

# **SPFRPALM : Universal Software for Data Assimilation**

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The SPMD PALM prototype is now complete and it is distributed under the PALM Research name. This software has been tested on relatively small size application. We are now implementing an incremental 4D-VAR and a 3D FGAT algorithms for the global oceanic model ORCA. This will constitute a full size test of PALM Research performance. The starting code is the ORCAVAR package developed by A.Weaver. ORCAVAR is a serial code. The comparison of the two implementation allows for an estimation of the overhead due to the coupler and of the speedup gained with parallelization.

In the same time we are carrying on the final implementation of the MPMD version of the coupler. The ECMWF VPP5000 is a good test platform for running MPI2 applications running massively distributed and memory demanding coupled codes. This requirement will be the object of specific negotiations with the system managers to find out appropriate dates and time slices for intensive testing. Migration to the new IBM platform will demand a strong interaction with the system administrators and with the IBM support staff for the evaluation of the MPI2 implementation on the SP4 architecture.