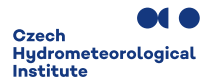


*Regional Cooperation for
Limited Area Modeling in Central Europe*



Status of OPLACE system

Alena Trojáková



**ARSO METEO
Slovenia**

- OPLACE
- Status & developments
- National data exchange
- Future plans

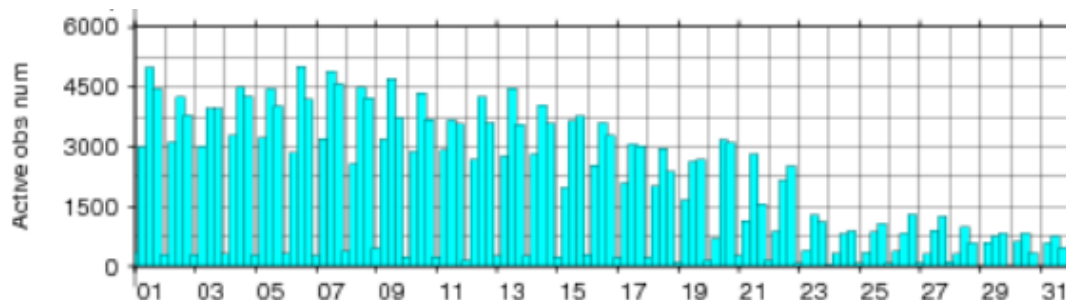
- The common **observation preprocessing system for RC LACE (OPLACE)**
 - aimed to support DA implementation, avoid duplication of work on observation preprocessing & to share maintenance;
 - provides observations in appropriate format for DA in NWP system ALADIN;

Observations	Type/Sensor	Platform	Output format
Surface synoptic	SYNOP,SHIP,BUOY		OBSOUL
Aircraft	AMDAR,ACARS		OBSOUL
Upper-air sounding	TEMP,TEMP MOBIL		OBSOUL
Wind profiler	E-PROFILE		BUFR
Atm. Motion Vectors	GEOWIND,HRWIND	Meteosat 11	BUFR
Satellite radiances	SEVIRI	Meteosat 11	GRIB
	AMSU-A/B,MHS HIRS, IASI ATMS	NOAA 18/19 Metop A/B/C SNPP	BUFR
Ocean/sea winds	ASCAT OSCAT	Metop A/B/C ScatSat-1	BUFR

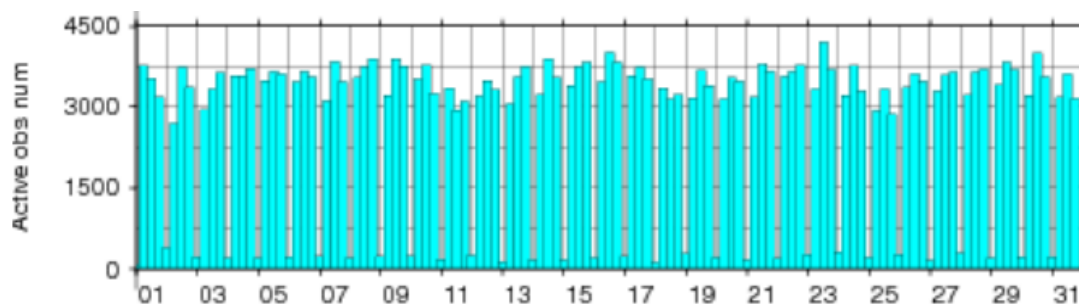
- **ATOVS and IASI from Metop-C** added on 8 Oct 2019
 - AMSU-A1 on Metop-C has generally better performance compared to Metop-B, except for Channel 3 where Metop-C has a severe degradation.
 - MHS on Metop-C has performance issue for Channels 3 and 4.
- **ASCAT from Metop-C** added on 3 Dec 2019
 - products have the same format and characteristics as those from Metop-A/B.
- **redesign of the OPLACE scripts** finalized in Feb 2020
 - aim is to improve the operations
 - - parallelization of tasks
 - - more robust to avoid data issues
 - - easier monitoring & supervision
 - all operational tasks implemented under **ecFlow**
 - added processing of conventional data in BUFR
 - **HW upgrade planned for 22 Sep 2020**



- decrease of aircraft observations due to COVID-19 in March 2020

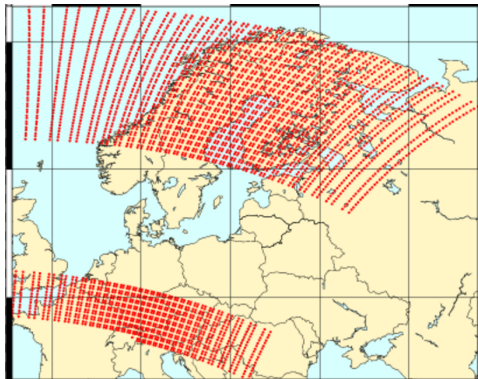


- EUMETNET Observation Programme coordinated mitigating actions: to increase radiosonde launch schedule & to enhance access to Mode-S data
- in August 2020 OPLACE contains around 80% of aircraft data from early March

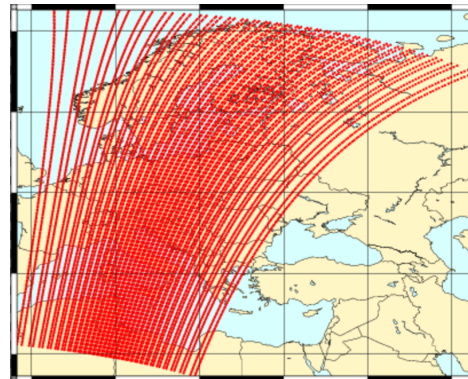


OPLACE status & development III

- **OPLACE processing of radiosonde data fixed** in April 2020
 - several stations (from Austria, Germany & UK) were missing
 - OULAN was adapted to avoid soundings with too many levels (above 3000)
- **new BUFR encoding for EUMETSAT's wind products** (AMV BUFR template)
 - data sample tested & only param.cfg requires update for cy43t2
 - **EUMETSAT will implement the new AMV template in Oct 2020!**
- **new IASI selection method implemented** in Jun 2020
 - original European IASI data selection was based on AVHRR images
 - HMS satellite group developed a new method based on IASI data itself



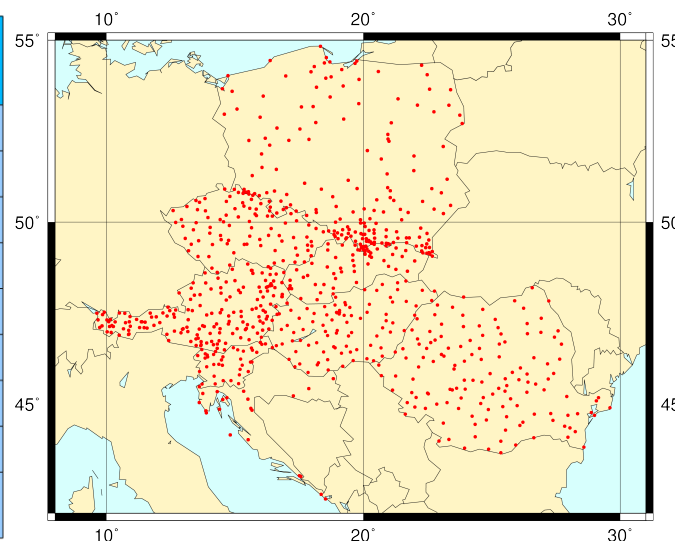
old method



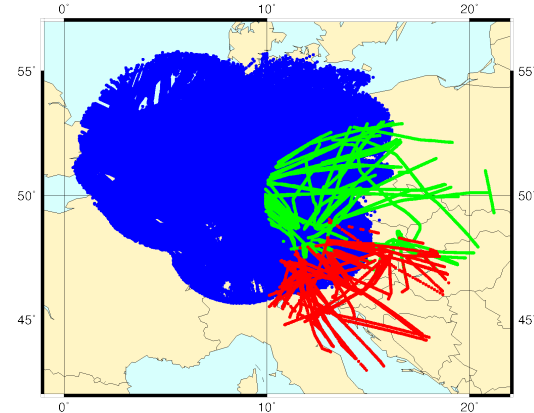
new method

- internal data exchange within RC LACE
- high resolution surface synoptic data exchange
 - stable and reliable for operational use
 - only minor changes in number of available stations
 - extension by high resolution synoptic data from Slovakia - **postponed**

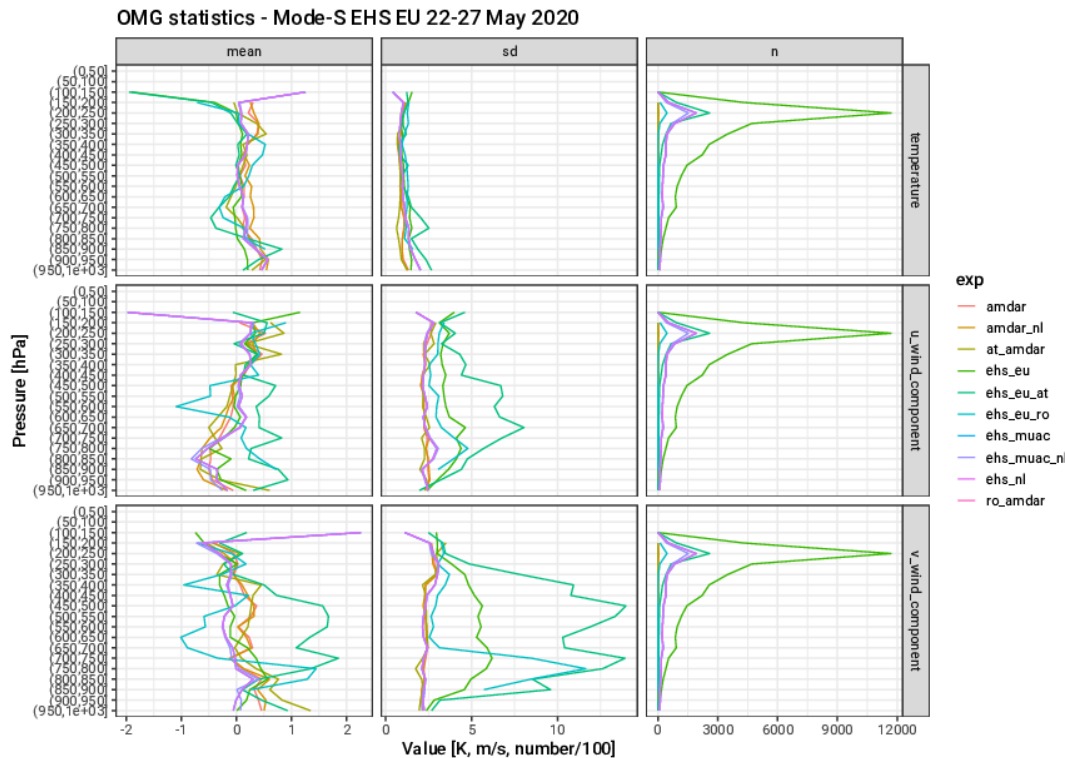
Number of national stations		Update WRT 2019
Austria	171	-2/+2
Croatia	23	-0/+1
Czech Republic	89	-0/+0
Hungary	93	-7/+10
Romania	134	-0/+0
Slovakia	49	-0/+2
Slovenia	14	-3/+0
Poland	180	-2/+0
Total:	753	



- **high resolution aircraft data exchange from modern air surveillance systems**
- **stable and reliable data provision**
 - Mode-S **EHS** from KNMI/Netherlands
 - Mode-S **MRAR** from ARSO/Slovenia
 - Mode-S **MRAR** from CHMI/Czech Rep
- **decrease of observations due to COVID-19**
- **new operational processing system for Mode-S data (EMADDC) developed by KNMI**
- **EUMETNET coordinated mitigating actions to enhance access to Mode-S data**
 - Mode-S EHS from DMI/Denmark available via OPLACE since 31 March 2020
 - Mode-S **EHS** from **all European countries collaborating with EMADDC** (AT,DK,FR,BE,DE,NL,NO,RO,SE,SP,UK) available via OPLACE since 12 May 2020



- EMADDC made a good progress in improving quality of data processing
 - to reduce outliers & improve BIAS,STD the **whitelisting** added since 8 Jun 2020
 - despite of that the monitoring study by B. Strajnar pointed **higher STD** for **Mode-S data from Austrian & Romanian airspace**



- **Priorities for 2020:**

- redesign of OPLACE scripts - **done**
- extensions by new observations (Metop-C) - **done**
- extensions by new observations (E-GVAP) - **postponed to autumn**
- new BUFR encoding for wind products (AMV BUFR template) - **ongoing**
EUMETSAT will implement the new AMV template in Oct 2020

https://www.eumetsat.int/website/home/News/DAT_4593260.html

- TAC2BUFR migration - **delayed**
 - - finalize BUFR data preprocessing
 - - progress with use of BUFR data (cy43t2)
- technical upgrade of SEVIRI preprocessing - **not tackled**
- observation monitoring - **not tackled**
- any proposal for new observation extension ?

- **Any question, comment and/or suggestion ?**

- **Your feedback is important and appreciated!**

End

Thank you for your attention !