

ACCORD

A Consortium for CONvection-scale modelling
Research and Development

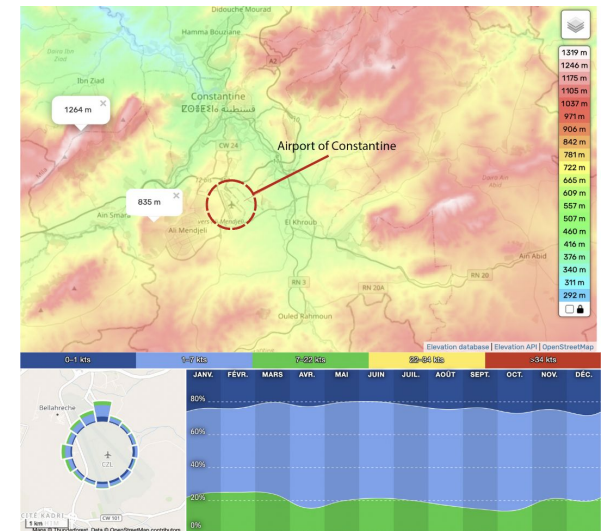
Posters Session, chaired by Javier Calvo

All Staff Workshop 2025

Analysis of wind shear intensity at Constantine Airport

Model	AROME 500m	
Horizontal resolution	500 x 500 m	
Vertical resolution	41 levels	
Grid points	320*320	
Initial conditions	Aladin	
Forecast range	48 h	
Time Step	60s	
Area	Lat	35.61 – 36.95 N
	Lon	5.78 E – 7.44 E

Table 1: AROME 500m Constantine airport configuration



Geographical Influence – Airport surrounded by mountains (880–1300m), impacting local wind patterns.

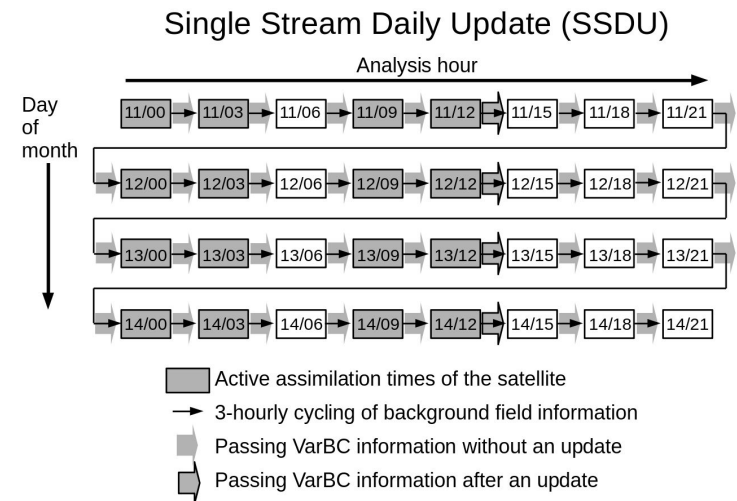
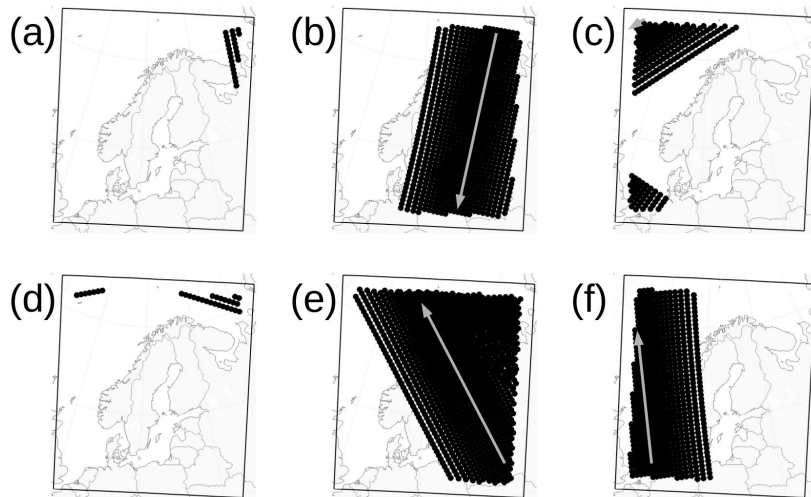
Methodology – AROME 500m model used; wind shear equation integrated into diagnostics.

Case Studies – Two critical events.

Results – Severe shear values, pose risks during takeoff and landing.

Future Work – Seasonal analysis & wind shear direction integration for better forecasting.

Variational bias correction of polar-orbiting satellite radiances in convective-scale DA



Typical daily variation in data coverage from a single polar-orbiting satellite

Demonstrating the feasibility of running VarBC in a “single-stream daily update” mode, that is:

- maintaining only one stream of VarBC coefficients (instead of multiple analysis-hour-specific streams as is the common operational practice)
- updating each sensor’s VarBC data only once per day at hours chosen to match the best possible data coverage from each satellite

The work has been published earlier at <https://doi.org/10.16993/tellusa.3259>