



Verification of ICON-LAM for South America domain / Preliminary results



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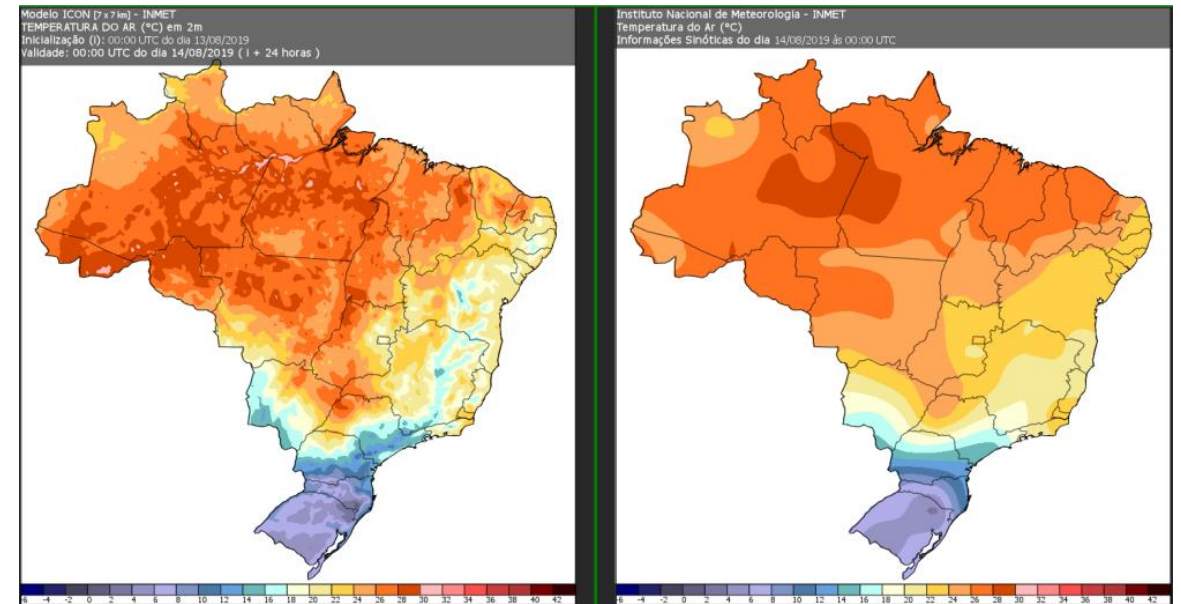
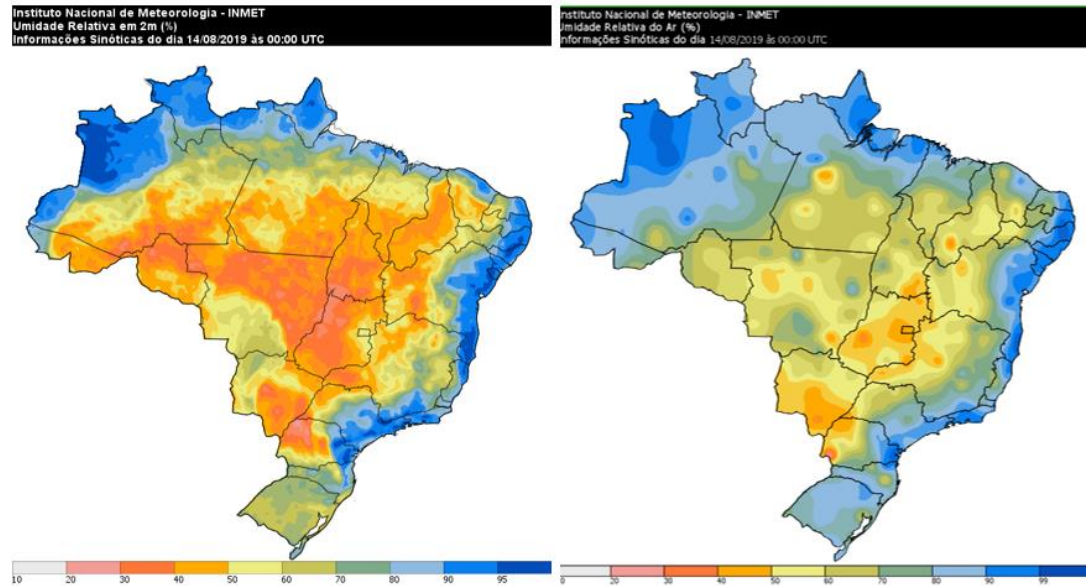
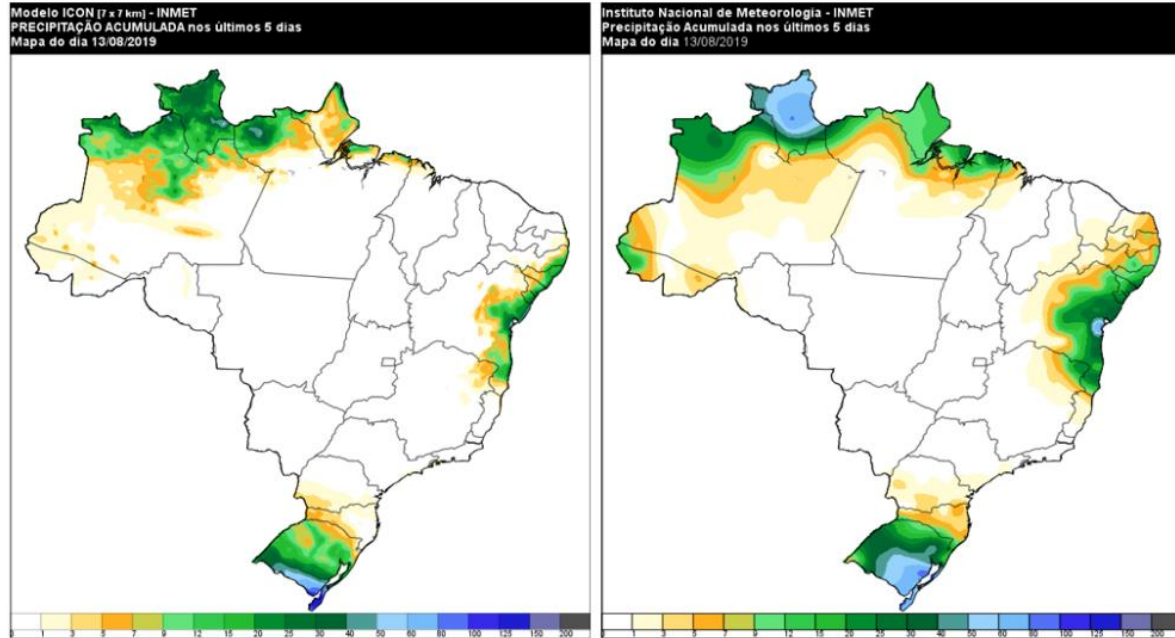
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Sistema Meteorológico do Paraná²
Brazil**

Priority Project “C2I” - Transition of COSMO to ICON-LAM
05th March 2020 – DWD – Offenbach - Germany

Strategy for verification of ICON outputs

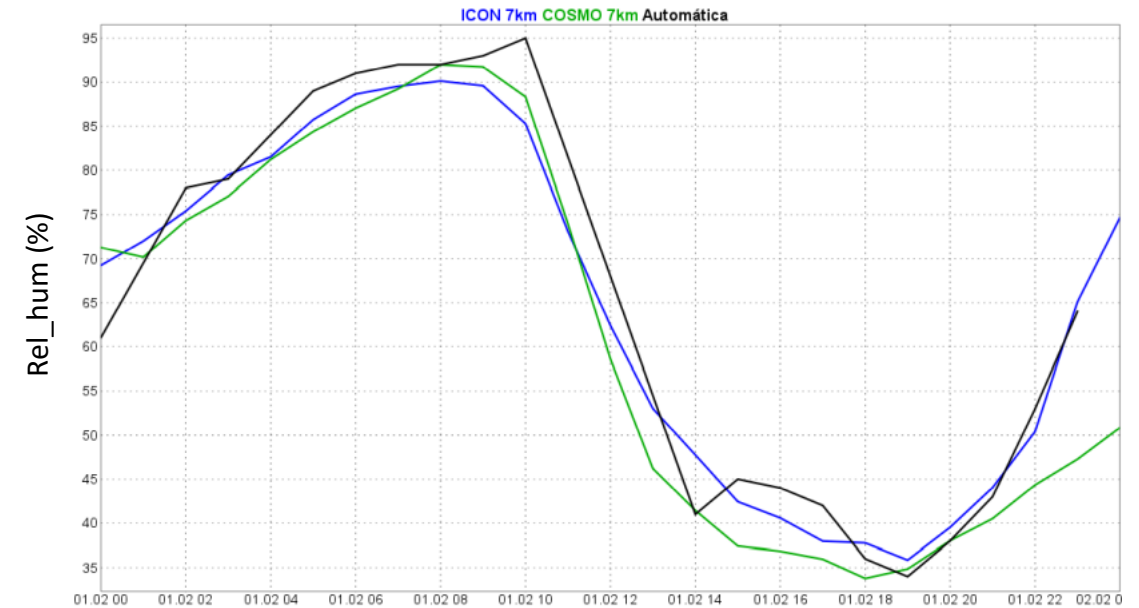
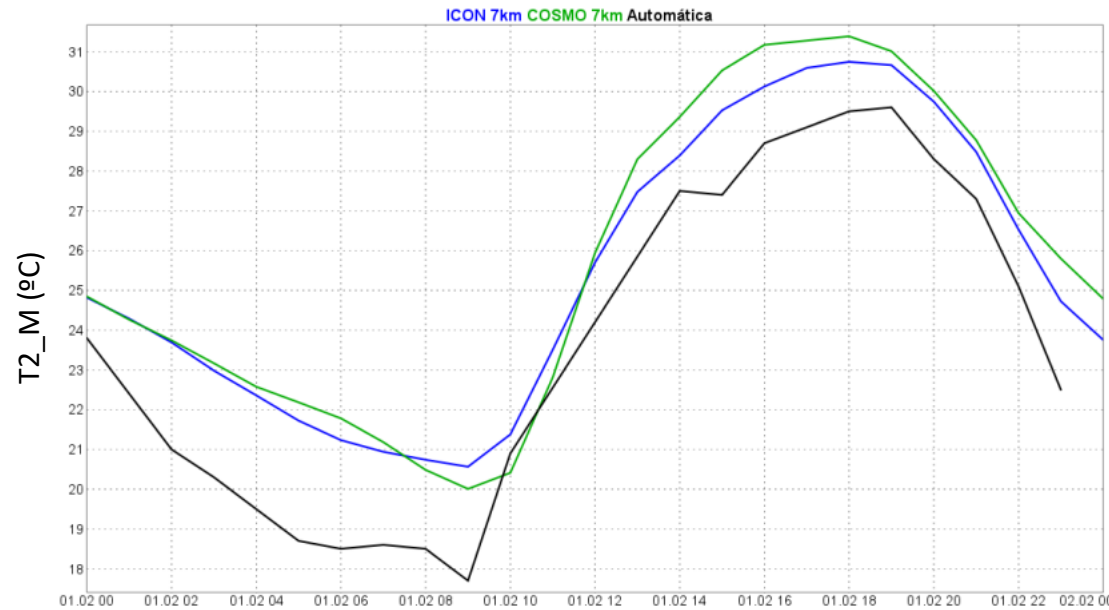
- Comparison of predicted and corresponding analysis parameters – ICON and COSMO;
- Comparison of predicted rainfall and observed values – ICON and COSMO;
- Time evolution of a comparison between model and observation for point meteogram outputs;
- Estimation of bias and error of surface variables (in progress).

ICON x Automatic Stations Interpolated Data



Results from INMET, Brazil

South America area at 6.5km (R3B8) forced by ICON Global

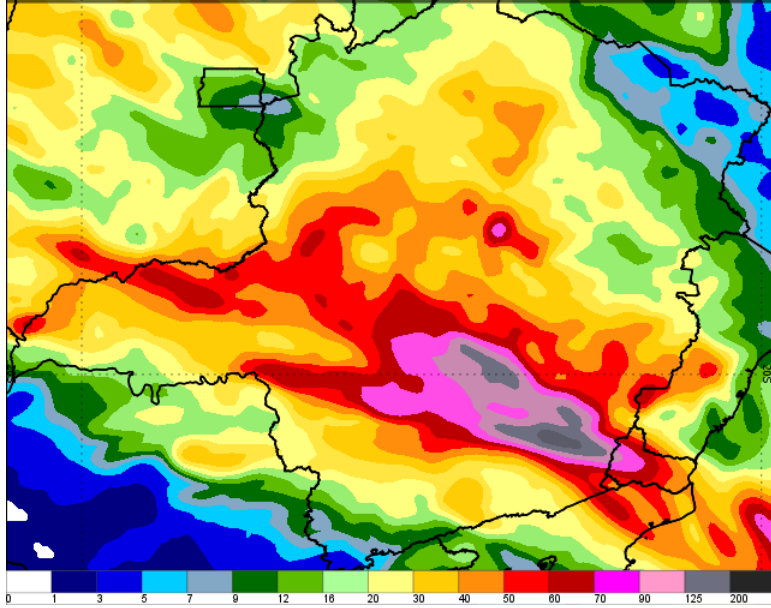


Hourly values for ICON, COSMO and **Brasília-DF automatic station**. January 24th 2020

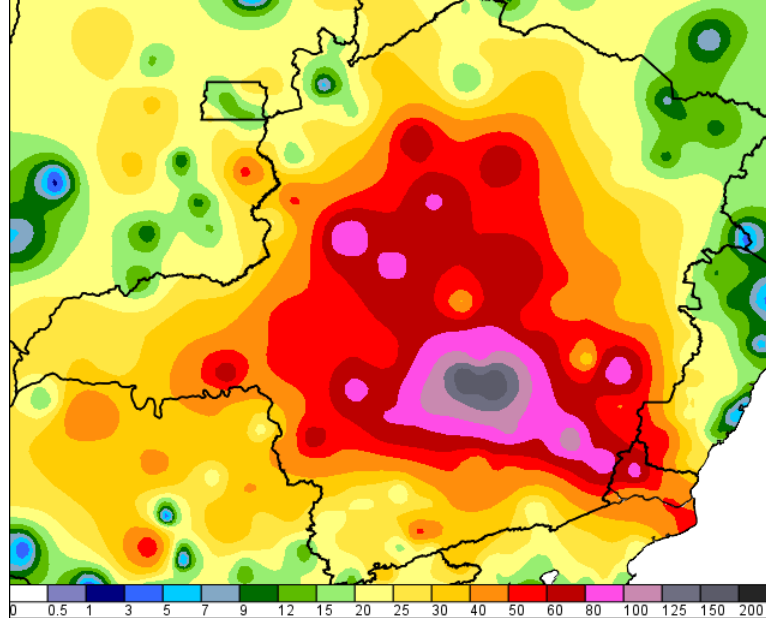
	ICON	COSMO	OBS
T2_m (°C)	25.4	26.8	24.8
Rel_hum (%)	65	62	64

Mean daily values for **ICON**, **COSMO** and Brasília-DF automatic station

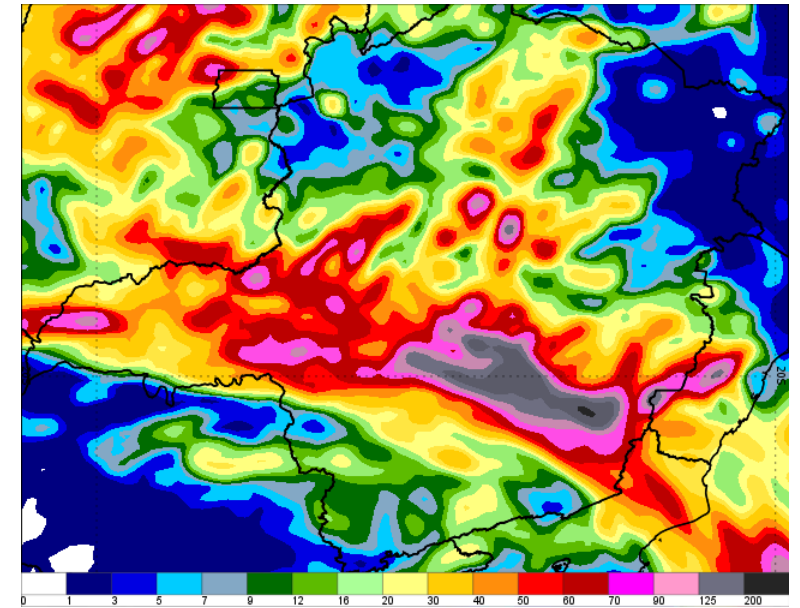
Results from INMET, Brazil – Belo Horizonte-MG



ICON 7km

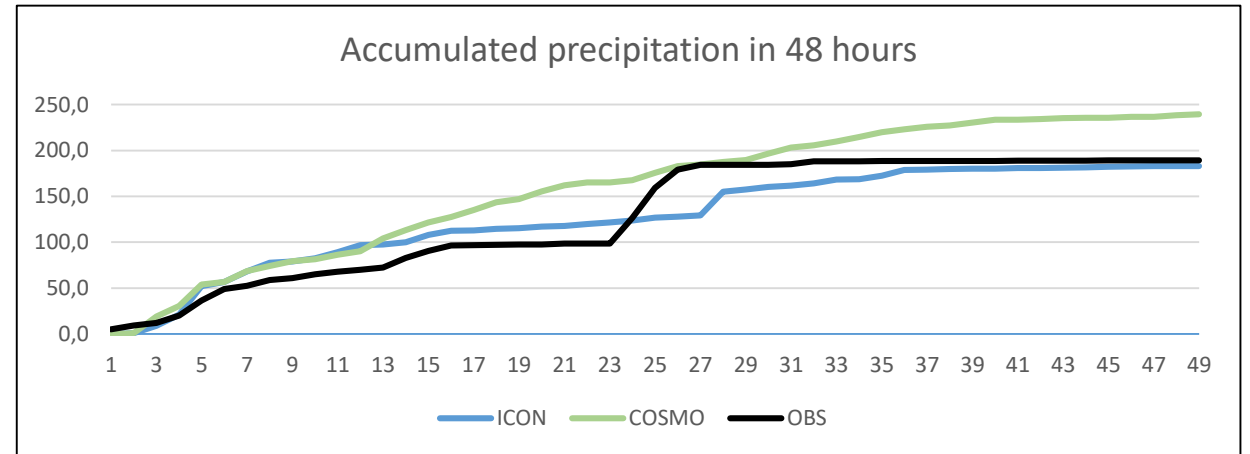


Automatic Stations Interpolated Data



COSMO 7km

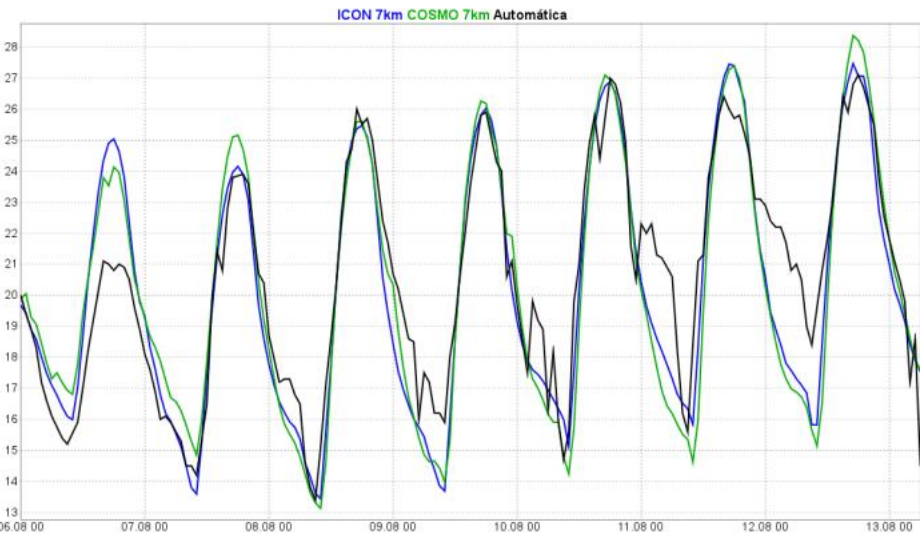
	ICON	COSMO	OBS
Prec_24h	126,8	175,5	159,4
Prec_48h	183	239,4	189,2
Dif_Prec_24h (F-O)	-32,6	16,1	
Dif_Prec_48h (F-O)	-6,2	50,2	



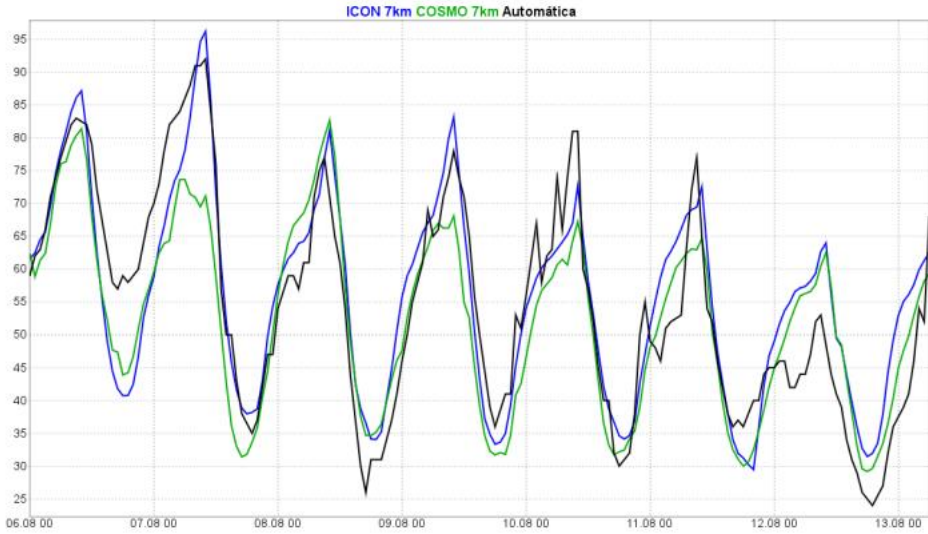
Accumulated precipitation in 24 and 48 hours for **ICON**, **COSMO** and Belo Horizonte-MG automatic station

Comparison: ICON x COSMO x Automatic Stations (more than 500)

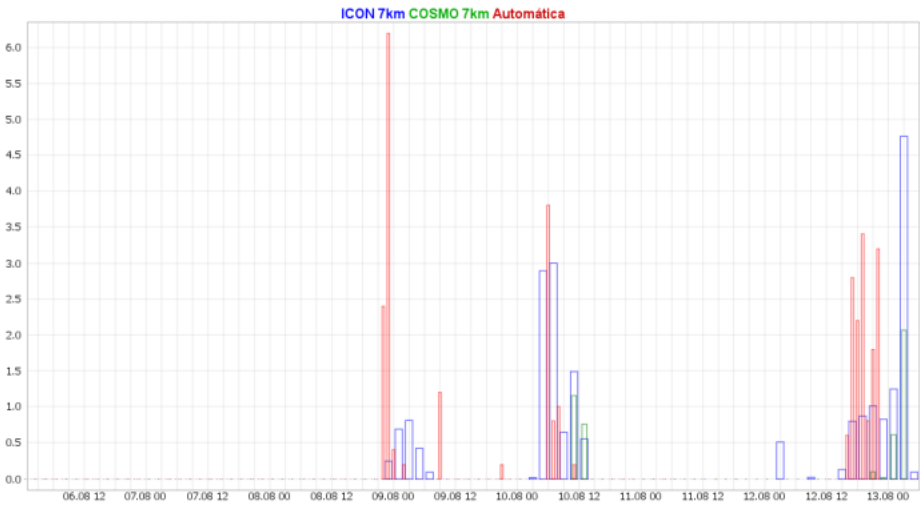
Temperatura 2m (°C)
Local: Brasília
Validade: 06.08.2019 00:00 - 13.08.2019 06:00



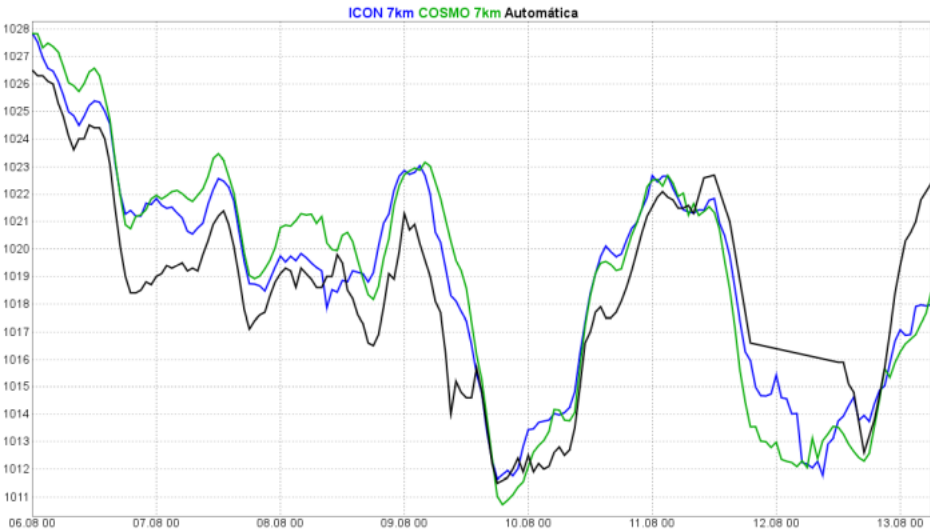
Umidade Relativa em 2m (%)
Local: Brasília
Validade: 06.08.2019 00:00 - 13.08.2019 06:00



Precipitação (mm/h)
Local: Porto Alegre
Validade: 06.08.2019 01:00 - 13.08.2019 06:00



Pressão Reduzida (hPa)
Local: Porto Alegre
Validade: 06.08.2019 00:00 - 13.08.2019 06:00

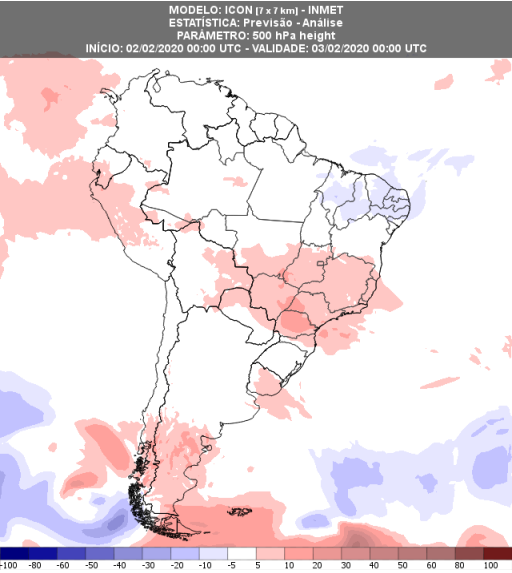


Comparison of predicted and corresponding analysis parameters – ICON and COSMO

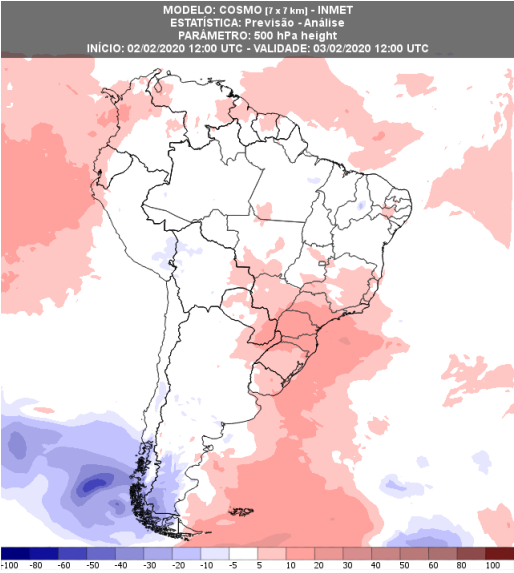
Geop Height 500 hPa – 24h

(Fc - An)

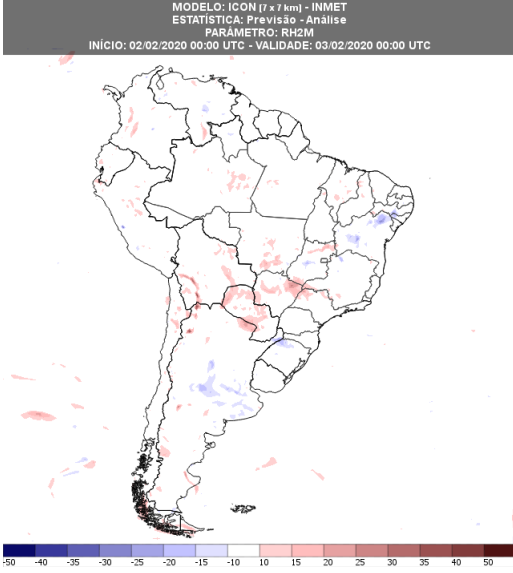
2m RH – 24h



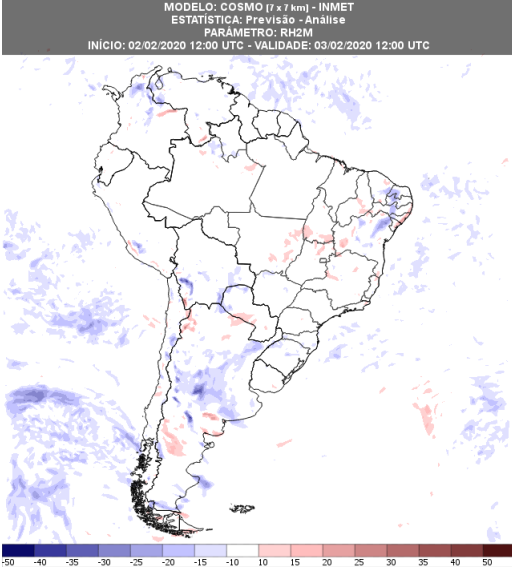
ICON 7km



COSMO 7km

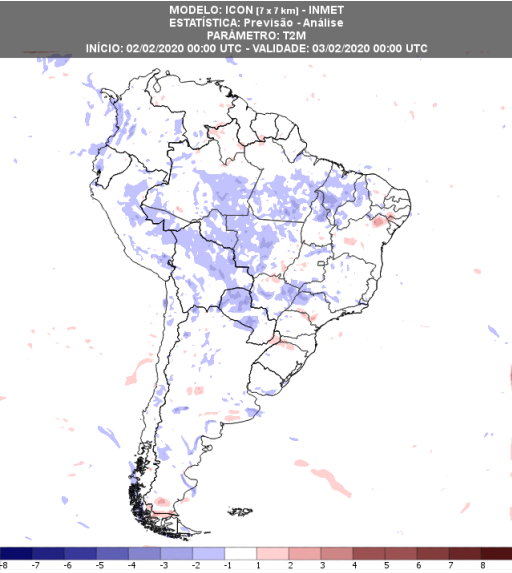


ICON 7km

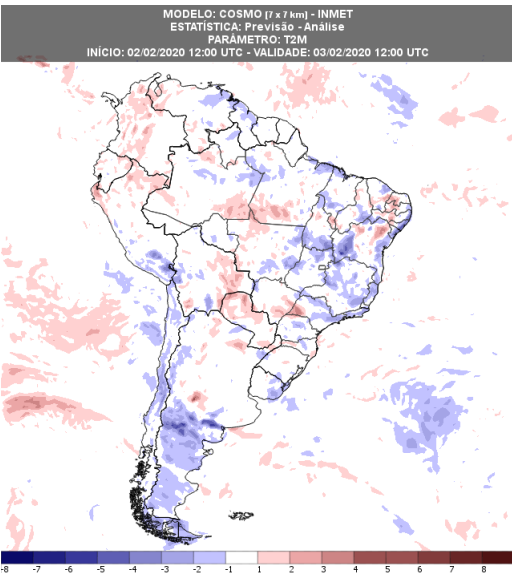


COSMO 7km

2m T – 24h



ICON 7km



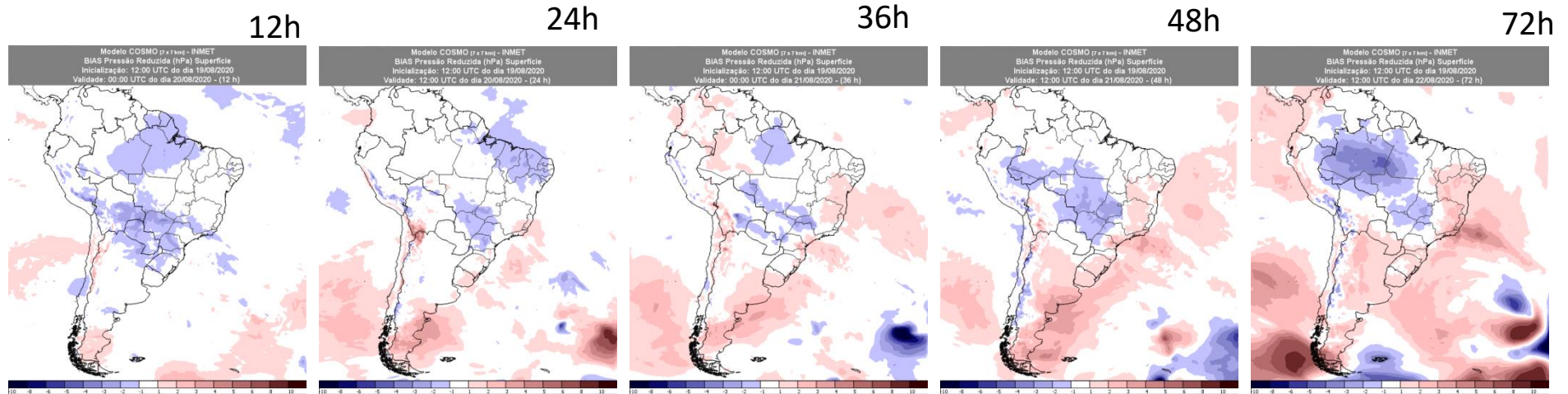
COSMO 7km

Comparison of predicted and corresponding analysis parameters – ICON and COSMO

(Fc - An)

(August 19th, 2020)

COSMO – 7km



ICON – 7km

