

NICAM – ICON workshop, 22-24 Februar 2016

Max Planck Institute for Meteorology

Bundestrassse 53, 20146 Hamburg (see <http://mpimet.mpg.de/en/institute/visitor-information/>)

Room 101 (1st upper floor behind elevators)

Participants

NICAM team:

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|--------------------|--------------------------------|-----------------------------|
| • Masaki Satoh | (AORI/The University of Tokyo) | satoh@aori.u-tokyo.ac.jp |
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MPI-M: (E-mail: firstname.lastname@mpimet.mpg.de)

- Bjorn Stevens
- Marco Giorgetta
- Peter Korn
- Thorsten Mauritsen
- Traute Crüger
- Jürgen Bader
- Cathy Hohenegger
- Mirjana Sakradzija
- Juan Pedro Mellado
- Elisa Manzini
- Sebastian Müller
- Tobias Haufschild
- Guidi Zhou
- Leonidas Linardakis
- Rieke Heinze
- Christopher Moseley

DKRZ: (E-mail: lastname@dkrz.de)

- Moritz Hanke
- Panos Adamidis
- Michael Böttinger
- Niklas Röber
- Dela Spickermann

Format

- Presentations of typically 15 minutes + 15 minutes discussion time.
- Spare time for individual discussions.
- Lunch: At restaurants in the vicinity of the institutes.
- Workshop dinner: Tuesday 19:00 at Jimmy Elsass, see last page

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Agenda

Monday, 22 February

09:00-10:30 Welcome + Model overview

- Stevens: Welcome
- Satoh: NICAM
- Giorgetta: ICON atmosphere and MPI-ESM-2
- Korn: ICON ocean

10:30-11:00 Coffee/tea

11:00-12:30 Climatology, bias, and tuning

- Kodama and Yashiro: Tuning strategies for high- and low-resolution NICAM
- Mauritsen: Tuning strategies for MPI-ESM.
- Bader:
 - High resolution atmospheric orography key to reduce southeastern tropical Atlantic coastal SST bias
 - First results of ICON-AMIP simulations in higher resolution

12:30-14:00 Lunch in nearby restaurants

14:00-15:30 General circulation features 1

- Miyakawa: MJO Hindcast experiments
- Crüger: Sensitivity of the MJO to details of a simulation.
- Nakano: Boreal Summer ISO (BSISO) and TC genesis forecast

15:30-16:00 Coffee/tea

16:00-17:00 General circulation features 2

- Nasuno: East Asian Summer Monsoon simulated in NICAM
- Kodama: Storm-track in a high-resolution global atmospheric model

17:15 Discussion on future MIP

- Satoh: Some ideas for AMIP/APE/RCE inter-comparison

Tuesday, 23 February

09:00-10:30 Middle atmosphere

- Kodama: Current status and strategy of high-top NICAM
- Manzini: Towards a high resolution stratosphere in ICON.
- Zhou: Upward extension of ICON for studying gravity waves from troposphere to thermosphere

10:30-10:45 Coffee/tea

10:45-12:45 Cloud microphysics and turbulence

- Juan Pedro Mellado: (Re)solving turbulence riddles in the planetary boundary layer.
- Noda: Turbulent mixing schemes in NICAM
- Seiki: Evaluation of Cloud Modeling using Satellites
- Seiki: Aerosol Modeling to be used for GCRMs

12:45-14:00 Lunch in nearby restaurants

14:00-15:30 Convection

- Hohenegger: Land-sea breeze in LES, convection-permitting and convection parameterizing simulations
- Sakradzija: How to represent shallow convection in the greyzone / A stochastic shallow Cu scheme.
- Noda: Sensitivity of marine stratocumulus to lower-atmospheric condition using LES and future plan for DNS study

15:30-16:00 Coffee/tea

16:00-17:30 Coupling atmosphere, land and ocean

- Miyakawa: Pilot experiments using the ocean-coupled NICAM (NICOCO)
- Yashiro: Atmosphere-Ocean coupled simulation with Jcup coupling library: the road to ESM
- Hanke: Yet Another Coupler – YAC

19:00 Dinner at Jimmy Elsass

Wednesday, 24. February

09:00-10:45 Technical aspects

- Yashiro: NICAM development milestones: present and future (45min)
- Adamidis: ICON en route to extreme scale computing
- Linardakis: The ICONFOR domain specific language

10:45-11:15 Coffee/tea

11:15-12:00 Visualization and closure

- Böttinger and Röber: Visualization and analysis of large data sets: present and future.
- Final discussion

12:00-13:30 Lunch in nearby restaurants

13:30-14:30 Joint Seminar (room 022/023)

- Satoh: Global highest resolution (870 m) simulation and 10-year history of NICAM.

Restaurant Jimmy Elsass, Schäferstraße 26, 20357 Hamburg

Tuesday evening, ~19:00 onward

