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Development of an ice-sheet model IcIES

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Ice sheet model for Integrated Earth system Studies (IcIES) has been developed and used for various studies, such as response of Greenland or Antarctic ice sheets to global warming or simulation of Laurentide ice sheet during glacial/interglacial cycles, as well as ideal process studies. We present an overview of recent and near-future development status of IcIES. Numerical experiments of Greenland ice sheet to global warming using IcIES are shown. In this study, influence on the simulation from the difference in the horizontal resolutions of the model is focused. Impact of the resolution to the present-day control case, as well as the response under uniform warming condition are discussed, which is thought be a useful and basic information of the property/sensitivity of the Greenland ice sheet.