Aladin activities for I-SRNWP

J.-M. Audoin, A. Bogatchev, R. El Khatib, C. Fischer, O. Spaniel

LACE
nwp central europe

METEO FRANCE
Toujours un temps d'avance

Roadmap

Topic	Who ?	Status
Technical coord	Bogatchev, El Khatib, Spaniel	Continuous and on demand
Doc	Niculae	V1 completed
GRIB2	Audoin	GRIB1 test files ready, interface 901/GRIB2 under work
Specs for grids	Jidane	Started
Specs for surface	Kral	Started (incl. Doc)
Devs for grids	Degrauwe	Started on specs
Devs for surface	?	Pending on specs
Administration	Fischer, Klaric	Link with RM, Aladin and RC-LACE coord.

# I-SRNWP documentation for ARPEGE/ALADIN and related models (ALARO, AROME, ...)

The general guidelines for work in Aladin :

- adapt Arpège configuration « 901 » to GRIB2 and LAM data; insert new geometry tools for recognizing exotic grids
- develop re-gridding tools from various input grids towards the Arpège/Aladin A-grid and field staggering.
- adapt « 901 » to requirements for surface fields (following the recommendations of the Surface E.T.)
- adapt headers of the Aladin specific model file format (FA) for handling information on inter-operable data; adapt accordingly the setup of "927/Fullpos" (the Arpège/Aladin change of geometry software)

"901"

- This configuration is already used to transform a Grib 1 file (from ECMWF) into an Arpège file (Météo-France format)
- In the Arpège code, some modifications are made in order to be able to read a Grib2 file using the grib_api library
- Further code adaptations will be needed in order to recognize new grids and geometries + insert re-gridding tools + possibly convert surface/soil parameters

FILE GRIB2

901

Namelist

ARPEGE FILE

geometry grib2

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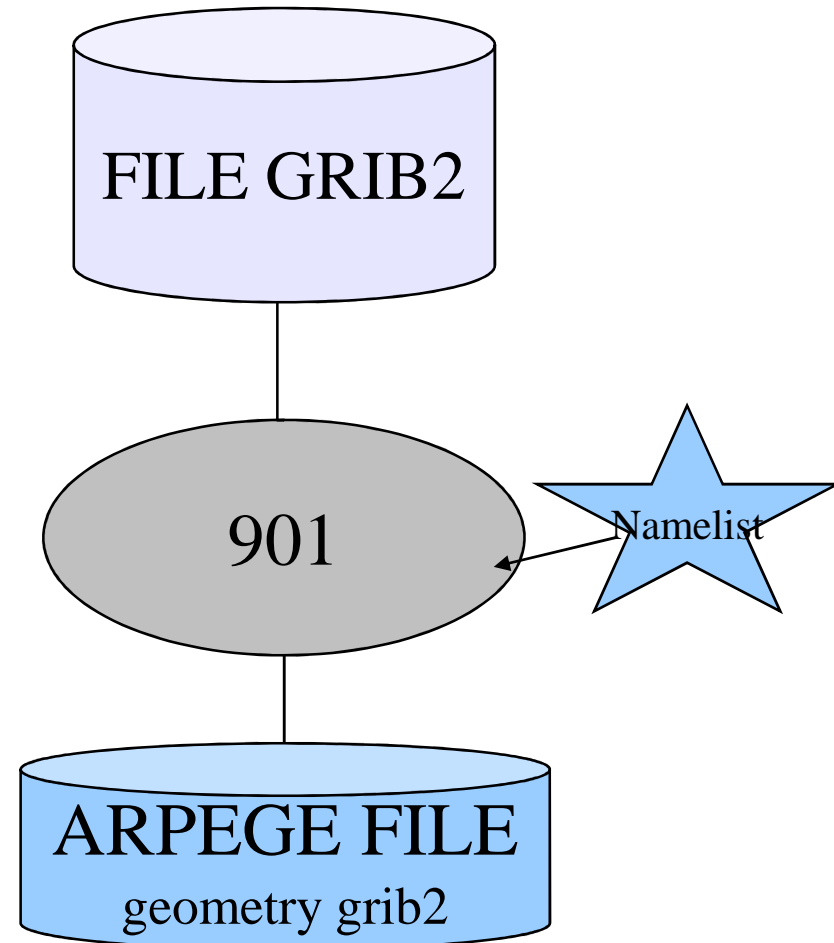
Step 2 for 901

- **To go into more details :**

- We will also need climatology data obtained by running a configuration « 923 ». This will complete our data with ISBA/SURFEX-compliant surface data.

- The output will be an ARPEGE « FA » file with the same geometry as in the GRIB input files.

- To change this geometry, we should run configuration « 927 » (FULLPOS).

ARPEGE FILE
geometry grib2

Clim
Clim
fi Surface fields
DB

Namelist

923

FILE GRIB2

Climatologic file
geometry grib2

901

Namelist

ARPEGE FILE
with ISBA fields
geometry grib2

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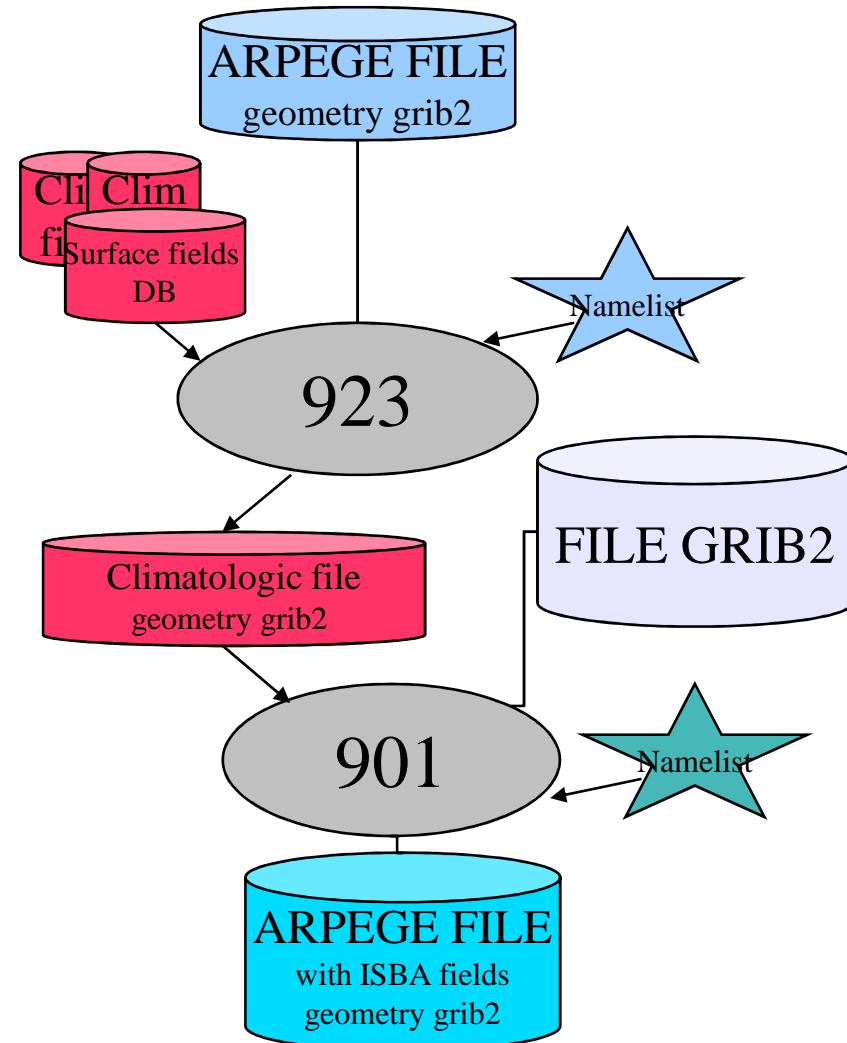
- The configuration « 927 » is the tool for changing the geometry and/or the resolution of an Arpège File.

- « 927 » is a specific version of our models' post-processing facility « Full-Pos ».

- - Fullpos is a post-processing package. It is used for operations and research as well.

- - Fullpos has two main parts : the vertical interpolations, then the horizontal interpolations. In between, a spectral treatment is sometimes possible for the « dynamic fields ».

ARPEGE FILE
with ISBA fields
geometry grib2

Climatologic file
geometry grib2

Climatologic file
NEW geometry

(e)927

Namelist

ARPEGE (or ALADIN) FILE
with ISBA fields
NEW geometry