

ALARO-1 Working days

LAM+ISBA Coupling with ARPEGE+SURFEX

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OUTLINE

- 1. General Framework**
- 2. Code Modifications**
- 3. Some Results**
- 4. Summary & Perspectives**

1. General Framework

Why do we need code changes for coupling a LAM to ARPEGE+SURFEX ?

- Météo-France will switch to ARPEGE+SURFEX in the operational suite (ARPEGE+SURFEX will be in the next e-suite in the coming weeks)
- LBC files coming from ARPEGE+SURFEX DO NOT contain all the necessary fields for LAM+ISBA coupling



Coding modification in order to overcome the missing fields issue for coupling

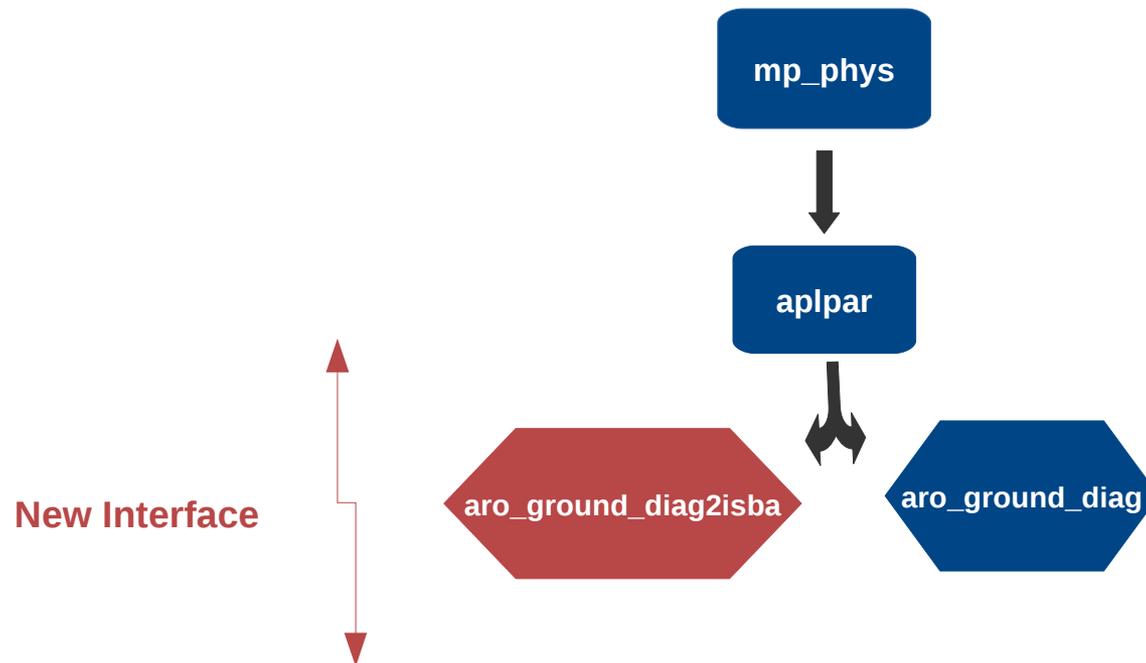
- PREP code modifications in order to facilitate the inline use of SURFEX : adding routines to process FA format directly without changing files to LFI (work done thanks to the help of Phillipe MARGINAUD, MF)

Tests

- Tests were made using an ALADIN-France with ISBA
- Primary validation tests in winter and summer period
- Altitude LBC files were tested with a surface file of ARPEGE+ISBA

2. Code modifications

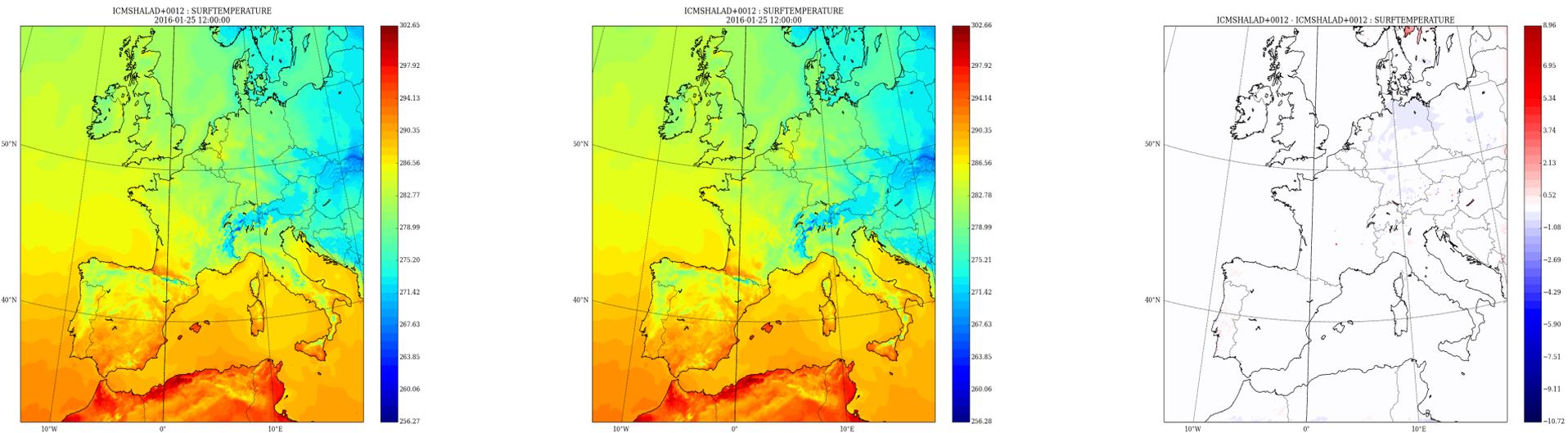
- ➔ Adding a new interface in APLPAR inspired by ARO_GROUNG_DIAG :
- Extracting fields from SURFEX BUFFUR
 - Computing ISBA fields based on ARPEGE+SURFEX fields



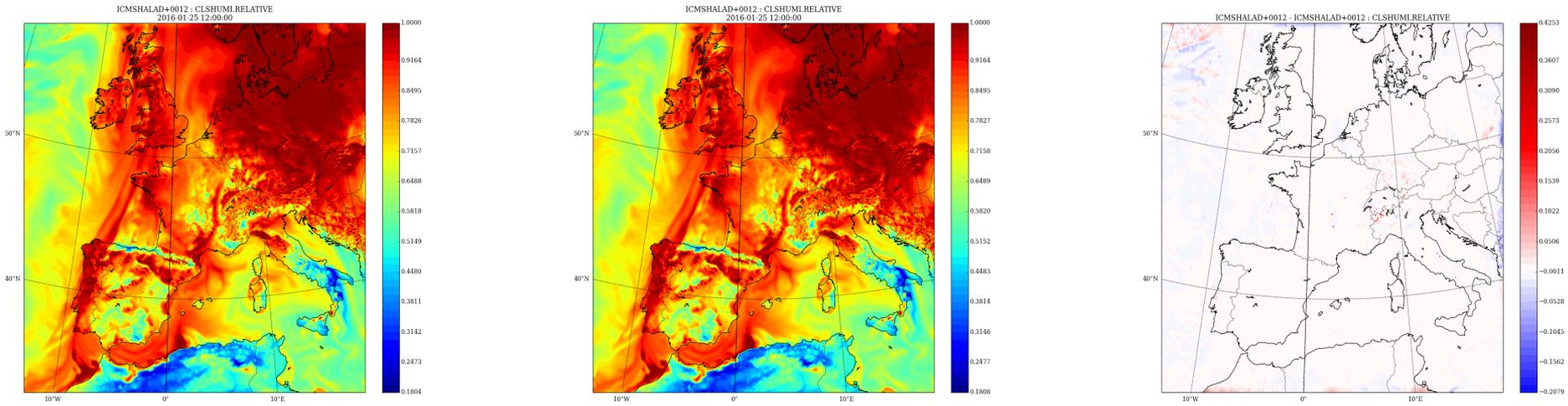
3. Some Results

- These results were obtained before the recent code refinements made by Françoise
- The new results are not yet available BUT global scores of ARPEGE are positive
- Winter period 25/01/2016 H12 r0

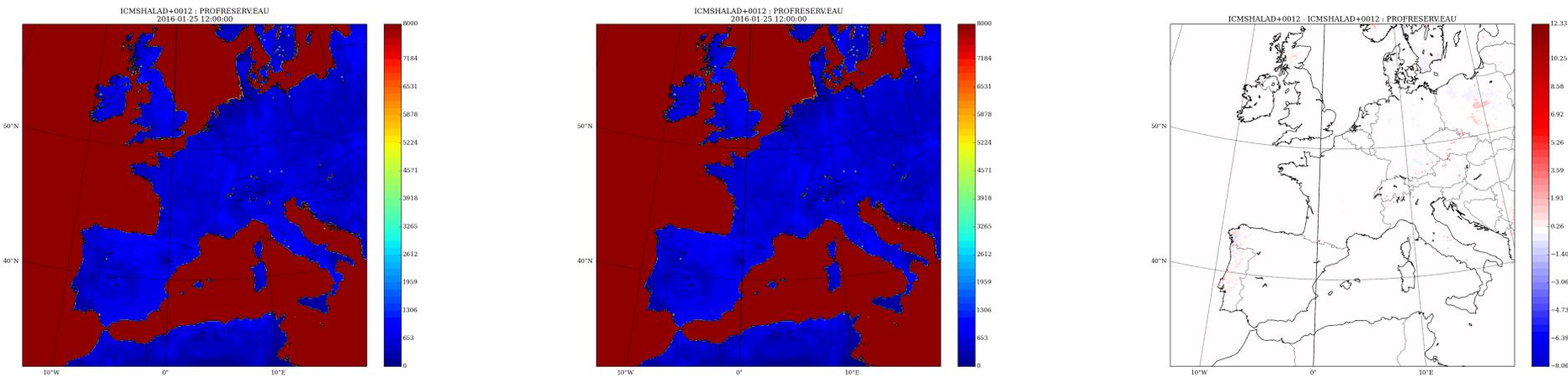
SURFTEMPERATURE



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4. Summary & Perspectives

Status :

- Code Modification : new interface in APLPAR to compute surface fields from ARPEGE Surfex fields
- Primary Validation Tests were made using an ALADIN-France with ISBA during winter and summer periods
- Altitude LBC files were tested with a surface file of ARPEGE+ISBA
- Code changes in PREP : processing the FA format directly
- More refinements were made recently by Françoise for computing isba fields from ARPEGE+SURFEX

Next Step :

- Partners need to conduct some Validation and testing to check the new LBC files quality

Questions ?
