Greenland fjord circulation dynamics – application of temperate estuarine frameworks to Greenland’s glacial fjords

Direct measurements of submarine melting at LeConte Glacier, AK with coordinated underwater acoustic, optical, and in-situ unmanned observations

Impact of increased glacial meltwater on nutrients, trace elements, and isotopes in SW Greenland fjords and the adjacent Labrador Sea.

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**Contact:** Rebecca Jackson (rjackson@marine.rutgers.edu) and Robert Sherrell (sherrell@marine.rutgers.edu)
Northern Hemisphere snow cover

- Long term monitoring of snow cover
- High quality climate data records

Contact: David Robinson (david.robinson@rutgers.edu)

Greenland Ice Sheet hydrology and climate

- Supraglacial & proglacial stream measurements; validation of model output
- Supraglacial stream catchment and atmospheric characterization with UAV observations
- Firn structure – evolution of density and ice layers through time
- Chemical composition of surface snow layer
- Coupled ocean-atmosphere controls on ice sheet surface melt and mass balance

Contact: Åsa Rennermalm (asa.rennermalm@rutgers.edu)
Arctic land hydrology and climate

- Climate model projections of 21st century changes in river discharge
- Recent and projected changes in freshwater pathways in the Arctic
- Arctic Amplification and climate feedbacks (e.g. water vapor)

Contact: Jim Miller (miller@marine.rutgers.edu)

Ecology and microbiology

- Mapping and modeling nesting habitat for Arctic breeding shorebirds to inform conservation management
- Tundra microorganism activity in subzero temperatures

Contact: Richard Lathrop (lathrop@crssa.rutgers.edu) and Max Haggblom (haggblom@rutgers.edu)