

Sea Ice, Satellites and the Canadian Arctic

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The recent release of Canada's Changing Climate Report indicates that Northern Canada is warming at more than double the global rate. This warming is associated with significant decreases in Canadian Arctic sea ice. Satellite observations are vital for the continued monitoring of Arctic sea ice cover and perhaps appropriately we are now entering new era of satellite observing capabilities from synthetic aperture radar. This new era is marked by the recent launch of the European Space Agency's Sentinel-1 satellites and the eventual launch of the Canadian Space Agency's RADARSAT Constellation Mission. In this presentation, I first present highlights from the sea ice section of Canada's Changing Climate Report with emphasis on the Canadian Arctic Archipelago. I then present a brief overview of the creation of new satellite based sea ice datasets (e.g. motion and melt onset) from Environment and Climate Change Canada made possible by this new era of synthetic aperture radar satellites.