



DAsKIT WD

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# Data Assimilation in Morocco : Status and plans

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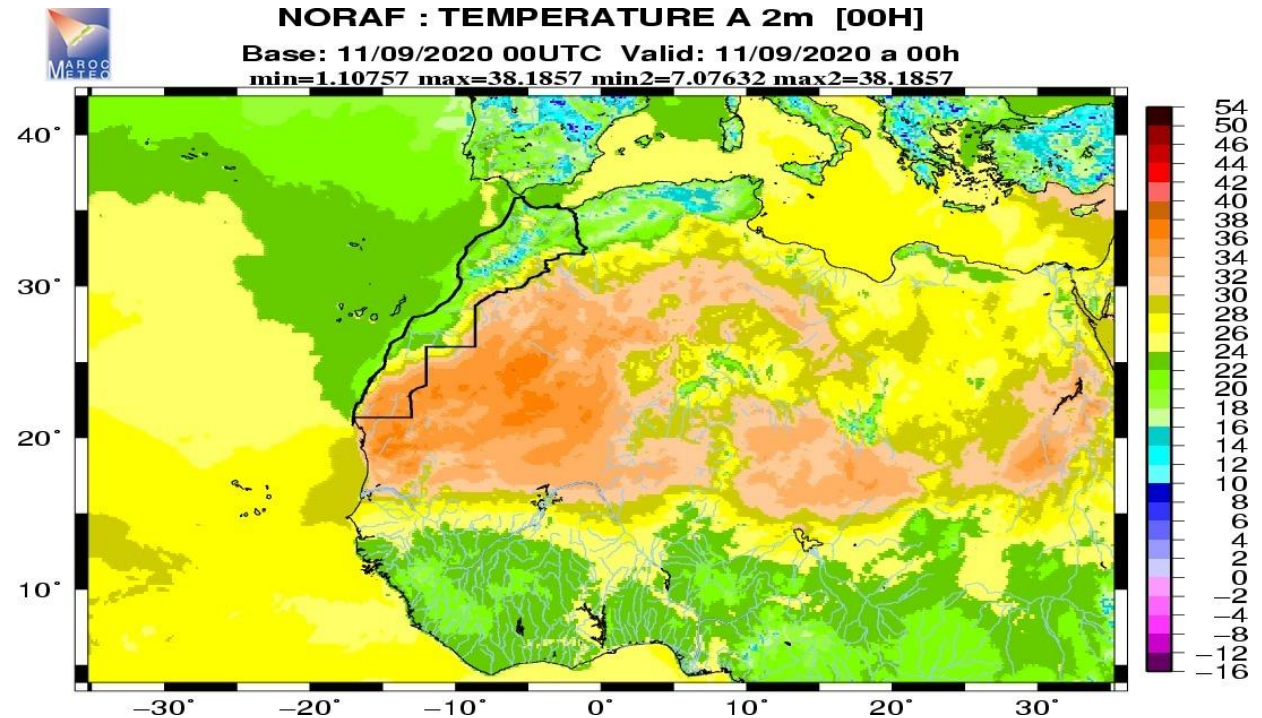
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# Operational NWP configurations in Morocco

## ALADIN NORAF

- Cycle: 41t1
- Resolution : 18 km
- Vertical levels: 70 levels
- Coupling with ARPEGE (6 hours)
- Dynamical downscaling
- Two run per day (00UTC and 12UTC)
- Forecast range : 72 hours



## Operational NWP configurations in Morocco

### ALADIN MOROCCO

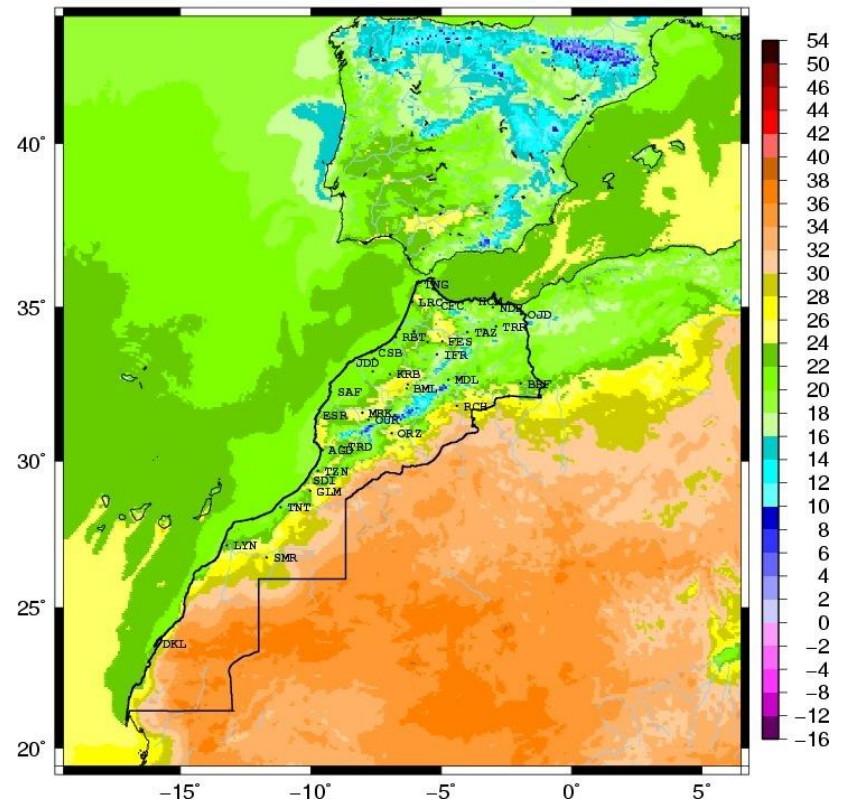
- Cycle: 41t1
- Resolution : 7,5 km
- Vertical levels: 70 levels
- Coupling with ARPEGE (3 hours)
- Dynamical downscaling
- Two run per day (00UTC and 12UTC)
- Forecast range : 72 hours



ALADIN 7.5km : TEMPERATURE A 2m [00H]

Base: 11/09/2020 00UTC Valid: 11/09/2020 a 00h

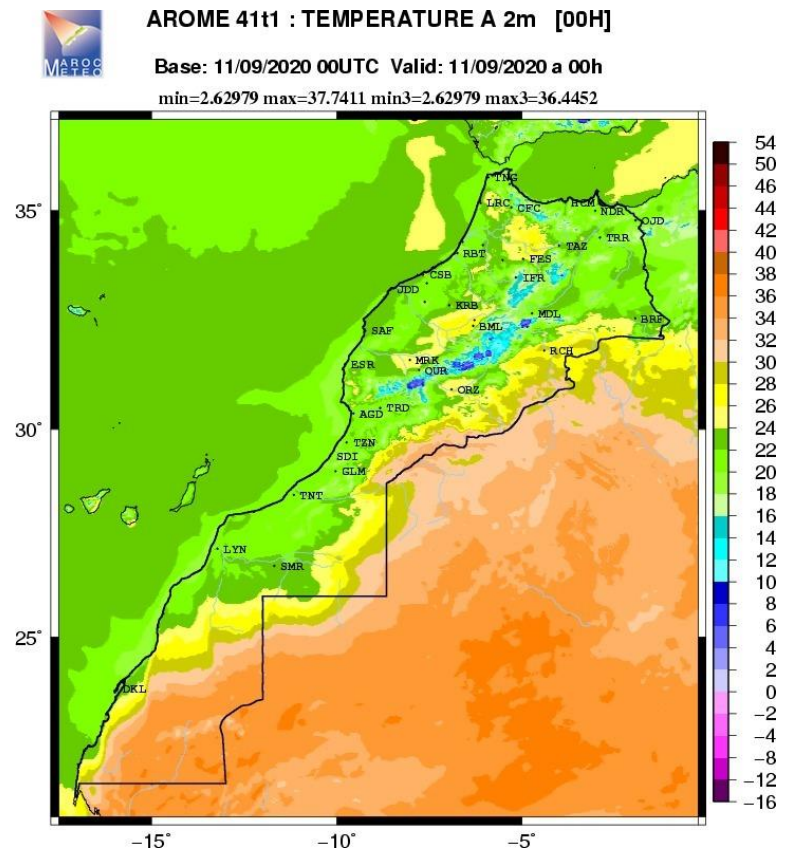
min=0.838281 max=38.182 min3=3.18203 max3=37.4945



# Operational NWP configurations in Morocco

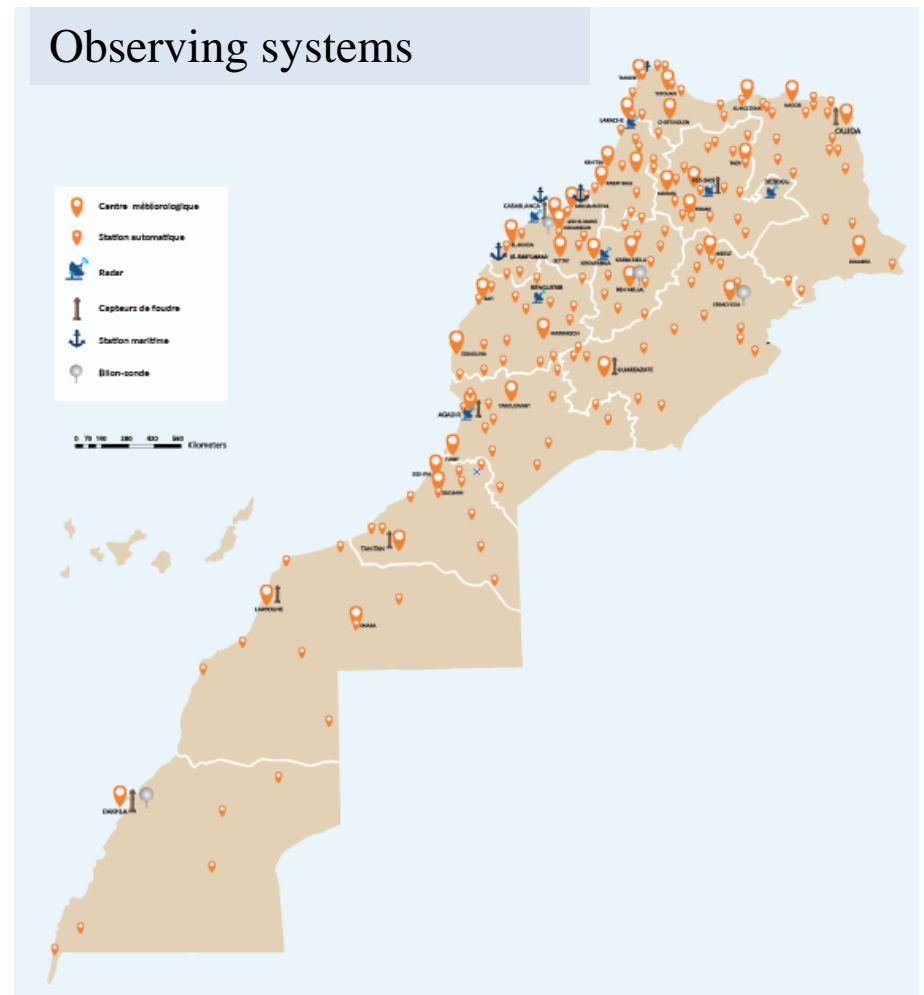
## AROME MOROCCO

- Cycle: 41t1
- Resolution : 2,5 km
- Vertical levels: 90 levels
- Coupling with ALADIN 7.5km (1 hours)
- Dynamical downscaling
- Two run per day (00UTC and 12UTC)
- Forecast range : 48 hours



# Observing systems

- Synoptic (46)
- Automatic (about 160)
- Radiosonding (3)
- GPS Meteorology (10)
- AMDAR (GTS)
- Buoys (GTS)





## Data assimilation status

<b>Observation</b>			
Preprocessing of GTS and local BUFR for conventional observations : local perl programs			
Preprocessing of GPS : Bernese suite to produce ZTD (Bufr)			

## Data assimilation status

Observation	Monitoring		
Preprocessing of GTS and local BUFR for conventional observations : local perl programs	Mandaly : OK		
Preprocessing of GPS : Bernese suite to produce ZTD (Bufr)	Obsmon: DASKIT exercise OK on local server Unable to read local database		



## Data assimilation status

Observation	Monitoring	Surface DA	
Preprocessing of GTS and local BUFR for conventional observations : local perl programs	Mandaly : OK	Daskit exercice ok in Beaufix machine	
Preprocessing of GPS : Bernese suite to produce ZTD (Bufr)	Obsmon: DASKIT exercice OK on local server Unable to read local data base	Bug in the old HPC machine	
		Currently under porting in the new HPC machine	



## Data assimilation status

Observation	Monitoring	Surface DA	3D-Var
Preprocessing of GTS and local BUFR for conventional observations : local perl programs	Mandaly : OK	Daskit exercice ok in Beaufix machine	Ensemble B matrix
Preprocessing of GPS : Bernese suite to produce ZTD (Bufr)	Obsmon: DASKIT exercice OK on local server Unable to read local data base	Bug in the old HPC machine	Bug in the old HPC machine
		Currently under porting in the new HPC machine	3D-Var : test ok in the new HPC machine



## Data assimilation status

Observation	Monitoring	Surface DA	3D-Var
Preprocessing of GTS and local BUFR for conventional observations : local perl programs	Mandaly : OK	Daskit exercice ok in Beaufix machine	Ensemble B matrix
Preprocessing of GPS : Bernese suite to produce ZTD (Bufr)	Obsmon: DASKIT exercice OK on local server Unable to read local data base	Bug in the old HPC machine	Bug in the old HPC machine
		Currently under porting in the new HPC machine	3D-Var : test ok in the new HPC machine

## Data assimilation plans in the new HPC

### The new HPC characteristics

- LENOVO cluster
- 1069 TFLOPS
- Storage : IBM V7000 Gen3 520 To



## Data assimilation plans in the new HPC

- Porting surfDA
- DA cycle (surfDA combined with 3D-Var)
- And then pre-operational suite
- Cycle 43t1
- Resolution 1,3 km