

# Working plan for ALADIN (objectives, teams and collaborations) 2002

## Maintenance

people :

- every team must feel concerned

actions :

- maintenance

place :

- Toulouse mainly, but also Budapest and Prague for phasing
- locally for some problems

coordination meetings :

- along phasing exercises

external collaborations :

- ECMWF
- SRNWP initiative for a common model interface

## Operations

people :

all ALADIN teams

actions :

- reduction of the discrepancies between operational applications
- harmonization of operational schedules

place :

- locally

coordination meetings :

- during the ALADIN workshop (Medulin, Cr, June 2002)

external collaborations :

## Applications

people :

all ALADIN teams

actions :

- better diffusion of information about existing tools
- improved portability of tools

place :

- locally

coordination meetings :

- during the ALADIN workshop (Medulin, Cr, June 2002)

external collaborations :

## Verification

people :

all ALADIN teams

actions :

- building a coordinated objective verification at synoptic scales
- searching for new methods, more suitable for small scales

place :

- locally

coordination meetings :

- Budapest (Hu) March 2002 (for objective verification)
- during the ALADIN workshop (Medulin, Cr, June 2002)

external collaborations :

- SRNWP Lead Center for Verification methods

## Coupling

people :

Jean-Marc Audoin (Fr), Chantal Moussy (Be), Gabor Radnoti (Hu), Raluca Radu (Ro), Piet Termonia (Be)  
+ Klaus Stadlbacher (Au) for validation  
+ *maybe an Hungarian student*

actions :

- coding and validation of spectral coupling (RR, GR, PT)
- debugging and validation of the coupling of surface-pressure tendency (JMA, GR, RR)
- evaluation of a diagnostic approach for the choice of coupling frequency (PT)
- further work on the time-interpolation of LBC (phase-angle approach)
- starting the work on two-way nesting (CM)

place :

- Budapest, Bruxelles, Ljubljana, Toulouse

coordination meetings :

- during the ALATNET seminar (Radenci, Si, May 2002)
- Ljubljana (Si), November 2002

external collaborations :

- HIRLAM

## Dynamics

people :

Pierre Bénard (Fr), Radmila Brozkova (Cz), Martin Janousek (Cz), Jan Masek (Sk), Abdelwaheb Nmiri (Tu), Chris Smith (UK), Petra Smolikova (Cz), Filip Vana (Cz), Jozef Vivoda (Sk), Karim Yessad (Fr)  
+ Slovenian and French students  
+ Ilian Gospodinov (Bu) for the interface with physics  
+ Klaus Stadlbacher (Au) and Alena Trojakova (Cz) for validation

actions :

- stable and optimal version of the NH dynamics, combining the predictor / corrector approach and the new variables within the end of 2002 (PB, PS, JV, RB, JM)
- lower boundary condition for NH : end and phasing of the work of CS, finding someone to take over the study
- radiative upper boundary condition for NH : restarting work (MJ)
- gridpoint horizontal diffusion based on the dissipative properties of semi-Lagrangian advection : resuming work with the training of a Slovenian student by FV

- design of an improved filtering of orography (French students + KS)
- relaxation of the thin layer hypothesis : continuation (KY, AN)

place :

- Toulouse and Prague (main developments)
- Ljubljana (validation) and Bruxelles (interface)

coordination meetings :

- in Toulouse and Prague (during phasing : March 2002 and ?)

external collaborations :

- UKMO (comparison with the new dynamics of UM)
- ECMWF (predictor / corrector scheme)

#### Physics : precipitations (convection, microphysics, ...)

people :

Doina Banciu (Ro), Eric Bazile (Fr), Martin Bellus (Sk), Karim Bergaoui (Tu), Jean-François Geleyn (Fr), Luc Gérard (Be), Stefan Greilberger (Au), Thomas Haiden (Au), Tomislav Kovacic (Cr), Jean-Marcel Piriou (Fr), Siham Sbii (Mo), Harald Seidl (Au), ...

actions :

- identification of weaknesses, end of the feasibility study for the "Functional Boxes" approach
- *to be defined more precisely along the next meetings*

place :

- Toulouse, Bruxelles and Vienna at least

coordination meetings :

- during the ALADIN workshop (Medulin, Cr, June 2002) + intensive exchanges before

external collaborations :

- HIRLAM

#### Physics : turbulent processes, boundary layer

people :

Martin Gera (Sk), Alexander Kann (Au), Janko Merse (Si), André Simon (Sk), Martina Tudor (Cr) + Toulouse team on Processes

actions :

- correction of CYCORA ter bugs !
- *to be defined more precisely along the next meetings*

place :

- Toulouse and Bruxelles at least

coordination meetings :

- maybe during the mid-term ALATNET review (Bruxelles, Be, April 2002)

external collaborations :

- HIRLAM

#### Physics : radiation

people :

Yves Bouteloup (Fr), Helga Toth (Hu)

actions :

- progressive improvement of the present scheme

place :

- Toulouse, Budapest

coordination meetings :

- not scheduled

external collaborations :

#### Physics : surface

people :

Eric Bazile (Fr), Dominique Giard (Fr), Olivier Latinne (Be), ...

actions :

- operational implementation of higher resolution databases
- operational implementation of an improved snow parameterization
- + ... (*additional tasks depending mainly on MAE stays*)

place :

- Toulouse, Bruxelles

coordination meetings :

- not scheduled

external collaborations :

- HIRLAM

#### Physics : orography

people :

François Bouyssel (Fr), Bart Cathry (Be), Dunja Dvvar (Cr), Jean-François Geleyn (Fr), Dominique Giard (Fr), Thomas Haiden (Au), Klaus Stadlbacher (Au), Yong Wang (Au)

actions :

- optimization of orography for each model
- *to be defined more precisely along the dedicated mini-workshop*

place :

- locally (retunings, use of higher resolution data)
- Toulouse
- Bruxelles / Gand
- Vienna
- Ljubljana

coordination meetings :

- Toulouse (Fr), March 2002

external collaborations :

#### Physics : simplified physics

people :

François Bouyssel (Fr), Cécile Loo (Fr), Cornel Soci (Ro)

actions :

- transfer of knowledge about ALADIN constraints from CS to CL
- further improvements (but mainly in the framework of ARPEGE for this year)

place :

- Toulouse

coordination meetings :

- in Toulouse before the end of the stay of CS

external collaborations :

- ECMWF
- UKMO
- HIRLAM

#### Physics : validation

people :

Romanian team + Toulouse team for Processes + ...

actions :

- systematic validation, at different resolutions, of new developments in physics (especially those likely to move to operations)
- design of new strategies / tools for validation at high resolution
- PhD work of Jean-Marcel Piriou

place :

- locally (whenever volunteering) for experiments and brainstorming
- Toulouse, Bucarest

coordination meetings :

- maybe during the ALADIN workshop (Medulin, Cr, June 2002)

external collaborations :

- SRNWP Lead Center for Verification methods

#### Physics : interface to dynamics

people :

Ilian Gospodinov (Bu) + authors of modifications

actions :

- must not be omitted !

place :

- Bruxelles
- wherever developments are performed

external collaborations :

- ECMWF
- HIRLAM

#### Data assimilation : methods

people :

Radi Ajjaji (Mo), Steluta Alexandru (Ro), Margarida Belo Pereira (Pt), Loïk Berre (Fr), Gergö Boloni (Hu), Philippe Caille (Fr), Alex Deckmyn (Be), Claude Fischer (Fr), Vincent Guidard (Fr), Andras Horanyi (Hu), Sandor Kertesz (Hu), Wafaa Sadiki (Mo), Cornel Soci (Ro), Simona Stefanescu (Ro)  
+ Adam Dziedzic (Pl), ... depending on MAE stays  
+ maybe Maria Monteiro (Pt) and Maria Siroka (Sk)

actions :

- local pre-operational 3d-var assimilation suites using raw ATOVS or aircraft data end 2002 (including local tunings of statistics, observation use, cycling and initialization) (a)
- local implementation and tuning of blending
- prototype version of 3d-FGAT (PC, CF, VG) (b)
- investigation of the problems related to double-nesting (SA, AH, AD) (c)
- a posteriori validation tools and tuning of Jb / Jo (WS, CF, Hungarian student) (d); completion of the PhD work of WS (e)

- improved Jb (LB, MB, SA, GB, SS, ...) : new methods, geographical modulation, part of humidity, ... (f)
- completion of the PhD work of CS (sensitivity studies) (g)

place :

- locally (implementation of blending)
- Toulouse (topics : a, b, d, e, f, g)
- Budapest (topics : a, c, d, f)
- Casablanca (topics : a, e, f)
- Prague (topics : a, f)
- Bucarest (topics : f, g)

coordination meetings :

- during the ALADIN workshop (Medulin, Cr, June 2002) or the EWGLAM meeting (De Bilt, Ne, October 2002)

external collaborations :

- HIRLAM

#### Data assimilation : observations

people :

Martin Benko (Sk), Gergö Boloni (Hu), Nihed Bouzouita (Tu), Philippe Caille (Fr), Claude Fischer (Fr), Vincent Guidard (Fr), Marian Jurasek (Sk), Sandor Kertesz (Hu), Roger Randriamampianina (Hu), Zahra Sahlaoui (Mo), Malgorzata Szczech (Pl), Rashyd Zaaboul (Mo)  
 + Toulouse team for observations  
 + *Gregor Gregoric (Si), Cornel Soci (Ro) ?*

actions :

- ODB : training, design of new tools for ALADIN (1) + local implementations
- screening : problem of observations close to lateral boundaries (3) , local tunings
- using aircraft data in local ALADIN 3d-var suites
- using observations of Hu2m for upperair assimilation (MJ) (4)
- impact of the drift of radiosondes (MB) (4)
- use of raw ATOVS data in ALADIN 3d-var (RR, GB, ZS, CF) (1, 2, 3)
- use of pseudo-observations (from MAP) in 3d-var (VG, CF) (1)
- use of IASI data over land : continuation (MS - PhD) (1)
- + *improved vertical interpolations in observation operators (MJ) (1) ... if the stay is kept*
- *small team ready to work on radar data at the end of the year (CS, GG, MJ)*

place :

- locally (implementation of ODB and / or screening)
- Toulouse (1)
- Budapest (2)
- Casablanca (3)
- Prague (4)

external collaborations :

- HIRLAM

internal collaborations :

- TOWARDS A SAFE EXCHANGE OF LOCAL OBSERVATIONS WITHIN THE ALADIN PARTNERSHIP  
 → action required at the level of Directors !

#### Data assimilation : surface

people :

Gianpaolo Balsamo (It), François Bouyssel (Fr), Adam Dziedzic (Pl), Lora Gaytandjieva (Bu), Stjepan Ivatek-Sahdan (Cr), Olivier Latinne (Be), Françoise Taillefer (Fr), Jean-Louis Ricard (Fr), Yong Wang (Au)  
 + ... (*additional contribution from Bulgaria and Morocco depending mainly on MAE stays*)  
 + ... (local implementations)

actions :

- local implementation and update of Diagpack
- use of aircraft data in Diagpack (JLR, FB)
- analysis of snow cover : alleviating problems related to orography, tuning for operational implementation in ARPEGE, use of satellite data for snow-cover edge (FT, LG, FB), + *maybe ... : use of pseudo-observations, tuning for ALADIN, use of new fields*
- analysis of precipitations : design (YW, FB)
- analysis of soil moisture and temperature : retuning of surface analysis (observation errors, smoothing, ...) for the operational ARPEGE and ALADIN assimilations and Diagpack (SIS, FB, OL), combination with spectral blending and retuning for ALADIN (AD), prototype version of a variational assimilation for ALADIN (GB, FB)

place :

- locally (implementation of Diagpack)
- Toulouse (main developments)
- Prague (combination with spectral blending)

coordination meetings :

- not scheduled

external collaborations :

### Predictability

people :

Claude Fischer (Fr), Andras Horanyi (Hu), Sandor Kertesz (Hu), Jean Nicolau (Fr), Jean Néméghaire (Be)

actions :

- starting exchanges of ideas
- defining a PhD topic for Sandor Kertesz

place :

- Toulouse
- Budapest

coordination meetings :

- not scheduled

external collaborations :

- HIRLAM