

# Status of the EUMETNET C-SRNWP project

Balázs Szintai

with inputs from experts of ALADIN, COSMO, HIRLAM, LACE, UKMO

# Outline

- News from EUMETNET
- OPERA and NWP
- AMDAR humidity
- SRNWP data pool
- Global Lake Database
- SEECOP
- C-SRNWP Expert Teams
- EWGLAM-2016

# C-SRNWP highlights

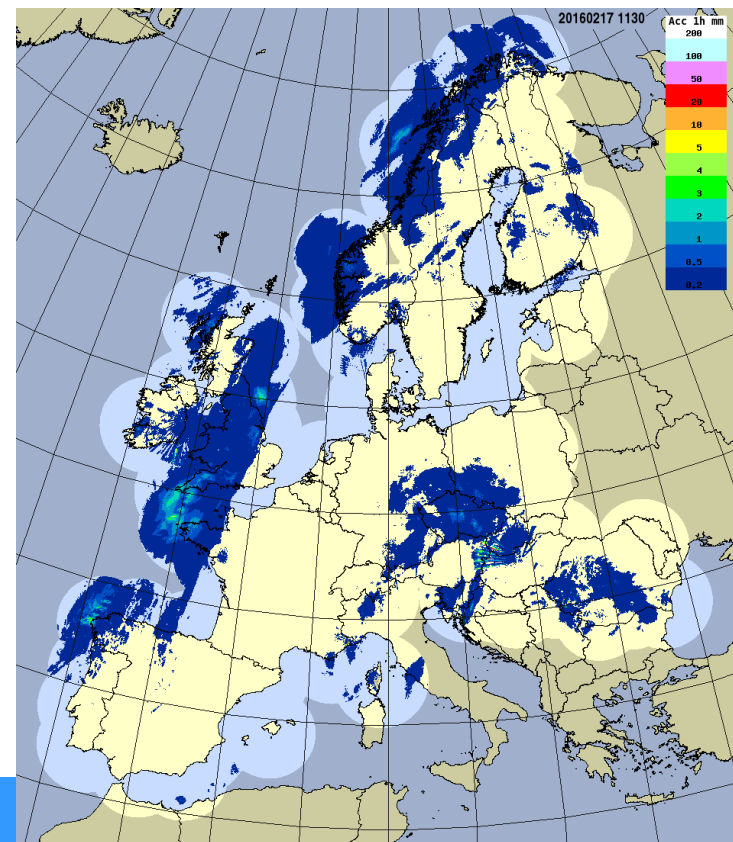
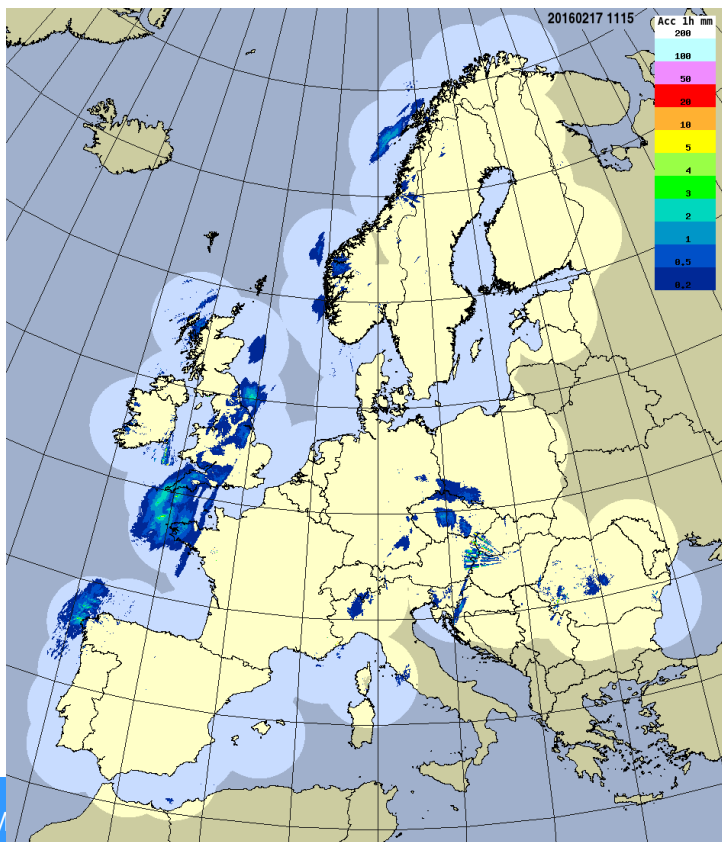
## News from the EUMETNET Forecasting Programme

- **All EUMETNET Programmes** prolonged with one year (until end of 2018)
- **Nowcasting Phase II**
  - Project name: ASIST (Application oriented analySIS and very short range forecast environment)
  - Duration: 1 July 2015 – 31 December 2018
  - Coordinating Member: ZAMG (Austria)
  - Kick-off meeting: January 2016
  - Involvement of more DA experts needed
- **SRNWP EPS Phase II**
  - Duration: 1 July 2015 – 31 December 2018
  - Coordinating Member: AEMET (Spain) supported by COMET (Italy) with the involvement of ARPA-SIMC (Italy)
  - Webex kick-off meeting: March 2016
  - Workshop on “Probabilistic prediction of severe weather phenomena”: 17-19 May 2016, Bologna

# C-SRNWP highlights

## OPERA news

- Composite software is running V1.9 → Rainrate product includes even the weakest echoes → for rain/no rain validation, some thresholding may be needed. BUT: for 6h sums this should improve the results



# C-SRNWP highlights

## OPERA news

- Composite software is running V1.9 → Rainrate product includes even the weakest echoes → for rain/no rain validation, some thresholding may be needed. BUT: for 6h sums this should improve the results
- Satellite products are now used to mask clear air echoes from cloudfree areas
- Malta is now testing submission of their data, and the new radars in Cyprus have been installed. This means that sooner or later the shape of the composite should be changed. But also it means we will have better quality at the Mediterranean.
- delivery of volume data is progressing in Meteo-France → other countries?
- OPERA—SRNWP Workshop: Rome, 6-7 Oct 2016

# C-SRNWP highlights

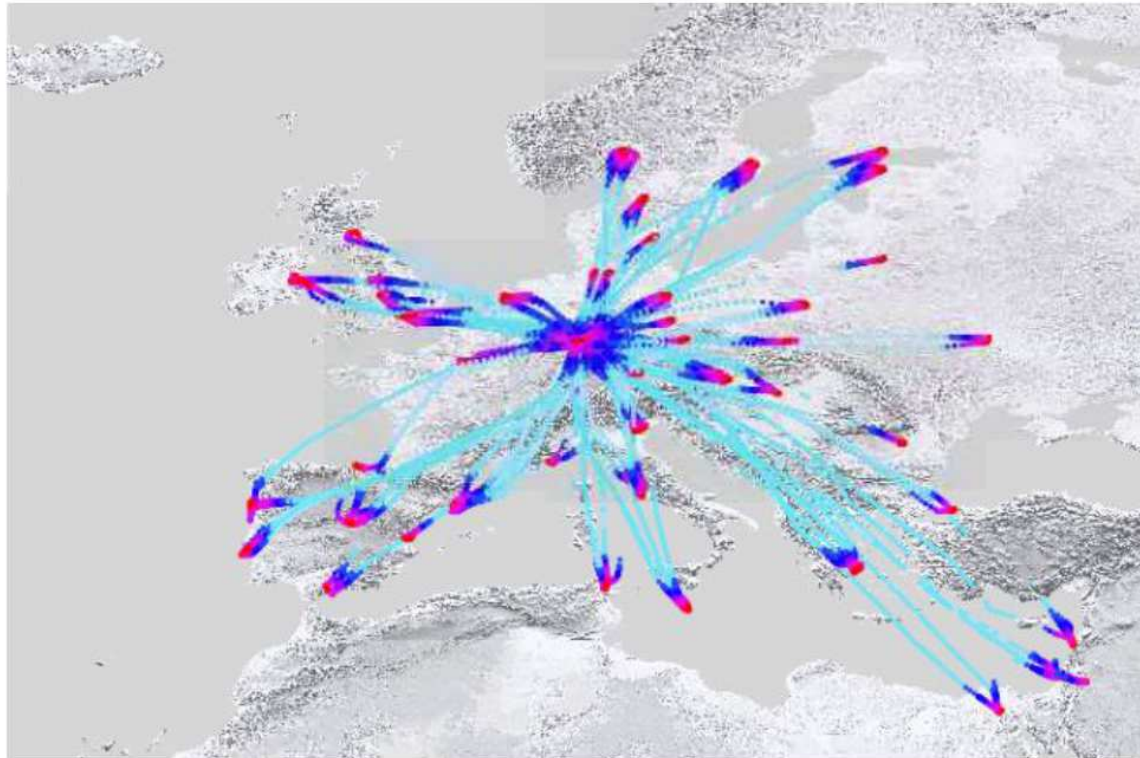
## Observation network design (support EUCOS, Obs-SET)

- Collect DFS (Degrees of Freedom For Signal) and FSO (Forecast Sensitivity to Observations) observation impact indicators from the SRNWP community → this provides useful complementary information to Observing System Experiments
- The above is important in order to have an influence on the priority of EUCOS observation programmes/projects from an SRNWP perspective
- Obs-SET meeting: May 2016

# C-SRNWP highlights

## Observation network design: AMDAR-humidity

- 2015: eight Lufthansa flights equipped with humidity sensor



WVSS-II destinations over 14 day period, Dec'15

# C-SRNWP highlights

## Observation network design: AMDAR-humidity

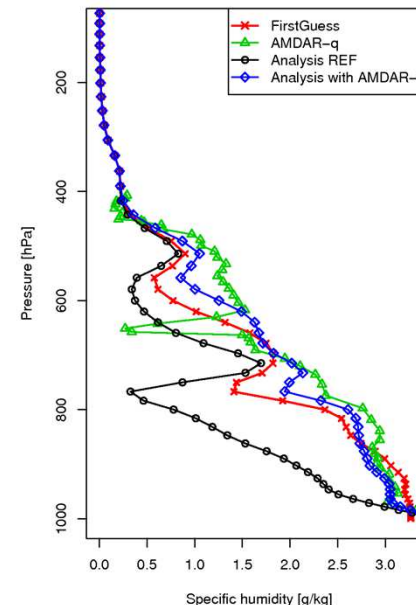
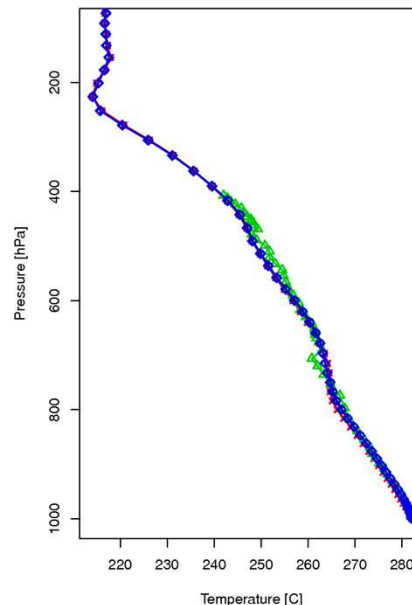
- Jan 2015: on request of the Obs PMT a questionnaire was prepared asking for AMDAR-humidity DA experience:
  - HIRLAM: not yet → plans to test it in 2016
  - COSMO: monitoring of data in Italy → plans to test it in 2016
  - UKMO: use in LAM in near future (already in global model)
  - ALADIN: testing in LAM in summer 2016, operational beginning 2017
  - LACE:
    - Austria:
      - currently used cycle might not be ready to properly ingest data
      - Data quality issues with ascends from Vienna
    - Hungary → first tests done



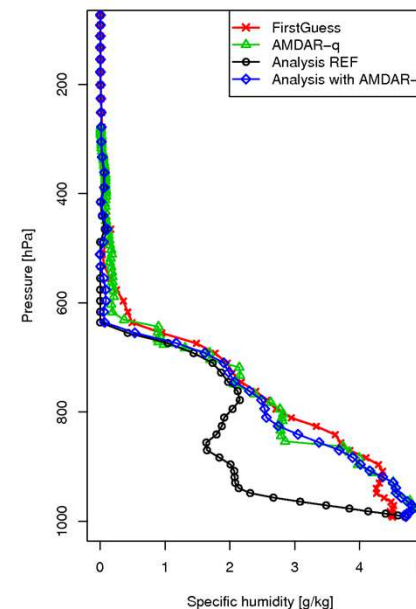
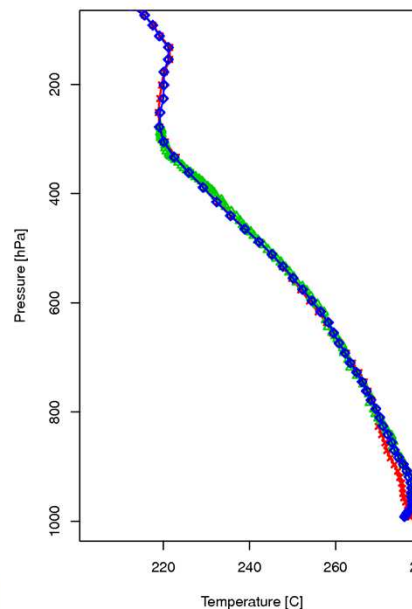
## Preliminary results of using AMDAR humidity in the AROME/Hungary DA system

- useful information about the vertical structure of the troposphere beside radiosondes → more frequent observations and good agreement with TEMP profiles
- temperature and specific humidity profiles at 06 UTC and 18 UTC (on different days)
- all available conventional observations were assimilated (no TEMP at this time) AMDAR humidity included or not

Vertical profiles for 20160325\_18 UTC, Station: Budapest, Flight number: EU882  
1st altitude: 235 last altitude: 7062  
1st time: 2016-03-25 18:21:17 last time: 2016-03-25 18:29:57



Vertical profiles for 20160308\_06 UTC, Station: Budapest, Flight number: EU883  
1st altitude: 293 last altitude: 9668  
1st time: 2016-03-08 05:37:49 last time: 2016-03-08 05:52:39



# C-SRNWP highlights

## NAWDEX campaign

- Measurement campaign: 2016-09-16 – 2016-10-15
- New measurements over the Atlantic (airborne lidar)
- On-demand measurements over Europe (financed by EUMETNET):
  - Radiosoundings (at existing locations)
  - Increased frequency of AMDAR profiles (3h → 1h)
  - Will be available on GTS → possible to assimilate/monitor the data
  - Obs-SET members and ETDA members will be informed later

# C-SRNWP highlights

## SRNWP data pool

- Relatively low usage
- Statistics for: 2014-07-17 – 2016-03-31 :
  - 35 registered users
  - 6 new users in the period
  - 10 active users in the period
  - 3 „very active” users (more than 1-2 downloads)
- Questionnaire prepared and sent on 1st April 2016 to 39 registered users
- Until 15th May 2016 only 3 answers received
- Possible ways forward:
  - some developments (new format, more quality control) would be needed
  - would be good to estimate the costs of the maintenance (from the side of COSMO, DWD and others). This might help to decide the question whether it is worth to continue to operate the Data Pool.
  - if the costs of further development (new format, more quality control, involvement of more stations) are high but we can foresee that these would significantly increase the usage of the Data Pool, we could look for support (eg. from EUMETNET?)
  - some advertisement of the Data Pool (eg. on conferences) might be desirable

# C-SRNWP highlights

## Global Lake Database

- AET Meeting Oct 2015: try EUMETNET funding
- EUMETNET STAC, 30 March 2016:
  - Lake Database funding proposal presented by C-SRNWP PM
  - 8500 EUR/year (for maint. and devel.): included in the C-SRNWP budget
  - STAC agreed → details of funding by PFAC
- EUMETNET PFAC, 1 April 2016:
  - GLDB funding should be included in the Forecasting Programme Management budget (all countries represented)

# C-SRNWP highlights

## SEECOP

- South East European Consortium for Operational weather Prediction
- 5 South East European countries: Albania, Bosnia-Herzegovina, Macedonia, Montenegro, Serbia
- Using NMMB (WRF) model
- Want to be recognised as new NWP consortium in Europe
- EUMETNET STAC, Nov 2015: recognized SEECOP as new NWP consortium → with list of recommendations from AET:
  - To become member of C-SRNWP
  - Formulate consortia structure officially
  - Have minimum staffing requirements for members
  - Have permanent WG structure
  - Rules for code management
- Second meeting of SEECOP experts: 27 June 2016, Bar, Montenegro → decisions on the organizational structure of SEECOP (Council, CET, WGs)

# C-SRNWP Expert Teams

## 8 C-SRNWP Expert Teams

- Data Assimilation
  - Diagnostics, validation and verification
  - **Dynamics and lateral boundary coupling**
  - Link with applications
  - **Physical parameterisation (upper air)**
  - Predictability and EPS
  - Surface and soil processes
  - **System aspects**
- 
- New HIRLAM phase → several new PLs → new ET representatives
  - Surface ET: meeting at next EWGLAM

# C-SRNWP highlights

## EWGLAM/SRNWP Annual Meeting

- 3-6 October 2016, Rome, Italy
- Local organiser: COMET
- Special topic: nowcasting applications
- Dedicated session: future of C-SRNWP
- Several side meetings: EPS II, Surface ET, Radar DA
- Website available with draft programme:  
<http://www.meteoam.it/news/38th-ewglam-23rd-srnwp-meeting-rome>

*Thank you for your attention!*

**Balázs Szintai**  
C-SRNWP Project Manager  
GIE/EIG EUMETNET

C-SRNWP Project Manager  
Hungarian Meteorological Service  
Kitaibel Pál u. 1  
Budapest, Hungary

Tel: + 36 1 3464705  
Fax: + 36 1 3464669  
Email: [szintai.b@met.hu](mailto:szintai.b@met.hu)  
Web: [srnwp.met.hu](http://srnwp.met.hu)

GIE EUMETNET Secretariat  
c/o L'Institut Royal Météorologique  
de Belgique  
Avenue Circulaire 3  
1180 Bruxelles, Belgique

Tel: +32 (0)2 373 05 18  
Fax: +32 (0)2 890 98 58  
Email: [info@eumetnet.eu](mailto:info@eumetnet.eu)  
Web: [www.eumetnet.eu](http://www.eumetnet.eu)