

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: Convective-scale ensemble data assimilation of humidity- and cloud-related observations

Computer Project Account: SPDEHARN

Principal Investigator(s): Florian Harnisch

Affiliation: Hans-Ertel Centre for Weather Research, LMU München

Name of ECMWF scientist(s) collaborating to the project (if applicable)

Start date of the project: 1. January 2015

Expected end date: 31. December 2016

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)	400000	0	400000	0
Data storage capacity	(Gbytes)	2.000	0	2.000	0

Summary of project objectives

(10 lines max)

The project aims to facilitate the assimilation of different potential high-impact observations for convective-scale NWP that are linked to humidity and clouds.

These observations are:

- Global Navigation Satellite System (GNSS) zenith and total delay
- Meteosat Second Generation (MSG) SEVIRI infrared (IR) humidity channels
- MSG SEVIRI visible and near-infrared channels

Summary of problems encountered (if any)

(20 lines max)

The project is currently facing some technical issues in the implementation of the ensemble data assimilation code on the ECMWF computer. The code is running well at other machines (e.g. DWD), but I was not able to successfully transfer it to the ECMWF computer environment so far. Work is ongoing to sort things out in the near future. The ensemble data assimilation code was already implemented in a different special project SPITCONV and I am in contact with the principal investigator Chiara Marsigli to adopt the code.

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

Due to the problems with the implementation of the data assimilation code, no experiments were performed to address the project objectives.

List of publications/reports from the project with complete references

none

Summary of plans for the continuation of the project

(10 lines max)

Collaboration with SPITCONV is ongoing to solve the technical issues. First experiments should assess the observation statistics of MSG SEVIRI IR humidity channels, and data assimilation experiments with clear-sky SEVIRI observation are planned.