How does Greenland’s Runoff Affect Ocean Circulation?

In turn, how does oceanic circulation, which has been forced by realistic time varying runoff flux, affect the water properties along the shelf and margins of Greenland?

These water masses are adjacent to the mouth of fjords, forcing of fjord circulation given by these water masses.

In a regional model Affect Ocean Circulation? How does Greenland’s Runoff
Focus on sensitivity of freshwater flux

- Boundary Current to West Greenland
- Greenland only.

2 Runs: Force coastal

- Reanalysis data
- Only, forced by atmospheric

Regional Arctic System Model

- Ocean and sea ice components
West Greenland Results

Not clear, at the onset of analysis, what role freshwater forcing plays. However, the ability of the model to simulate the correct oceanographic conditions due to realistic forcings will affect future predictions. Strength of currents and freshwater surface layer between runs vary spatially and temporally. Strength of currents and freshwater surface in magnitude vary the same trend but vary along west coast of Greenland. Heat, volume flux along west coast of Greenland.

West Greenland Results