Séminaire vendredi le 02 juin 2017 11:00 / Seminar Friday June 2nd 2017 11:00h

Sujet/Subject: On retrieving parameters of a regression model that accommodates error correlation in well sampled data

Langue/language : Anglais/English

Conférencier/Lecturer: Rick Danielson (the Nansen Environmental and Remote Sensing Center, in Bergen, Norway)

Résumé/ Abstract:
A validation of extreme conditions, characterized by high heat flux, rapidly changing surface wind, or strong ocean current, is rare. Analyses and forecasts provide estimates of such conditions, but because there is often little reference data to begin with, it is difficult to calibrate and validate a forecast or satellite retrieval by independent observations (cf. Stoffelen 1998). However, the question may be whether independent observations are really required. Perhaps the simplest (first order autoregressive) parameterization of error correlation is proposed for comparing two datasets, with one being well sampled (i.e., high resolution in space and/or time). Retrieval of calibration and performance metrics using data with known error characteristics is nearly as robust as for more familiar error models (e.g., triple collocation; Gruber et al. 2016). Practical applications are illustrated (using ocean surface current and heat flux products) that suggest a more complete analysis or retrieval is one that includes a first order calibration and validation against another high quality reference.