SPECIAL PROJECT PROGRESS REPORT

Progress Reports should be 2 to 10 pages in length, depending on importance of the project. All the following mandatory information needs to be provided.

Reporting year	2015
Project Title:	Boundary layer model errors in the AROME ensemble prediction system
Computer Project Account:	spfrbout
Principal Investigator(s):	Francois Bouttier
Affiliation:	CNRM, Meteo-France
Name of ECMWF scientist(s) collaborating to the project (if applicable)	n/a
Start date of the project:	January 2015
Expected end date:	December 2017

Computer resources allocated/used for the current year and the previous one

(if applicable)

Please answer for all project resources

		Previous year		Current year	
		Allocated	Used	Allocated	Used
High Performance Computing Facility	(units)	n/a	n/a	6 MSBU	0
Data storage capacity	(Gbytes)	n/a	n/a	5	4

Summary of project objectives

(10 lines max)

The objective is to research new parametrisations for the representation of low-level model error in ensemble prediction. The main intention is to test several strategies for stochastically perturbing parameters in the Bougeault-Lacarrere TKE-based vertical mixing scheme.

Summary of problems encountered (if any)

(20 lines max)

Numerical experimentation has not yet started because of issues with the ECMWF supercomputer changes: the AROME ensemble prediction system has not yet been migrated to the Cray system. Once this is done, it is planned to consume the allocated CPU resources during the 2nd half of 2015.

Summary of results of the current year (from July of previous year to June of current year)

This section should comprise 1 to 8 pages and can be replaced by a short summary plus an existing scientific report on the project

n/a (first year of the project)

List of publications/reports from the project with complete references

n/a (first year of the project)

Summary of plans for the continuation of the project

(10 lines max)

Several months of AROME EPS system will be run using various configurations of the newly developed PBL stochastic perturbation scheme. The physical processes behind variations in ensemble spread and probabilistic scores will be investigated in order to design an optimal perturbation scheme.