Regional Cooperation for
Limited Area Modeling in Central Europe

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Status of OPLACE system

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OPLACE system

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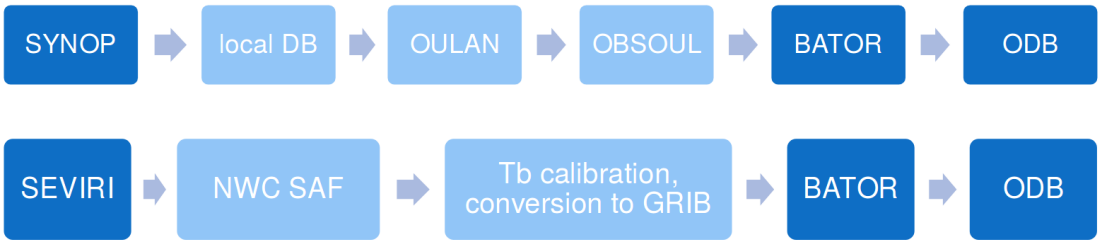
- **The common LACE observation pre-processing system (OPLACE)**
  - **aimed to support DA implementation, avoid duplication of work on observation pre-processing & to share the maintenance;**
  - **provides observations in appropriate format for DA;**
  - **comprises mainly decoding, conversion to the local databases, simple QC, conversions to suitable format for ODB conversion;**
  - **based on existing observation processing infrastructure of OMSZ; & operated by OMSZ and LACE Data Manager provides support;**
- **Observations: SYNOP, SHIP, TEMP, AMDAR, AMV, wind profiler, ATOVS, SEVIRI, IASI and ATMS**



OPLACE status & developments

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- **aircraft data handling corrections** applied in February 2017
  - suppressed undefined winds, added data for flight level=0;
  - adaptation for the phase of flight according to the new BUFR template;
  - the phase of the flight passed into ODB (retrtype@hdr) to be used for blacklisting of AMDAR data with unstable phase of flight which are of possibly minor quality @Florian Meier;
  - blacklisting will not be done on the level of the OPLACE system, but it is user's responsibility to apply such blacklisting!
- **new SYNOP and TEMP databases** implemented in April 2017
  - upgrade of the local (both TAC and BUFR) databases was prepared by the OMSZ OBS team to ensure stable and reliable service;

  (23 more TEMP stations from UK, Italy, Spain, Turkey, Russia and Norway)
- **technical upgrades**
  - renaming of EARS sounder products;
  - more reliable uploading procedure implemented;

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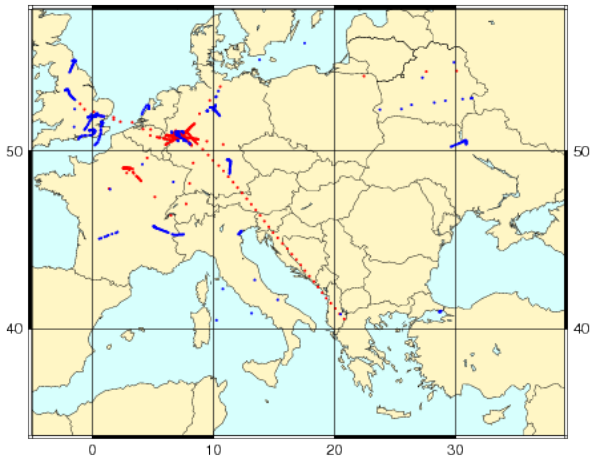
- **aircraft data extended by non-European programs** in June 2017 (pointed by A. Bucanek)
  - mainly from USA and Hong Kong/China providing data over the Europe;
  - significant increase of data during night;
  - new data labeled **ACARS** (codetype=145)
  - old **AMDAR** have subtype (codetype=144)



- **TAC2BUFR migration** progressing slowly
  - processing of AMDAR data progressed in collaboration with M. Monteiro (2017);
  - evaluation of BUFR SYNOP processing continues;
  - evaluation of BUFR TEMP planned for autumn in collaboration with A. Satouri;
  - first prototype of BUFR SYNOP & AMDAR data processing included in OPLACE test suite but further work is needed before an operational implementation;
- **ASCAT - ocean winds** in OPLACE test suite;
  - data processing works technically for both data resolutions (25km &12km);
  - data sample examined WRT to MF - template is the same, but the content differs;

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- **OPLACE access for non-LACE countries**
  - **agreement with Poland was signed in 2017;**
  - **currently two non-LACE users (Tunisia, Poland);**

OPLACE-national data exchange

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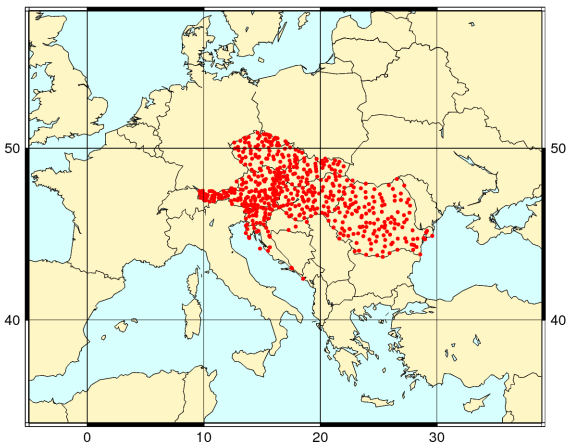
- internal data exchange within RC LACE
- high resolution surface synoptic data exchange
  - stable and reliable for operational use;
- status for August 2017
  - decrease of CRO and SLO stations due to removal of duplicated GTS data;
  - extension for data from Poland is in the preparation;



Number of national stations	
Austria	169
Croatia	21
Czech Republic	90
Hungary	92
Romania	134
Slovakia	46
Slovenia	17
Total:	**569**

OPLACE-national data exchange

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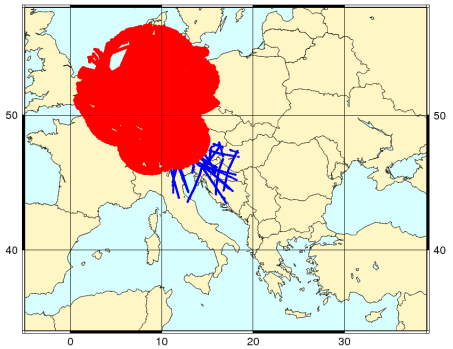
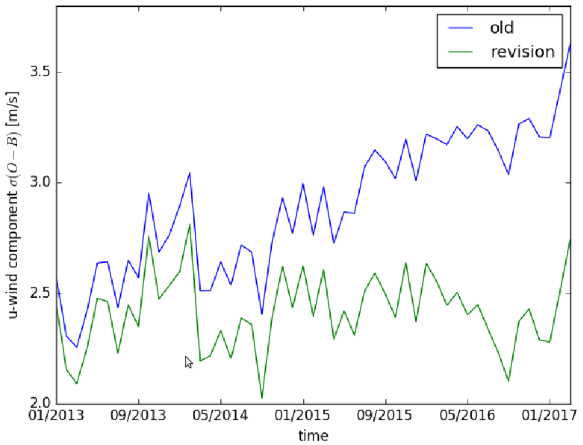
- high resolution aircraft data exchange
  - Mode-S MRAR from ARSO/Slovenia
  - Mode-S EHS from KNMI/Netherlands
  - stable and reliable data provision, but quality issues:



- EHS preprocessing fixed in May 2017
  - an offset to make the magnetic correction relative to Schiphol airport was applied when creating the correction files but was NOT applied when the actual correction was done
  - reprocessed data available upon request



- MRAR whitelist error fixed in September 2017
- All Members are kindly encouraged to explore availability of Mode-S data.

OPLACE plans

- **Any question, comment and/or suggestion ?**
- **Is everybody happy with OPLACE data available, performance, ... ?**
- **Feedback is important and appreciated!**

Priorities for 2018:

- **finalize TAC2BUFR migration**
- **finalize ASCAT validation**
- **review/fix wind profiler processing**
- **scripts redesign to improve OPLACE operations**
- **observation monitoring**
  - **extension for GPS, Mode-S, ATMS and add the bias correction**
- **?? (new data, ...**

End

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Thank you for your attention !

References

M. Monteiro. Upgrade of the source code BATOR to WMO AMDAR template 311010v7. Technical report, IPMA, 2017. http://www.rclace.eu/File/Data_Assimilation/2017/MMonteiro_short_stay_2017_v20170131_cor.pdf.