rossby centre news

SMHI

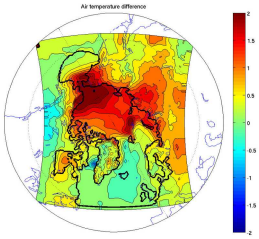
A NEWSLETTER FROM THE ROSSBY CENTRE

A locally cold end of a globally warm year

We are pleased to present the 2nd issue of the Rossby Centre Newsletter for 2010. A year that began and ends with very cold temperatures in Sweden. Notwithstanding this, 2010 looks set to be the warmest year on record globally, emphasizing the need for careful consideration of regional-scale natural variability in the context of future regional climate conditions estimation. At the Rossby Centre we will continue to work actively on this and many other exciting areas in 2011.

Best Wishes for the coming year!

Colin Jones
Head of Rossby Centre



Rapid sea ice change events in regional Arctic scenario experiments

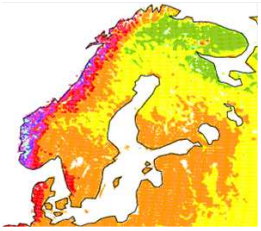
The Arctic summer sea ice extent has been decreasing since the start of satellte observations 1979. Rossby Centre's regional Arctic coupled ocean-ice-atmosphere scenario experiments show a number of rapid sea ice loss events for a projected warming of the Arctic climate.

Read more about rapid sea ice events in regional Arctic scenario experiments

Decadal prediction: aim and approach at SMHI - Rossby Centre

Decadal predictions are increasingly interesting for decision makers that plan with a 10-30 years time horizon in mind. Since this time period is often characterized by a weaker forced climate change signal, a big effort is currently put into getting more accurate initialization of slow-varying components of the climate system in order to improve the skills of the internal variability.

Read more about the aim and approach of decadal prediction at Rossby Centre



Exploring the benefits of higher resolution with RCA3.5

One benefit of regional climate models is that they offer increased resolution for simulating climate features of importance to a given region, at a relatively low computational cost. In particular, higher resolution provides more accurate surface forcing of regional climate processes, such as associated with topography, land-water contrasts and heterogeneous surface cover.

Read more about exploring the benefits of higher resolution with RCA3.5

EC-EARTH successfully tested in a high resolution

configuration

A high-resolution configuration of the earth system model EC EARTH 3 has been developed at the Rossby Centre. First tests of the system revealed the challenging nature of performance analysis and optimisation of coupled models, however, EC EARTH shows good scalability, compared to standalone runs of ECMWF's atmospheric model IFS.

Read more about the successful testing of EC-EARTH in high-resolution

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Special RCA(O) Issue of Tellus A

In late December the journal Tellus A will publish a special issue (vol 63A, no 1, 2011) on the Rossby Centre regional atmosphere/coupled atmosphere-ocean model RCA(O). The special issue contains articles on results from, and performance of, the model. Below is a list of the articles which already now can be read online at the Wiley Online Library.

List of articles and link to Wiley Online Library

Special Issue on Regional Climate Modeling

This week a special issue (CR special 23) devoted to Regional Climate Model (RCM) evaluation and weighting is published in Climate Research. The presented work was undertaken in the European fp6 project ENSEMBLES. SMHI staff has been actively engaged and partly leading the ENSEMBLES RCM work. In the special issue, contributions from the Rossby Centre involves articles on evaluation of daily and monthly temperature and precipitation statistics in RCMs, and assignment of weights to RCMs.

List of articles and link to abstracts

Rossby staff news

David Lindstedt joined the Rossby Centre in September to work on high-resolution regional climate modeling. Previously he worked as a consultant at the Environment & Saftey Services Department at SMHI.

Visit David's webpage

Shiyu Wang joined the Rossby Centre in November to work on coupled atmospheric-ocean modeling. Shiyu has previously worked with climate modeling at the National University of Ireland, Galway (NUIG) and the Irish Met Éireann.

Visit Shiyu's webpage

ABOUT THE ROSSBY CENTRE

The Rossby Centre pursues research on climate processes and the behaviour of the climate system. The principal tools are the global and regional climate models developed within the research unit.
Rossby Centre at www.smhi.se

CONTACT AND DATA REQUEST

Climate scenario data from the Rossby Centre is available via a web application or as netCDF-files for download. The Rossby Centre can be reached via rossby.data@smhi.se, where requests for data and other material can be made.

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