

**YORK UNIVERSITY
DEPARTMENT OF EARTH & SPACE SCIENCE & ENGINEERING
AND
THE CENTRE FOR RESEARCH IN EARTH AND SPACE SCIENCE**

INVITED SPEAKER

**Dr. Julienne Stroeve
National Snow and Ice Data Center
University of Colorado at Boulder**

Sea-ice evolution: Combining observations and models

An isolated analysis of climate-model simulations does not usually allow one to assess whether these simulations capture the main processes that govern the evolution of the Earth's climate system. An isolated analysis of observations does not usually allow one to understand the processes that are responsible for the observed evolution. In a combined analysis of both observations and model simulations, models allow for enhanced understanding behind the observed evolution of sea ice, while observations allow assessments of how realistically the models represent the processes that govern sea-ice evolution in the real world. Models and observations agree well on the sensitivity of Arctic sea ice to global warming and on the main drivers for the observed retreat. In contrast, a robust reduction of the uncertainty range of future sea-ice evolution remains difficult, in particular since the observational record is often too short to robustly examine the impact of internal variability on model biases. Process-based model evaluation and model evaluation based on seasonal-prediction systems provide promising ways to overcome these limitations.

DATE: Friday, November 20, 2015
TIME: 2:30 p.m.
LOCATION: Room 317, Petrie Sciences Building
Refreshment will be served at 2:15 p.m.



Dr. Stroeve is a senior research scientist at the National Snow and Ice Data Center (NSIDC) at the University of Colorado. Her Arctic research interests are wide-ranging, and include atmosphere-sea ice interactions, sea ice predictability on the short and longer term time-scales, climate change and impacts on native communities. Dr. Stroeve has given keynote addresses around the world on Arctic climate issues, and briefed congressional staff and former Vice President Al Gore on Arctic sea ice changes. Dr. Stroeve was named by Reuters as one of the most influential scientific minds of 2014.