

Séminaire vendredi le 26 février 2016 11:00 / Seminar Friday February 26<sup>th</sup> 2016  
11:00h

**Sujet/Subject: Assimilation of Surface Sensitive Radiances over Land  
provided by Hyperspectral Infrared Sensors.**

**Langue/language : Anglais/English**

**Conférencier/Lecturer: Suryakanti Dutta (ARMA)**

**Résumé/Abstract:**

This study highlights progress in the assimilation of AIRS and IASI radiance observations sensitive to land surfaces at the Canadian Meteorological Center. The assimilation is carried out using the Canadian Global Ensemble-variational System. That system benefits from flow-dependent background error statistics which include covariances between surface skin temperature and atmospheric variables. Up to 142 channels from both AIRS and IASI are assimilated. A detailed spectral surface emissivity database is used. Forecasts are evaluated against ERA-Interim analyses, own cycle analyses and radio-sonde observations in a two-month cycle. A conservative approach is taken, with restrictive conditions on topography and surface emissivity. A significant positive impact is obtained in the Northern Hemisphere Extra-Tropics beyond day 2 from the surface to the upper troposphere. The impact is mixed in other regions, depending on level or forecast lead time. Causes of these mixed results are examined in view of future experiments and eventual operational implementation.