

## SPECIAL PROJECT FINAL REPORT

All the following mandatory information needs to be provided.

<b>Project Title:</b>	GEMS - Global and regional Earth-system Monitoring using Satellite and in situ data
<b>Computer Project Account:</b>	spitbolc
<b>Start Year - End Year :</b>	2007 - 2010
<b>Principal Investigator(s)</b>	A. Maurizi
<b>Affiliation/Address:</b>	ISAC CNR via Gobetti 101 40129 Bologna Italy
<b>Other Researchers (Name/Affiliation):</b>	M.Disidoro, ENEA F.Tampieri, ISAC CNR

The following should cover the entire project duration.

## **Summary of project objectives**

(10 lines max)

Project is devoted to the CNR-ISAC contribution to the GEMS RAQ work-package. The BOLCHEM modelling system is implemented and operates, to perform the tasks invoked by different GEMS RAQ WPs. The tasks include:

- coupling of the lateral boundaries with the global chemistry model MOZART;
- assimilate all available in-situ data using the data stream to be implemented in the framework of GEMS
- perform near real-time forecast of gas species in the GEMS/RAQ domain and publish them daily.

## **Summary of problems encountered**

(If you encountered any problems of a more technical nature, please describe them here. )

See the interim report

## **Experience with the Special Project framework**

(Please let us know about your experience with administrative aspects like the application procedure, progress reporting etc.)

## **Summary of results**

(This section should comprise up to 10 pages and can be replaced by a short summary plus an existing scientific report on the project.)

The modelling system BOLCHEM has been run operatively in the frame of the subproject GEMS/RAQ and the results have been published on the web site of the subproject until the end of the task (April 13, 2010): see

[http://gems.ecmwf.int/d/products/raq/ensemble/epsfields/plot\\_ensemble\\_o3/](http://gems.ecmwf.int/d/products/raq/ensemble/epsfields/plot_ensemble_o3/)

## **List of publications/reports from the project with complete references**

Huijnen V., Eskes H.J., Poupkou A., Elbern H.; Boersma K.F., Foret G., Sofiev M., Valdebenito A., Flemming J., Stein O., Gross A., Robertson L., D'Isidoro M., Kioutsioukis I., Friese E., Amstrup B., Bergstrom R., Strunk A., Vira J., Zyryanov D., Maurizi A., Melas D., Peuch V.-H., *Comparison of OMI NO2 tropospheric columns with an ensemble of global and European regional air quality models*. Atmospheric Chemistry and Physics, volume 10, pages 3273-3296, 2010.

## **Future plans**

(Please let us know of any imminent plans regarding a continuation of this research activity, in particular if they are linked to another/new Special Project.)

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