DAsKIT (ST2) progress report

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ACCORD ASW 2022, 4-8 April 2022

With collaboration of: Alena Trojakova, Benedikt Strajnar, Eoin Whelan, Pierre Brousseau, Antonin Bucaneck, Magnus Lindskog, Florian Meier, Martin Bellus, Eric Bazile, Patrick Samuelsson, Roger Randriamampianina, …

DAsKIT (ST2) ➢ checkpoint

2020-2021 Achievements

✓ *Common implementation of* T-*codes cycle* CY43T2

✓ *Testbed: combined* DA *solution, for one network (to be validated !)*

2021-2022 Plans ➢ to merge with new ACCORD framework

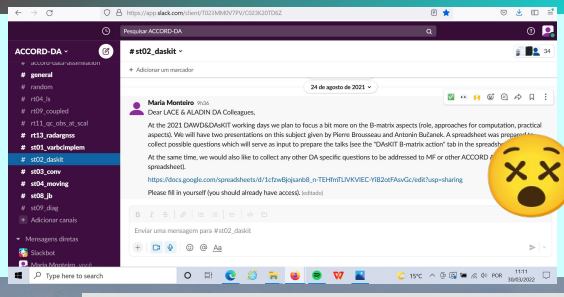
📌*More countries cycling* CANARI-OI_MAIN + 3D-Var ...

📌*B-matrix computation: NodeRunner extension to and further actions …*

📌*Populate* DAsKIT *wiki…*

📌*Getting involved in further* ACCORD DA *topics…*

DAsKIT (ST2) ➢ common activities



Wiki » Data Assimilation » ResearchAndSupportTeams » Support

ST2: Local implementation of a DA Starters KIT

Co-leaders

Dedicated DAsKIT wiki page

http://212.175.180.89/daskit/index.php/

Meetings notes

18 March 2022, Local Upper-Air DA implementations status

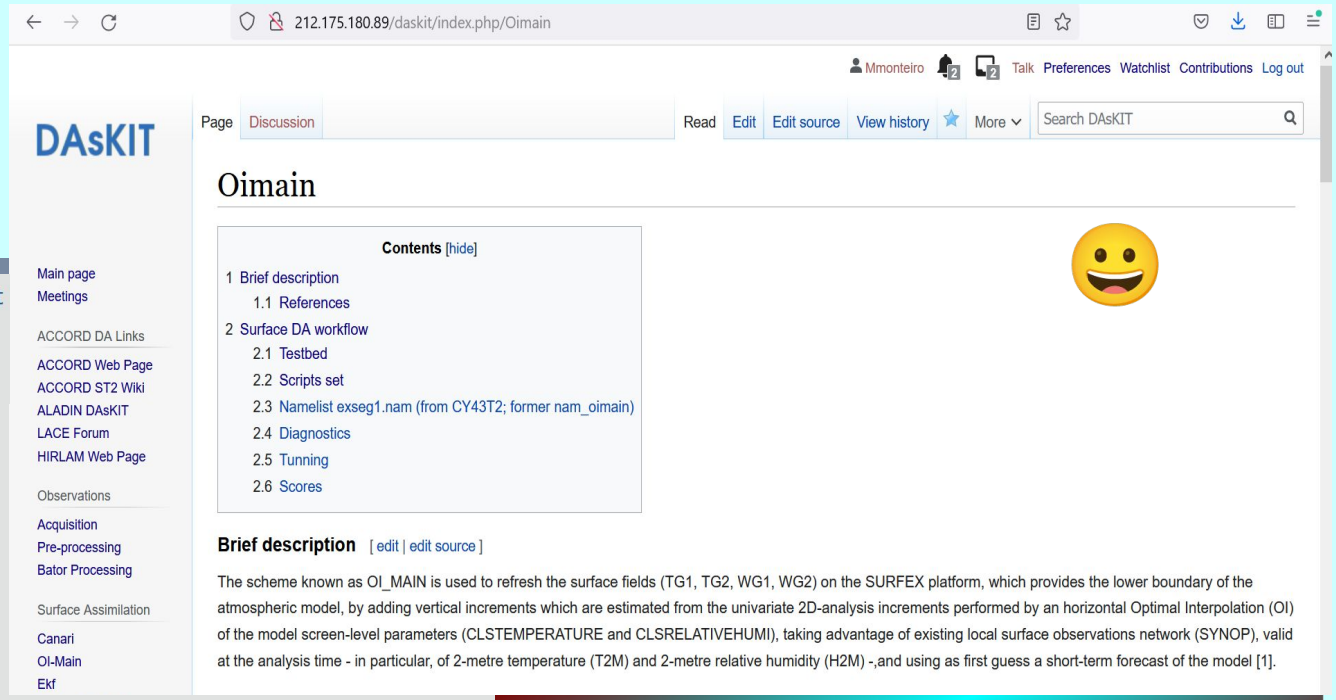
02 February 2022, Local Surface DA implementations status

22-24 September 2021, Joint 2021 LACE Data Assimilation Working Days and ALADIN Data Assimilation basi
Working Days

01 June 2021, ST2 Kick-off Meeting

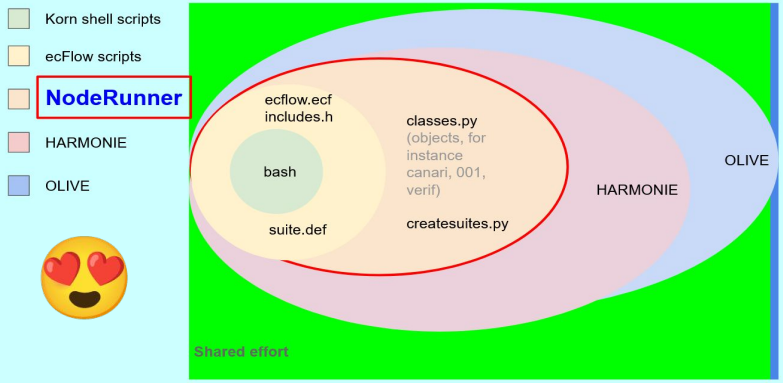
Thematic groups (on-going actions)

1. *(DA8.6) NodeRunner (Alex Deckmynn, Yelis, Cengiz, Idir Dehmous, Maria Monteiro)*
2. *(DA8.5) Surface DA validation and tuning (Yelis Cengiz, Sahra Sahlaoui, Fatima Hdidou, Idir Dehmous, Maria Monteiro) Summary reports (See also 2021 ACCORD Surface WW)*
3. *DAsKIT wiki (all)*
4. *(DA8.5) B-matrix computation (Maria Monteiro, Yelis, Cengiz, Idir Dehmous, Ouali Aitmeziane, Alex Deckmynn) Summary reports (See also ST8 Kick-off Meeting)*



Further progress: workflow

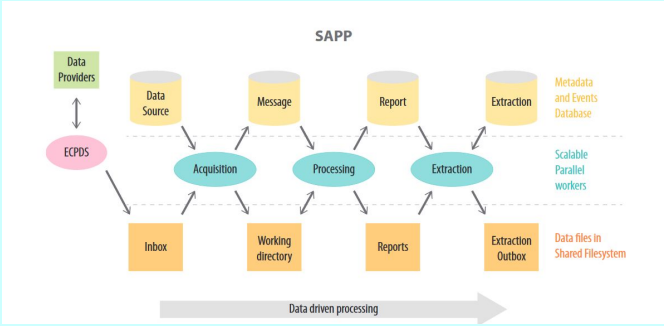
Enhancing workflow sharing by increasing the common scripts effort

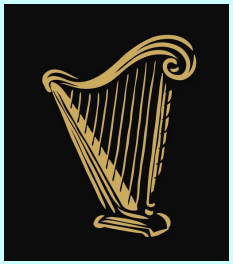


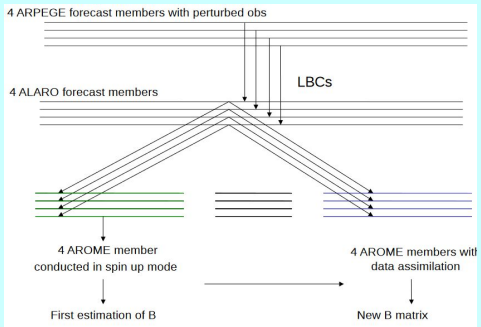
DAsKIT (ST2) ➢ countries' synopsis

	Data Acquisition			Data pre-processing		Data monitoring		BATOR	Surface DA		B-matrix		Upper-air/ Combined DA		Validation	
	SYNOP local	TEMP	AMDAR	other	SAPP POP-RMI	MANDALAY OBDSQL	OBSMON	1-2-3 obs types	cycled	OPER	first	EDA	cycled	OPER	home made MONITOR	HARP
Algeria																
Belgium																
Bulgaria																
Estonia																
Morocco																
Poland																
Portugal																
Romania																
Tunisia																
Turkey																

DAsKIT (ST2) ➢ tools & schemes





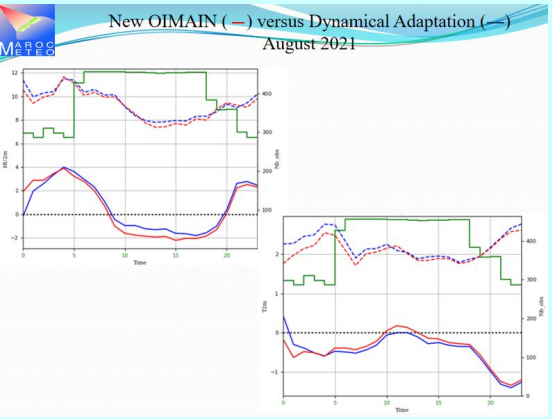


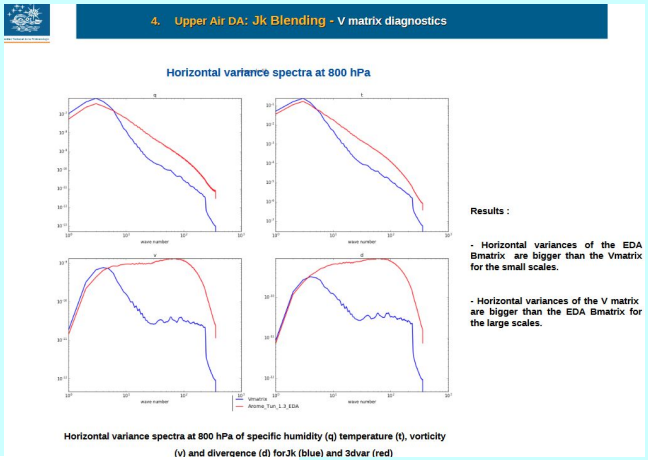
Increase on the number of countries tackling SAPP, HARP *and* EDA B-*matrix (diagnostics included)*

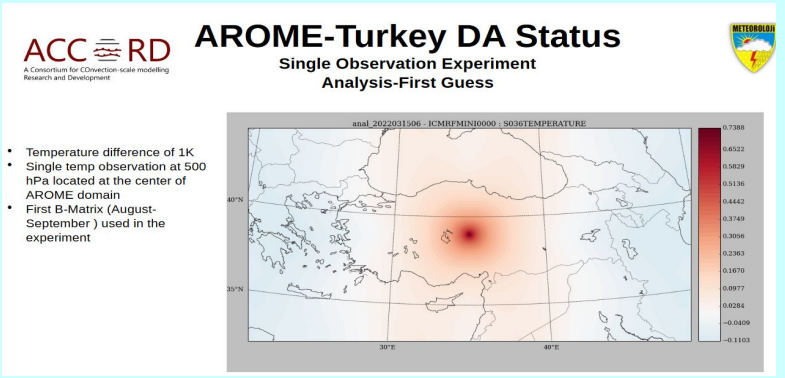
But !

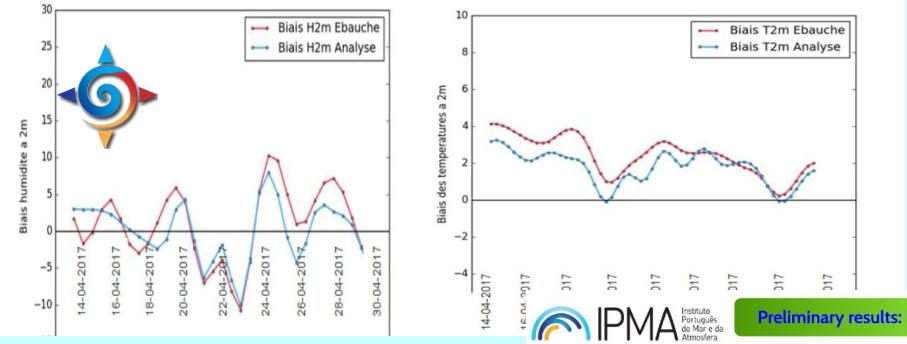
no changes on the number of operational systems

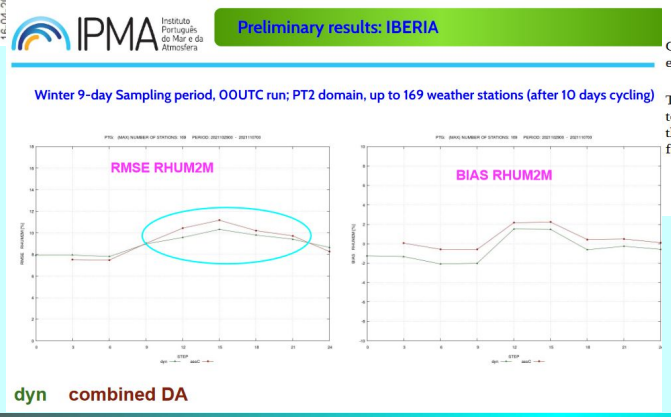
DAsKIT (ST2) ➢ diagnostics & tuning

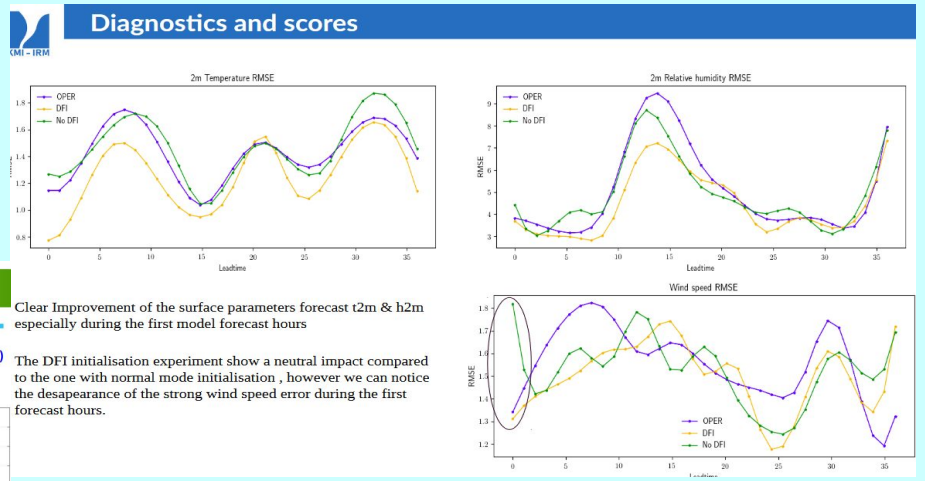










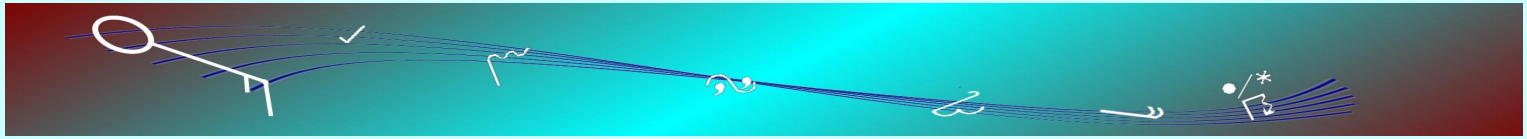


DAsKIT (ST2) ➢ summary & plans

2021-2022 (DONE !)

- *NodeRunner as a* DA *workflow sharing tool has become a reality and was invited to be present at the Support Team* WW *!!*
- DAsKIT *wiki has been widely populated…*
- *Action on surface* DA *(partly join with* ACCORD *surface* WP*):*
  - DAsKIT *(*CY43T2*) bug on the workflow has been corrected*
  - *there is a wider understanding on the local tuning procedures*
- *Action on upper-air/combined* DA *(partly join with* ST8 *and with* E-LAEF *help):*
  - *a set of scripts exist in belenos for* B*-matrix computation (*AROME *cpl* ARPEGE*)*
  - *NodeRunner* @ECMWF *provides the remaining B-matrix computation possibilities*
- *The number of countries which are cycling* 3D*-Var has increased*
- *The number of countries dealing with* SAPP, HARP *has increased*

2022-2023 (TODO…)

- *Inter-cross-validation of* AROME-OI_MAIN *!!*
- *More countries dealing optimally with the* DA *tools:* OBSMON, HARP *and NodeRunner*
- *To continue to register all information at the* DAsKIT *wiki…*
- *All countries experiencing* B*-matrix computation procedures*
- *More local* DA *implementations in operations*
- *To continue the involvement with other* ACCORD DA *activities*

Thank you for the attention !