Séminaire vendredi le 30 septembre 2016 11:00 / Seminar Friday Sept 30th 2016 11:00h

Sujet/Subject: Skill of snow water equivalent forecasts in CanSIPS

Langue/language : Anglais/English

Conférencier/Lecturer: Reinel Sospedra-Alfonso (Visiting Research Fellow at CCCma)

Résumé/Abstract:

I will describe the initialization, potential predictability and actual skill of snow water equivalent (SWE) retrospective forecasts (1981-2010) in the Canadian Seasonal to Interannual Prediction System (CanSIPS). CanSIPS is based on the CanCM3 and CanCM4 coupled global climate models developed at the Canadian Centre for Climate Modelling and Analysis (CCCma), and has provided Environment and Climate Change Canada's operational seasonal forecasts since late 2011. I will discuss the sources of SWE predictability at short (weeks to months) and long (seasonal to interannual) lead times, particularly the roles of initial SWE anomaly persistence and ENSO teleconnections at long leads. CanSIPS actual skill in forecasting SWE is assessed against several verification datasets. Highest skills are obtained using a blend of five such datasets, consistent with the hypothesis that skill scores can be degraded by errors in the verification data as well as by forecast errors, and that observational errors can be reduced by blending multiple datasets, much as forecast errors can be reduced by averaging across different models. I will show that actual skill for SWE is comparable to, although generally lower than, that implied by potential predictability. Some thoughts towards the improvement of actual skill in CanSIPS SWE forecasts will be discussed.