

# IFS cycle 43r3 scorecard

- High resolution
- Ensemble

## High resolution

			Extratropical Northern Hemisphere		Extratropical Southern Hemisphere		Tropics	
			Anomaly correlation/SEEPS	RMS error/Std. dev.of error	Anomaly correlation/SEEPS	RMS error/Std. dev.of error	Anomaly correlation/SEEPS	RMS error/Std. dev.of error
Analysis	Geopotential	100						
		250						
		500						
		850						
	Mean sea level pressure							
	Temperature	100						
		250						
		500						
		850						
		1000						
	Wind	100						
		250						
		500						
		850						
		1000						
	Relative humidity	250						
		700						
		1000						
	10m wind at sea							
	Significant wave height							
	Mean wave period							
Observations	Geopotential	100						
		250						
		500						
		850						
	Temperature	100						
		250						
		500						
		850						

	2m temperature							
	Wind	100						
		250						
		500						
		850						
	10m wind							
	Relative humidity	250						
		700						
	2m dew-point							
	Total cloud cover							
	24h precipitation							

			Europe		Northern America		East Asia	
			Anomaly correlation/ SEEPS	RMS error/ Std. dev.of error	Anomaly correlation/ SEEPS	RMS error/ Std. dev.of error	Anomaly correlation/ SEEPS	RMS error/ Std. dev.of error
Analysis	Geopotential	100						
		250						
		500						
		850						
	Mean sea level pressure							
	Temperature	100						
		250						
		500						
		850						
		1000						
	Wind	100						
		250						
		500						
		850						
		1000						
	Relative humidity	250						
		700						
		1000						
Observations	Geopotential	100						
		250						
		500						
		850						
	Temperature	100						
		250						

		500						
		850						
	2m temperature							
	Wind	100						
		250						
		500						
		850						
	10m wind							
	Relative humidity	250						
		700						
	2m dew-point							
	Total cloud cover							
	24h precipitation							

			Northern Atlantic		Northern Pacific	
			Anomaly correlation/ SEEPS	RMS error/ Std. dev.of error	Anomaly correlation/ SEEPS	RMS error/ Std. dev.of error
Analysis	Geopotential	100				
		250				
		500				
		850				
	Mean sea level pressure					
	Temperature	100				
		250				
		500				
		850				
		1000				
	Wind	100				
		250				
		500				
		850				
		1000				
	Relative humidity	250				
		700				
		1000				
	10m wind at sea					
	Significant wave height					
	Mean wave period					

			East Asia		Australia New Zealand	
			Anomaly correlation/ SEEPS	RMS error/ Std. dev.of error	Anomaly correlation/ SEEPS	RMS error/ Std. dev.of error
Analysis	Geopotential	100				
		250				
		500				
		850				
	Mean sea level pressure					
	Temperature	100				
		250				
		500				
		850				
		1000				
	Wind	100				
		250				
		500				
		850				
		1000				
	Relative humidity	250				
		700				
		1000				
Observations	Geopotential	100				
		250				
		500				
		850				
	Temperature	100				
		250				
		500				
		850				
	2m temperature					
	Wind	100				
		250				
		500				
		850				
	10m wind					

	Relative humidity	250				
		700				
	2m dew-point					
	Total cloud cover					
	24h precipitation					

			Arctic		Antarctic	
			Anomaly correlation/ SEEPS	RMS error/ Std. dev.of error	Anomaly correlation/ SEEPS	RMS error/ Std. dev.of error
Analysis	Geopotential	100				
		250				
		500				
		850				
	Mean sea level pressure					
	Temperature	100				
		250				
		500				
		850				
		1000				
	Wind	100				
		250				
		500				
		850				
		1000				
	Relative humidity	250				
		700				
		1000				
Observations	2m temperature					
	10m wind					
	2m dew-point					
	Total cloud cover					
	24h precipitation					

## Ensemble

	Extratropical Northern Hemisphere		Extratropical Southern Hemisphere		Tropics	
	EM RMS error	CRPS	EM RMS error	CRPS	EM RMS error	CRPS

Analysis	Geopotential	200						
		500						
		850						
		1000						
	Temperature	200						
		500						
		850						
	Wind speed	200						
		500						
		850						
Observations	Geopotential	500						
	Temperature	850						
	Wind speed	850						
	2m temperature							
	10m wind							
	24h precipitation							

			Europe		Northern America		East Asia	
			EM RMS error	CRPS	EM RMS error	CRPS	EM RMS error	CRPS
Analysis	Geopotential	200						
		500						
		850						
		1000						
	Temperature	200						
		500						
		850						
	Wind speed	200						
		500						
		850						
Observations	Geopotential	500						
	Temperature	850						
	Wind speed	850						
	2m temperature							
	10m wind							
	24h precipitation							

			East Asia		Australia New Zealand	
			EM RMS error	CRPS	EM RMS error	CRPS
Analysis	Geopotential	200				

		500				
		850				
		1000				
	Temperature	200				
		500				
		850				
	Wind speed	200				
		500				
		850				
Observations	Geopotential	500				
	Temperature	850				
	Wind speed	850				
	2m temperature					
	10m wind					
	24h precipitation					

			Arctic		Antarctic	
			EM RMS error	CRPS	EM RMS error	CRPS
Analysis	Geopotential	200				
		500				
		850				
		1000				
	Temperature	200				
		500				
		850				
	Wind speed	200				
		500				
		850				
Observations	Wind speed	850				
	2m temperature					
	10m wind					
	24h precipitation					

The **score card** provides a quick visual overview over the performance of the cycle 43r3 scores compared to cycle 43r1.

Each symbol indicates whether for the given time step, score, parameter, level and domain the cycle 43r3 is better or worse than the cycle 43r1 on the given level of statistical significance.

**Symbol legend:** for a given forecast step...

43r3 **better** than 43r1 statistically **significant with 99.7% confidence**

43r3 **better** than 43r1 statistically **significant with 95% confidence**

43r3 better than 43r1 statistically **significant with 68% confidence**

not really any difference between 43r1 and 43r3

43r3 worse than 43r1 statistically **significant with 68% confidence**

43r3 **worse** than 43r1 statistically **significant with 95% confidence**

43r3 **worse** than 43r1 statistically **significant with 99.7% confidence**