

## Development of a new Earth system model and its application in the project of "Integrated Research Program for Advancing Climate Models"

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In the national project on climate projection, named “The Integrated Research Program for Advancing Climate Models (TOUGOU)”, development and application of a new Earth system model (ESM) has started. In the previous project, we have already developed an ESM named “MIROC-ES2”, which was designed to be mainly used for CMIP6 (Coupled Model Intercomparison Project Phase 6) experiments. Beyond CMIP6, a new trial to make advance the ESM has started, such as projection of non-CO2 GHGs concentration. In this presentation, our strategies and framework for the new ESM development will be shown, and plans for the model applications under the tight collaboration with other groups / other scientific projects will be also displayed.

キーワード：地球システムモデル、炭素循環、気候変動予測

Keywords: Earth system model, Carbon cycle, Climate projection