

Report on the AMBER Workshop on “Climate Modelling”

The AMBER workshop on “Climate Modelling” took place on October 13, 2010 in Norrköping/ Sweden. 20 participants (7 female & 13 male) from Denmark, Estonia, Finland, Germany, Poland, Russia, and Sweden, (see list of participants on AMBER webpage) were educated by five teachers from Germany, Spain and Sweden (see list of teachers on AMBER webpage). Most of the participants were Ph.D. students, some of them in different BONUS+ projects. The workshop was supported by the SMHI which is greatly acknowledged. In the following a short description of the course is given. Details of the complete teaching programme can be found on the AMBER webpage.

Eduardo Zorita gave an overview on climate change in the past, on the external drivers, and on climate models and their projections, uncertainties and limitations. Sten Bergström’s topic was sea level rise and its causes. He reported on tectonics, thermal expansion, changes in gravity fields, salinity fields, pressure fields, winds and storm tracks. Eric Kjellström introduced into Regional Climate Models (RCMs) from the view of atmospheric modelling. He explained the need for RCMs, their construction, simulations and limitations. Ralf Döscher presented the topic Arctic Climate Modelling. His foci were the role of the Arctic in climate system, RCMs of the Arctic, sea ice modelling, climate processes and feedback studies, and climate change scenarios and their uncertainties and perspectives. Markus Meier continued RCM from the view of ocean modelling. He discussed the bias in the models, the variability and uncertainty in freshwater fluxes, and ended with new computations in which he combined different climate change scenarios with four different nutrient load scenarios. The workshop ended with a panel discussion on possible improvements of future workshops.

The workshop was carried out in a very friendly atmosphere. All students and teachers wish to thank the local organizers Helen Andersson and Markus Meier and the research staff of SMHI for their perfect organization.

Norrköping, September 14, 2010

Joachim Dippner