



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
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Swiss Confederation

Federal Department of Home Affairs FDHA  
Federal Office of Meteorology and Climatology MeteoSwiss



# Priority project « Advanced interpretation and verification of very high resolution models »



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**End of project:**  
**September 2008**



# PP Interpretation and verification of VHRM



## 1. Prediction of weather parameters

### 1.1. Postprocessing for recognition of hail

### 1.2. Temperature and dew point Kalman filtering on the COSMO LEPS



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## 2. Verification of precipitation in very high resolution model

2.1. Application and evaluation of the neighbourhood method and eventually other fuzzy methods on the COSMO-DE.

2.2. Application and evaluation of the neighbourhood method on the COSMO-S2: verification

❖ **Deliverables:** report, implementation of products

2.3. Organise workshop in (early) spring 2008 (COSMO, SRNWP?) Choice of one method, definition of the related verification score(s) (maximum 3), definition of the related products.

❖ **Deliverables:** '1 Method' (short report & recommendation)

2.4. Implementation of the scores and products defined in 2.5.

2.5. Write report and/or publication

❖ **Deliverables:** report, recommendation of one (few) score, definition of products



# PP Interpretation and verification of VHRM



## 3. Hydrological applications

3.1. Compare “7km → hydro” with “7km → postprocessing → hydro

❖ Deliverables: report, provision of software

3.2. Compare “7km → hydro” with “7km → postprocessing → hydro

❖ Deliverables: report, provision of software

3.3. Snow cover: investigate relationships between snow analysis, new snow deposition / melting model and meteorological variables: T, Td,... Influence to hydrological outflow

❖ Deliverables: installation and validation of new scheme, report



# PP Interpretation and verification of VHRM



## Previous history

- **Workshop of the same project in April 2007**
- See minutes



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## « Workshop » in December 2007 with Beth Ebert

- Avoid « leaking » scores
- Use illustrative and understandable scores
- Try at least upscaling and fraction skill score
- Possibility to think of products:
  - Upscaling  $\Leftrightarrow$  regional mean
  - Fraction skill score  $\Leftrightarrow$  probability to exceed some threshold in neighbourhood
- 2 km “better” than 7km models...
- ...on quite large scale (30-50 km)



# PP Interpretation and verification of VHRM



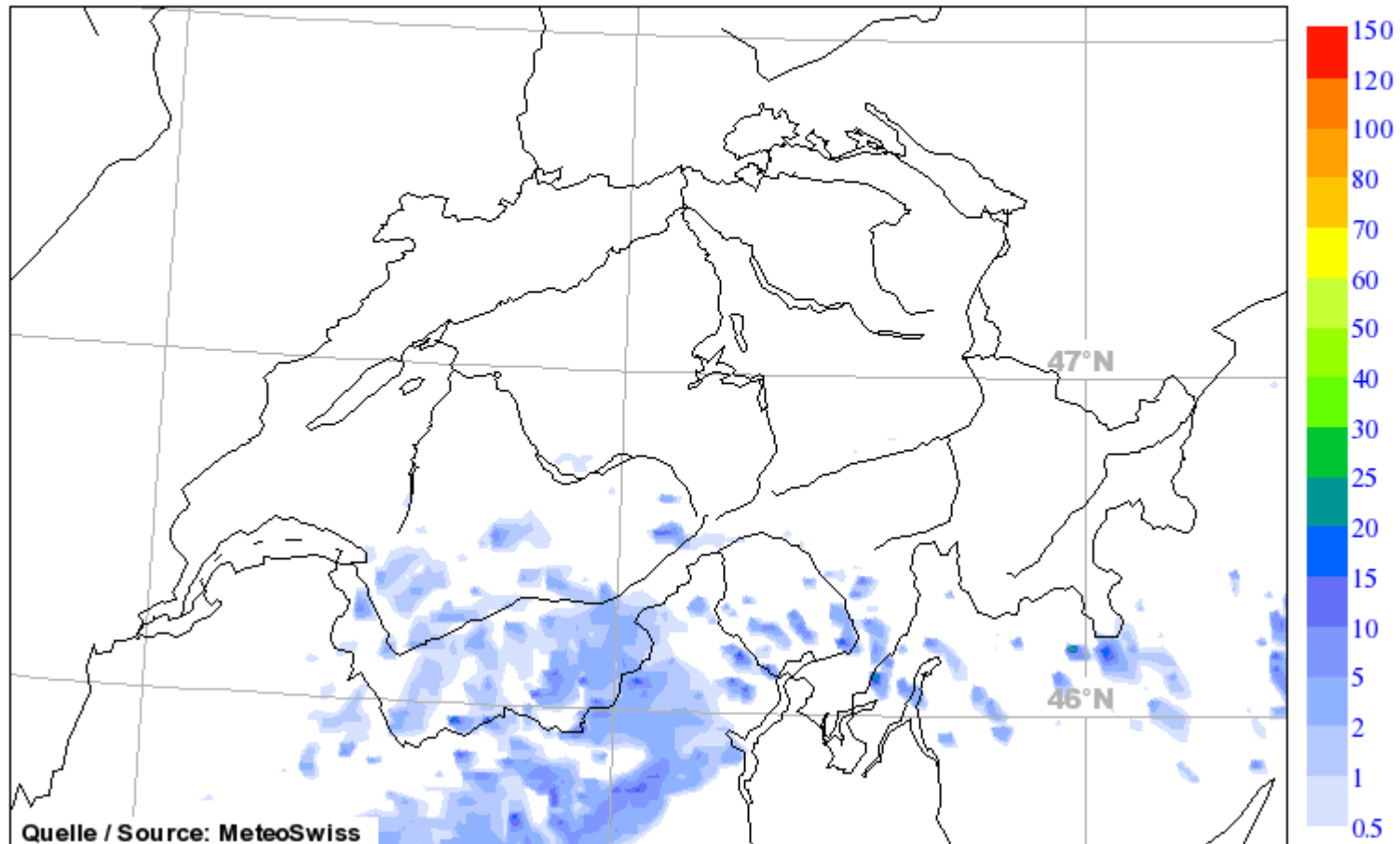
COSMO-2 Forecast for: **Wed 21 May 2008 18 UTC**

**Version: forecasts 2km (847)**

3h Sum of precipitation in mm

Mean: 0.223

Run: 21.05.2008 00UTC+18h





# PP Interpretation and verification of VHRM



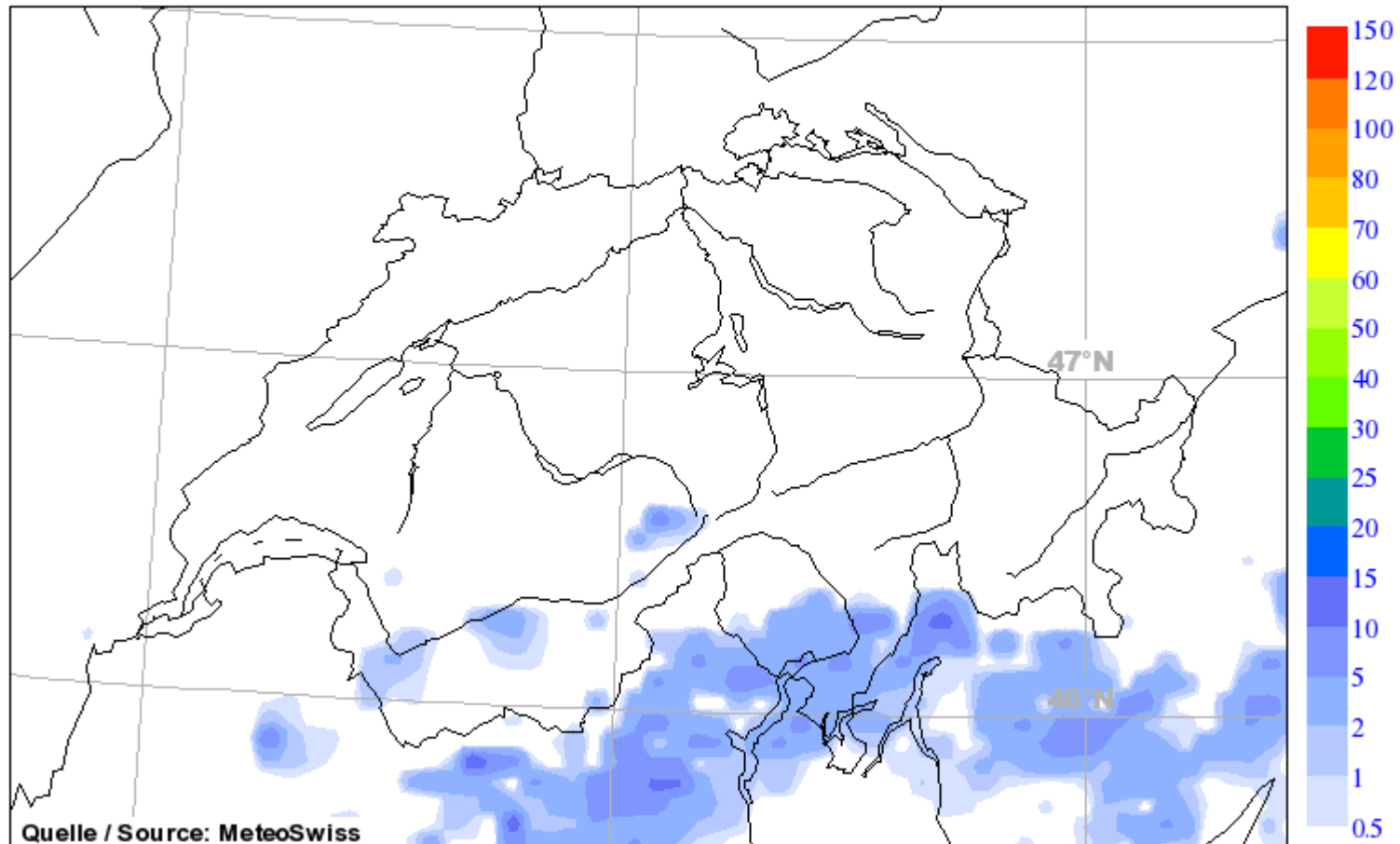
COSMO-7 Forecast for: **Wed 21 May 2008 18 UTC**

**Version: forecasts 7km (847)**

3h Sum of precipitation in mm

Mean: 0.421

Run: 21.05.2008 00UTC+18h





# PP Interpretation and verification of VHRM



## Goals of this workshop

- Exchange information on the work done in the since september 2007, incl. MAP DOP
- Preliminary conclusions / recommendations
- Some reporting
- Planning of work until September 2008
- Plan the redaction of the final report