International Session (Oral) | Symbol A (Atmospheric and Hydrospheric Sciences) | A-CG Complex & General

[A-CG09]Development and application of land and ocean biogeochemistry components of Earth system models

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Earth System Models (ESMs) include representations of biogeochemical cycles including the carbon and nutrient cycles, aerosols and atmospheric chemistry, and the coupling of these processes to the physical climate system, which itself is represented through atmosphere, land and ocean components. ESMs are comprehensive tools which allow to project the response of the physical climate system, as well as the associated biogeochemical cycles, to future changes in concentration of greenhouse gases and/or their anthropogenic emissions and other climate forcers. The 6th phase of Coupled Model Intercomparison Project (CMIP6) is an international research project which amongst its many model intercomparison projects (MIPs) will allow to compare climate change projections from participating ESMs. The Coupled Climate ? Carbon Cycle Model Intercomparison Project (C4MIP) which focusses on carbon cycle is one of the MIPs endorsed by CMIP6. Efforts such as those of the CMIP community allow for an organized cooperation among institutes from across the world and are expected to yield significant advances in the understanding of dynamics of carbon and nutrients cycles, atmospheric tracers, and future changes in the ocean and land ecosystems. The purpose of this session is to discuss the development and evaluation of ESMs and its components, and the scientific issues which can be addressed with them. It is hoped that such discussion will lead to refining the future scope of ongoing efforts such as C4MIP for investigating the role of, and changes in, biogeochemical cycles in affecting global change.

4:45 PM - 5:00 PM [Discussion]Discussion