

Validation des modèles

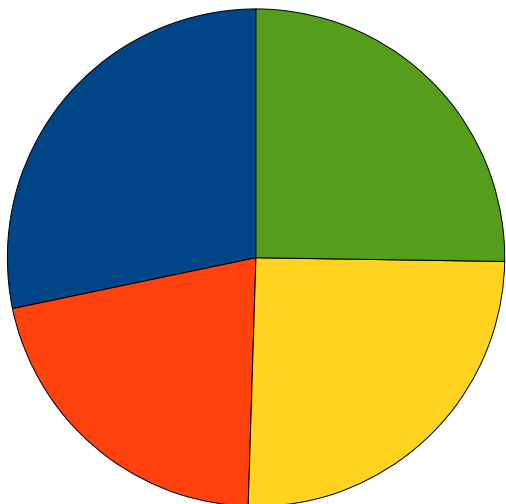
Simulations

- Référence : 1961-1990
- Scénario A1B : 2071-2100 Δ SST CNRM-CM3
- ALADIN LMDZ et MAR corrigés quantile-quantile vs SAFRAN
- Réponses assez différentes
- Les modèles bruts sont ils valides ?

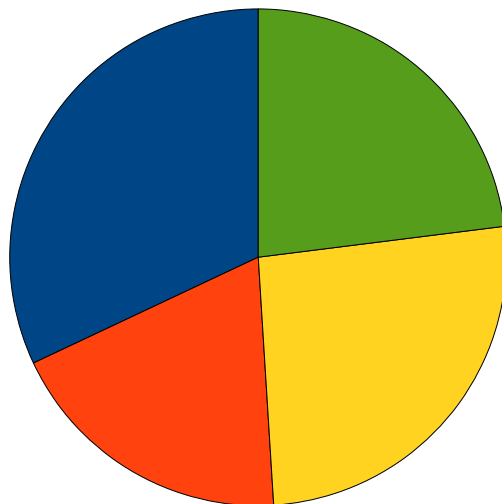
Fréquence des régimes de temps

- Régimes type Michelangelli et Vautard
- Z500 Atlantique Nord-Europe centré
- Maximisation variance inter-classe
- 4 saisons ERA-40 1961-1990
- 4 centroïdes par saison
- Pour chaque modèle : fréquence des 4 régimes

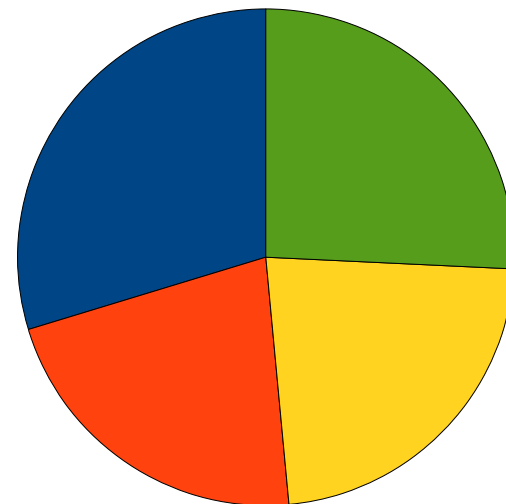
Régimes : DJF



ERA40

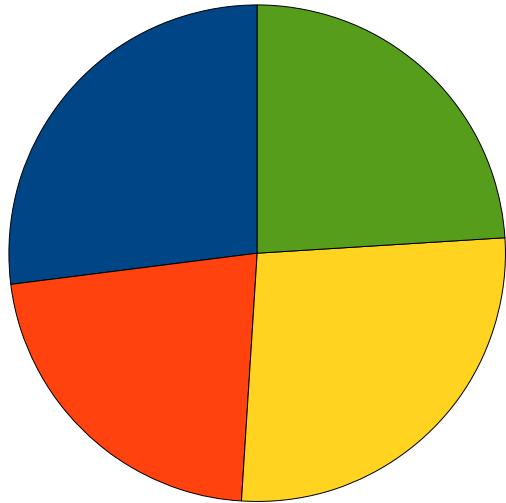


ALADIN

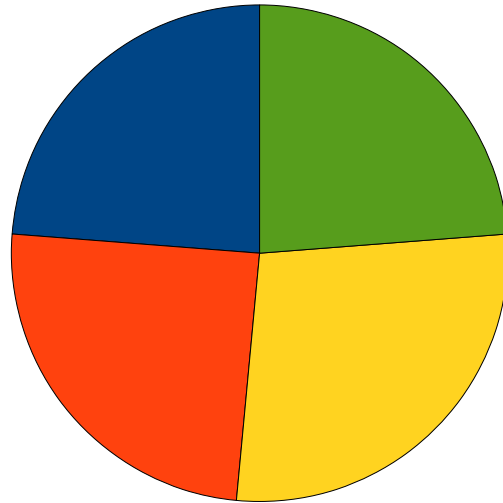


LMDZ

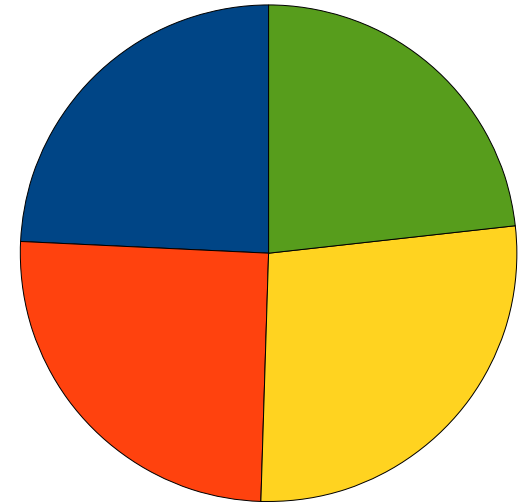
Régimes : MAM



ERA40

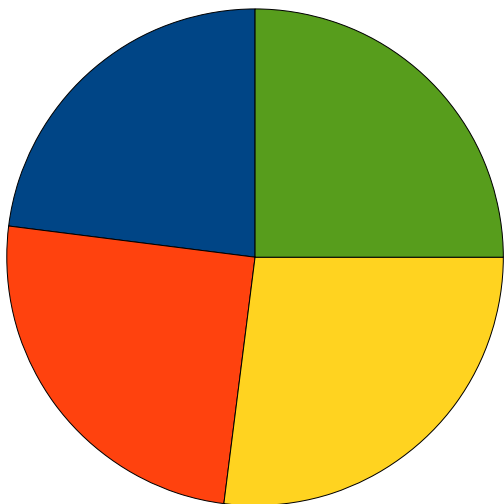


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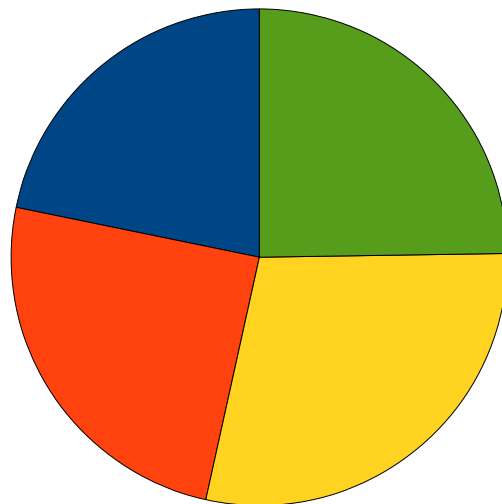


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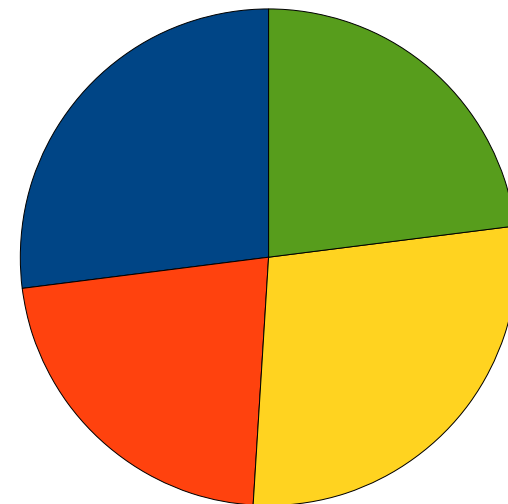
Régimes : JJA



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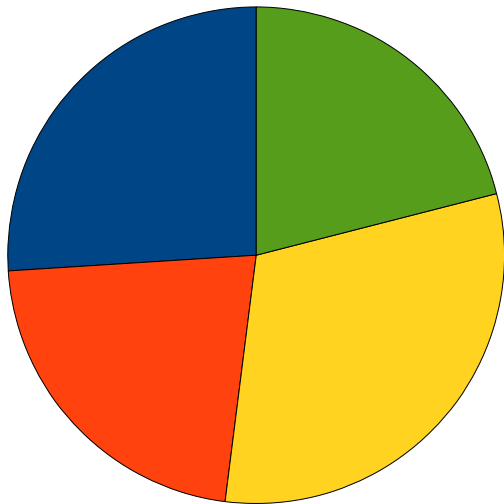


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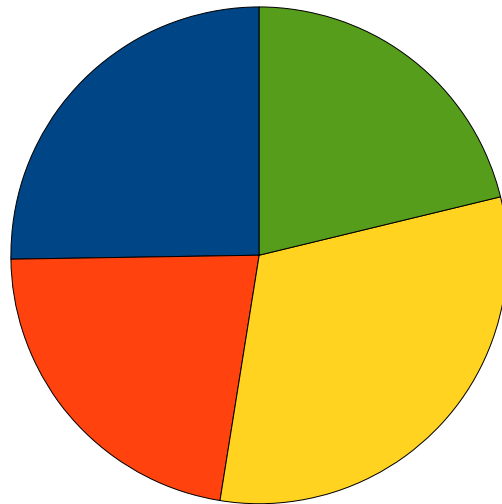


LMDZ

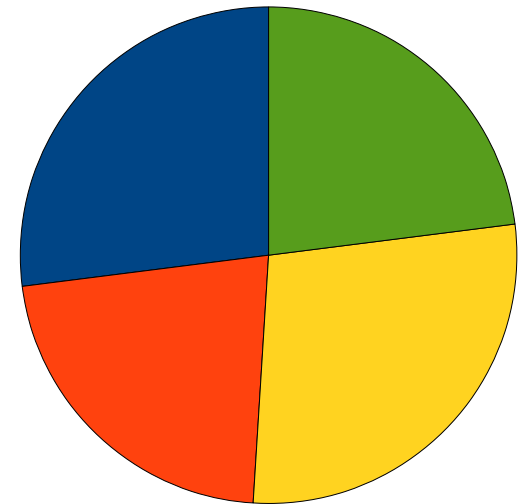
Régimes : SON



ERA40



ALADIN



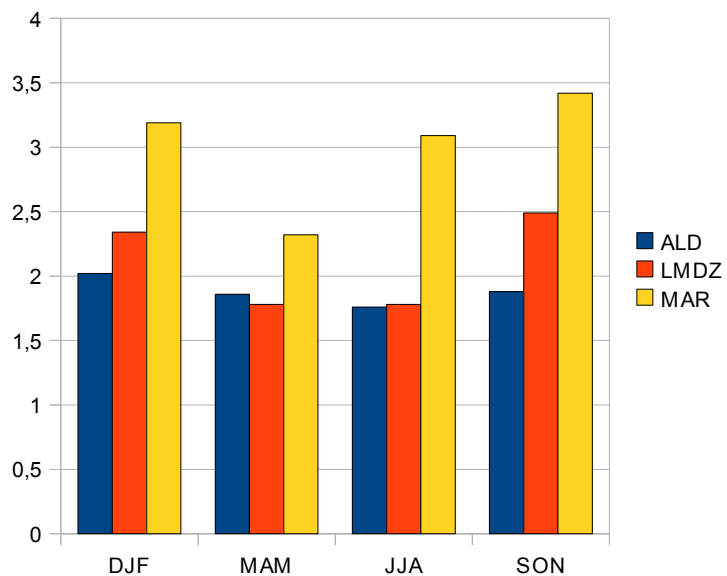
LMDZ

Erreur quadratique des centiles

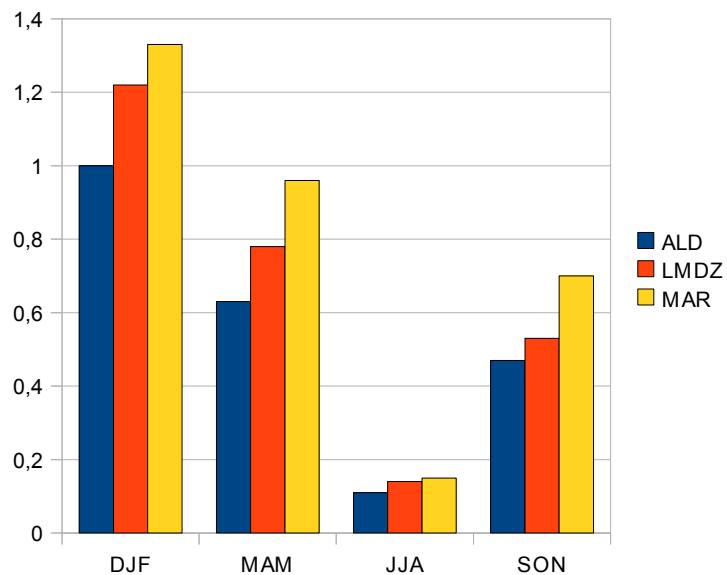
- Distance Référence – SAFRAN
- Moyennée sur les 99 centiles quotidiens
- Plus sévère qu'un biais
- Ne tient pas compte de la chronologie
- Moyennée sur la grille SAFRAN, tous régimes confondus

Erreur quadratique des centiles

Precipitations

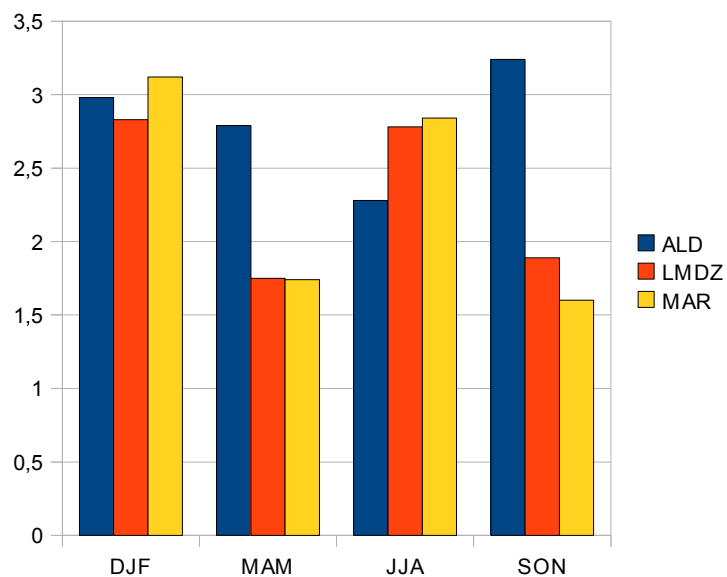


Neige

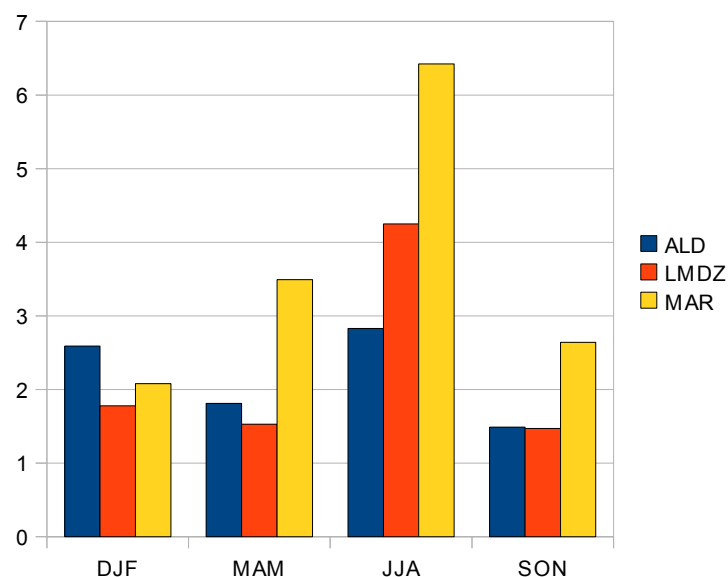


Erreur quadratique des centiles

T min 2m

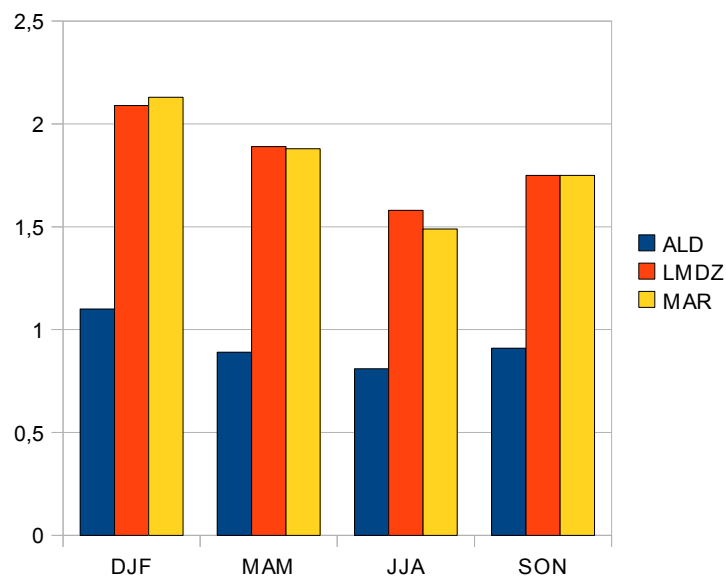


T max 2m

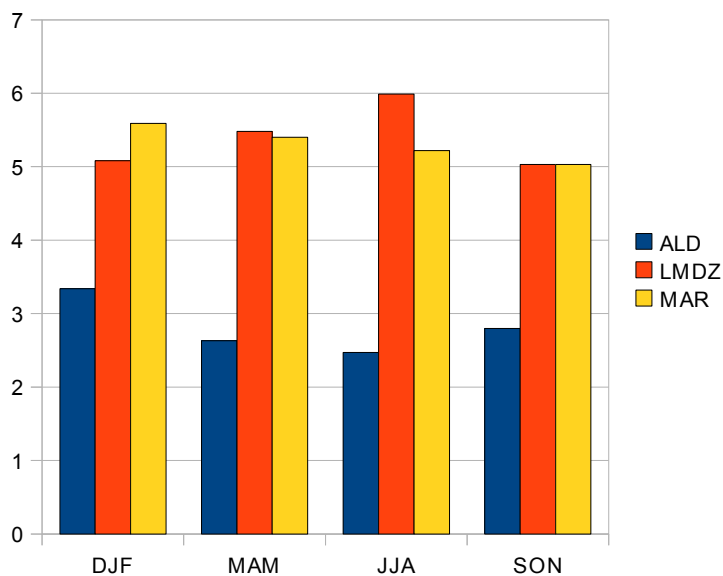


Erreur quadratique des centiles

vent moyen 10m

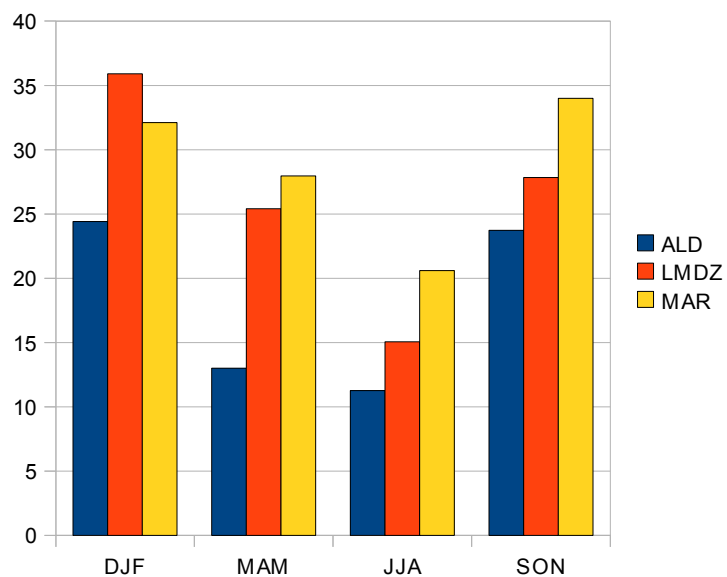


vent maxi 10m

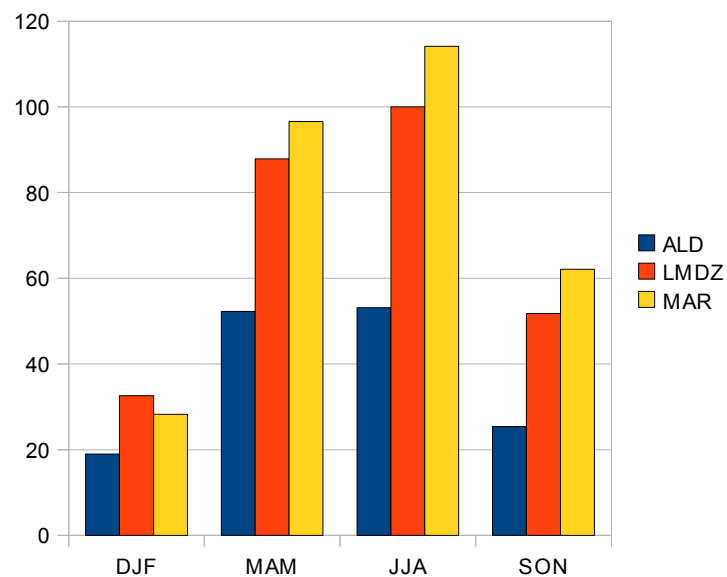


Erreur quadratique des centiles

infra-rouge descendant



solaire descendant

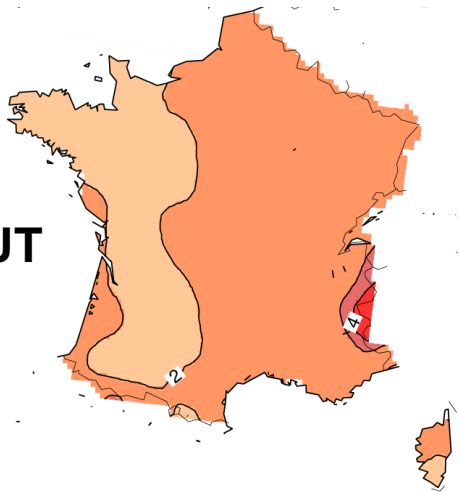


Impact de la correction sur la réponse

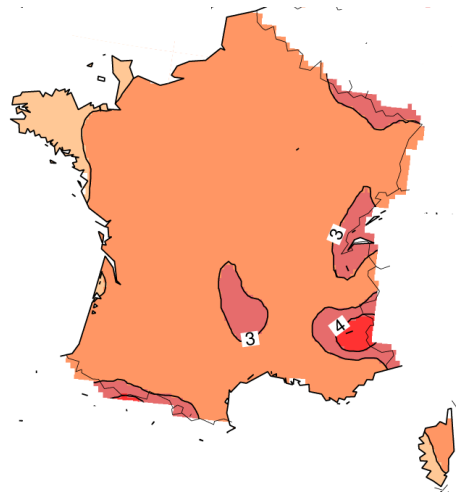
- Référence :1961-1990
- Scénario A1B : 2071-2100 Δ SST CNRM-CM3
- ALADIN LMDZ et MAR corrigés quantile-quantile vs SAFRAN
- Réponses brut versus corrigé
- 4 variables de base, 2 saisons

Réponse TN DJF

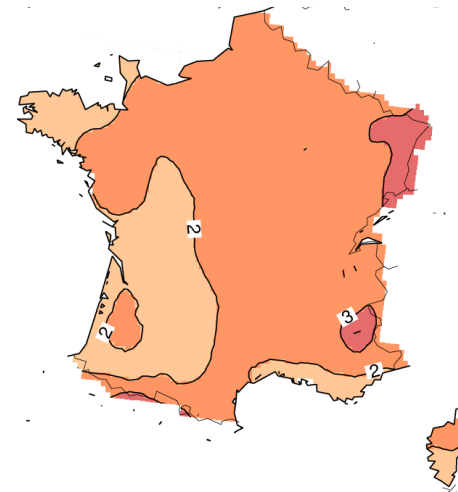
BRUT



ALADIN

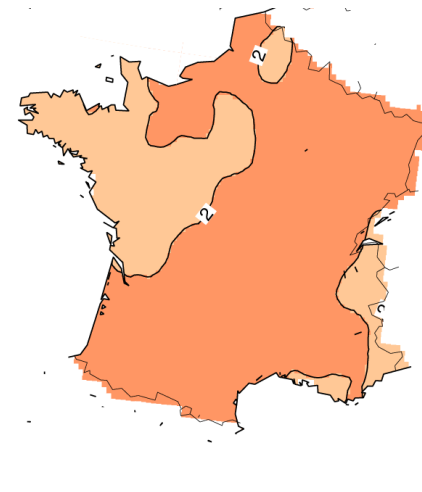
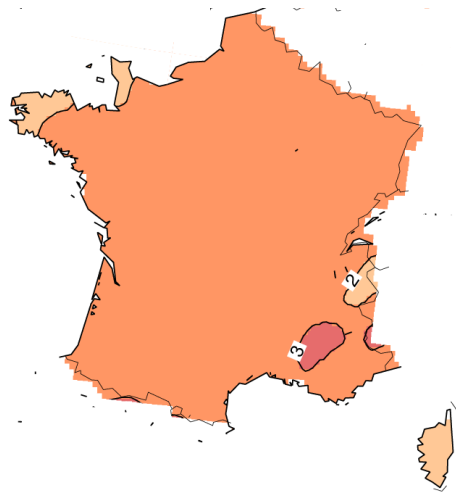
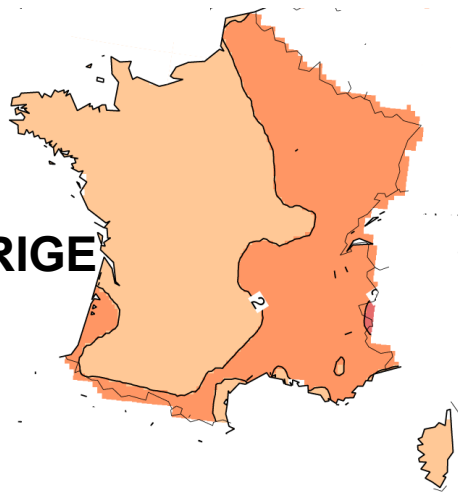


LMDZ



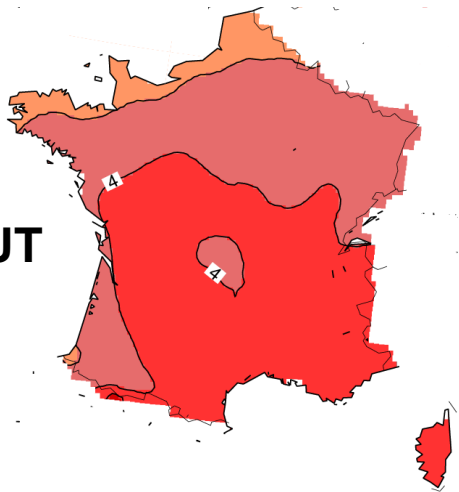
MAR

CORRIGE

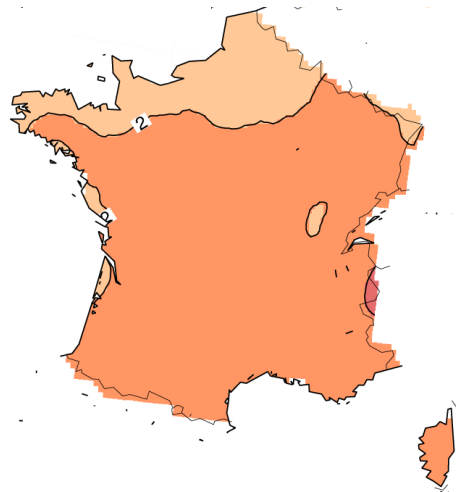


Réponse TN JJA

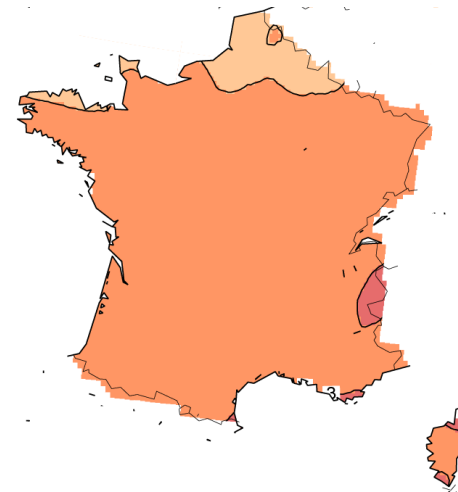
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ALADIN

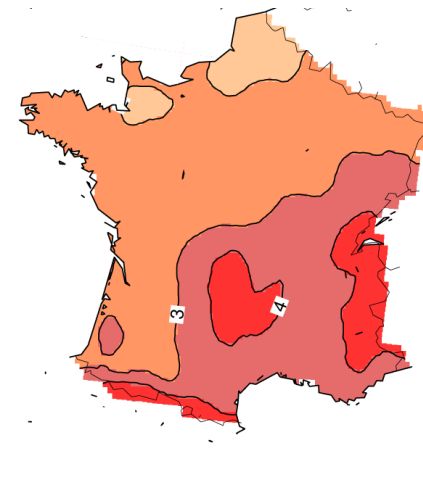
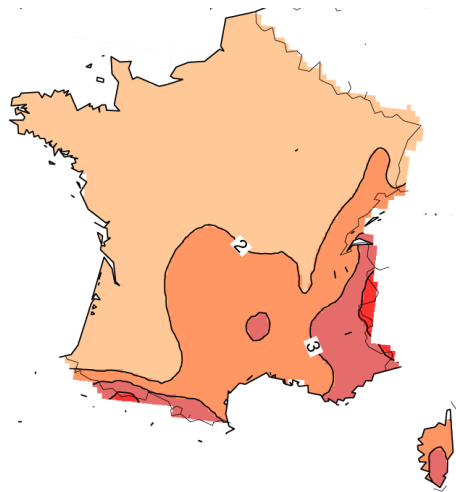
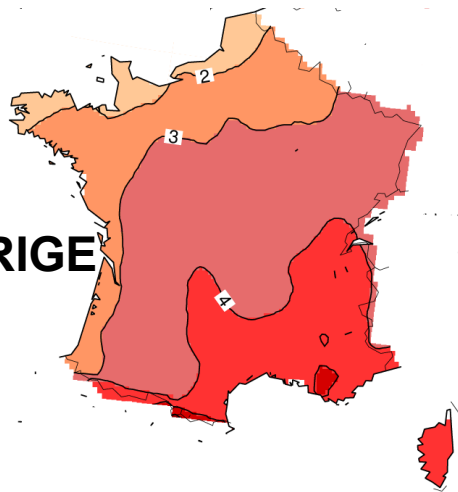


LMDZ



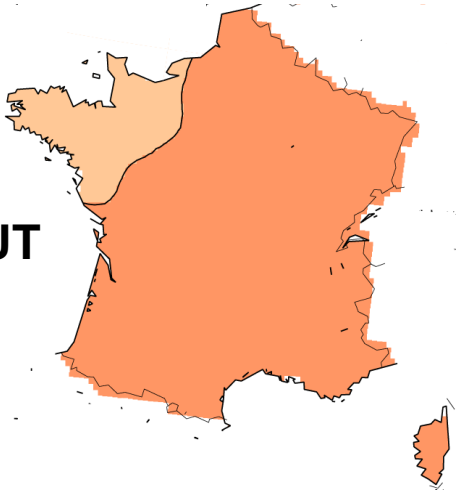
MAR

CORRIGE



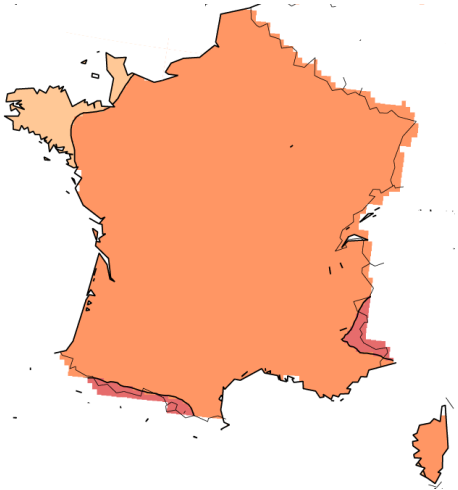
Réponse TX DJF

BRUT

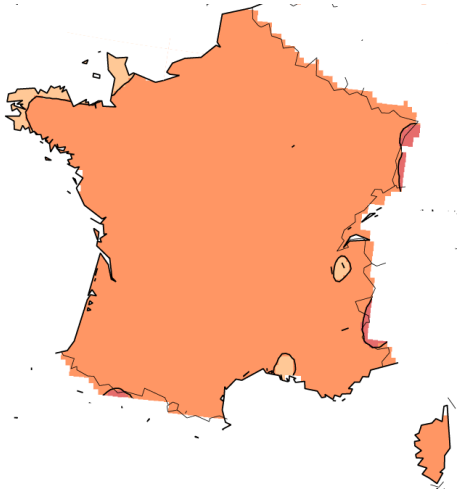


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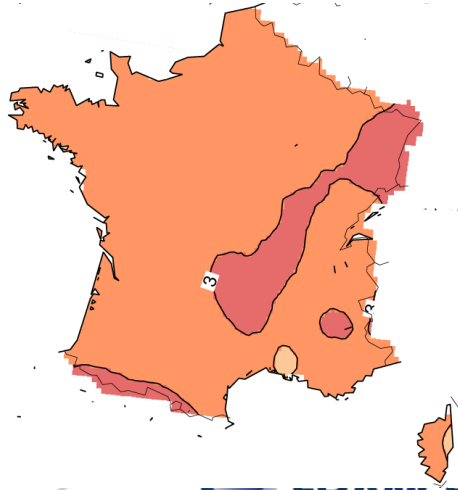
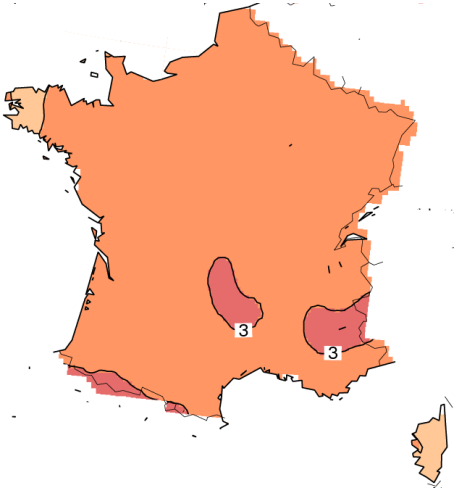
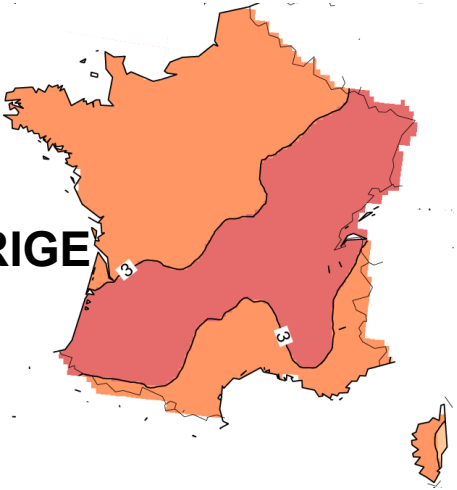
LMDZ



MAR

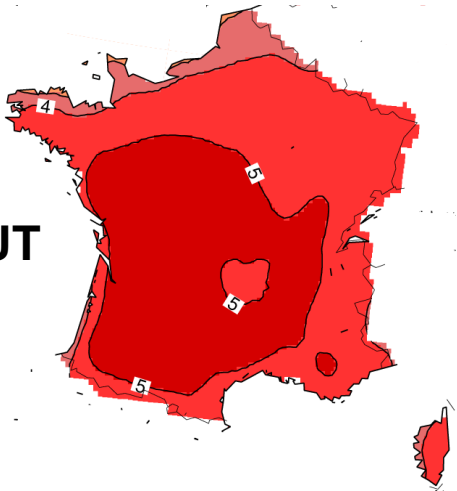


CORRIGE

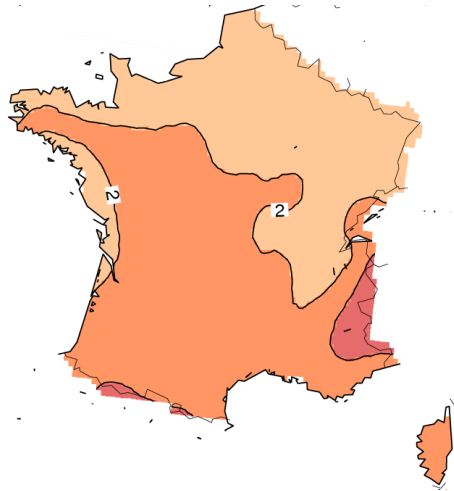


Réponse TX JJA

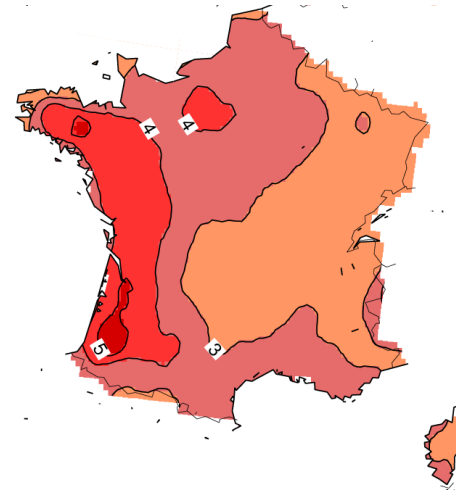
BRUT



ALADIN

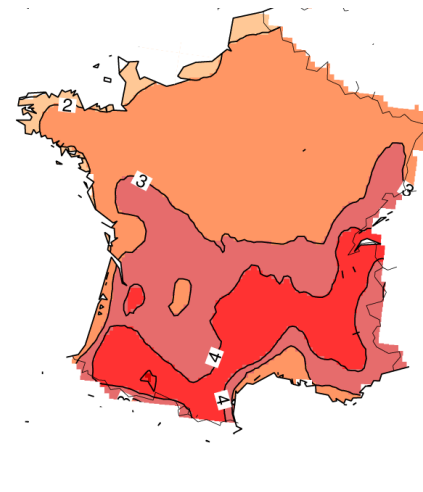
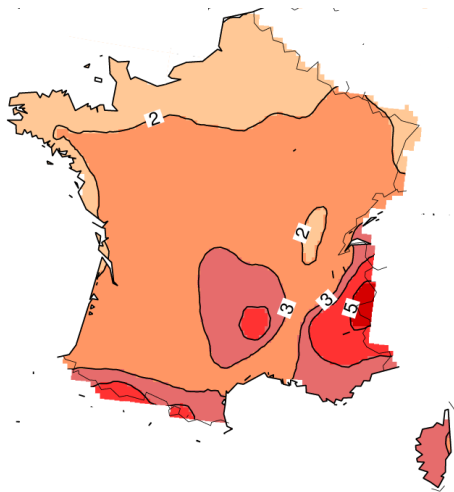
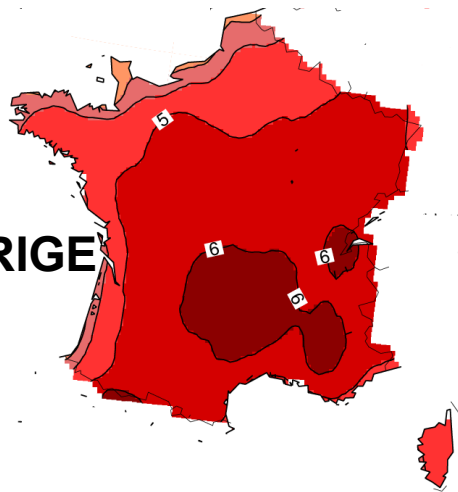


LMDZ



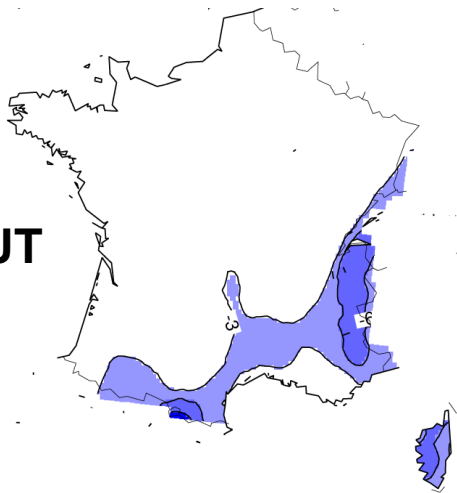
MAR

CORRIGE

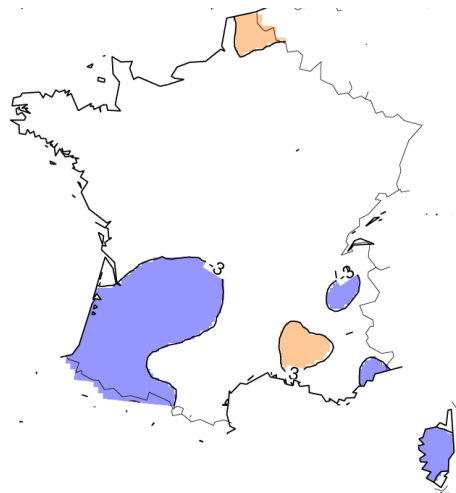


Réponse VX DJF

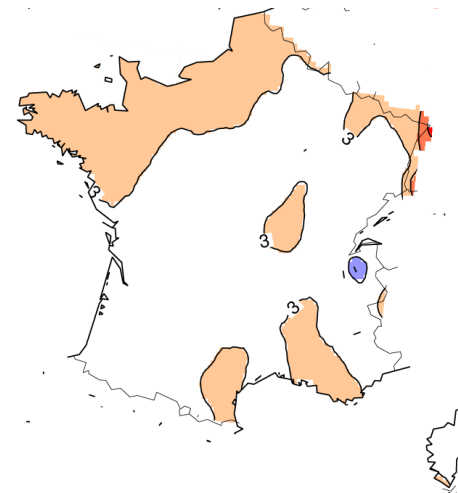
BRUT



ALADIN

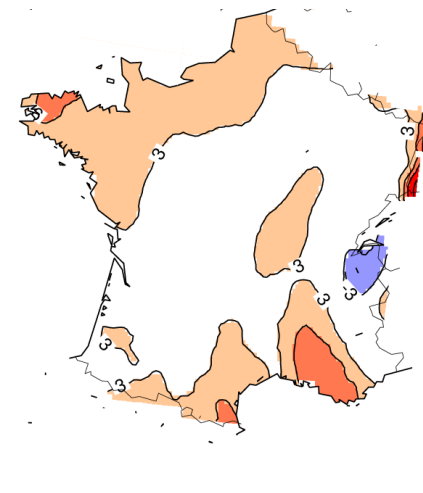
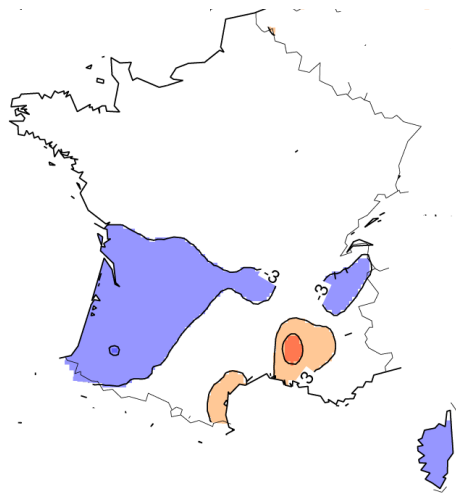
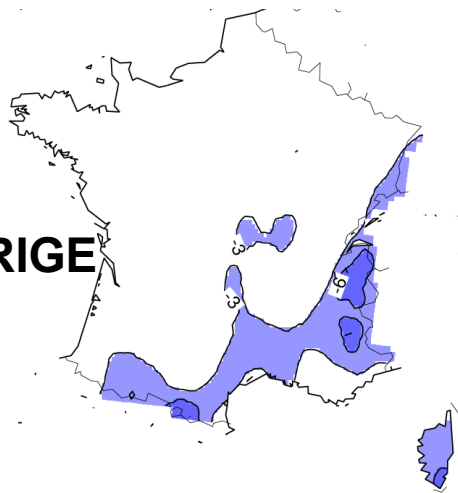


LMDZ



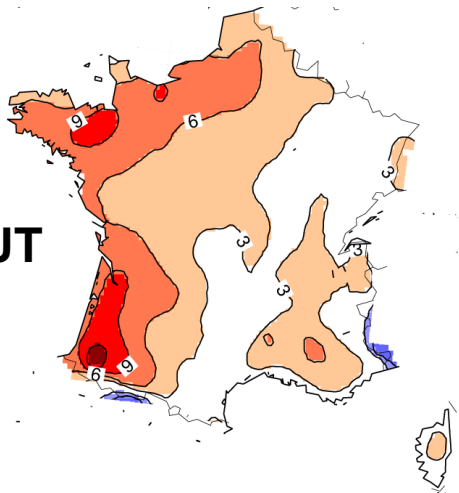
MAR

CORRIGE

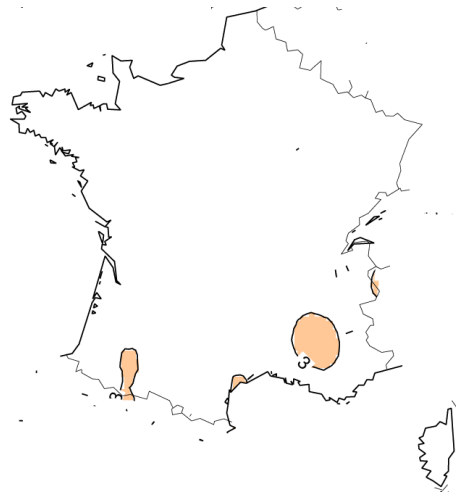


Réponse VX JJA

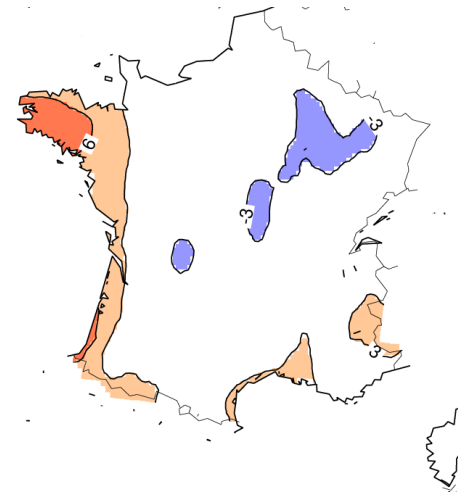
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ALADIN

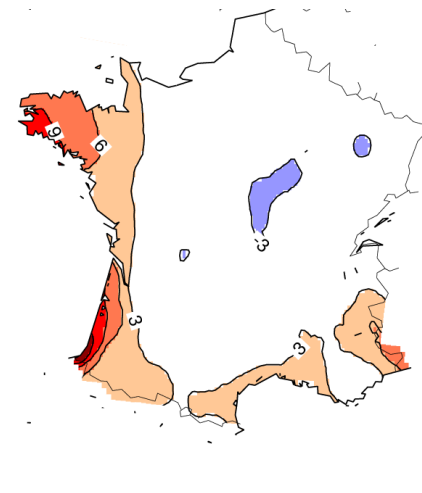
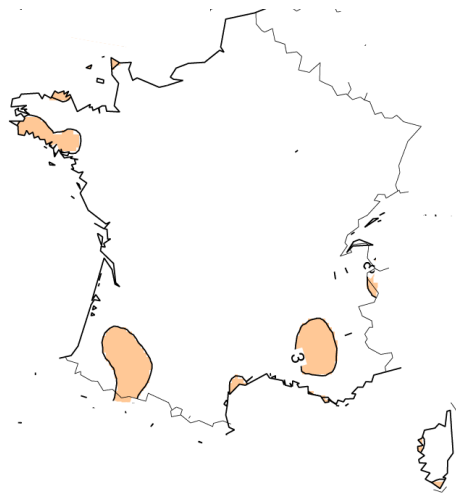
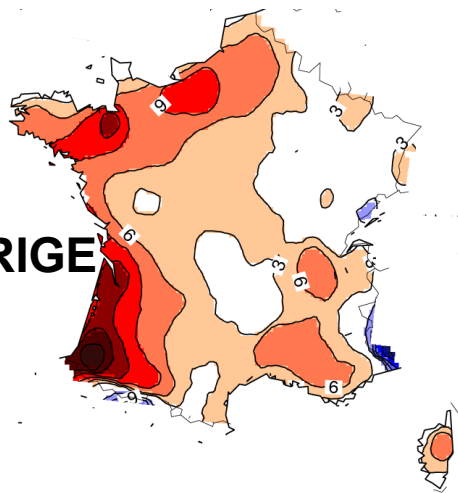


LMDZ



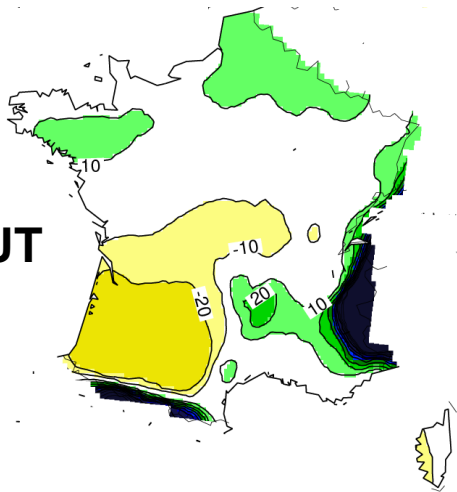
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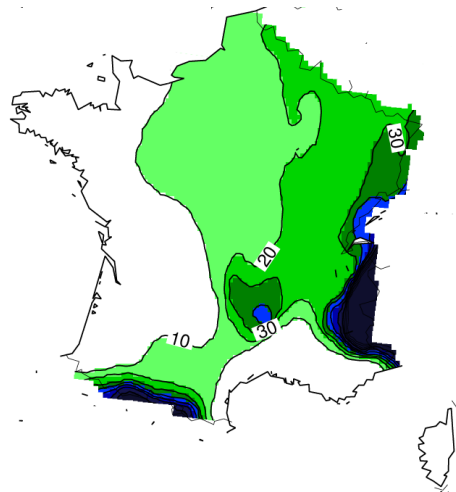


Réponse RR DJF

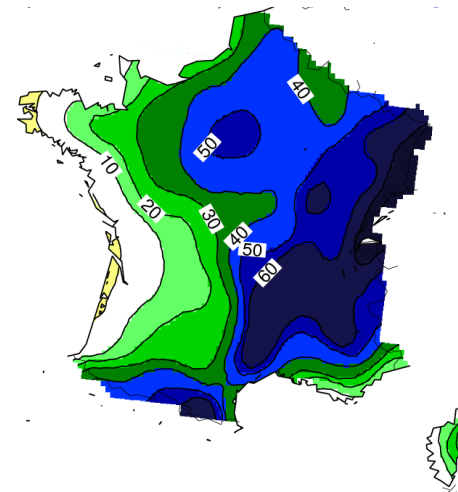
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ALADIN

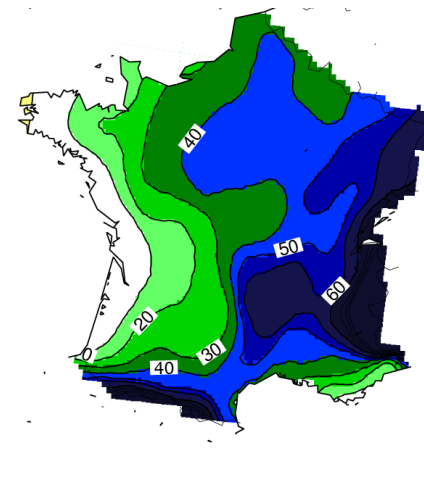
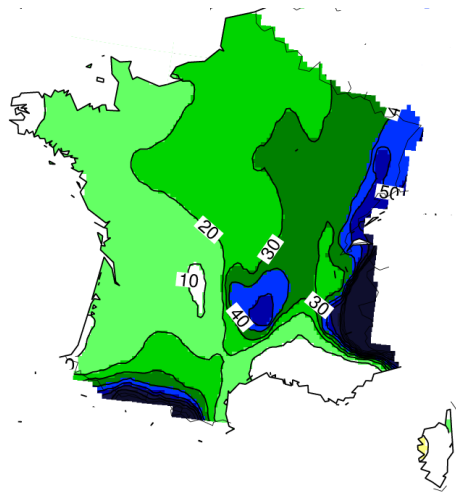
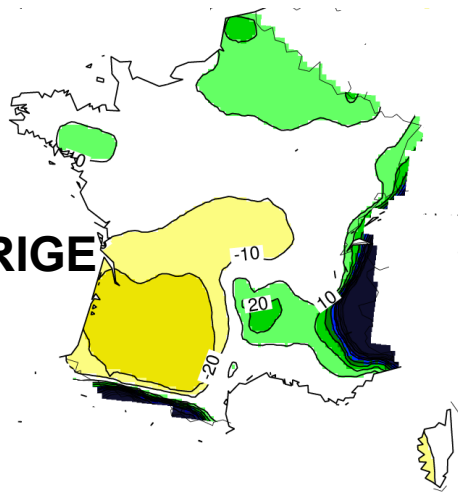


LMDZ



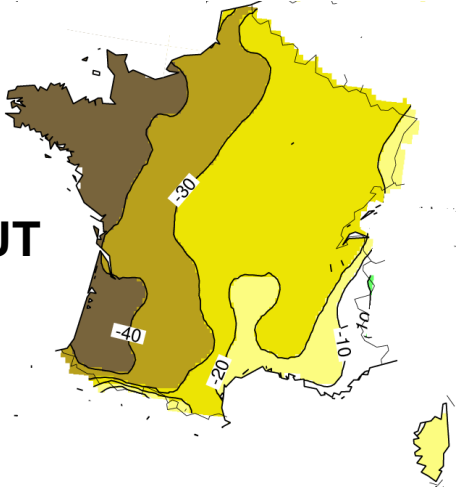
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CORRIGE

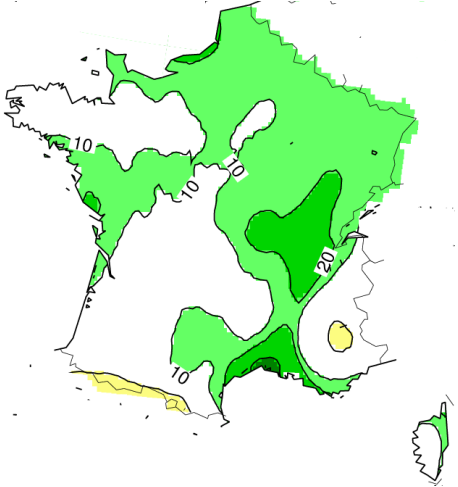


Réponse RR JJA

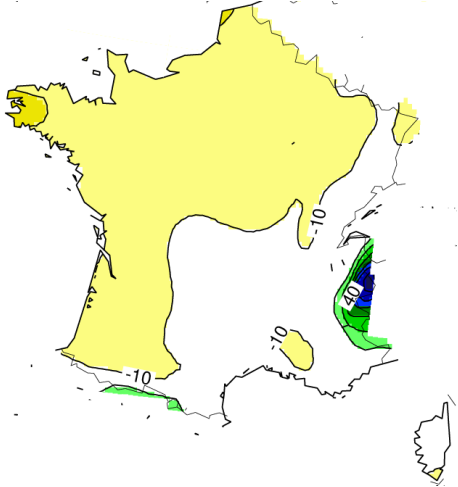
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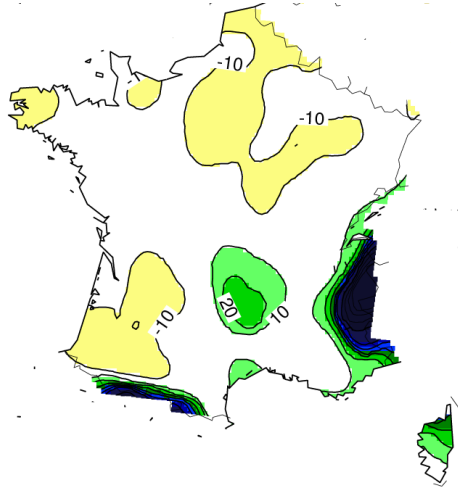
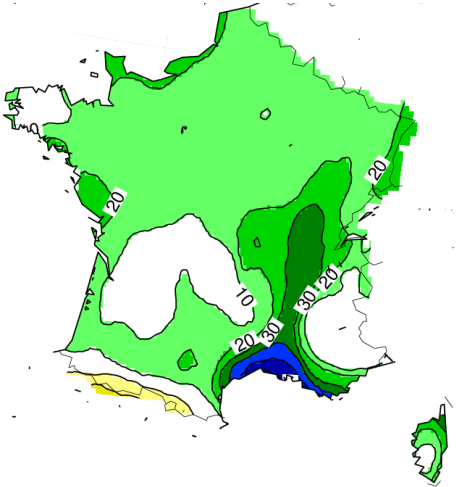
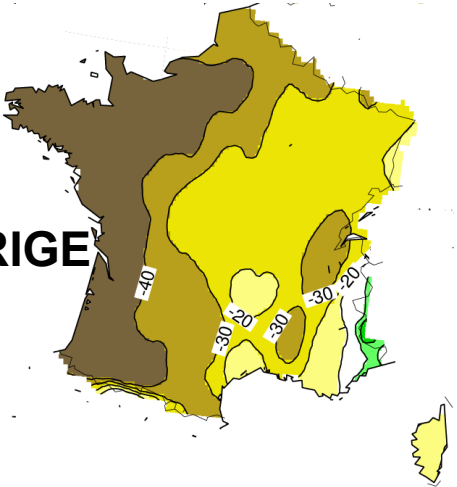


LMDZ



MAR

CORRIGE



CONCLUSIONS

- En hiver les 3 modèles ont des niveaux de fiabilité comparables
- La diversité des réponses n'est pas le résultat des corrections
- Scampei = Sceptique ?