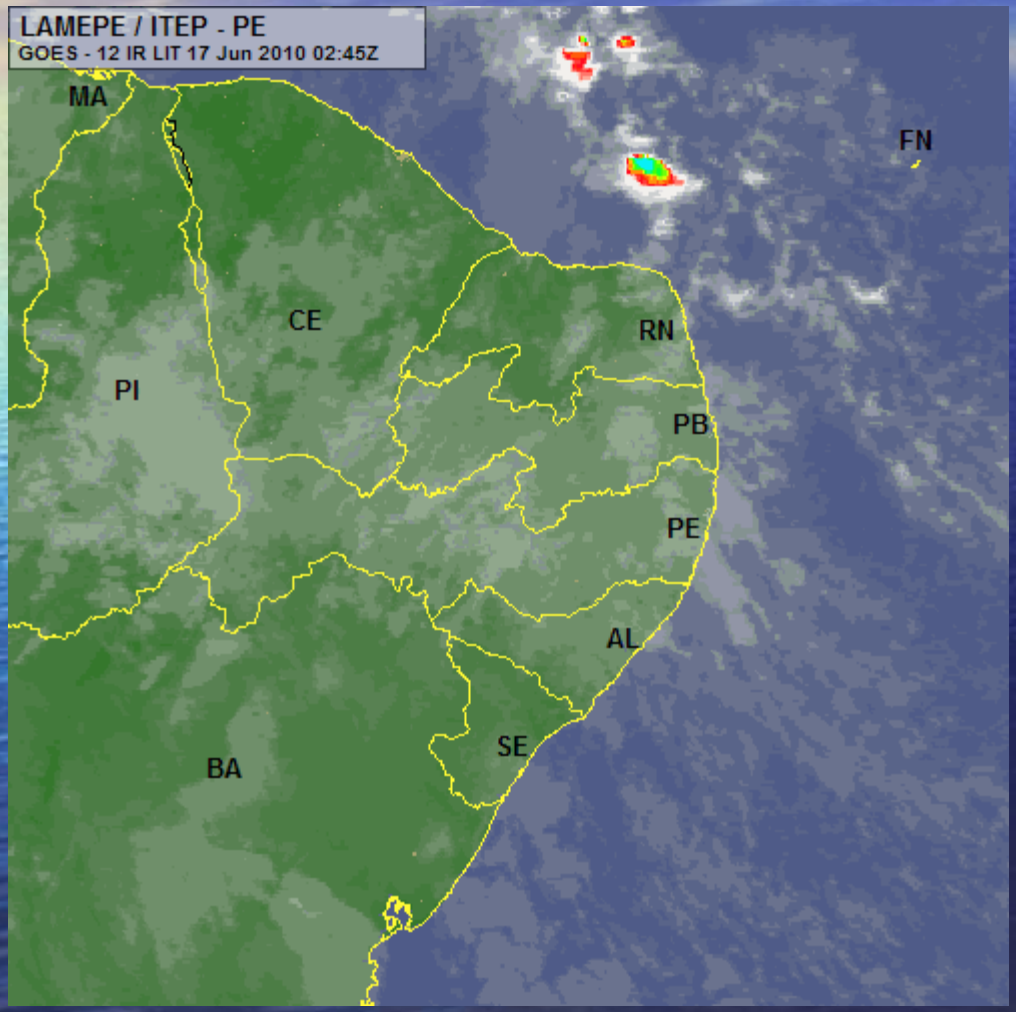
III Worketa - Cachoeira Paulista

Adriano Almeida Santos - LAMEPE

Arthur Chaves - CEMIG

Romilson Ferreira - LAMEPE

ESTUDO DE CASO DAS CHUVAS DE JUNHO/2010 EM PERNAMBUCO



EVENTO EXTREMO

Distúrbio Ondulatório de Leste (?) atinge leste do Nordeste.

Motivação e Justificativa:

O Lamepe é responsável pela previsão e monitoramento meteorológico do estado de Pernambuco. Tendo em vista a severidade do evento que ocorreu em junho desta ano, há o interesse de avaliar a destreza do modelo Eta (rodado operacionalmente neste centro) em prever eventos extremos.

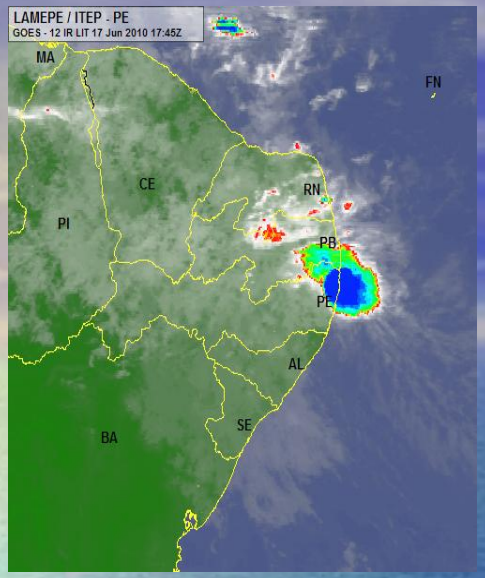
Objetivo:

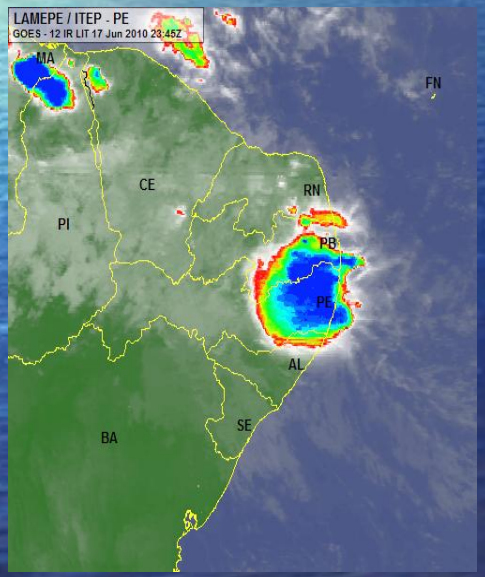
Avaliar os resultados do modelo Eta utilizando diferentes esquemas de parametrização Cumulus.

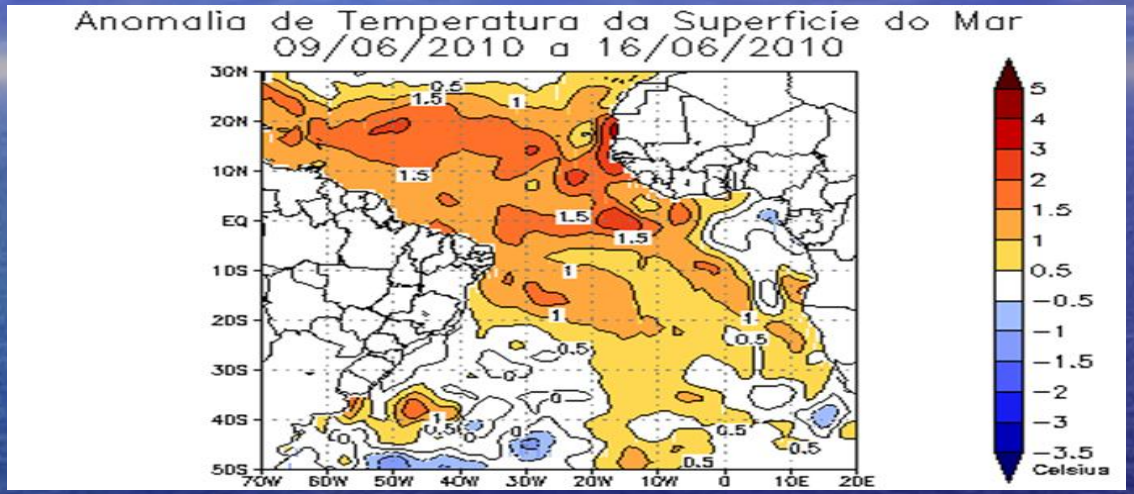
Conseqüências

Palmares - PE

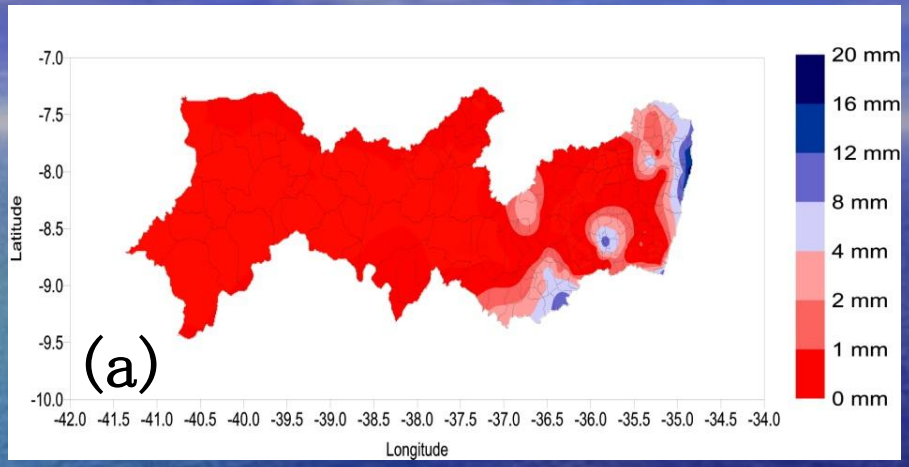
Barreiros - PE

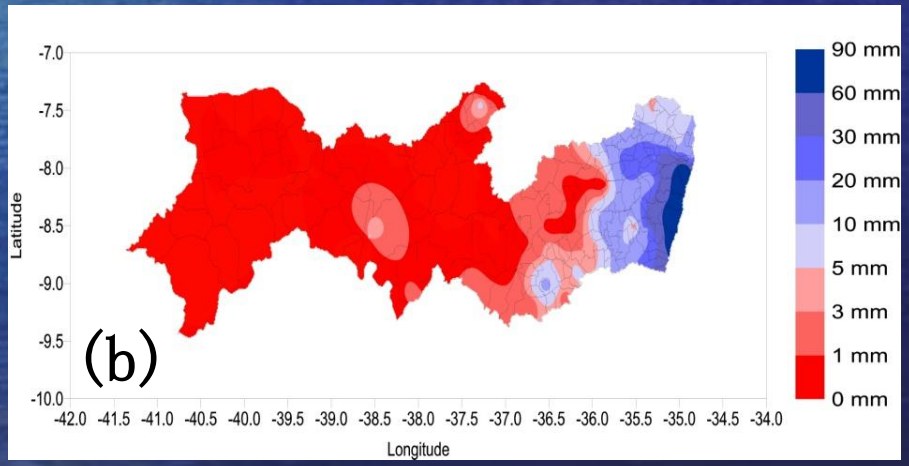

LAMEPE / ITEP - PE
GOES - 12 IR LIT 17 Jun 2010 17:45Z
MA
FN
CE
RN
PI
PB
PE
AL
SE
BA


LAMEPE / ITEP - PE
GOES - 12 IR LIT 17 Jun 2010 23:45Z
MA
FN
CE
RN
PI
PB
PE
AL
SE
BA


Anomalia de Temperatura da Superficie do Mar
09/06/2010 a 16/06/2010
30N
20N
10N
EQ
10S
20S
30S
40S
50S
70W
60W
50W
40W
30W
20W
10W
0
10E
20E
5
4
3
2
1.5
1
0.5
−0.5
−1
−1.5
−2
−3
−3.5
Celsius

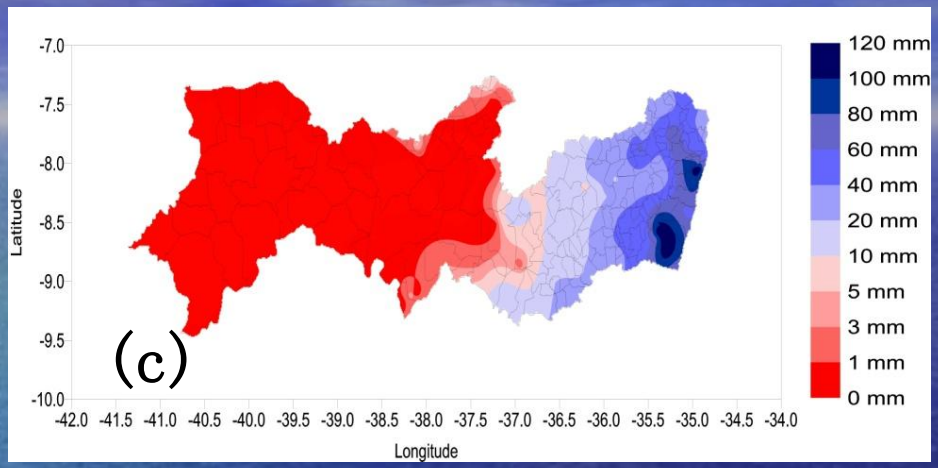
Monitoramento Pluviométrico

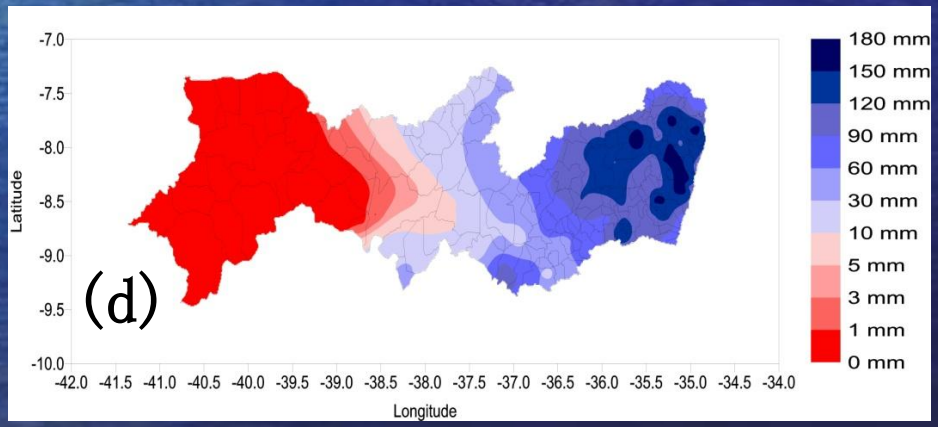




Precipitação registrada em Pernambuco nos dias 15 (a) e 16 (b) de Junho de 2010

Monitoramento Pluviométrico





Precipitação registrada em Pernambuco nos dias 17(c) 18(d)

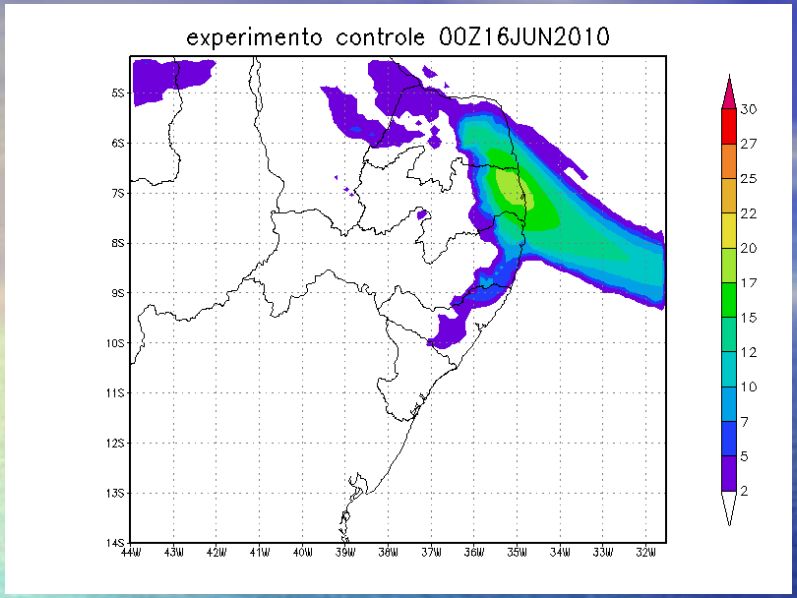
Experimento Realizado

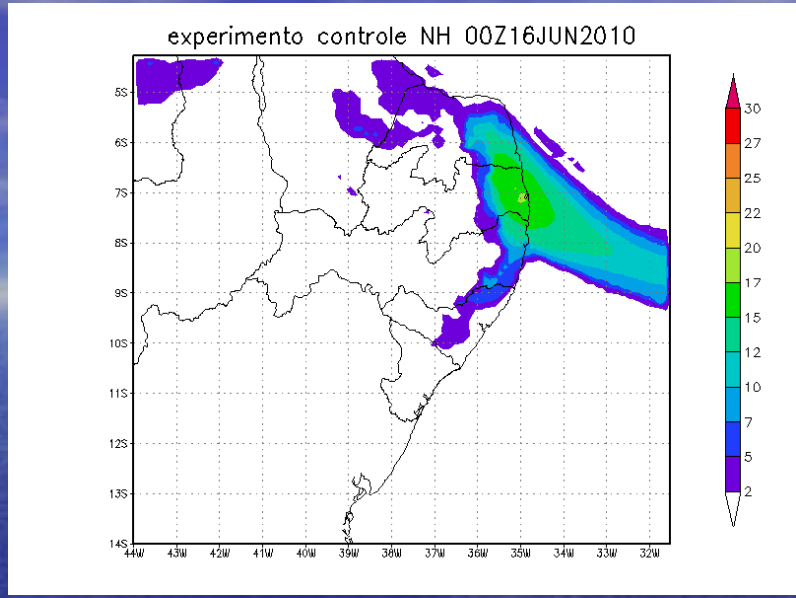
O modelo Eta com resolução de 40 km foi utilizado como condição inicial e de contorno.

Esquemas de convecção:

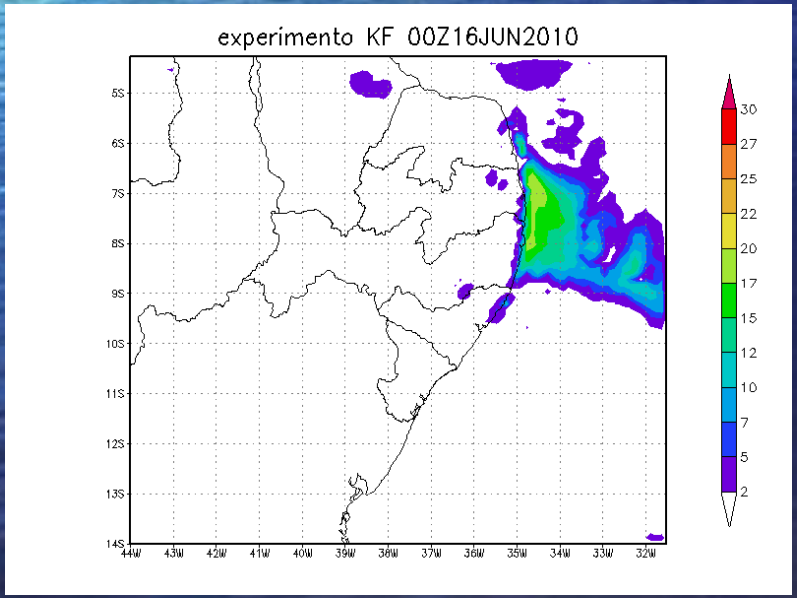
- Betts Miller-Janjic
- Betts Miller-Janjic – Não hidrostático
- Kain-Fritsch
- Kain-Fritsch – Fluxo de Momento

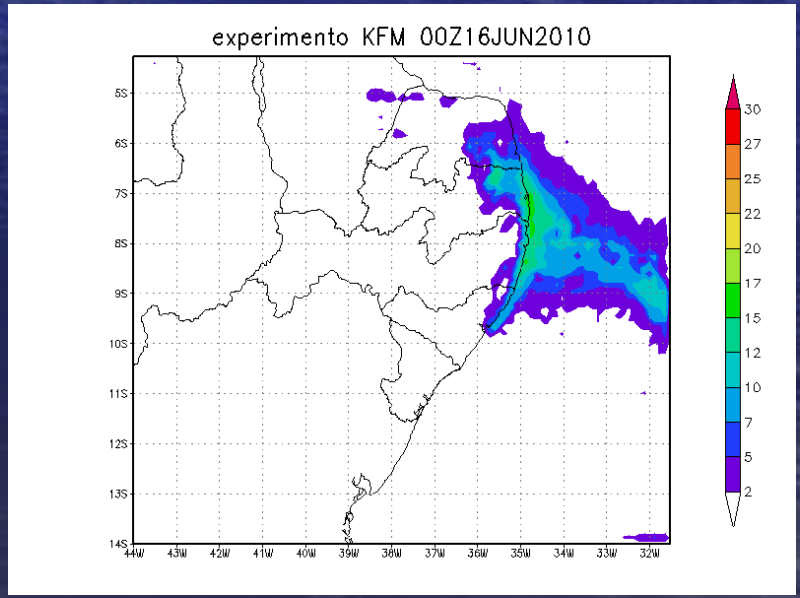
Betts Miller-Janjic



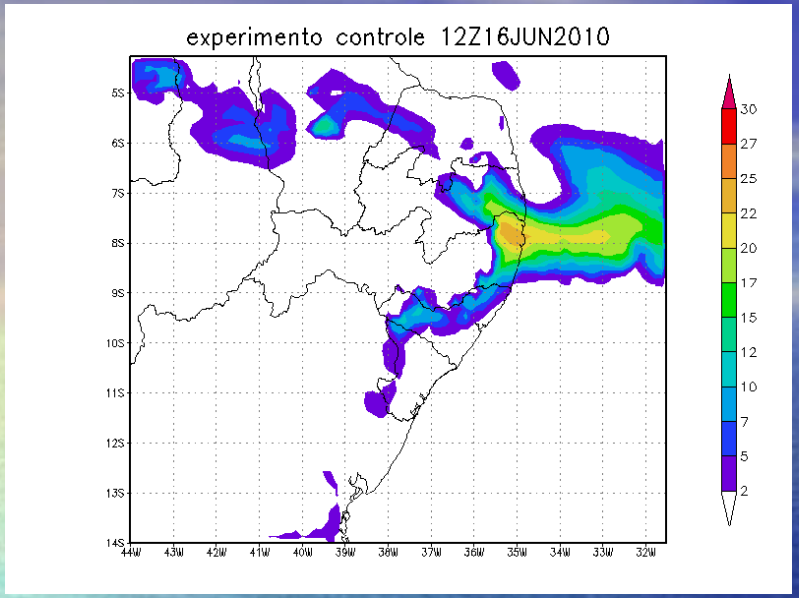


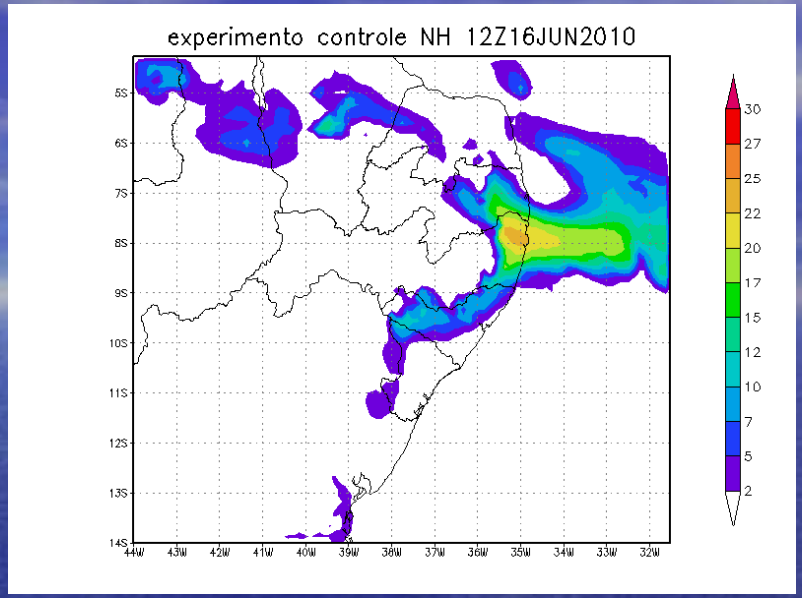
Kain-Fritsch



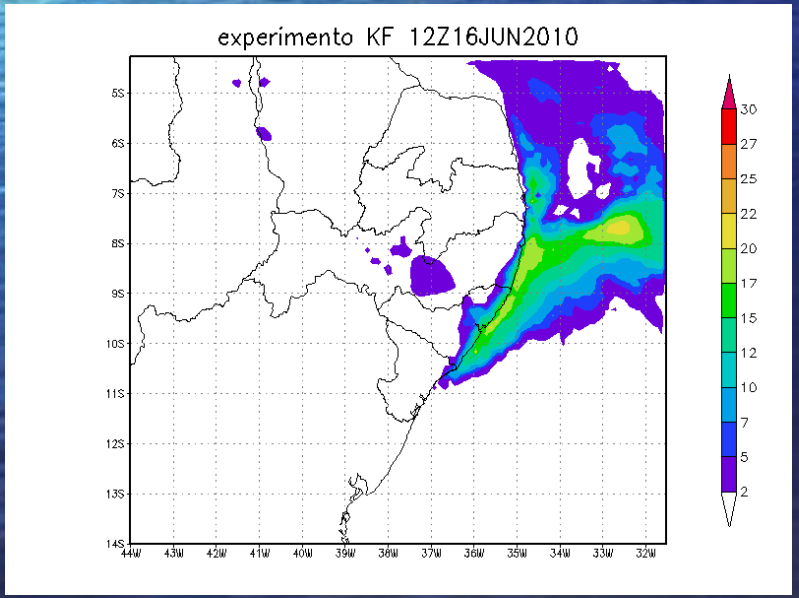


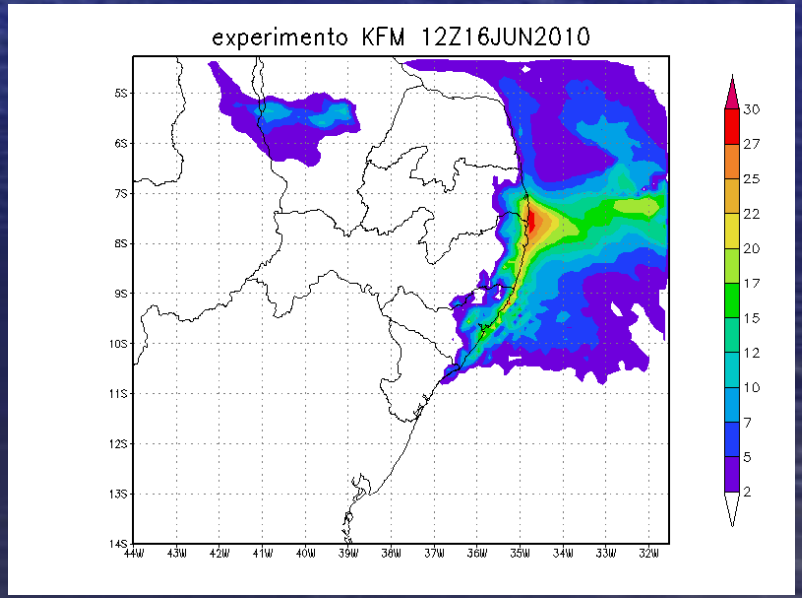
Betts Miller-Janjic



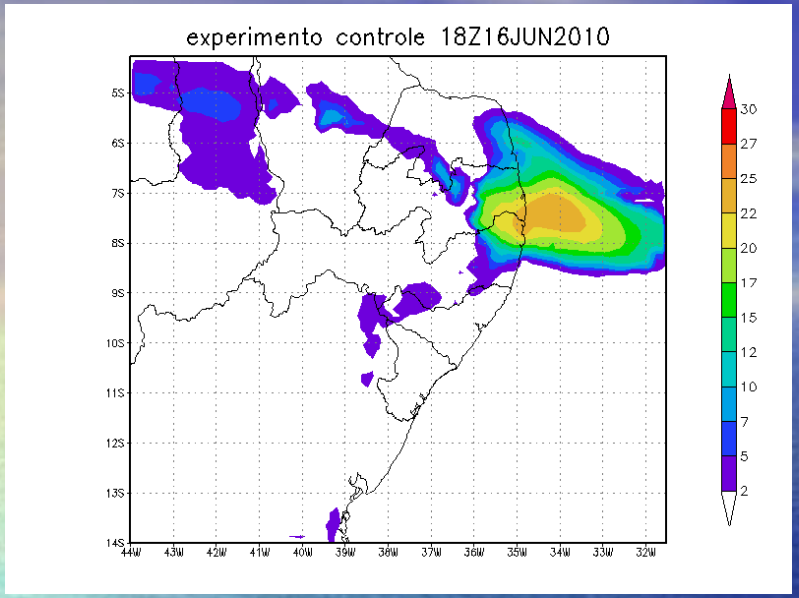


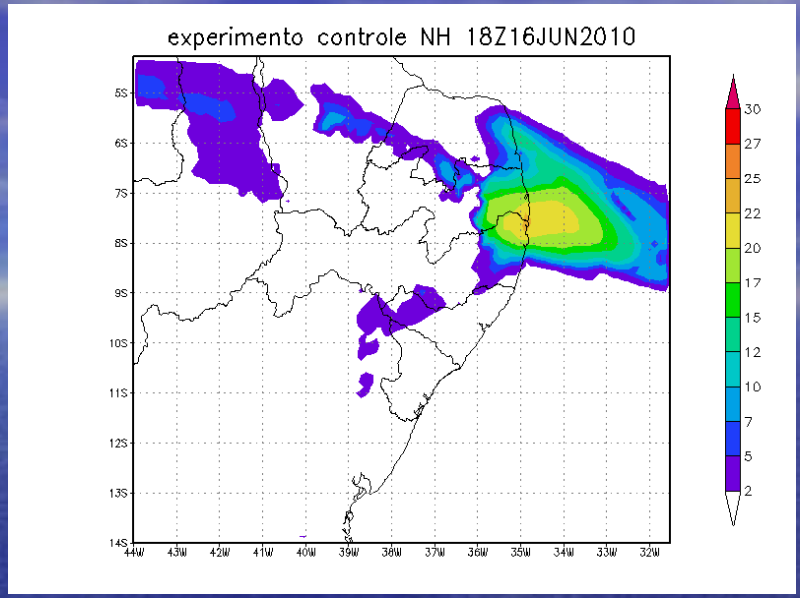
Kain-Fritsch



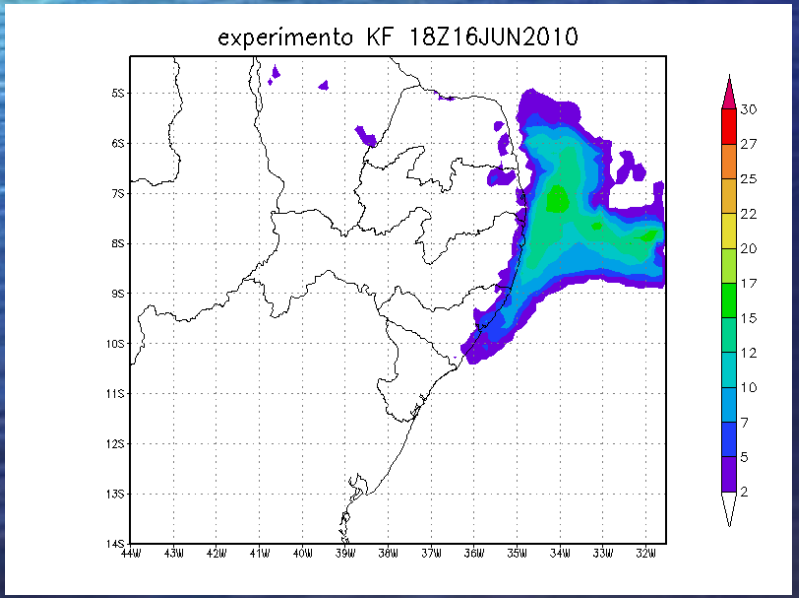


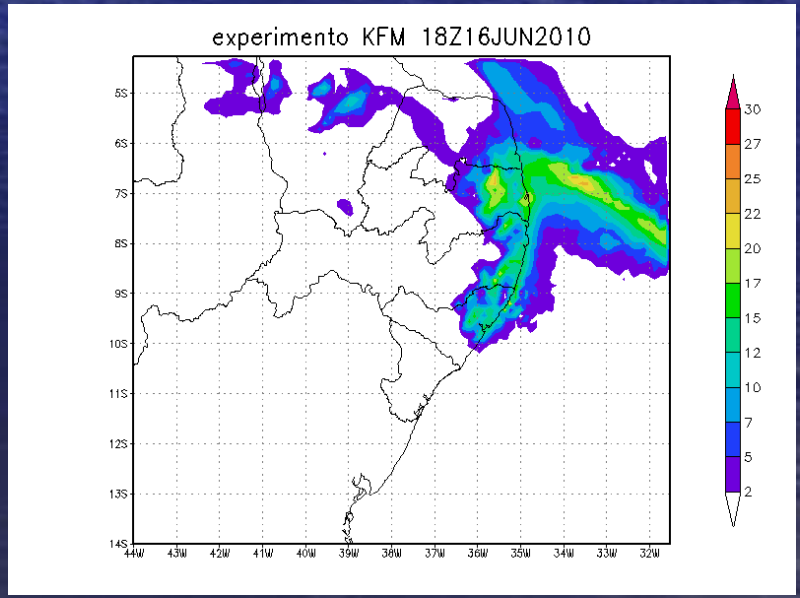
Betts Miller-Janjic



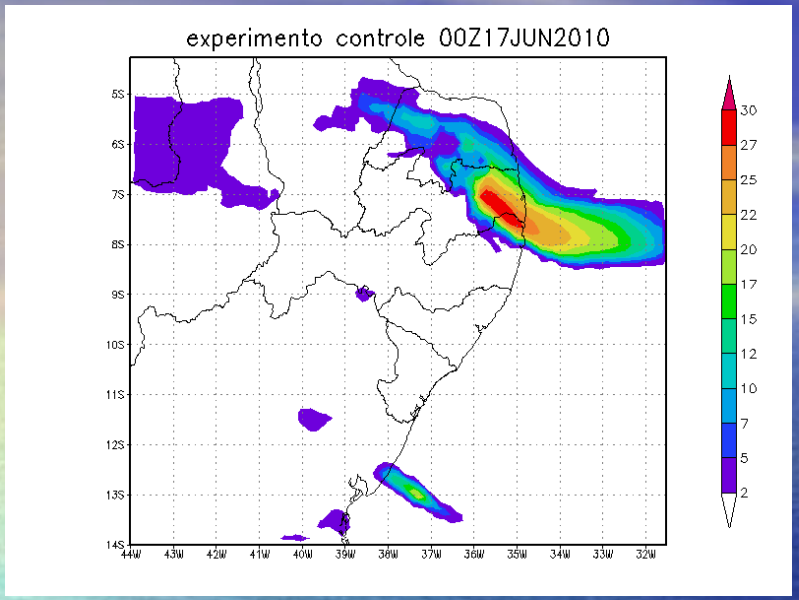


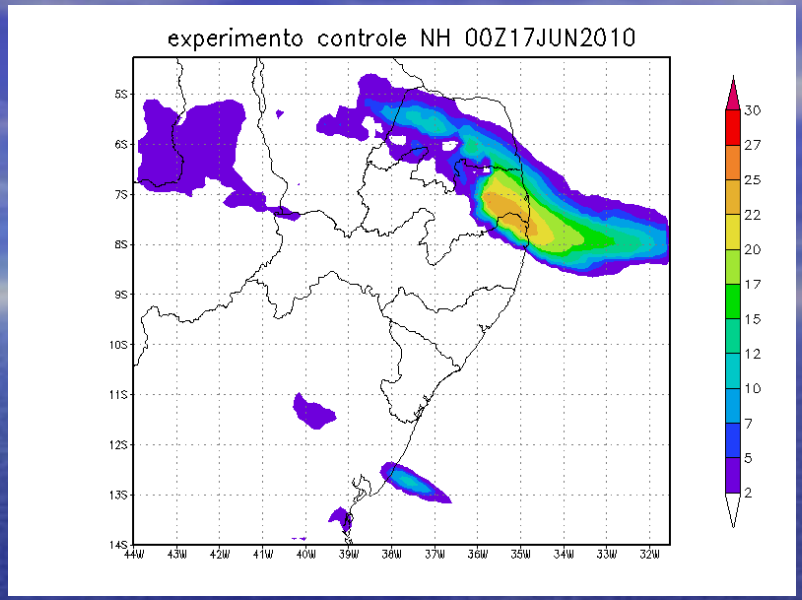
Kain-Fritsch



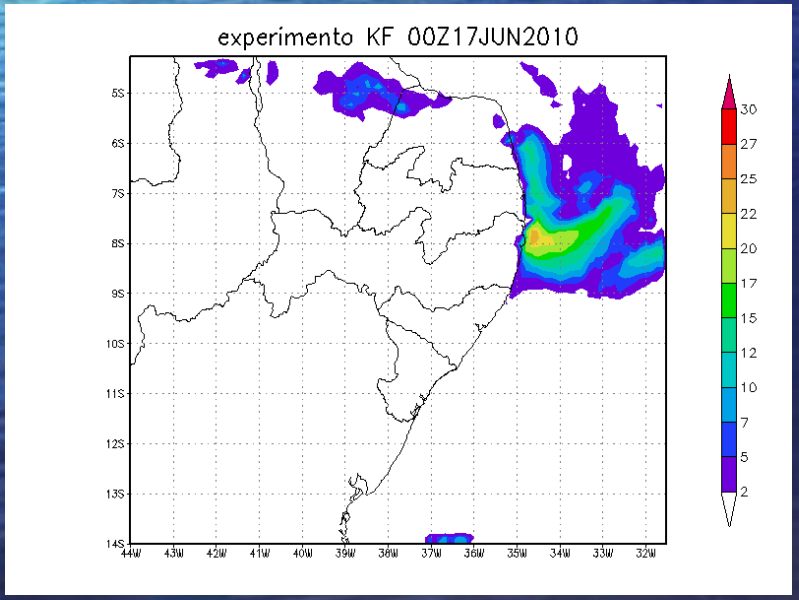


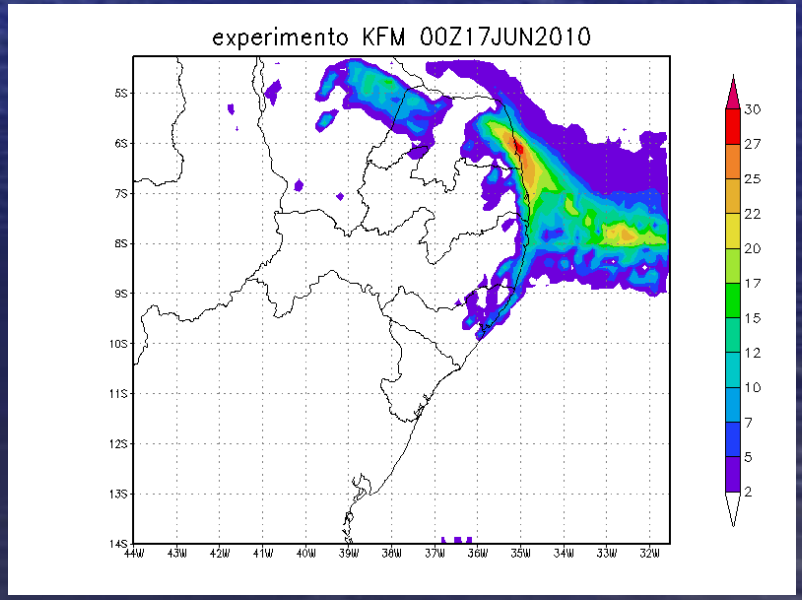
Betts Miller-Janjic



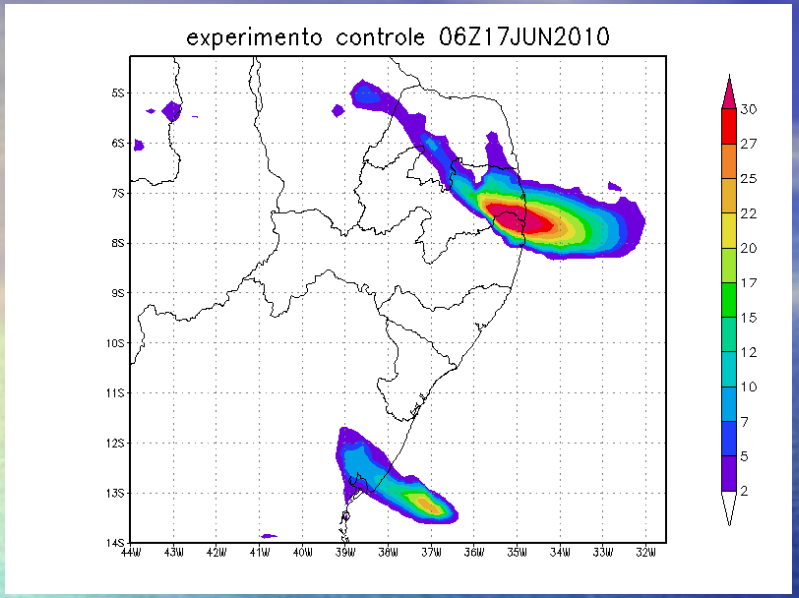


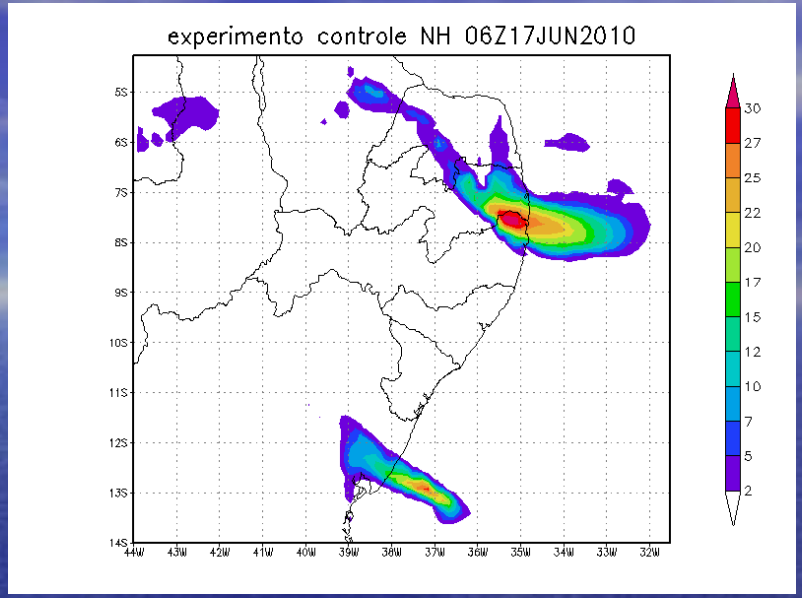
Kain-Fritsch



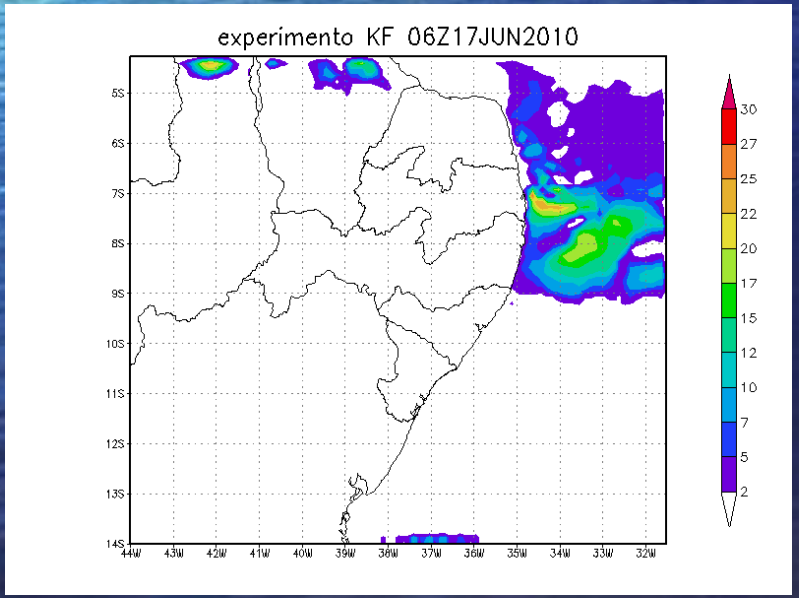


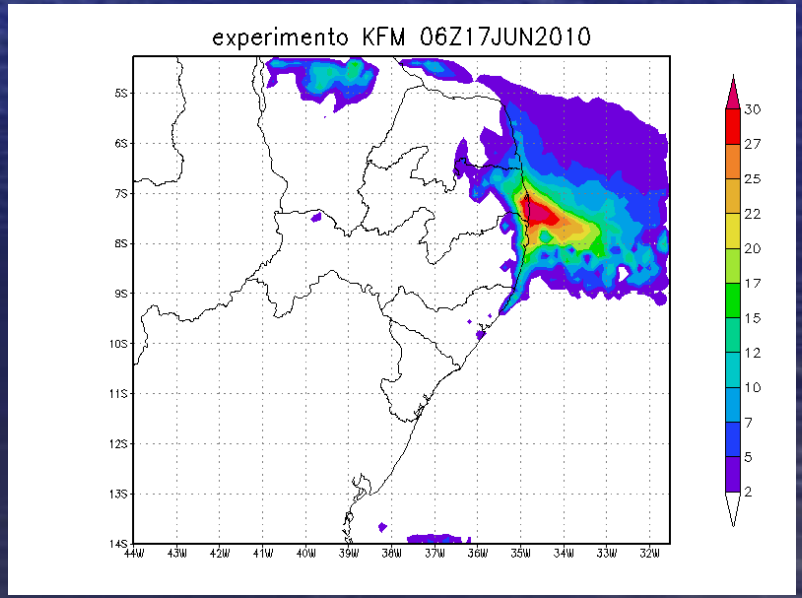
Betts Miller-Janjic



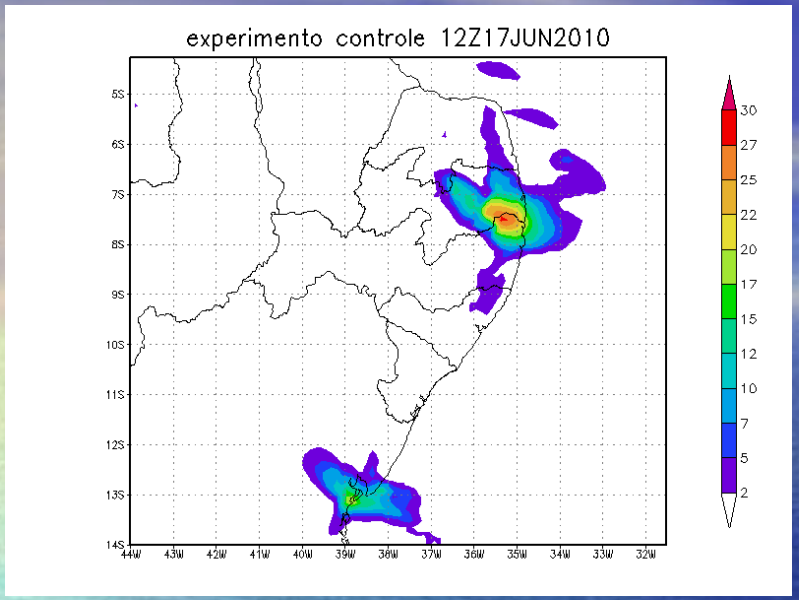


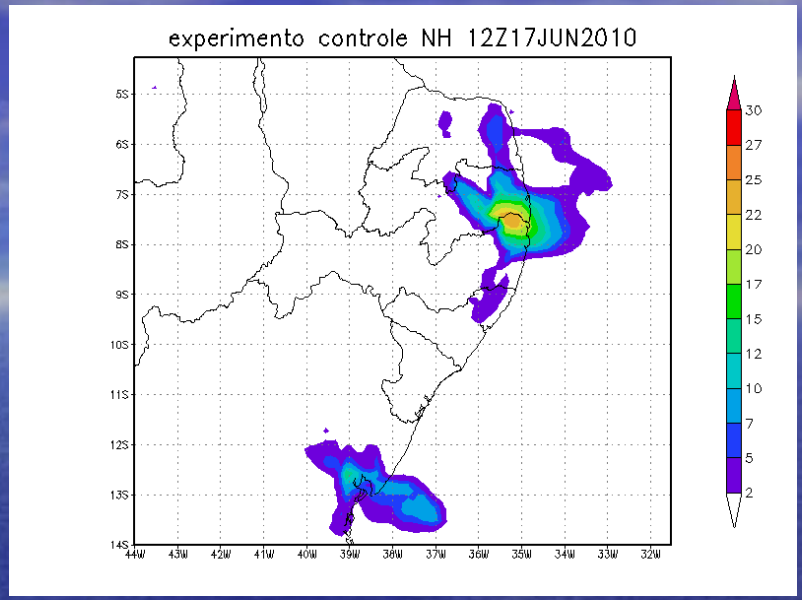
Kain-Fritsch



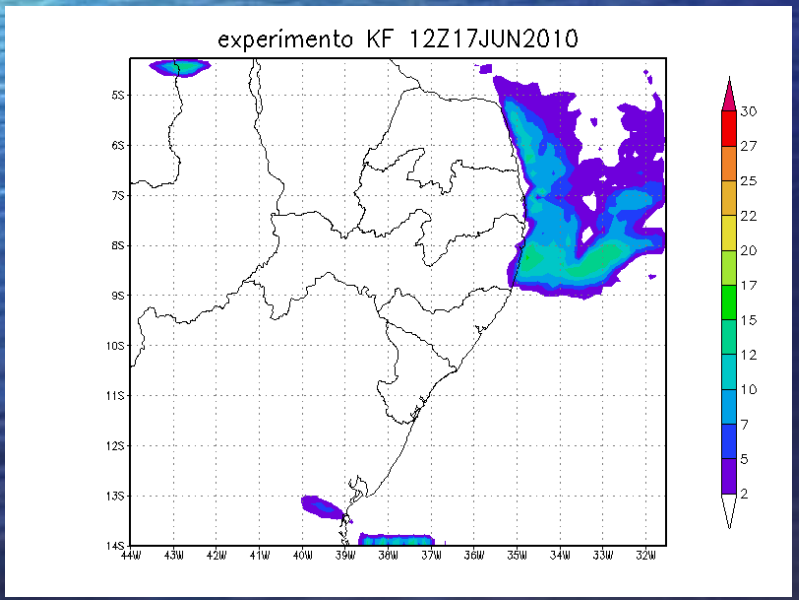


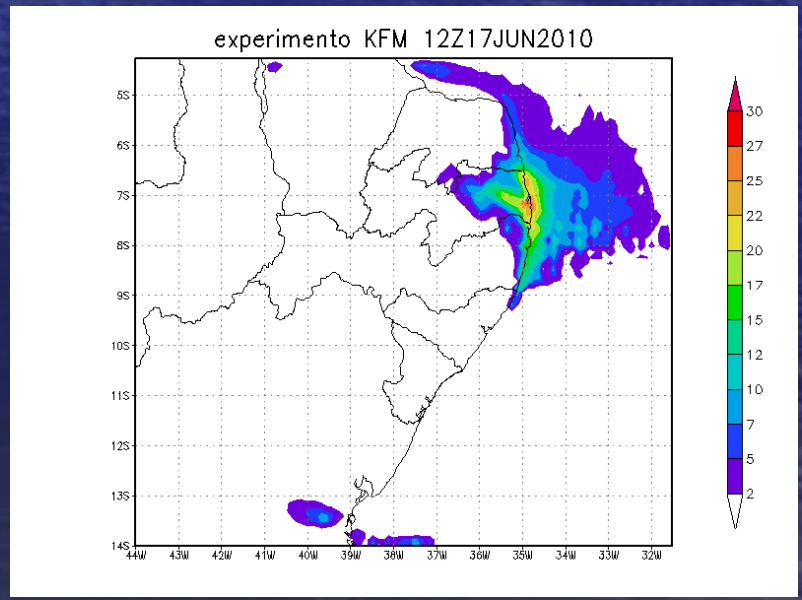
Betts Miller-Janjic



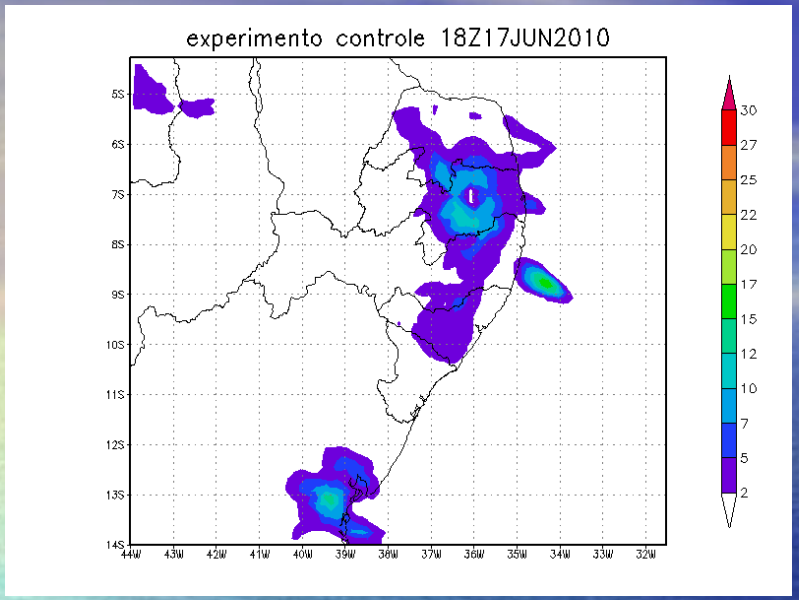


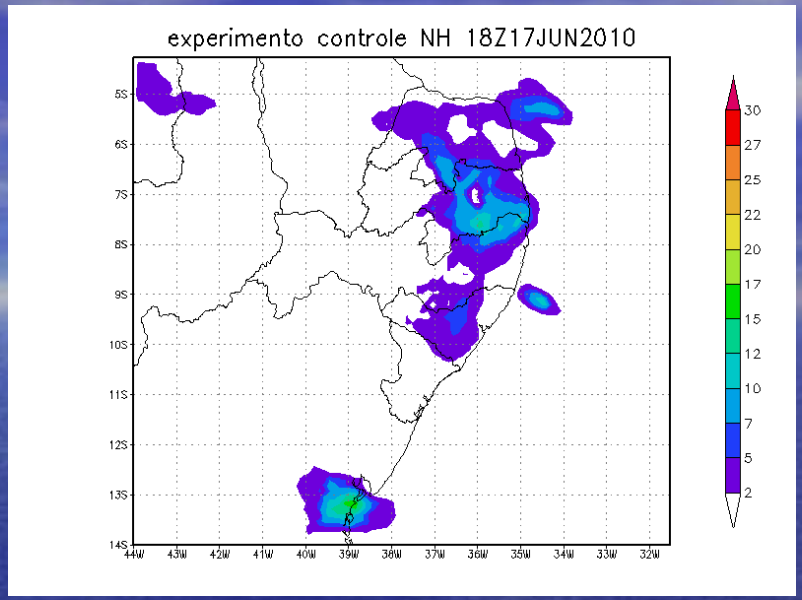
Kain-Fritsch



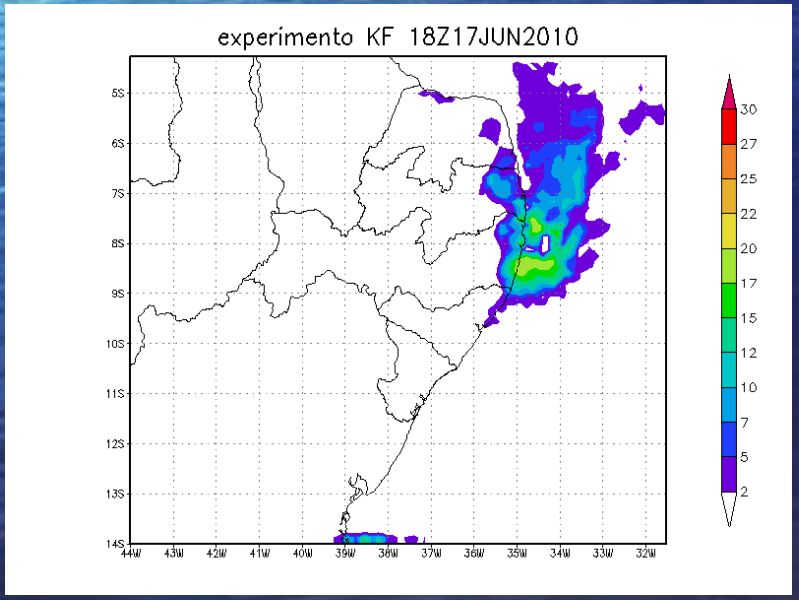


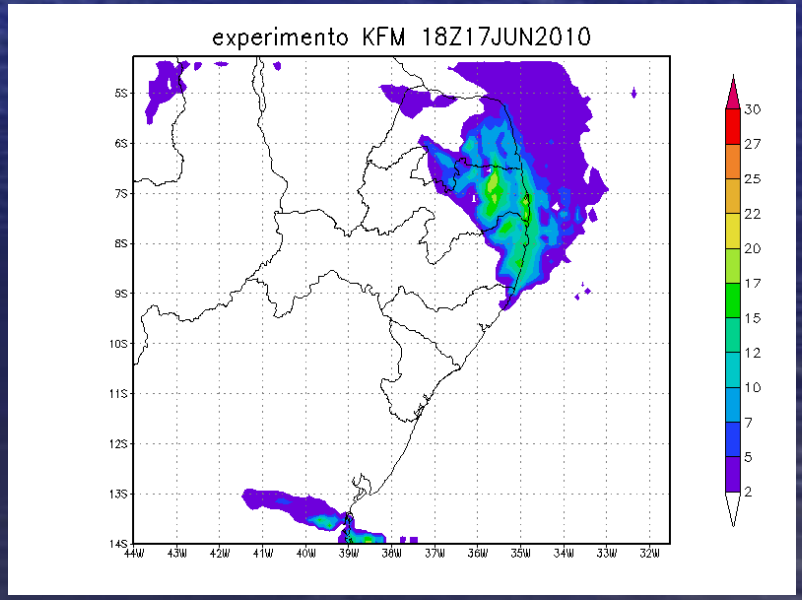
Betts Miller-Janjic



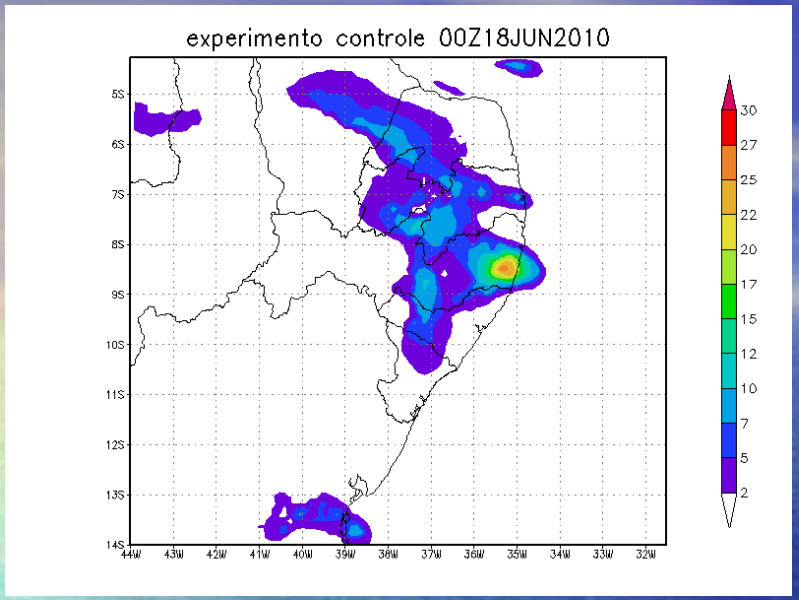


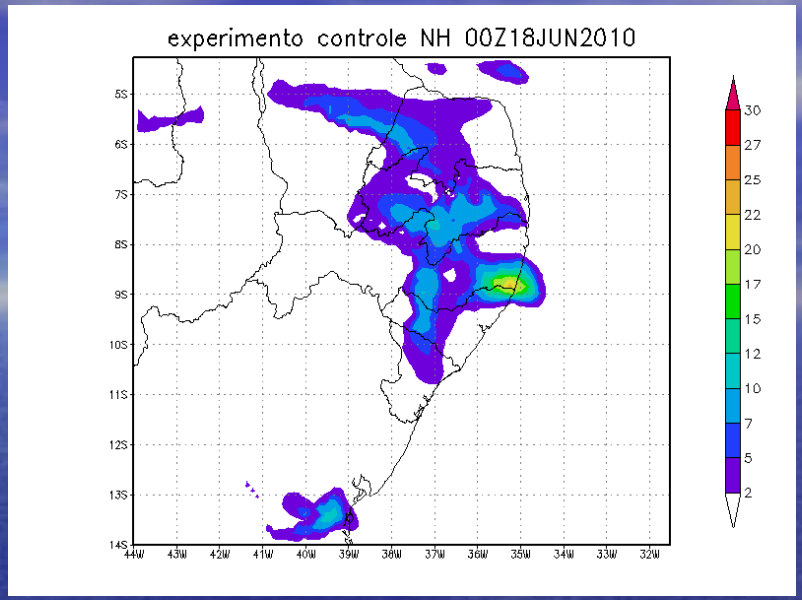
Kain-Fritsch



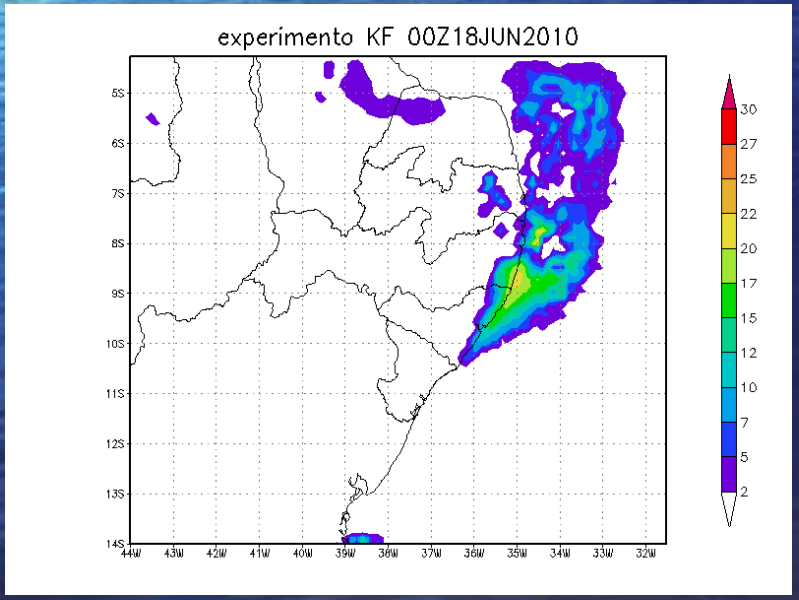


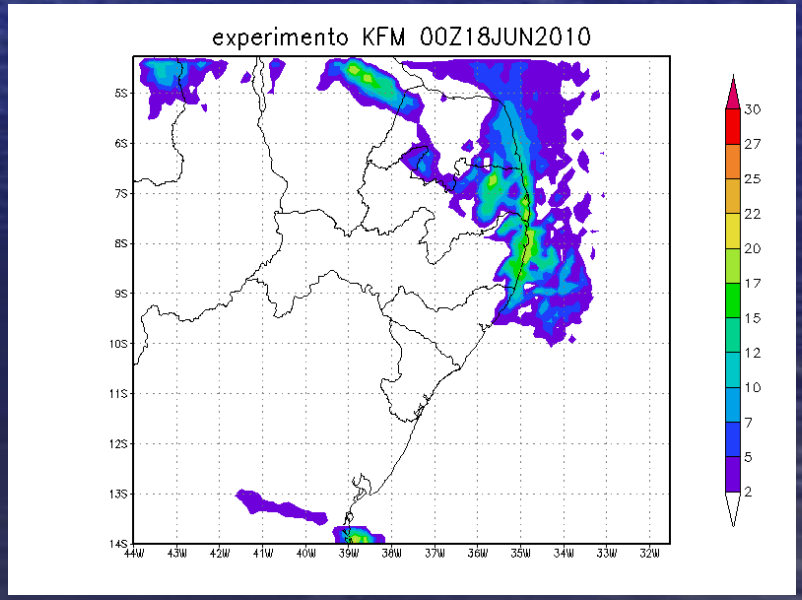
Betts Miller-Janjic



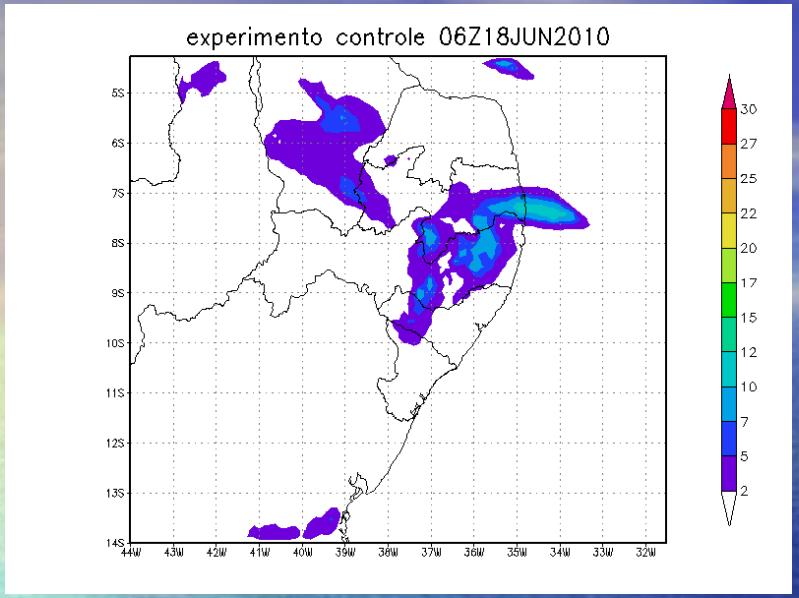


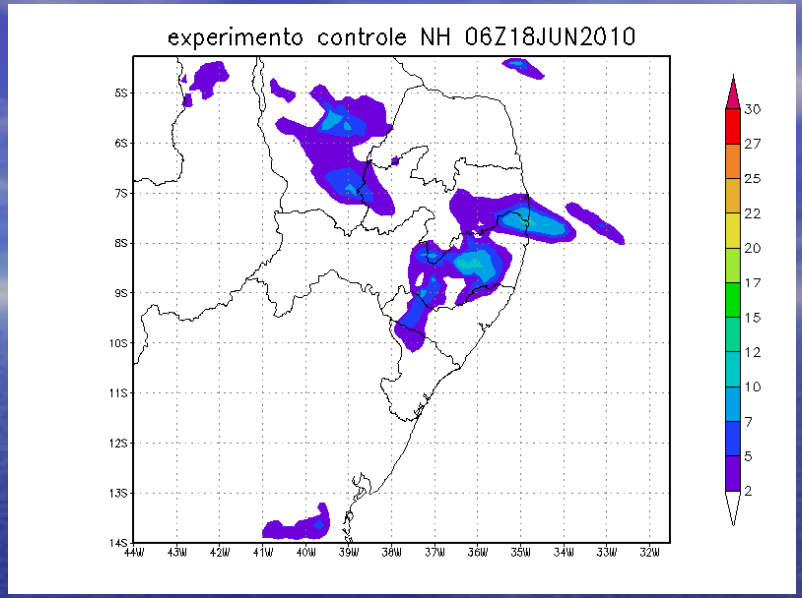
Kain-Fritsch



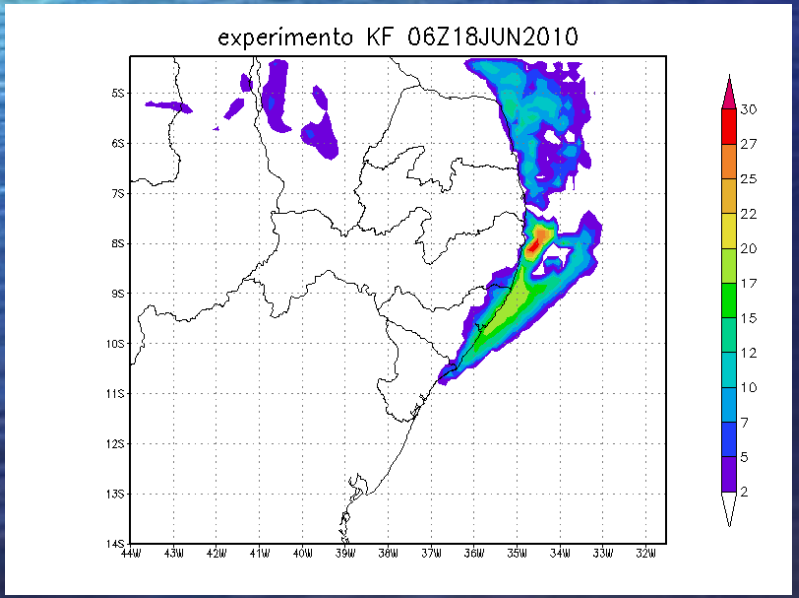


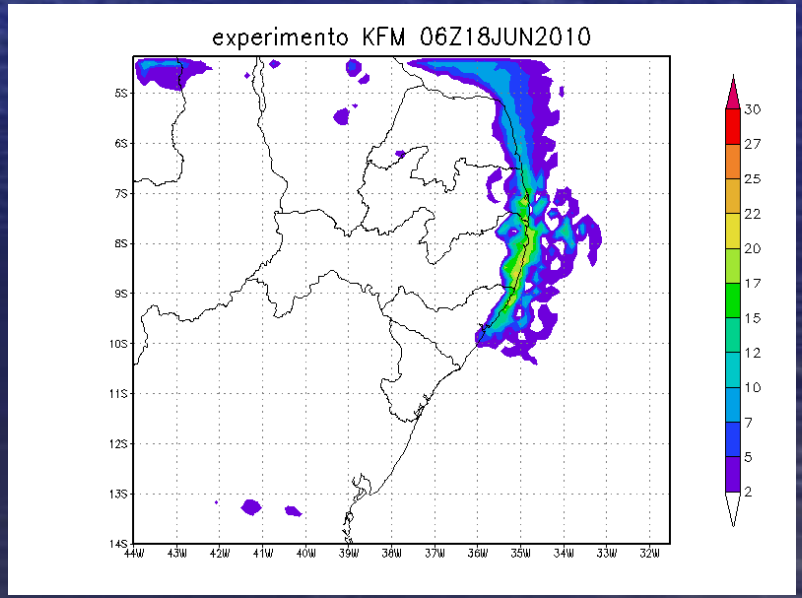
Betts Miller-Janjic



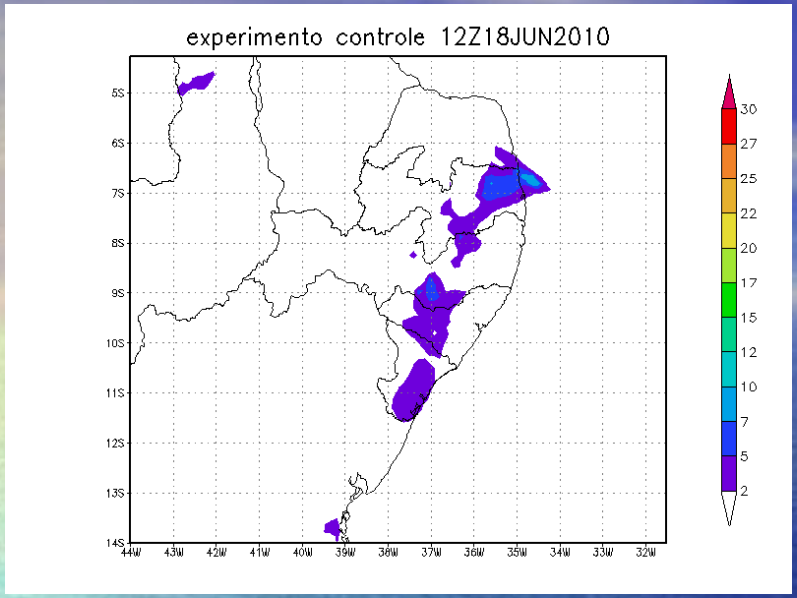


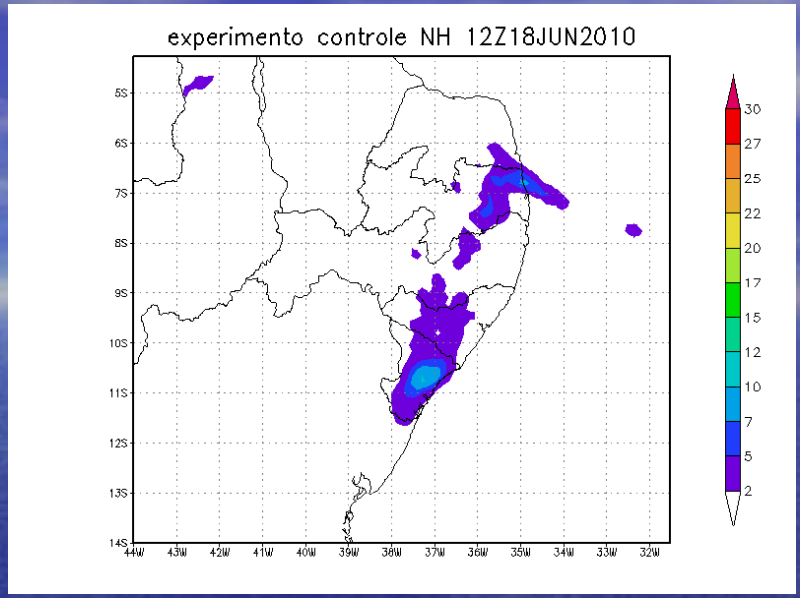
Kain-Fritsch



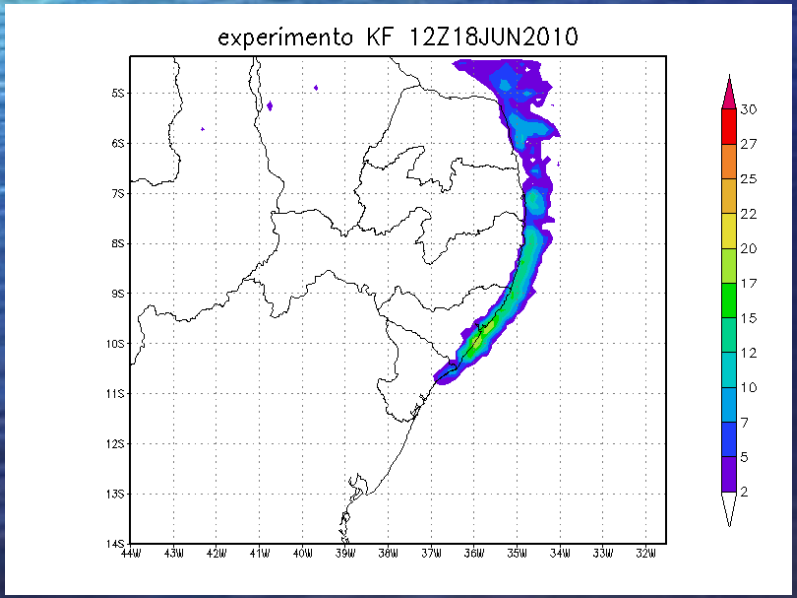


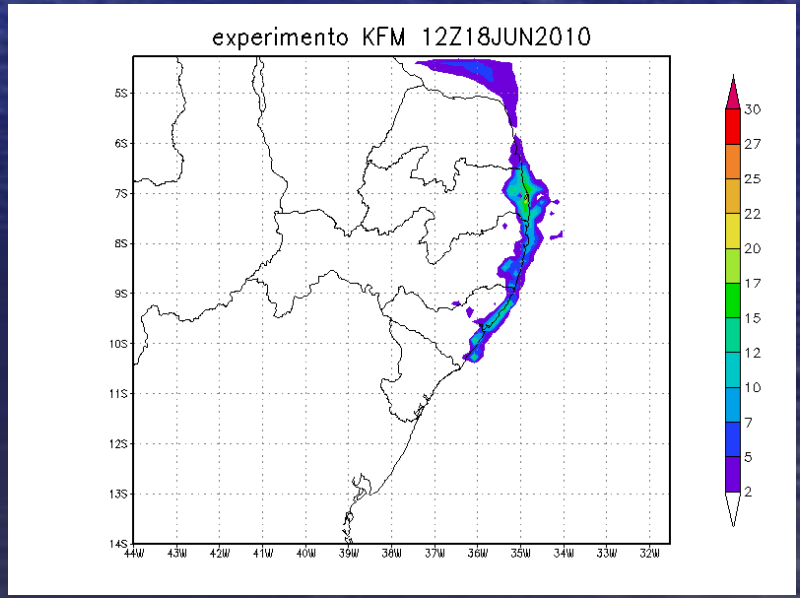
Betts Miller-Janjic





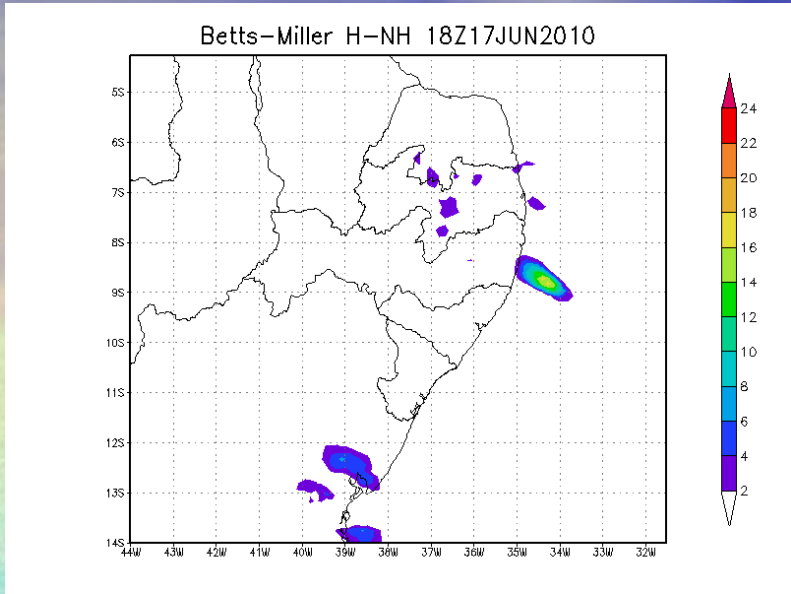
Kain-Fritsch

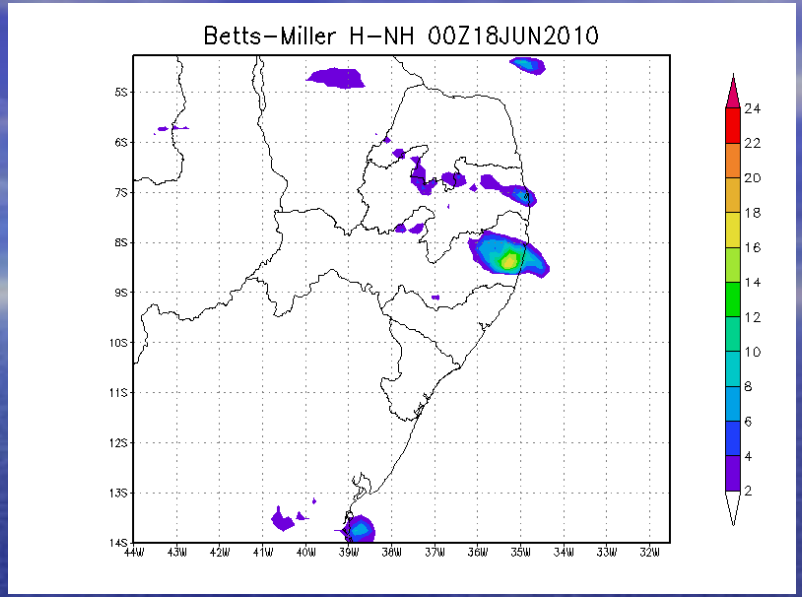


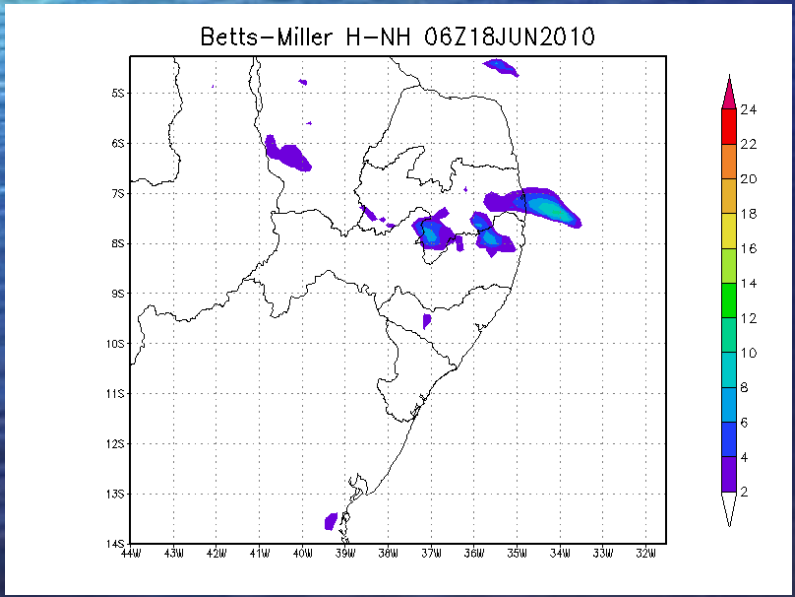


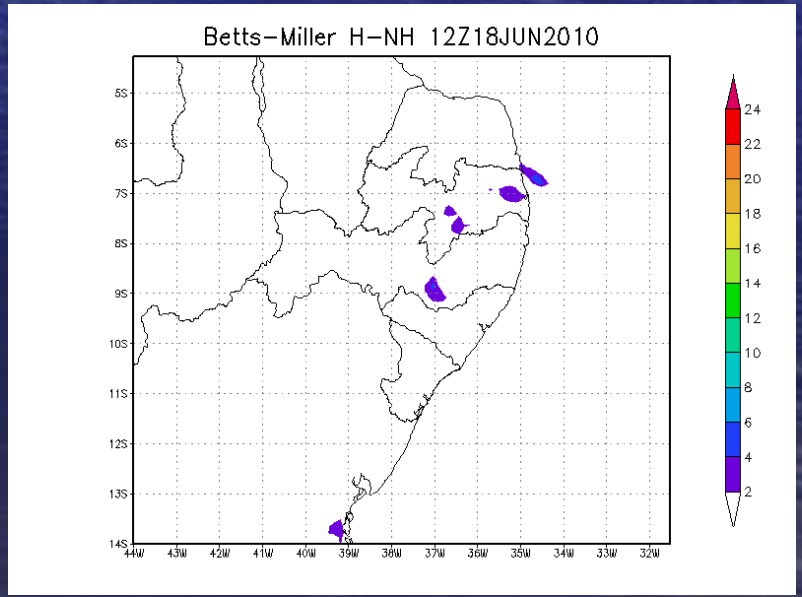
Diferença entre os esquema de Convecção

Betts Miller-Janjic: Hidroestático – Não-hidroestático

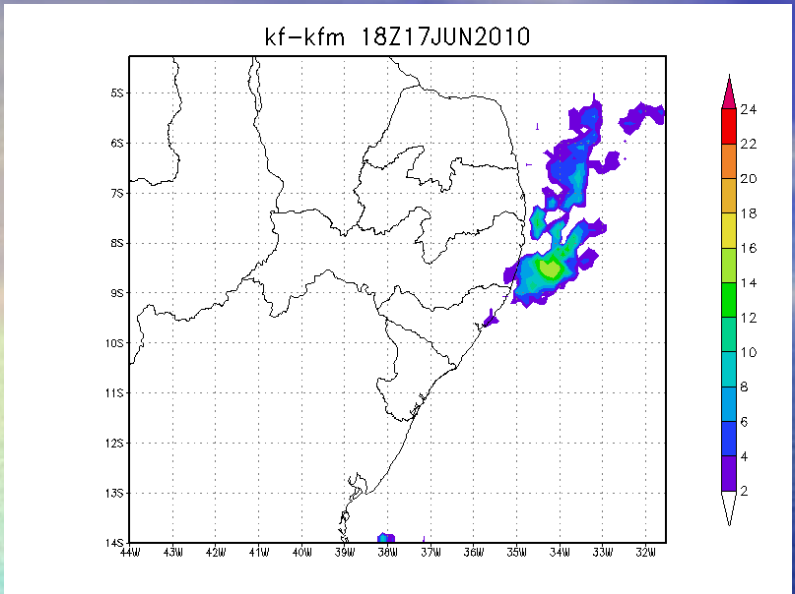


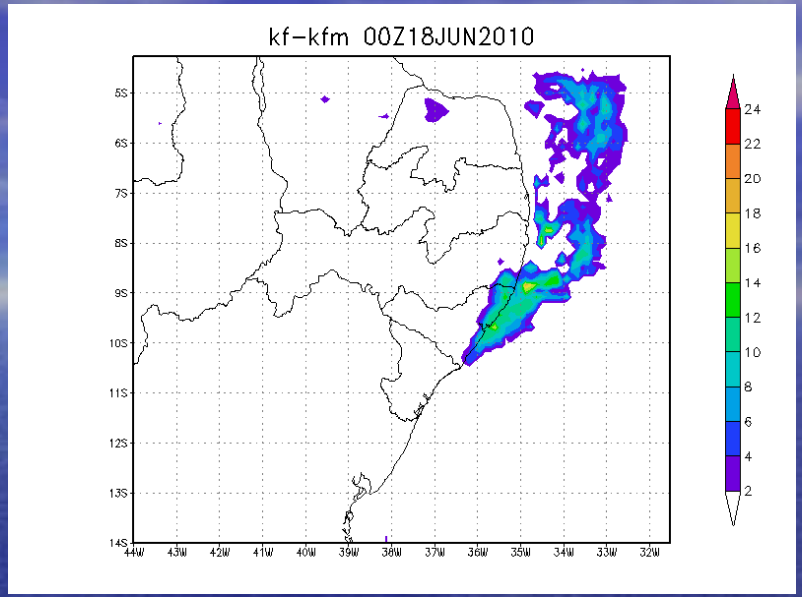


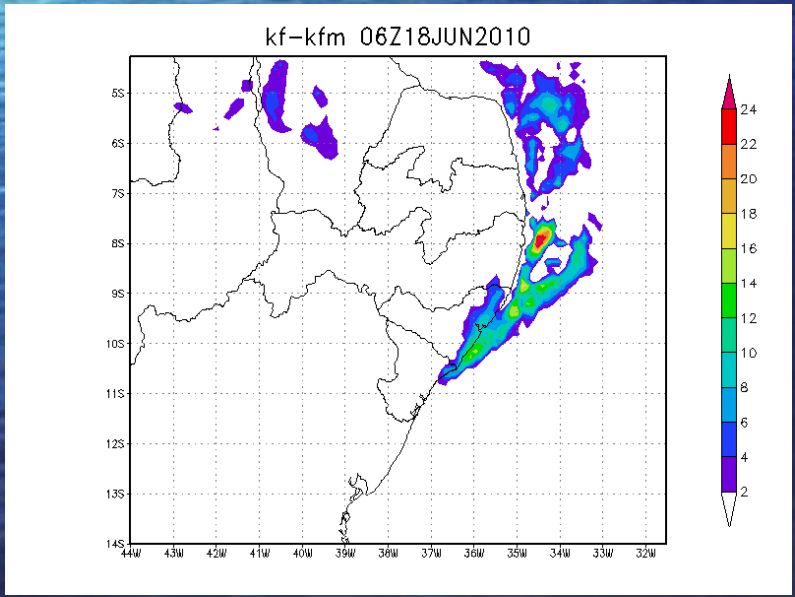




Kain-Fritsch: Hidroestático – Não-hidroestático







Conclusões:

1. Quanto a distribuição espacial, o esquema Betts-Miler se aproximou mais do observado.

2. Não foram observadas difereças significativas entre as rodadas de Betts-Miler Hidrostático e Não-Hidrostático.

3. Com Kain-Fritsch o modelo ficou bloqueado na costa da região em estudo.

Sugestões de Trabalhos Futuros:

1. Rodar com condições inicias e de contorno de 15Km, para verficar melhor a leste da região.

2. Rodar ensamble com alguns membros para verificar a destreza do modelo.

Obrigado