



Low-level jets around coastal Greenland

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The coastal seas around Greenland are the windiest in the world ocean. Greenland is located close to the primary North Atlantic stormtrack, and the impact of Greenland's high and steep topography on the passing synoptic-scale storms results in a plethora of low-level jets around the coast. Off the southernmost point, Cape Farewell, low-level "tip jets" are common in both westerly and easterly directions. Off the southeastern coastline, including the Denmark Strait between Greenland and Iceland, "barrier jets" are common. An easterly tip jet event and a sequence of barrier flow events were comprehensively observed during the aircraft-based field campaign of the Greenland Flow Distortion Experiment in February-March 2007. Here I will present observations of these events, as well as a dynamical analysis based on high-resolution numerical simulations.