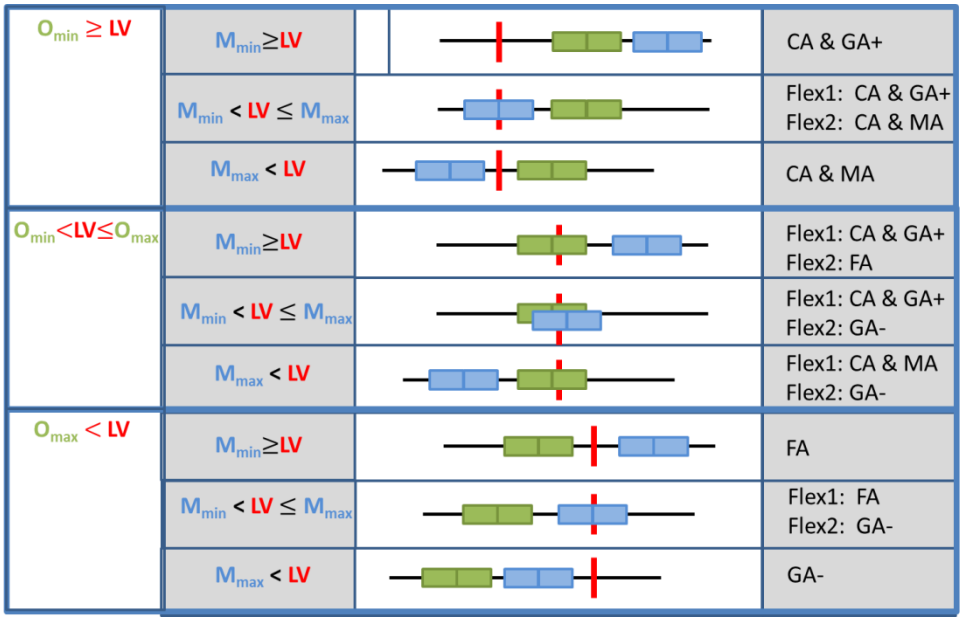
1. Jenny Stocker scheme: Forecast + Uobs, Umod



Flex : - Avoid MA (Health approach)
Avoid FA (Economic approach)

Implemented into the DeltaTool, not activated

2. Dichotomous forecast based on contingency table

FA OBS<=LV & MOD>LV 38	**GA⁺** OBS>LV & MOD>LV 82	Forecast YES events 120
GA⁻ OBS<=LV & MOD<=LV 222	**MA** OBS>LV & MOD<=LV 23	Forecast NO events 245
Observed NO events 260	Observed YES events 105	**Total** 365

What fraction of the observed Y events were correctly forecast?

POD = $GA^+ / (GA^+ + Mi) = 0.78$

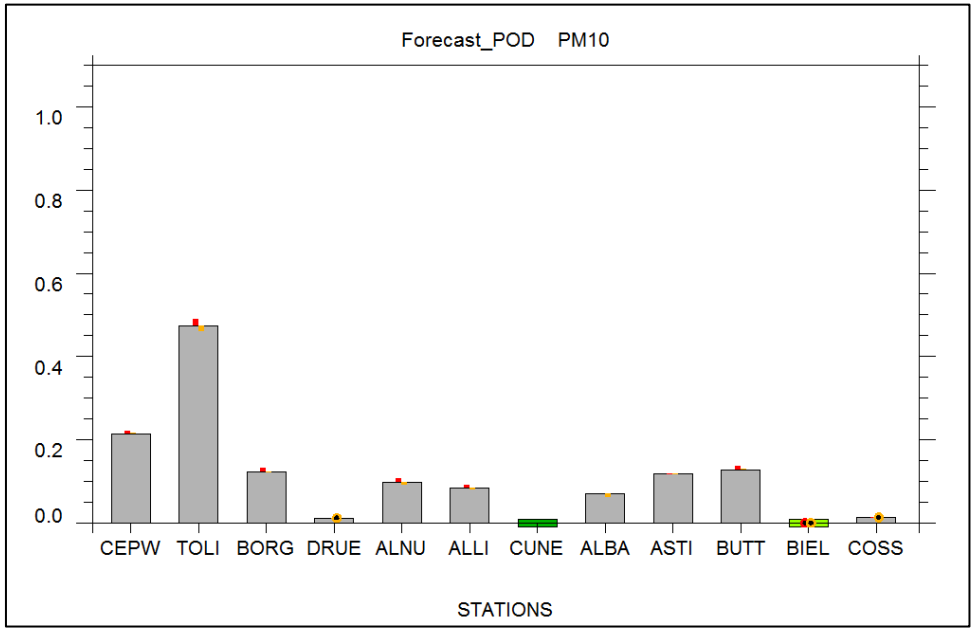
Probability of Detection.

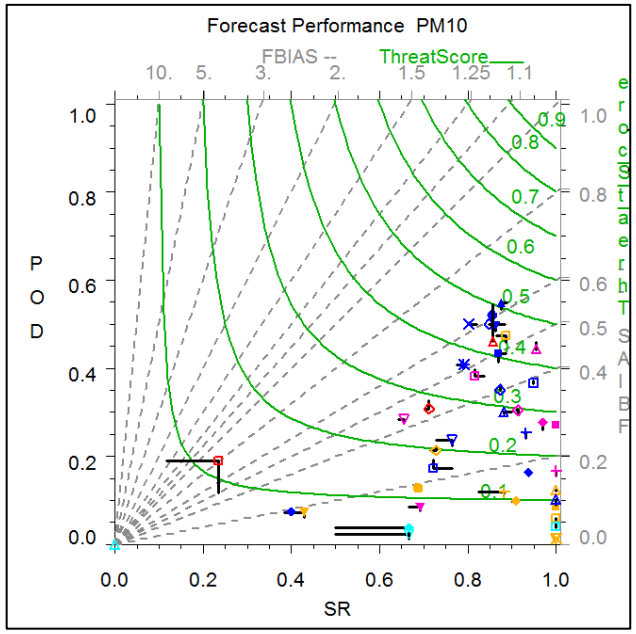
What fraction of the forecast Y events were correctly observed?

1-FAR = $GA+ / (GA+ + FA) = 0.68$

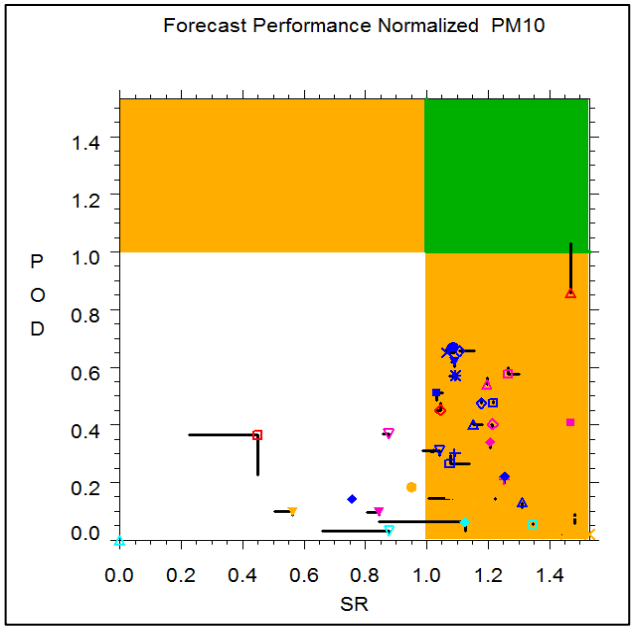
False Alarm Ratio, Success ratio (SR).

Bar plot POD
+ sensitivity



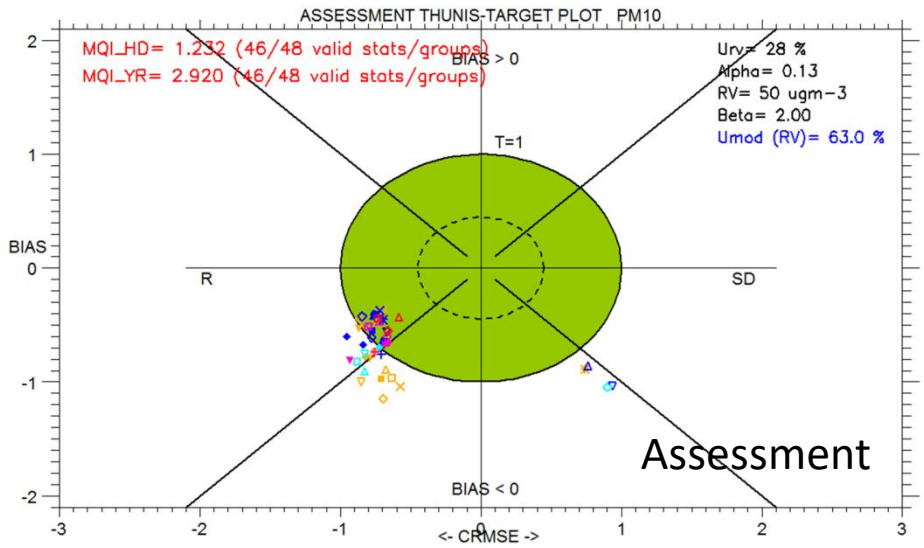


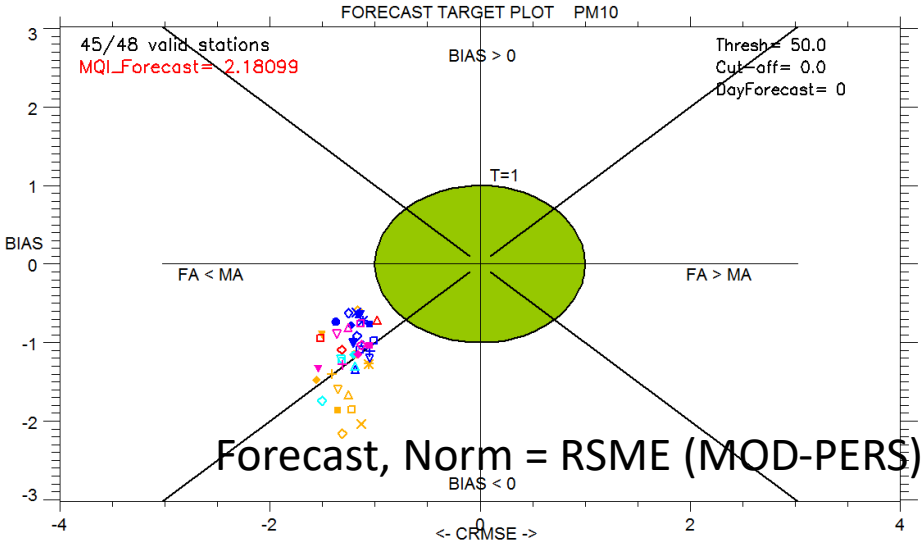
Performance diagram
+ sensitivity

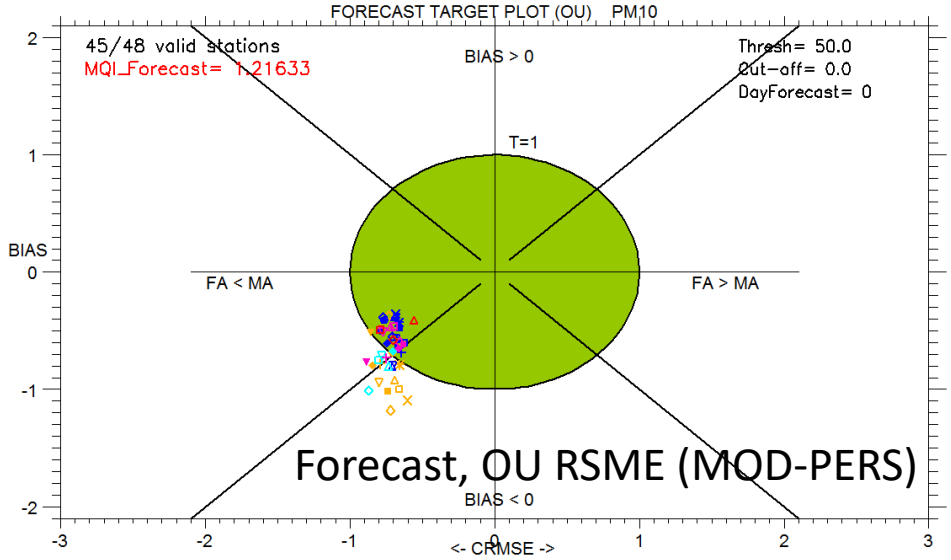


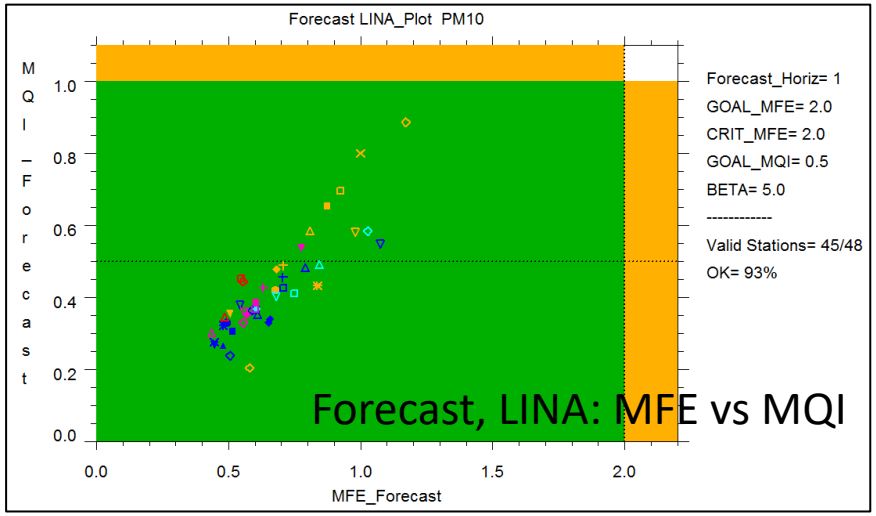
Normalized Performance diagram
(Norm = PERS) + sensitivity

3. Target plots, Lina, OU-Philippe: No POD, SR





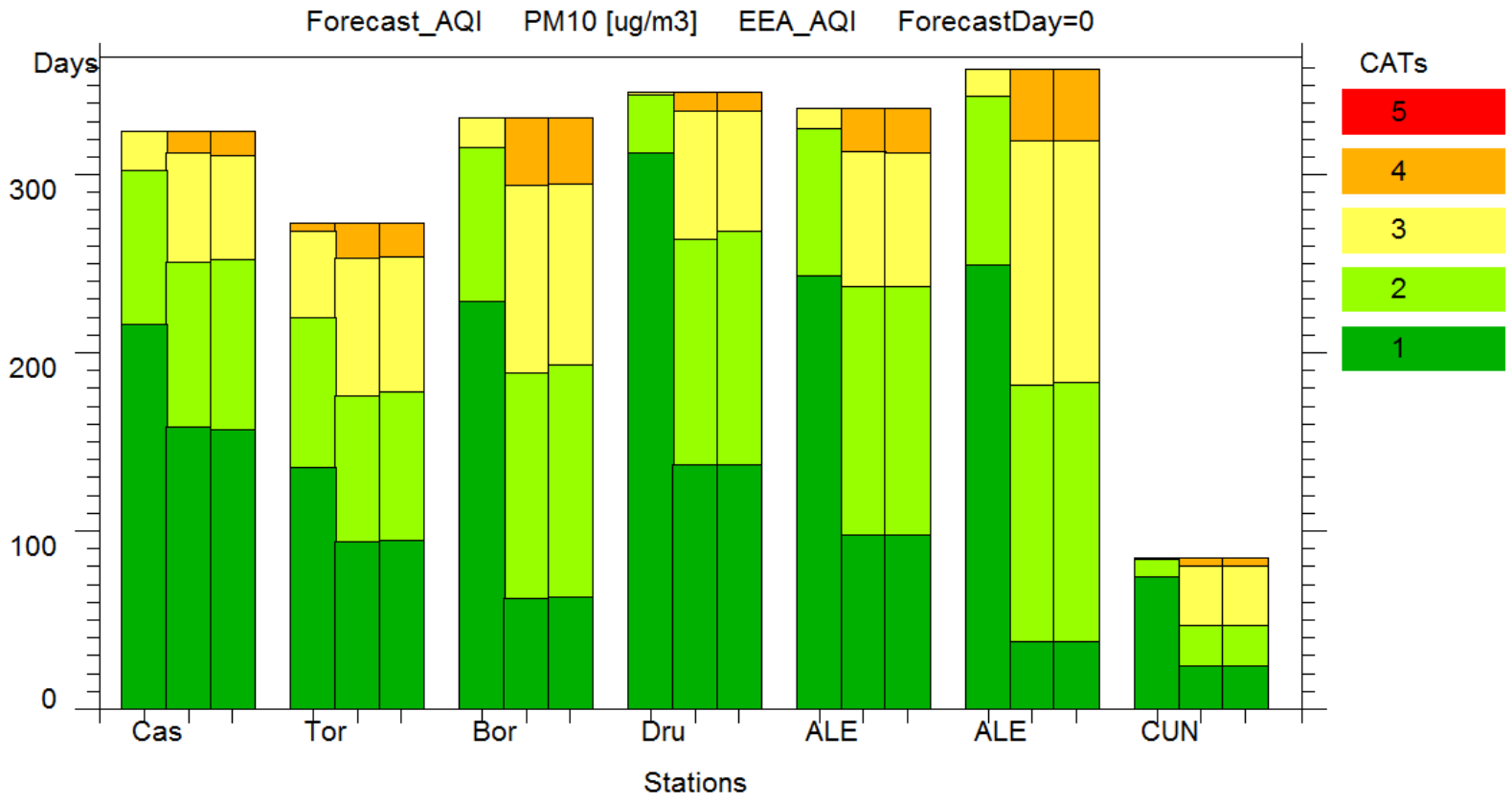




Odiff = OBS – PERS
If Odiff > 0 then Odiff:=Odiff+Crit
If Odiff <= 0 then Odiff:=Odiff-Crit
Norm = RMSE (Odiff)

MFE = mean(2*|MOD-OBS|/|MOD+OBS|)
MFE_{pers} = mean(2*|PERS-OBS|/|PERS+OBS|)
MQI = MFE/(β* MFE_{pers})

4. Air Quality Indices



Sub Bars: M O P

EEA_AQI:	Cat5: Very Poor:	180.0 ---	5000.0
	Cat4: Poor:	90.0 ---	180.0
	Cat3: Medium:	50.0 ---	90.0
	Cat2: Good:	25.0 ---	50.0
	Cat1: Very Good:	0.0 ---	25.0

Strt/end Ind: 1-8760
Model (s): MOD1
Parameter: PM10
Scen: 2005
Extra Values: 0
Season: Year
Day hours: All 24h
Time Average: Preserve
Daily stats: Mean

To SUMMARIZE

3 types of approaches

- Based on exceedances of the LV
  FA,MI,GA^{+},GA^{-}, …, POD,SR)
  Bar plots, Performance plots

- Based of RMSE,MFE,MQI + normalization (Pers, OU)
  Target plots, Lina plots

- Based of Air Quality categories (EEA, UK, USEPA, …