

Error grave en los resultados de las integraciones de MM5 con la version 3.7

Soy Daniel Santos del grupo del INM que trabajamos en el ensemble a corto plazo multimodelo multicondiciones iniciales con José A. García-Moya.

Me ocupo de las integraciones de MM5 y hemos encontrado un error grave en los resultados de las integraciones de MM5 con la version 3.7

Ya hemos reportado al mesouser y aqui teneis el mail que se envió y del cual no hemos tenido respuestas. Creo que se deberia comunicar el resto de miembros de la Red para que lo tuviesen en cuenta en sus investigaciones.

Un saludo,
Daniel Santos

BAD PERFORMANCE MM5 3.7

Estimate Miss Bruyere,

This is Daniel Santos from Instituto Nacional de Meteorologia (Spain). We are working in a multi-model and multi-boundaries Short-Range Ensemble Prediction System (INM-SREPS) This system is running 4 models: HIRLAM, GME, MM5 and UM, and 4 boundary conditions from GFS, ECMWF, DWD and UKMO.

Also we are testing a multiphysics MM5 ensemble using GFS conditions only. We decide, 2 weeks ago, upgrade MM5 from Version 3.5 to the latest version 3.7 in our multimodel ensemble but the upgrade has not be performed in multiphysics one.

We send some images to you showing a bad behavior of the latest MM5 version.

Image1 obtained from our intranet web page is a today based forecast: 2006-02-01 at 00 UTC in HH+72 h 500 hPa geopotential height. The output shows a very different atmosferical structure of the MM5 models.

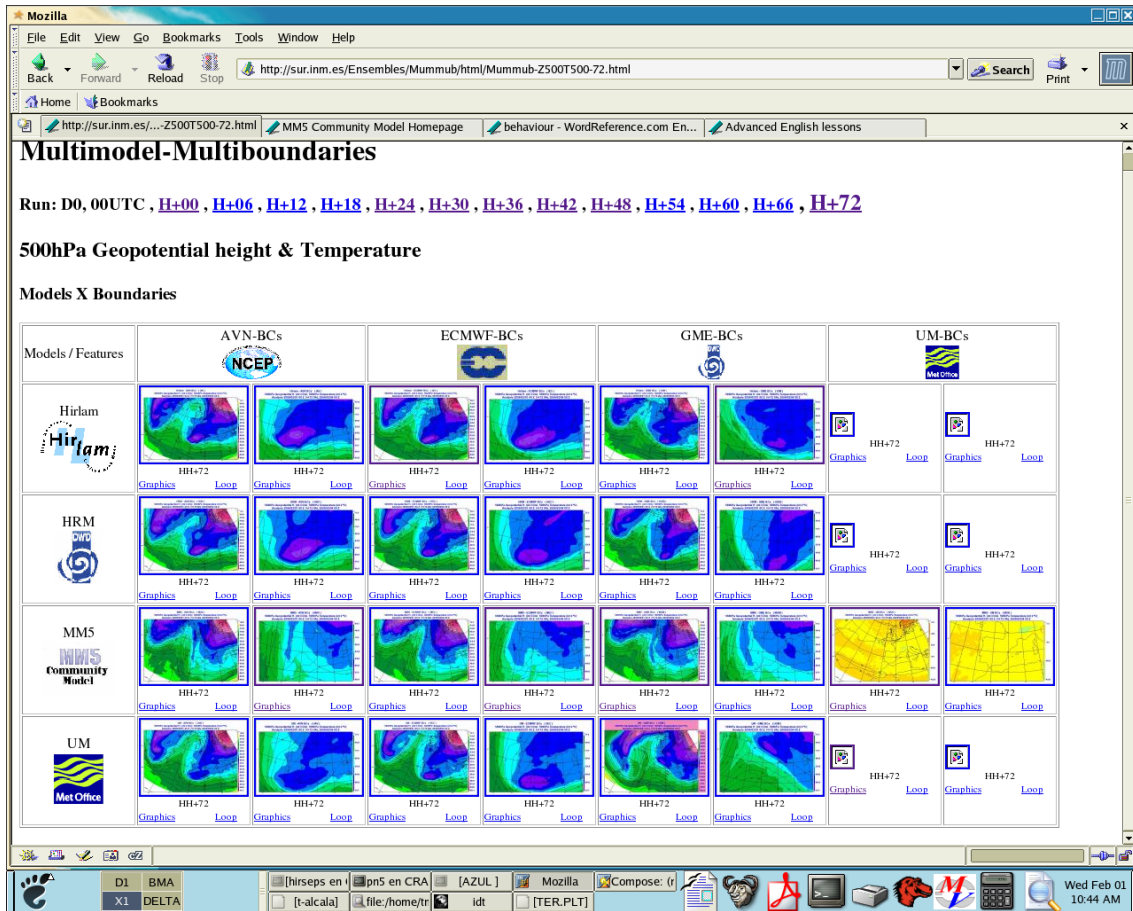


Image2, shows RMSE & Bias evolution of multimodel SREPS. MM5 (3.7) model (light-blue lines) has more Bias and RMSE than the other ensemble members . This results have been appeared from the upgrade.

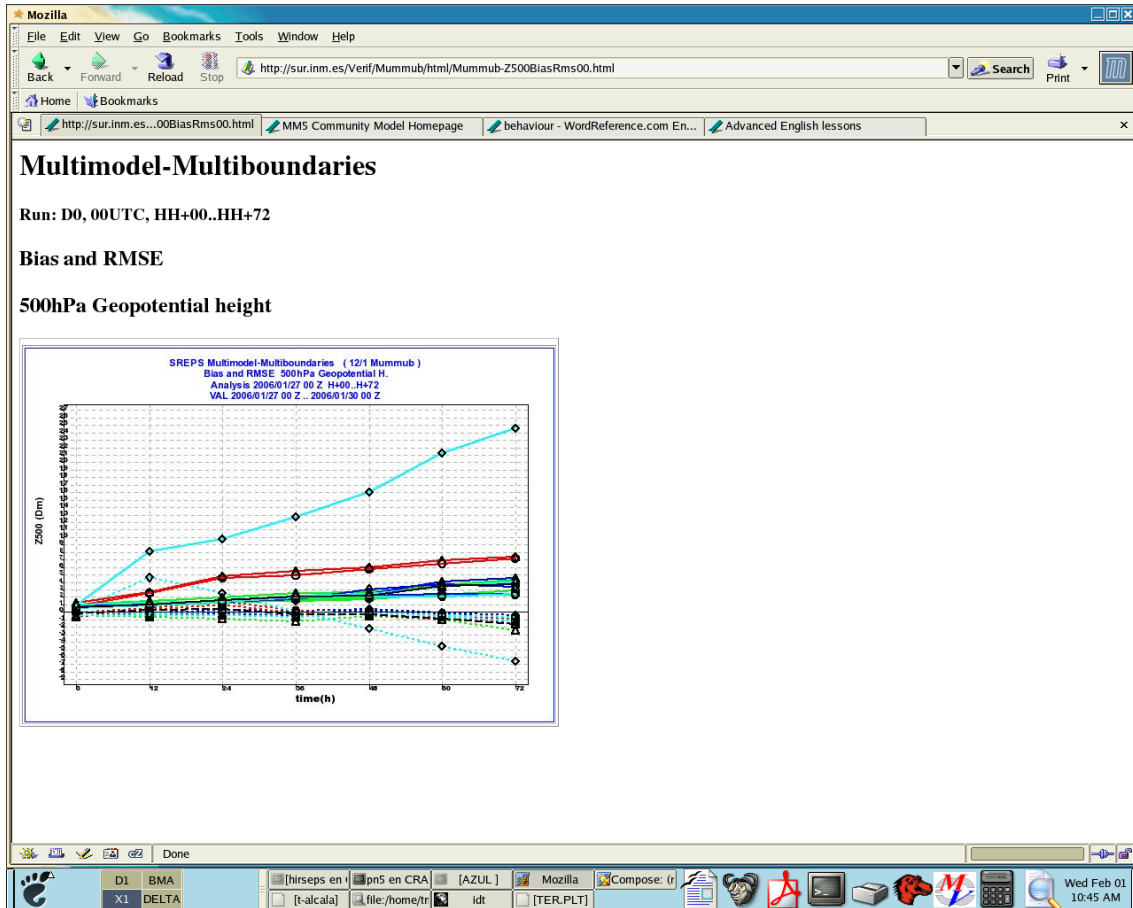
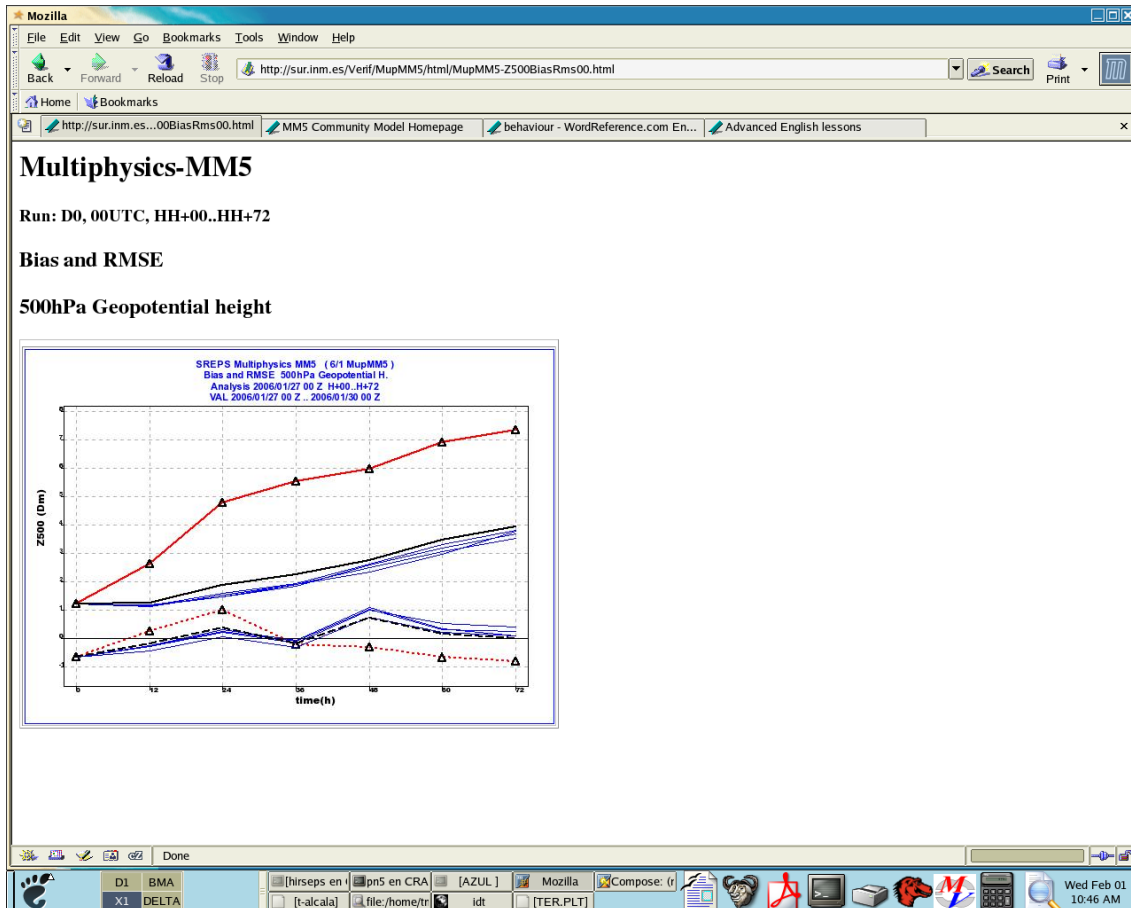


Image3 shows RMSE & Bias evolution of multiphysics MM5 ensemble. MM5 (3.7) with GFS (red lines) model has more Bias and RMSE than the other ensemble members MM5 (3.5) (blue lines).



We dicide go back to the 3.5 version and also try to localize the mistake in 3.7 version. If you need more information or graphics to help you to detect these anomalous results, do not hesiate in contact with us.

Regards,

Daniel Santos Muñoz.
 Numerical Weather Prediction Service
 INM Spain

Respuesta:

That is very interesting results.

It would be interesting to see if different physics also create this. Another route may be to try the new WRF model and see how that models results compare:

<http://www.mmm.ucar.edu/wrf/users/>

If you do find the exact reason for the behaviour difference between the model, please to give us some feedback.

Cindy