AEMET-γ-SREPS: CONVECTION-PERMITTING EPS

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**EPISODE I**

**AEMET-γ-SREPS**

**MULTI-BPCS**

ECMWF / EPS

NCEP / GFS

MF / ARPEGE

CMC / GEM

JMA / GEM

**MULTI-NWP**

**HARMONE-ARGONE**

**HARMONE-AALRO**

**WRF / ARW**

**NMMB**

**CHARACTERISTICS**

- 2.5 km 20-members convection-permitting LAM-EPS
- Multi-boundary conditions from 5 Global NWP models
- Multi-model with 4 non-hydrostatic NWP models

**GOALS**

Mesoscale forecasts but estimating uncertainties for:
- Heavy precipitation events
- Convection organization
- Geographic effects: e.g. enhancement of precipitation
- Local surface with social impact variables: T2m, RH2m, Winds, etc.

**EPISODE II**

**TOWARDS MULTI-BOUNDARIES AND MULTI-NWP MODELS**

**MULTI-BOUNDARIES THE BEST**

SLAF with ECMWF deterministic performs better than ECMWF-EPS as boundaries

Multi-boundaries perform better than SLAF with ECMWF-DET

Multi-boundaries performs better than SLAF with ECMWF-DET

**MULTI-MODEL IS BETTER THAN MULTI-PHYSICS AND SPPT**

Multi-model → HARMONE-ARGONE + WRF-ARW

Multi-physics → ARGONE and AALRO (HARMONE)

SPPT → Applied to HARMONE-ARGONE

**EPISODE III**

**AEMET-γ-SREPS APRIL-2006**

**TOWARDS OPERATIONS**

- Currently daily running at 00 and 12 UTC up to 36 hours, but without assimilation

- Subjective (plots) and objective verification of each member

- Monitoring through EcFlow

- Probabilistic verification

- Re-verify multi-boundaries with multi-model as the best choice

**EPISODE IV**

**THE FUTURE**

- Running every 6 hours up to 48-72 hours operationally

- Combining multi-model, SPPT and surface flows perturbations

- Assimilation with LERTF

- Verification with Spatial Methods

- Specific products development: aeronautics, solar and wind power, etc.