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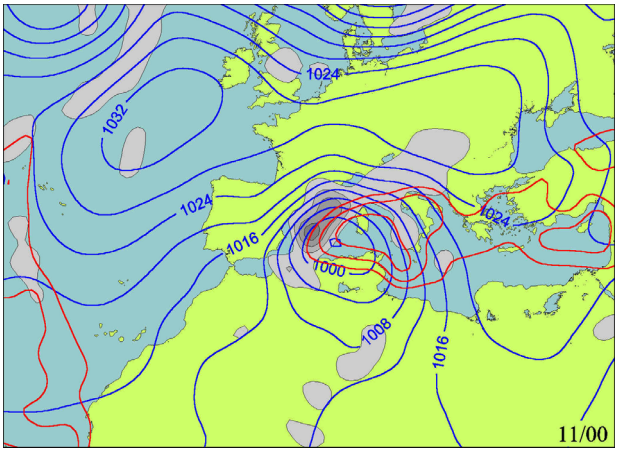
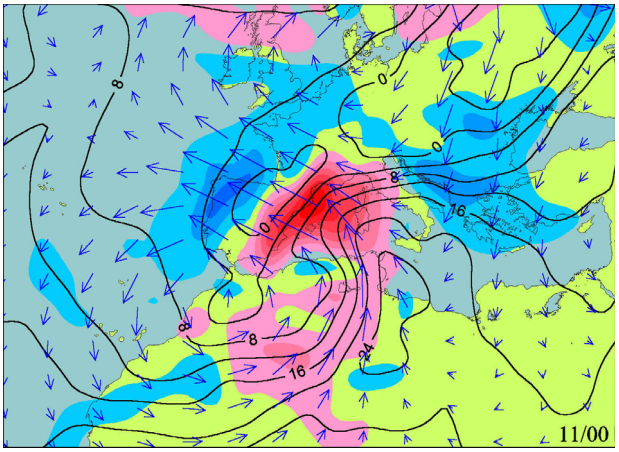
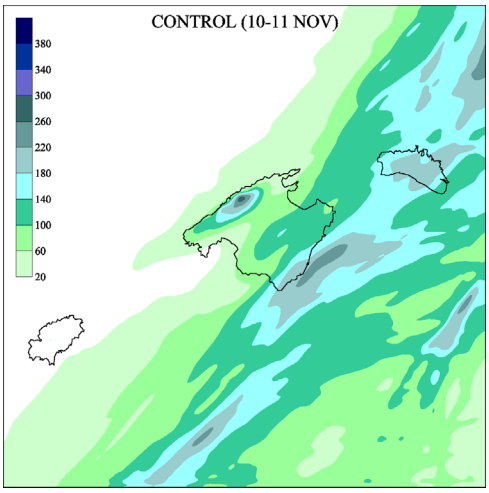
VIS5D EXTERNAL ANALYSIS FUNCTIONS TO CONVERT YOUR MM5-v3 OUTPUT AND DIAGNOSTIC FIELDS INTO SURFER GRID FILES

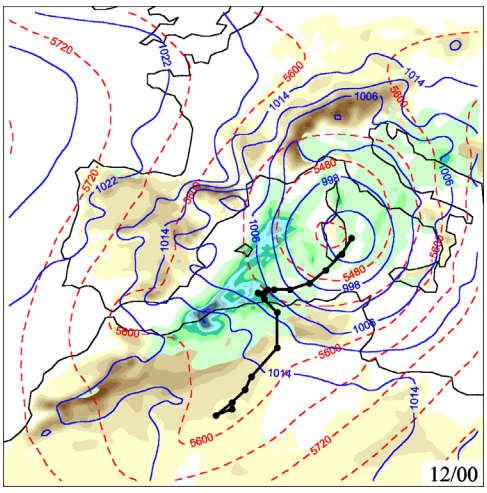
Surfer, a Golden Software product, is a contouring and 3D surface mapping program that runs under Microsoft Windows. It quickly and easily converts your data into outstanding contour, surface, wireframe, vector, image, shaded relief, and post maps (see some examples below). Virtually all aspects of your maps can be customized to produce exactly the presentation you want. Producing publication quality maps is quick and easy. Detailed information about this powerful contouring, gridding, and surface mapping package for scientists and engineers can be found at:

http://www.goldensoftware.com/products/surfer/surfer.shtml

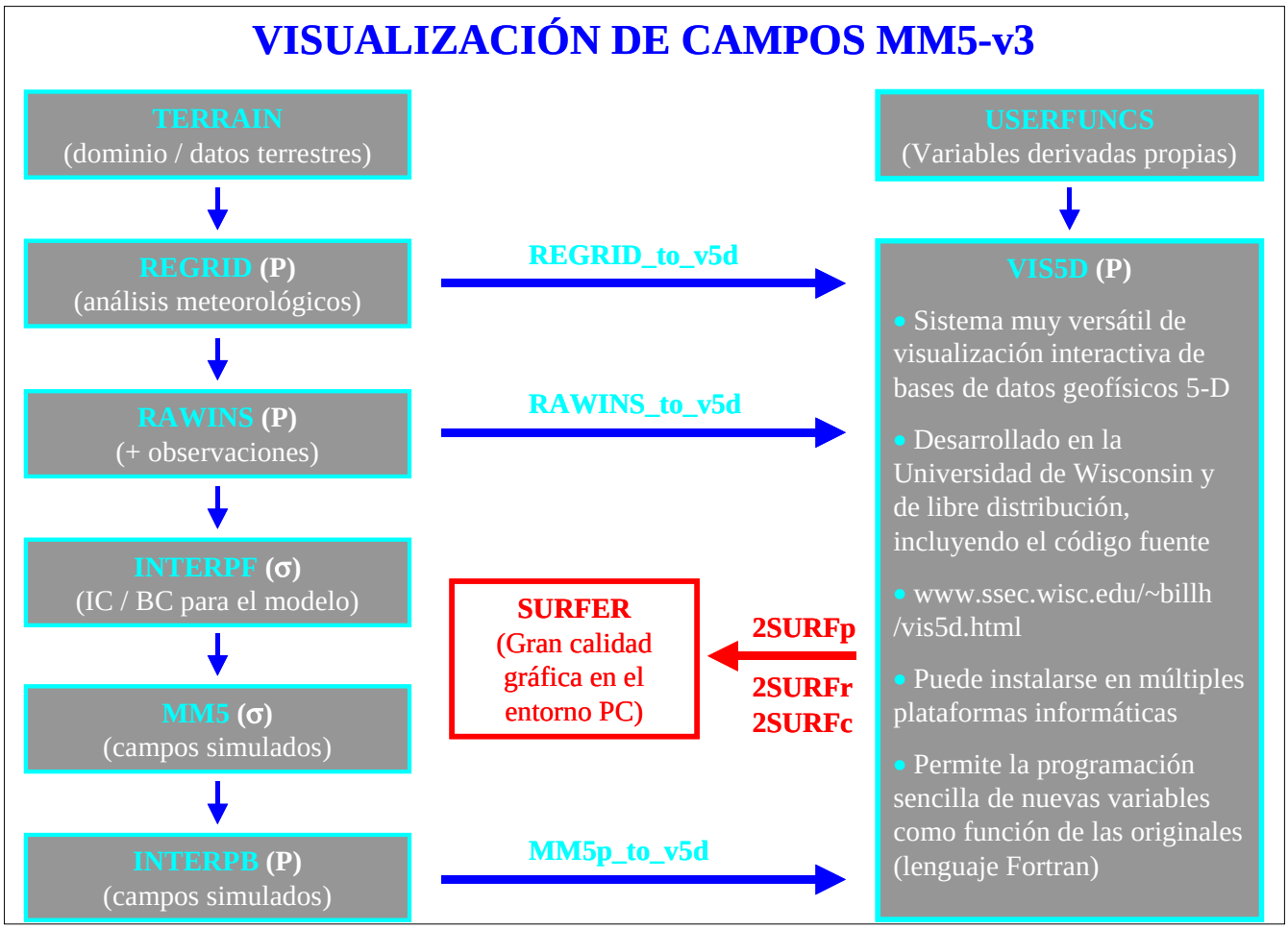








Three Vis5D external analysis functions (FORTRAN programs) are provided to convert your MM5-v3 output and diagnostic fields into Sufer grid files ready to be plotted (see the scheme below): ***2SURFp*** produces horizontal cross sections of 2D and 3D fields for given ***p***ressure levels, ***2SURFr*** produces vertical cross sections of 3D fields along given Vis5D grid ***r***ows, and ***2SURFc*** produces vertical cross sections of 3D fields along given Vis5D grid ***c***olumns.



USE OF THE CONVERSION FUNCTIONS

1) *2SURFp* (files *2SURFp.f* / *2SURFp.txt*):

Compilation (in directory ***/userfuncs*** relative to the current directory where you run vis5d):
externf 2SURFp

Parameters (in the current directory where you run vis5d):
Specify in *2SURFp.txt* which variables to convert, and for each variable, number of times to pass a filter and pressure levels of interest

Run: Call "2SURFp" from the list of functions under the NEW VAR button of Vis5D

Output (in directory ***/surferfiles*** relative to the current directory where you run vis5d):
For each time *YYMMDDhhmm*, variable *VAR* and pressure level *PPPP* a Surfer grid file *YYMMDDhhmm-VAR-pPPPP.grd* is created

2) *2SURFr* (files *2SURFr.f* / *2SURFr.txt*):

Compilation (in directory ***/userfuncs*** relative to the current directory where you run vis5d):
externf 2SURFr

Parameters (in the current directory where you run vis5d):
Specify in *2SURFr.txt* which variables to convert, and for each variable, number of times to pass a filter and W-E rows of interest

Run: Call "2SURFr" from the list of functions under the NEW VAR button of Vis5D

Output (in directory ***/surferfiles*** relative to the current directory where you run vis5d):
For each time *YYMMDDhhmm*, variable *VAR* and W-E row *RRRR* a Surfer grid file *YYMMDDhhmm-VAR-rRRRR.grd* is created

3) *2SURFc* (files *2SURFc.f* / *2SURFc.txt*):

Compilation (in directory ***/userfuncs*** relative to the current directory where you run vis5d):
externf 2SURFc

Parameters (in the current directory where you run vis5d):
Specify in *2SURFc.txt* which variables to convert, and for each variable, number of times to pass a filter and S-N columns of interest

Run: Call "2SURFc" from the list of functions under the NEW VAR button of Vis5D

Output (in directory ***/surferfiles*** relative to the current directory where you run vis5d):
For each time *YYMMDDhhmm*, variable *VAR* and S-N column *CCCC* a Surfer grid file *YYMMDDhhmm-VAR-cCCCC.grd* is created

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