

Modeling sea ice properties and ocean circulation in the Arctic Ocean is one of the key tasks for assessing the role of the ocean in the climate system. An intercomparison study is currently under way in the Alfred Wegener Institute to assess the skill of Arctic ocean simulations using three ocean-ice models (NAOSIM, MITgcm and Finite Element Sea ice-Ocean Model (FESOM)) forced as proposed by Coordinated Ocean-ice Reference Experiments (COREs, Griffies2009). The proposed HLRN project incorporates the FESOM simulation part of this study. In addition to this intercomparison, a global version of FESOM will be compared to other published COREs results. These studies will provide a background for further FESOM configurations with different regional focus and thus serve as a platform for future ocean-ice studies. Since FESOM requires massively parallel architecture, the studies will strongly benefit from using resources available at HLRN.