ALADIN : a common tool for different uses --> options are necessary

Consensus

- To use new DDH in Arp/Ald/Aro
- To converge to a unique interface between physics and dynamics in Arp/Ald/Aro (and Hirlam to be discussed) following F.Bouyssel's paper and the summary of the group on that subject
- To use "Lopez microphysics" in 3MT and to code for testing purposes the option to deactivate the subgrid treatment of precipitations
- To split ICE3 in subroutines (one per process) and to check that results are unchanged in Arome and Meso-NH, with the objectives
  - to test (before using) ICE3 in 3MT (to be done by the partners)
  - to study the impact of microphysics in the 3MT context
  - to test sedimentation : collection and not only auto-collection (long time step)
- Test of 3MT in Arp/Ald with "Lopez microphysics" and CBR, keeping separate shallow convective scheme (KFB or EDKF) and working together on clouds treatment
  - Given a framework for evaluating 3MT at Arome resolution

Proposal on how to collaborate

- We keep the principle : a common parametrisation code between Meso-NH and Arome, in order to allow Meso-NH developments to go quickly into operation in Arome
- Some adaptations will still be needed for application into Arp/Ald (long time scale)
- On the other hand, difficulties can occur for transferring Arp/Ald developments into Arome/Meso-NH (which is mainly Météo-France's problem)

Open questions

- Is 3MT useful at 2 km scale ?
- Is subgrid treatment of precipitation necessary at high resolution ?
- Link between shallow convection and 3MT
- Cooperation on validation : 1D model, satellite simulators

Progress on Convergence issues at MF (Oct 2009)

- New DDH dataflow ready (CY35T2) and tested in Arome and Arp/Ald; documentation sent to partners (incl. ECMWF)
- Physics/dynamics interface:
  - Multi-phasic eq.: progress contributed by *S. Malardel* (now at ECMWF)
  - Common phys/dyn interface: specification work has made progress (*visit by D. Degrauwe at MF*); report needs to be finalized and circulated for agreement
  - Physics monitor interface: some cleaning started (*work by R. Brozkova*)
- Split of ICE3 microphysics ($\mu\varphi$) : work under way (*B. Catry*); assistance from MF experts whenever required
- MF's $\mu\varphi$ in 3MT: several steps identified in Sept. 08 have been completed, yet MF's $\mu\varphi$ are not fully 3MT-compatible
- Test 3MT in Arp/Ald:
  - documentation written and circulated;
  - tests have started and will continue pending completion of some adaptations of 3MT and Arp/Ald $\mu\varphi$

Plans in 2010 on Convergence issues at MF

- New DDH dataflow: add dynamics terms and testing in Arp/Ald and Arome
- Physics/dynamics interface:
  - Coding of new CPTEND_NEW on the basis of agreed specifications (MF+partners)
  - Then: test the new interface in Arome => assess both its meteorological and computational impact before a decision to use it operationally can be taken
  - Further cleaning at the level of the physics monitor (reduce number of dummy arguments)
- Complete adaptations of MF's $\mu\varphi$ to 3MT; testing in Arp/Ald
- Assistance whenever required for testing the split ICE3 scheme in the Alaro context; assistance for the phasing with respect to the ICE4 version; implementation of optional code (for the split version) inside the Meso-NH libraries