WG5 – Open issues for discussion/decisions

COSMO General Meeting Lugano 2012

Standard verification

- Results for both surface and upper air parameters should be mandatory
- New parameters: Radiation and wind gusts
- New scores are necessary (RV??)
- Results of comparison with Driving models should be mandatory for all countries
- Suggested list for suspect observation values (who???)

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Conditional Verification

- Following at least the recommendations from WG3-4-5 joint meeting/WG5 Rome meeting and mainly Vanessa's extended tests, improve the routinely use of CV and apply more combinations (new revised list – Who???)
- Test of new combination of CV's and discussion of results more often: CV in forecast space when obs are not available; comparison with CV in fcs and obs space.
- Also "non-official" CV test results (good or bad) should be shared to avoid duplication or work
- Once the results are stable and interesting, that CV becomes mandatory for WG5 and possibly a part of Quarterly Report.
- Common plot report amendments – Responsibility of production on annual basis (Italy for one more year?)

Common Plots

Reformulation of the Report format

Reformulation of parameters, if needed, and thresholds for Precipitation

Use of Performance diagrams Test for precipitation: definition of cumulation periods and steps. Hopefully available soon in VERSUS (PL agrees??)

Possible definition of a common area and a common list of station following Uli suggestions (see the following slides)

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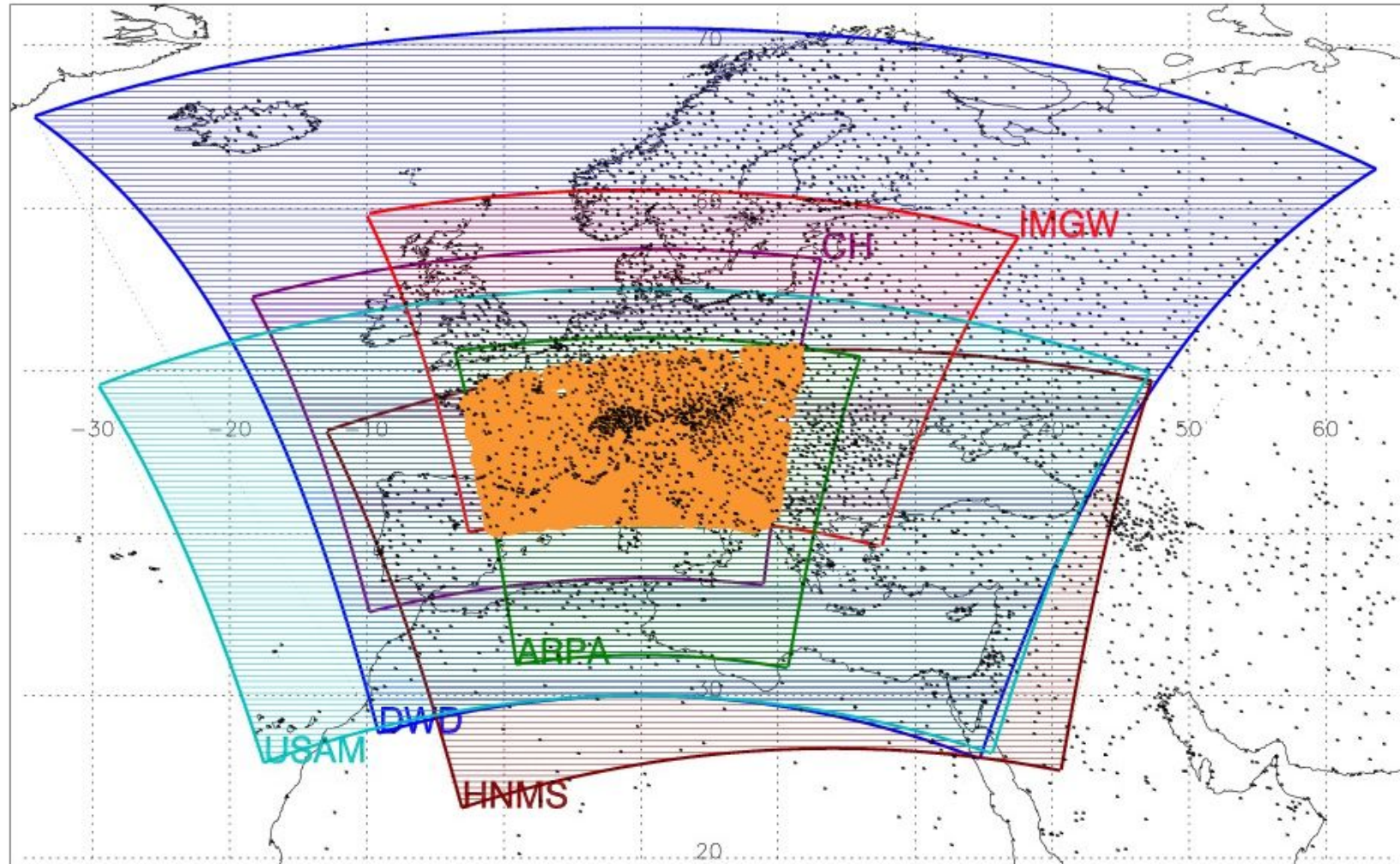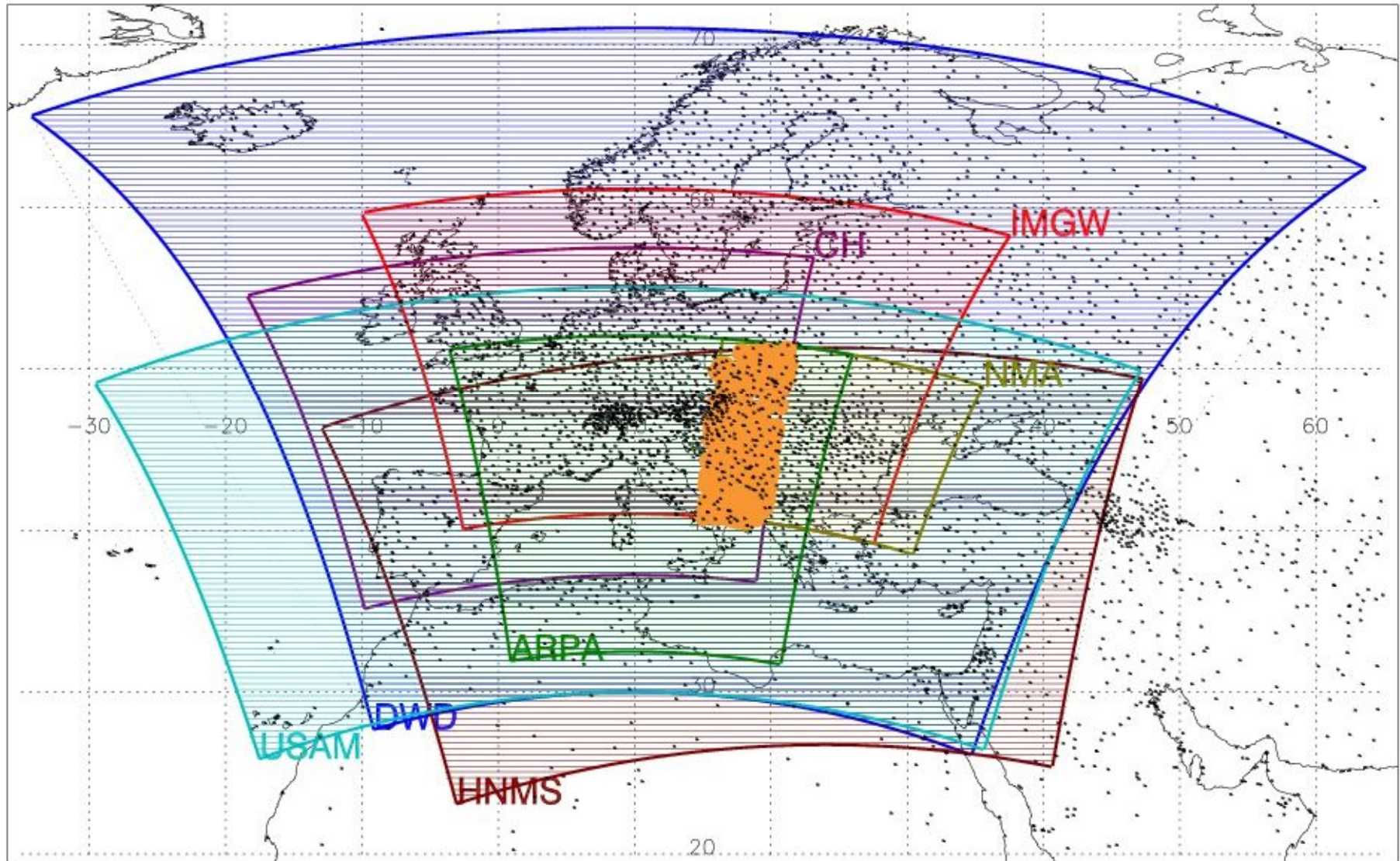
Neighborhood method techniques

•Boost the use of B.Eberth Package in other countries where applicable, waiting for VERSUS implementation
(<u>is this the plan??</u>)

•Identification of "some" specific scores only (<u>INTERP report suggestions, who?</u>)

Long term trend verification (LTT)

•The importance of this LTT needs to be underlined

•Use of COSI index (Check of COSI implementation in VERSUS)

•LTT for precipitation for a number of scores (ETS, FBI, POD, FAR…) and thresholds

Weather Dependant Verification (WDV)

- Underline the importance of this WDV
- Basic link with Forecasters (suggestions, ongoing actions?)
- Can WDV become mandatory?
- WDV are also a LTT based on real synoptic or mesoscale situations. They can characterize the behaviour of a model in a specific area.

More focus on extreme events

- Verification of following parameters: Frost, Heavy rain, Extreme rain, Gusts, Heavy gusts, Extreme gusts, Thunderstorm, Extreme thunderstorms
- Use of EDS score (better comprehension of the meaning) for precipitation (rare event)
- Which new scores or combination of old scores could be used?
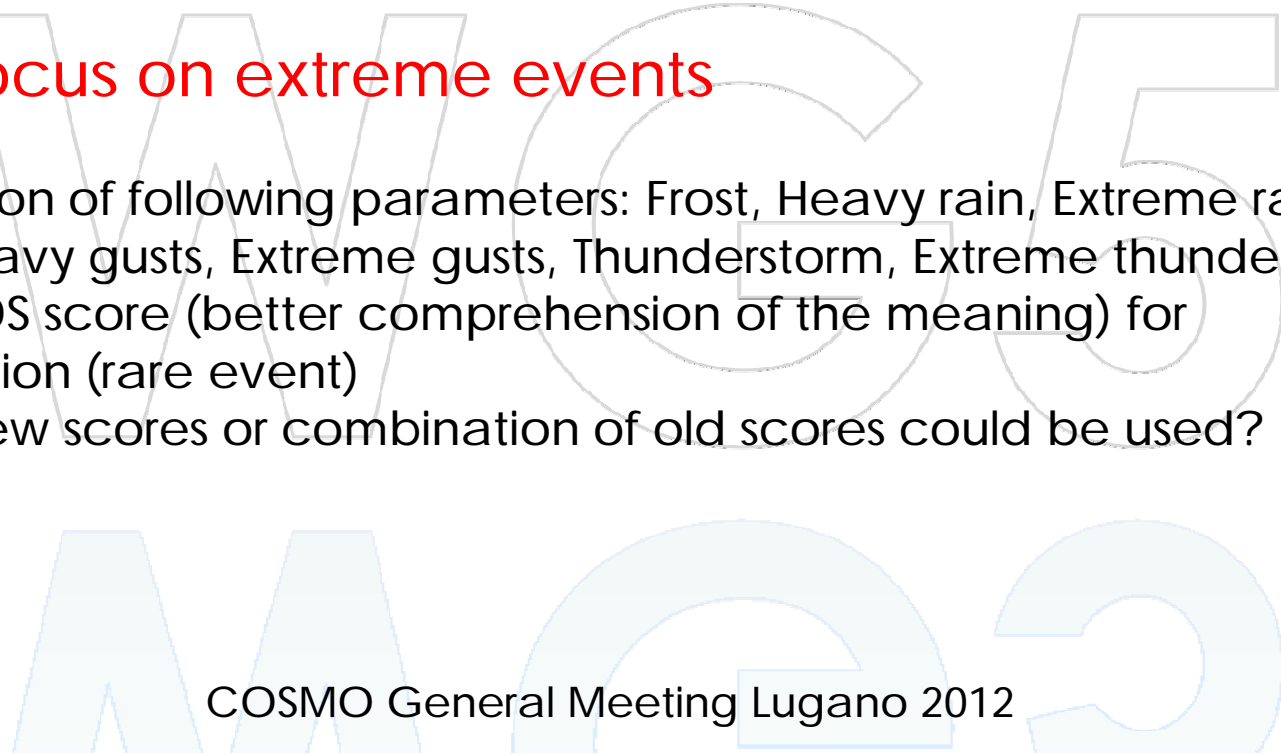
EPS Verification

•Definition of the scores following EPS requirements (Gofa) and VERSUS implementation (VERSUS 3.0)
•How many members are going to produce EPS verification?

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Future and specific developments

• Exploitation of non GTS data for verification made available in COSMO; identification of alternative methods
• PBL: one of the main problem of COSMO models is in the PBL. WP on evaluation of model in lower PBL should be proposed and discussed again (new PP is based on identification of errors to 2mT)
• Use of gridded data for precipitation: radar, satellite, raingauges or their composition (need of software)
• Implementation and tests and use of object oriented verification: SAL, CRA and MODE (Russian experience is needed)
• More Meetings through web-conference for exchange of ideas and results

Proposition on a new Priority Project or PT

Discussion on what is missing and what WG5 needs

Possible ideas

Study of an algorithm and implementation of the related software for gridded precipitation composite from raingauges, radar, satellite (H-SAF for example), synop on any COSMO model grid.

Creation of a common software tool for object-oriented verification outside VERSUS based on gridded precipitation

NWP test suite (probably will be realised after this GM)

Other