realistic simulation of El Niño-Southern Oscillation (ENSO), which was poorly reproduced in the previous version. We found that the model ENSO systematically varies its amplitude when we changed a single parameter that affects the efficiency of entrainment process in the cumulus convection scheme. The physical processes of convections that control the model ENSO are investigated in detail by comparing three century-long runs adopting different values of the parameter.