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Presentation Type: In Person, Oral

Topic: Kickoff of NASA's "FRESH" field campaign

Title: Exploring the FRESH Arctic: Fate of River Export and Surface Hydrology

Abstract: The Fate of River Export and Surface Hydrology (FRESH) Arctic team will address the following overarching question: 1: How does freshwater move through the land-delta-ocean system and ultimately control the pathways that dictate the fate of freshwater in the Beaufort Sea? To answer this question, we will trace the flow of the Mackenzie River through multiple pathways via an integrated land-delta-ocean study. We conjecture that the best way to understand the processes within the ocean is to also understand the processes on land and especially within the delta, so as to be able to pass the most accurate freshwater fluxes from and through each system. By connecting all three systems, the land, delta, and ocean, we will reshape our ability to understand how mechanisms occurring on land translate to the ocean, and collect new observations of the pathways freshwater takes into the Arctic Ocean, which ultimately modulate ocean circulation, sea ice production, and ocean ecology and biogeochemistry. This presentation will introduce the FRESH Arctic Program and the team.