

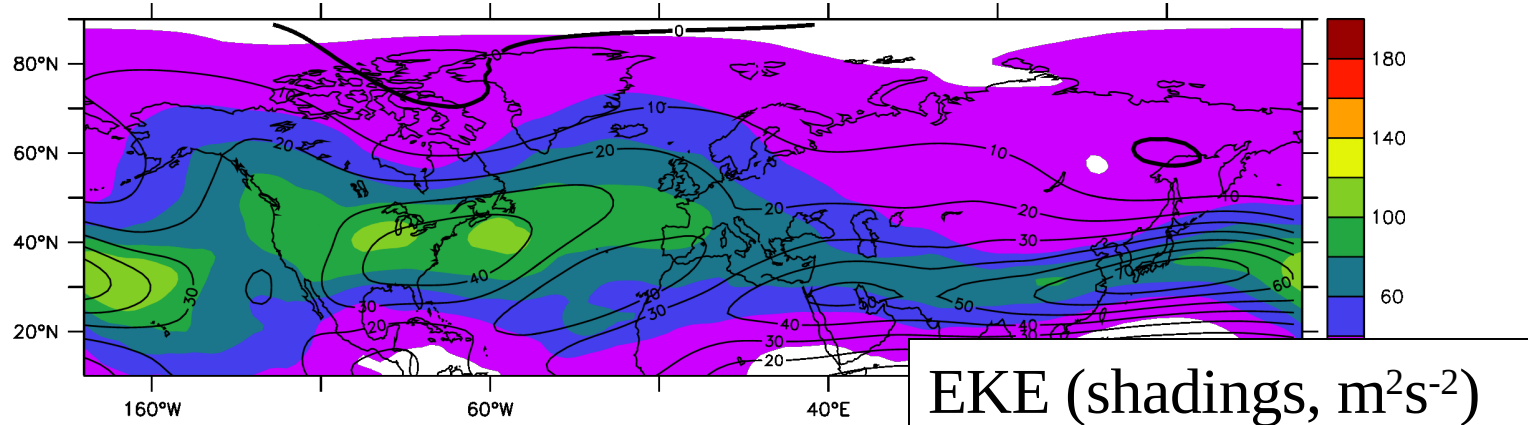
Storm-tracks ou rails des dépressions dans LMDZ

Gwendal Rivière

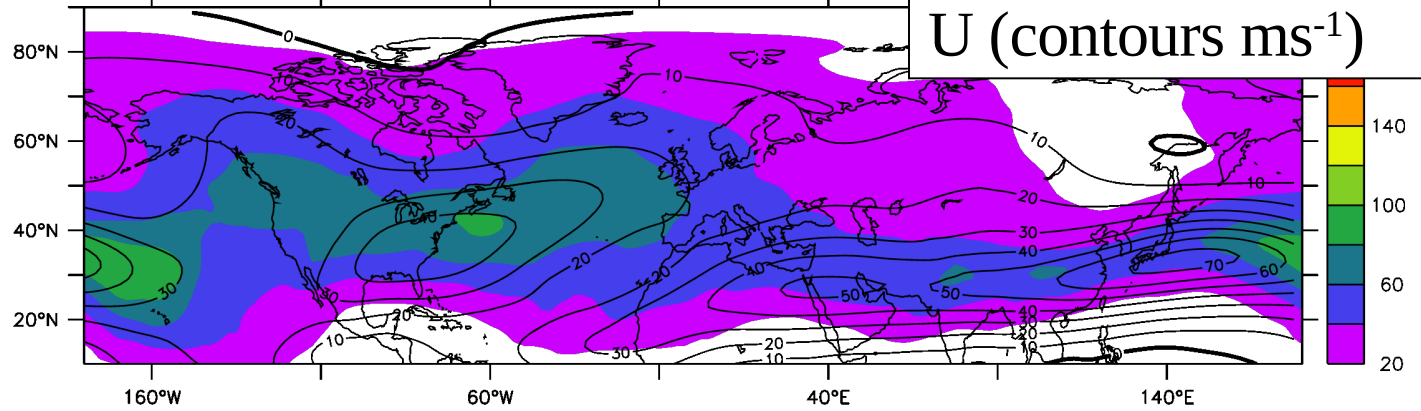
Journée LMDZ du 30 juin 2014

Variabilité haute fréquence HN ($T < 8$ jours) (DJF, 200mb)

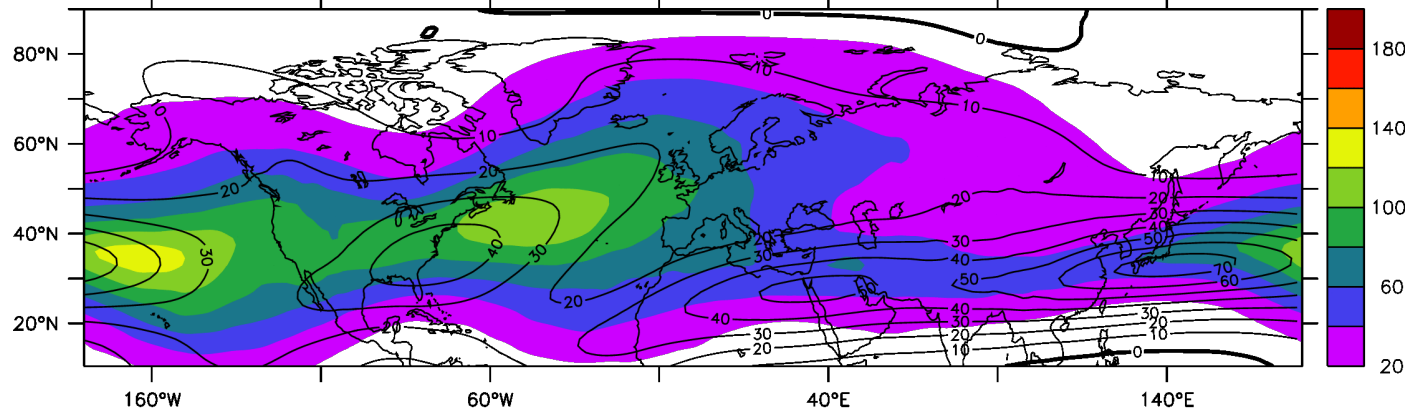
NPv4.12bis
10 ans



APv4.0
(CM5A)
3 ans

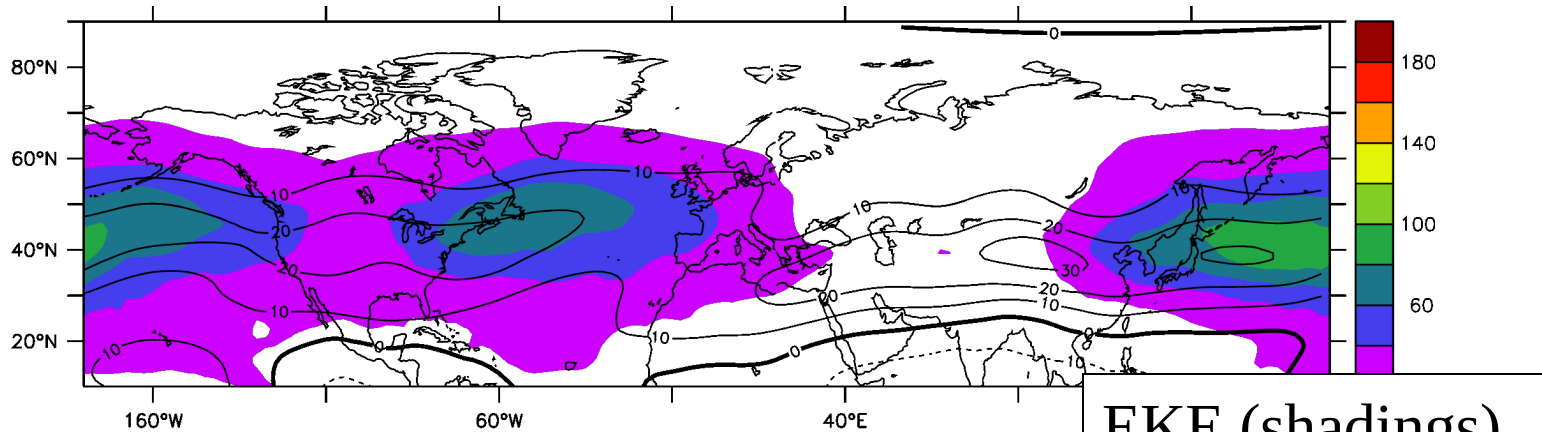


ERA-Interim
35 ans

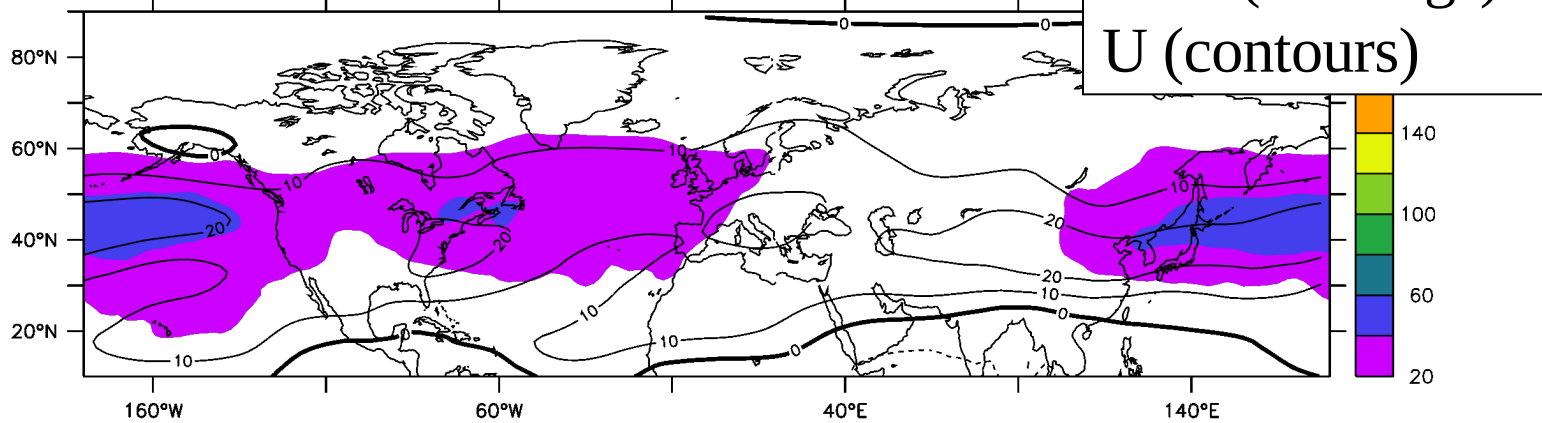


Variabilité haute fréquence HN ($T < 8$ jours) (JJA, 200mb)

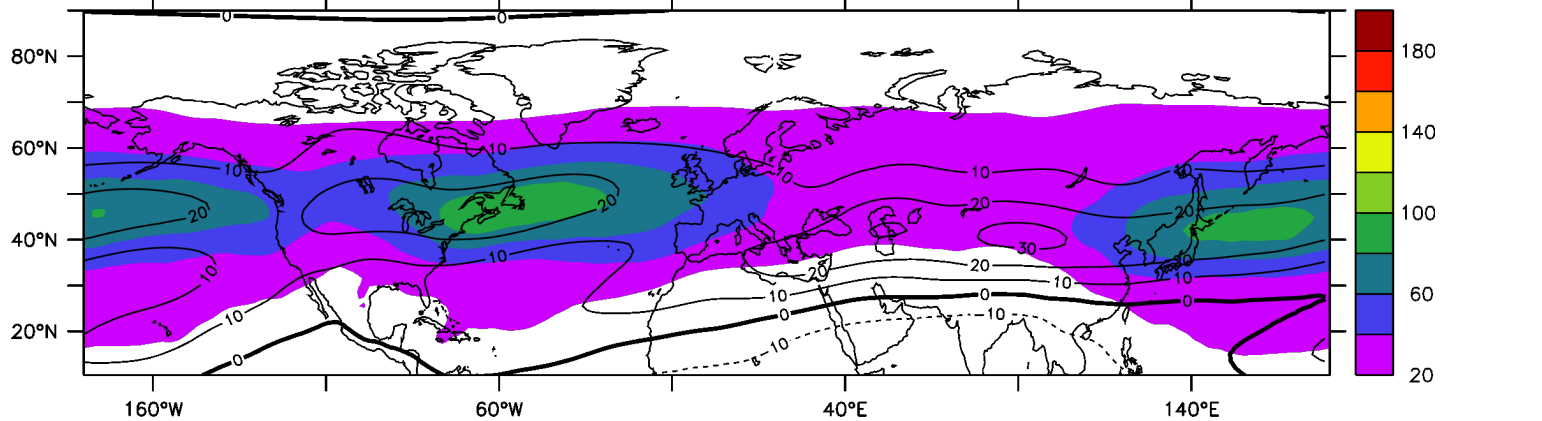
NPv4.12bis



APv4.0

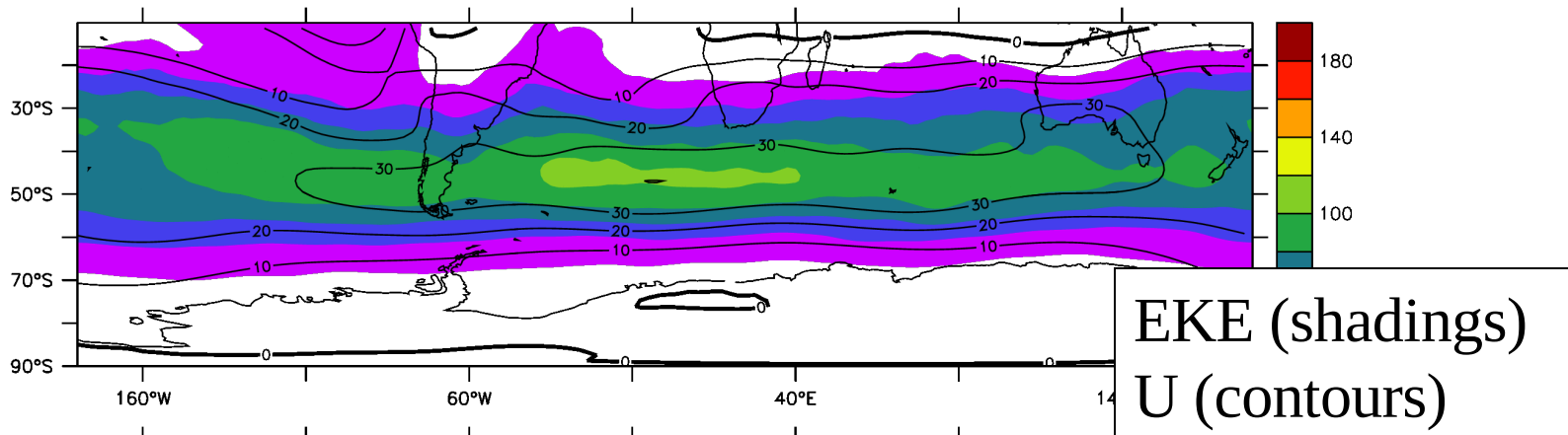


ERA-Interim

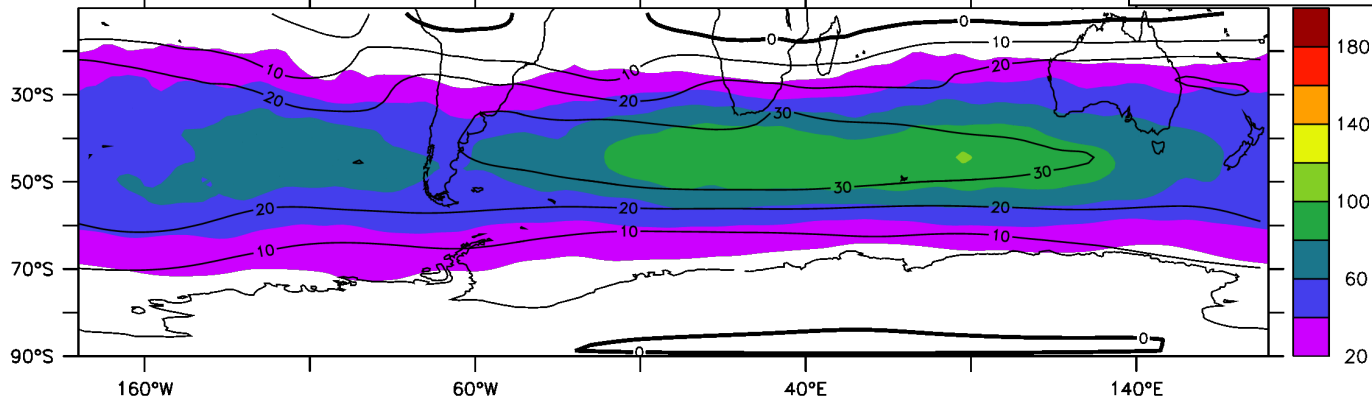


Variabilité haute fréquence HS ($T < 8$ jours) (DJF, 200mb)

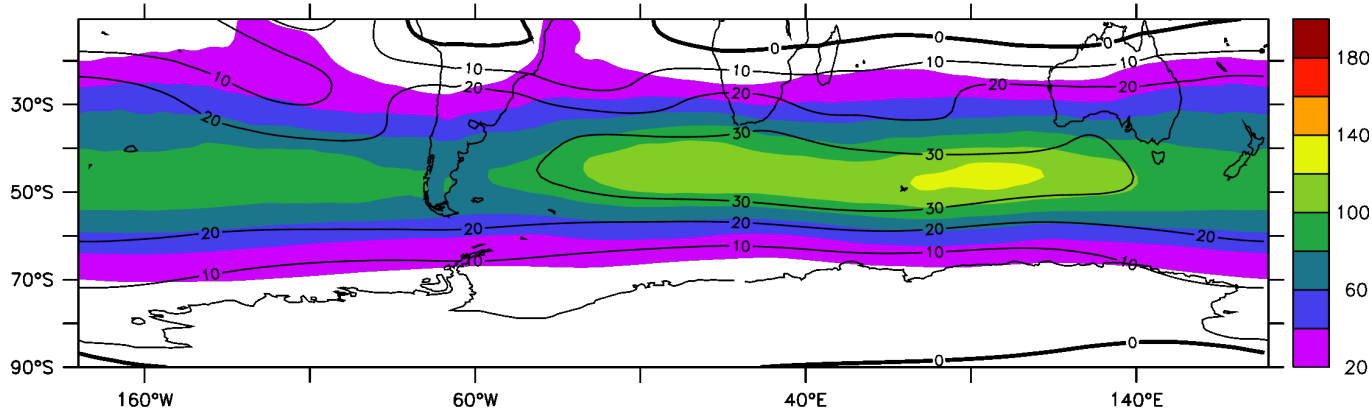
NPv4.12bis



APv4.0

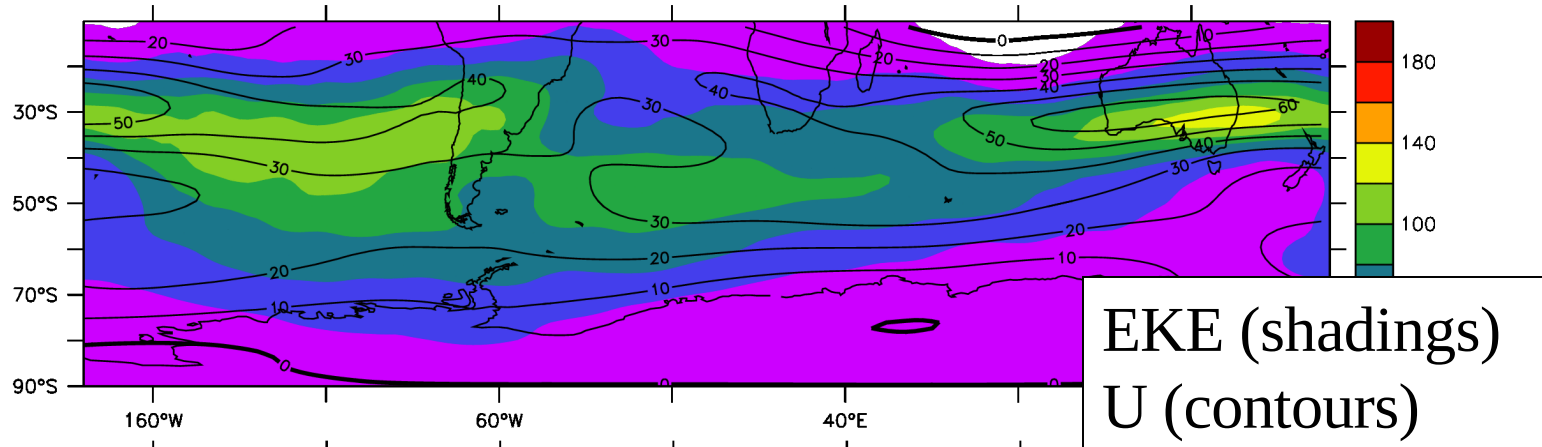


ERA-Interim

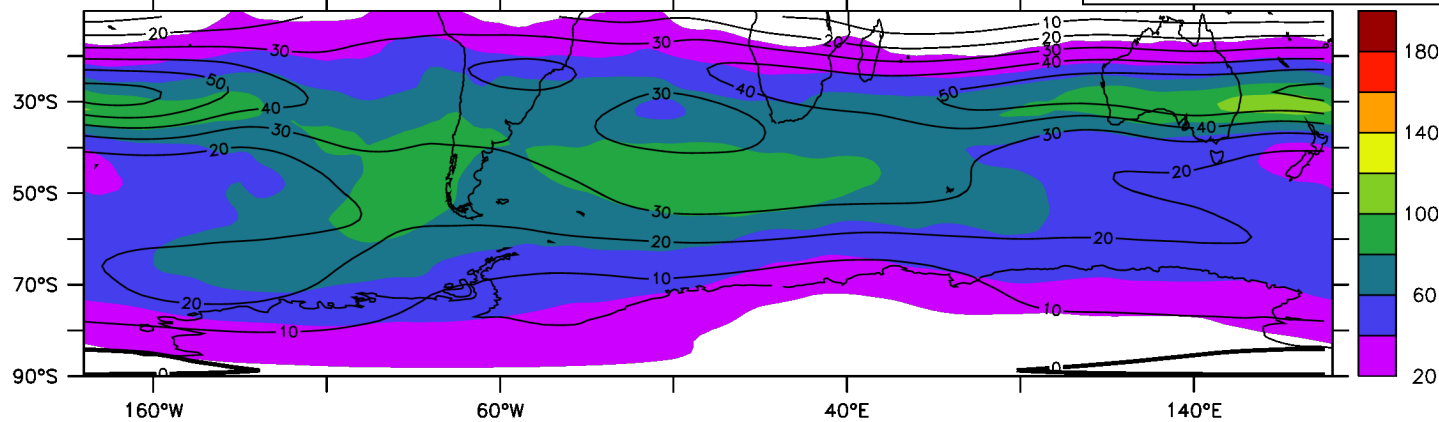


Variabilité haute fréquence HS ($T < 8$ jours) (JJA, 200mb)

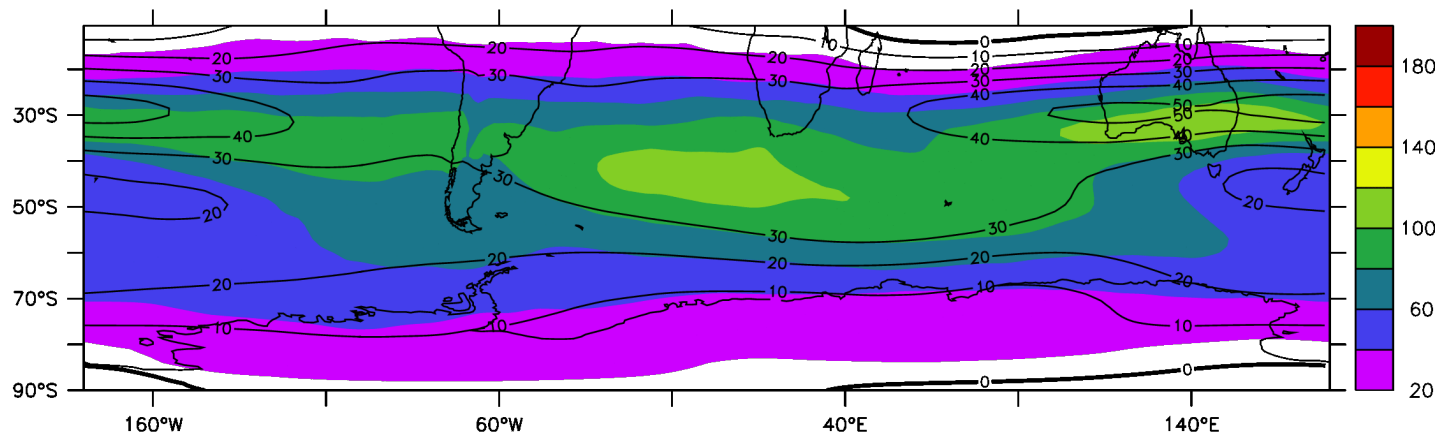
NPv4.12bis



APv4.0

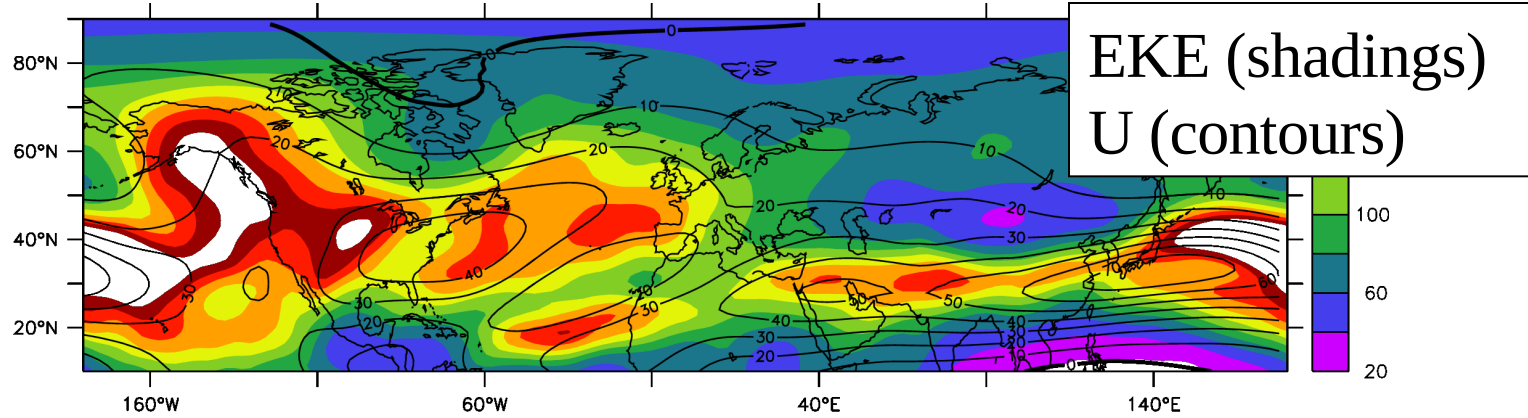


ERA-Interim

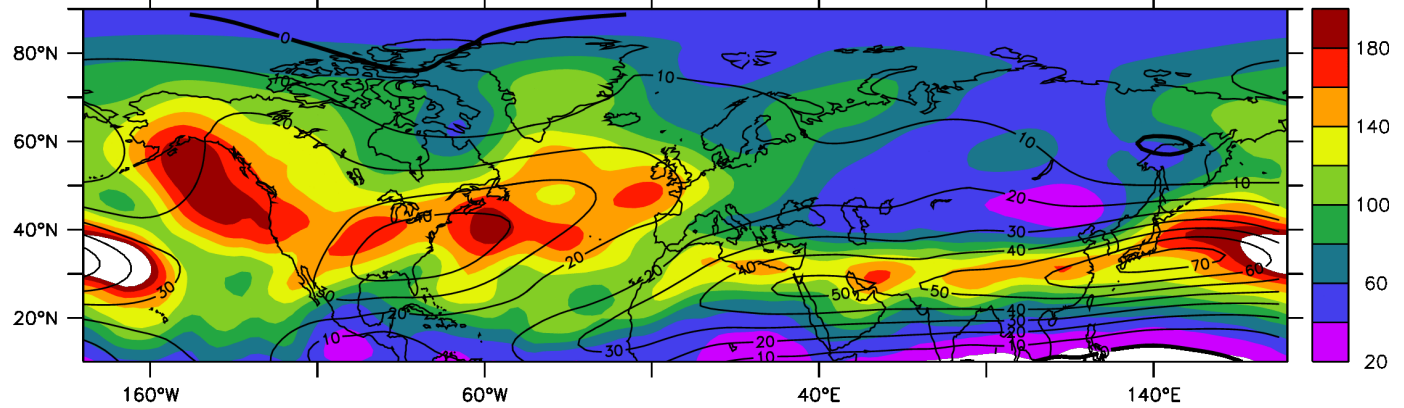


Variabilité basse fréquence HN ($T > 8$ jours) (DJF, 200mb)

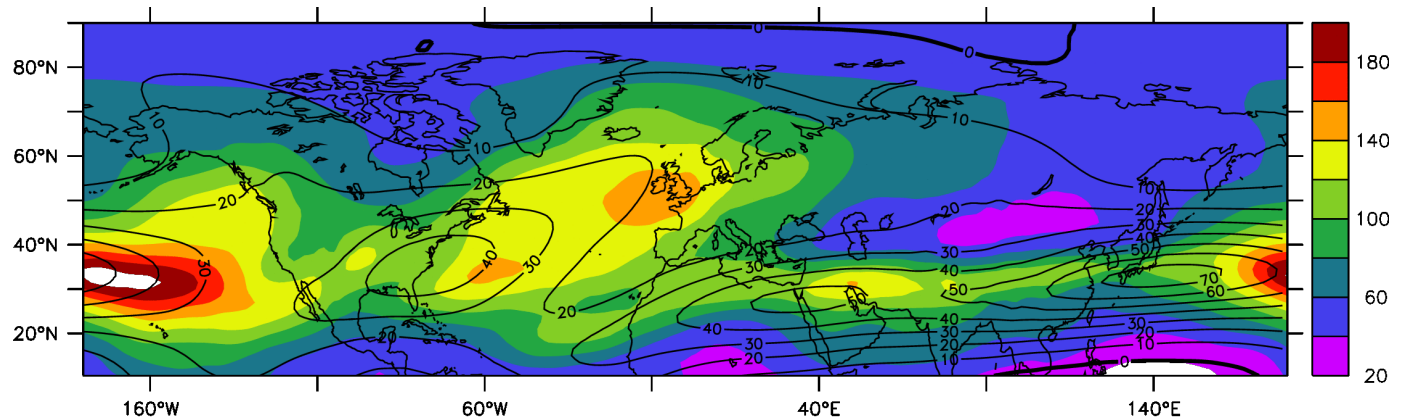
NPv4.12bis



APv4.0

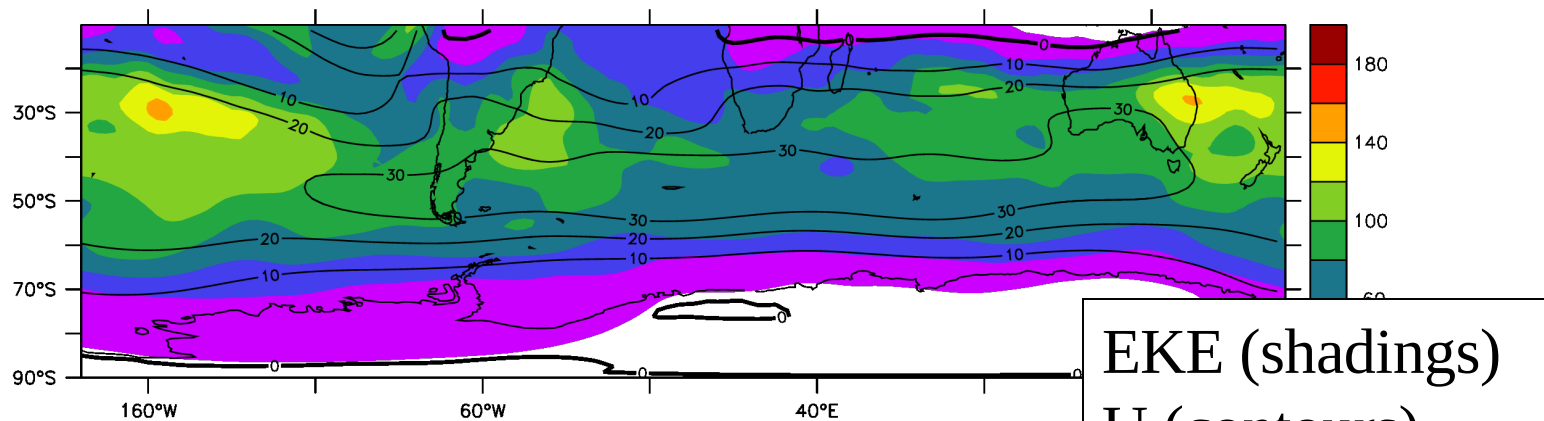


ERA-Interim

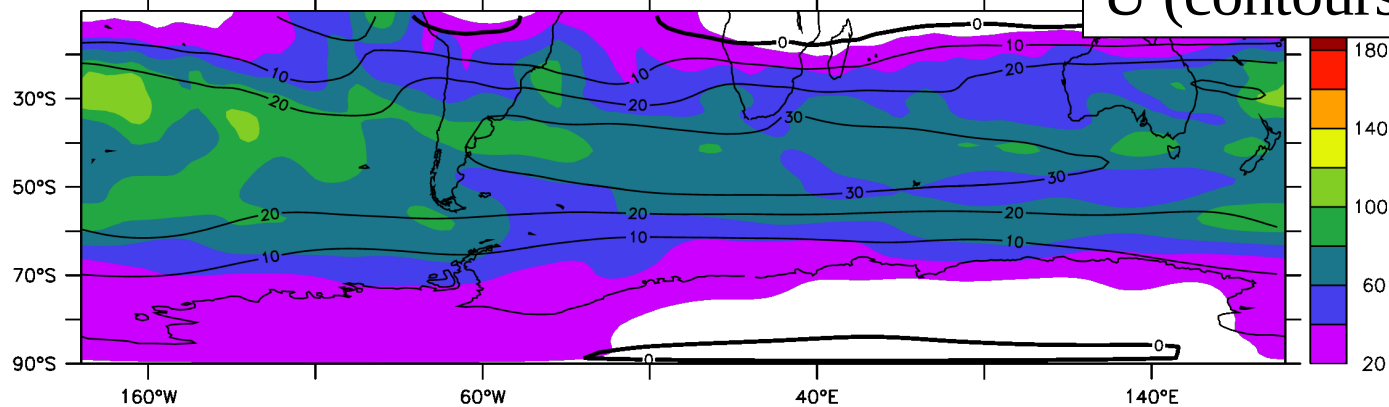


Variabilité basse fréquence HS (T>8 jours) (DJF, 200mb)

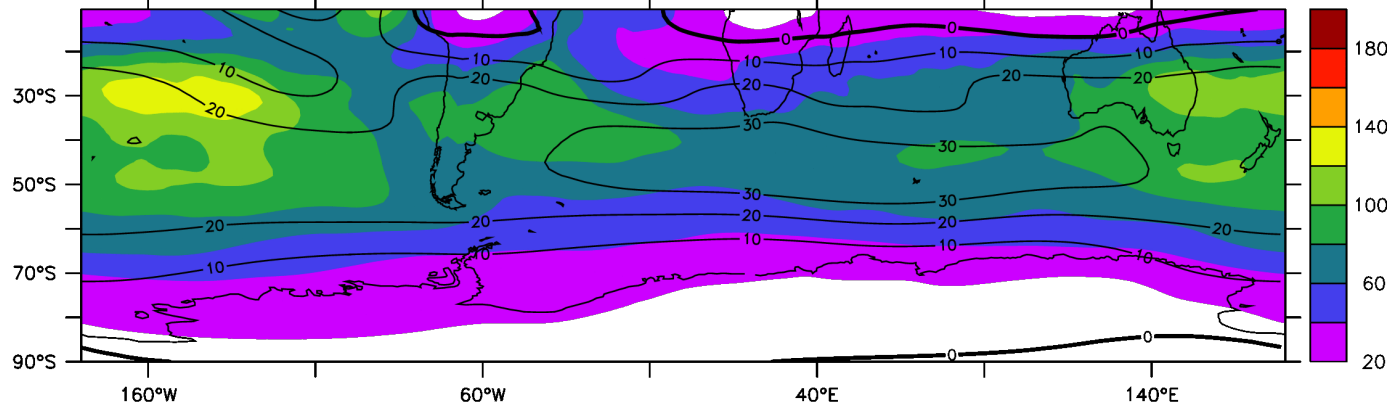
NPv4.12bis



APv4.0

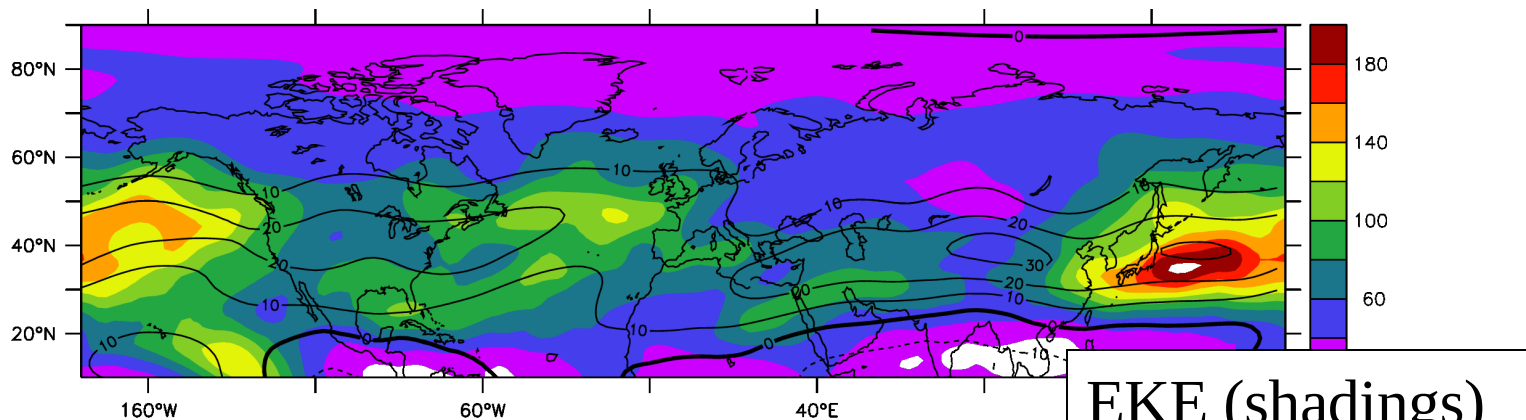


ERA-Interim

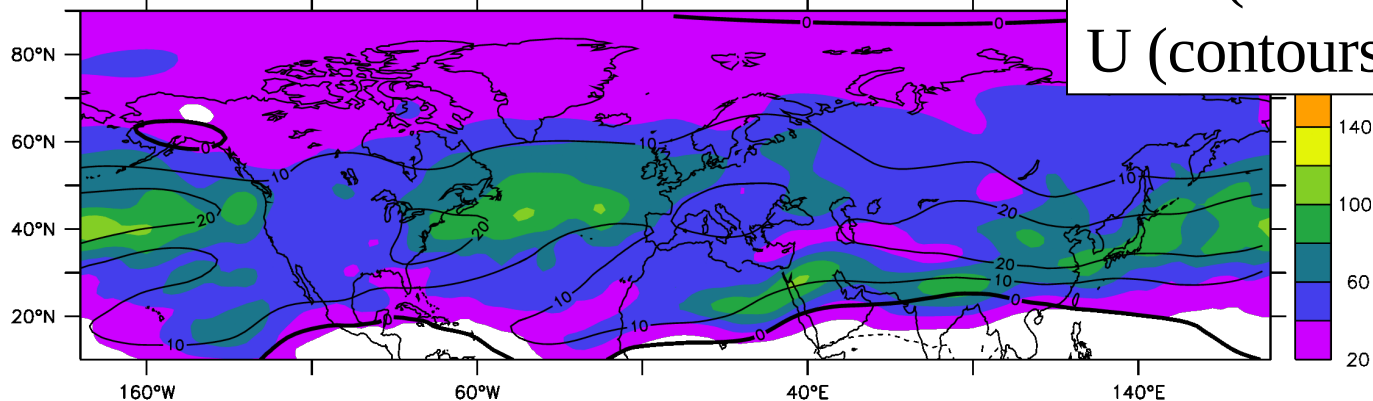


Variabilité basse fréquence HN (T>8 jours) (JJA, 200mb)

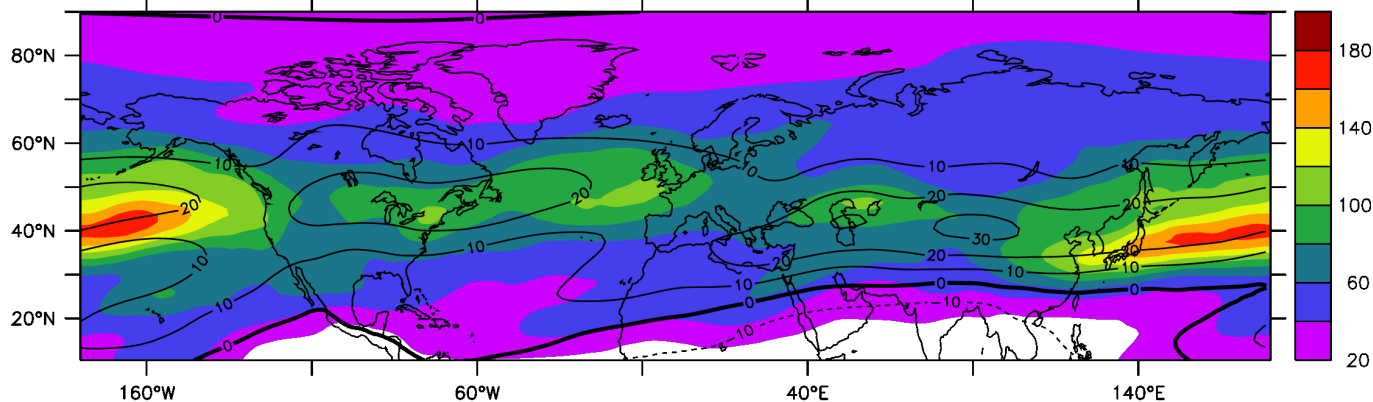
NPv4.12bis



APv4.0

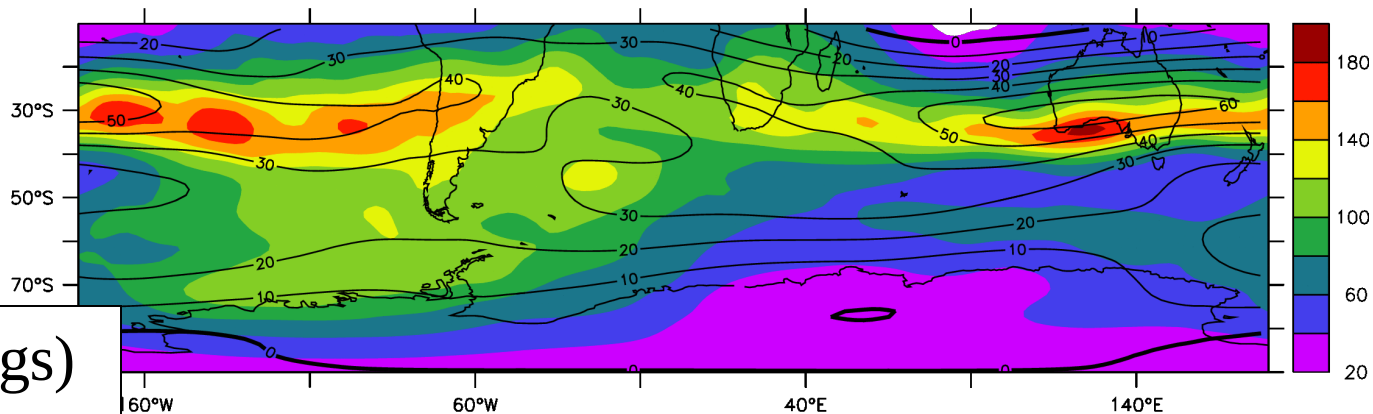


ERA-Interim



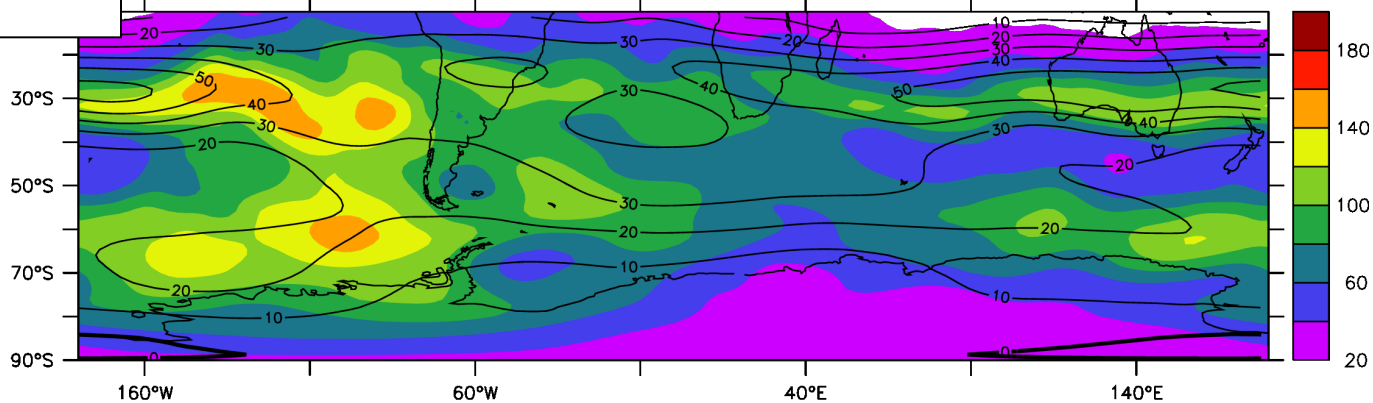
Variabilité basse fréquence HS (T>8 jours) (JJA, 200mb)

NPv4.12bis

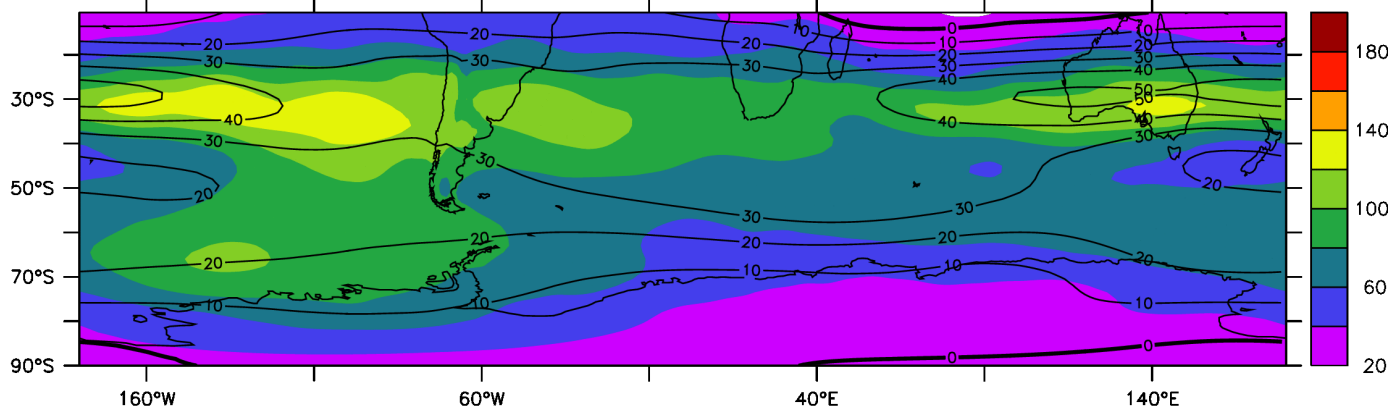


EKE (shadings)
U (contours)

APv4.0

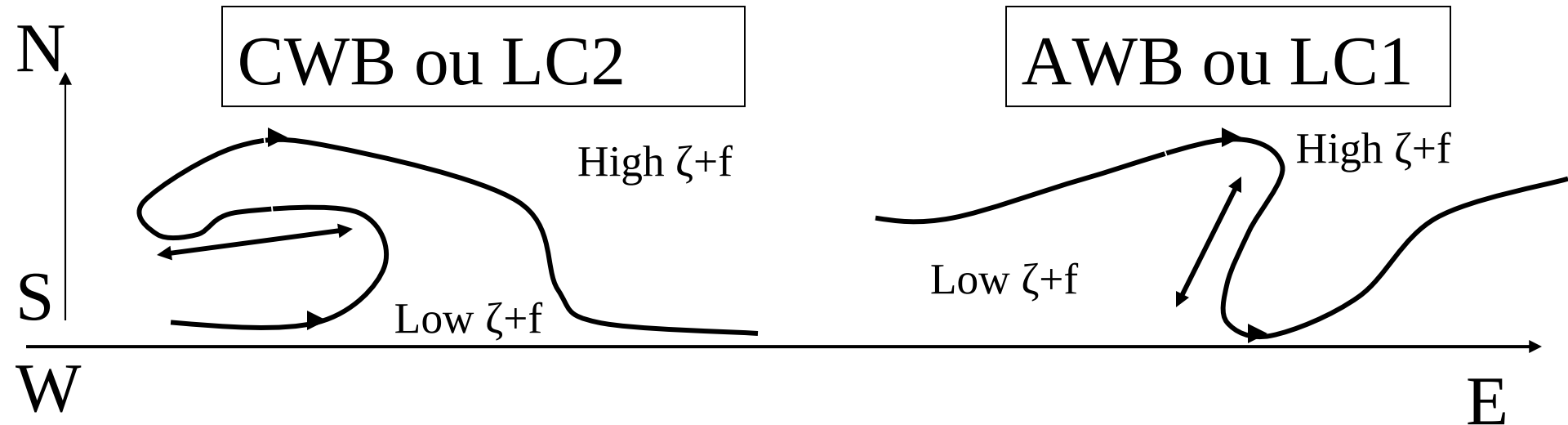


ERA-Interim



Introduction aux déferlements d'ondes de Rossby synoptiques

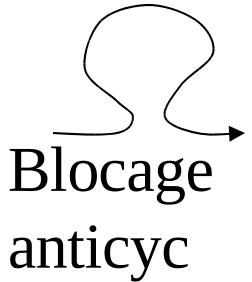
Thorncroft et al. (1993): deux types de déferlement: phénomène qui est étroitement lié à l'interaction ondes-jet



At a given time, we detect all the points presenting a reversal of the absolute vorticity gradient at 200 hPa. We then distinguish between CWB and AWB.

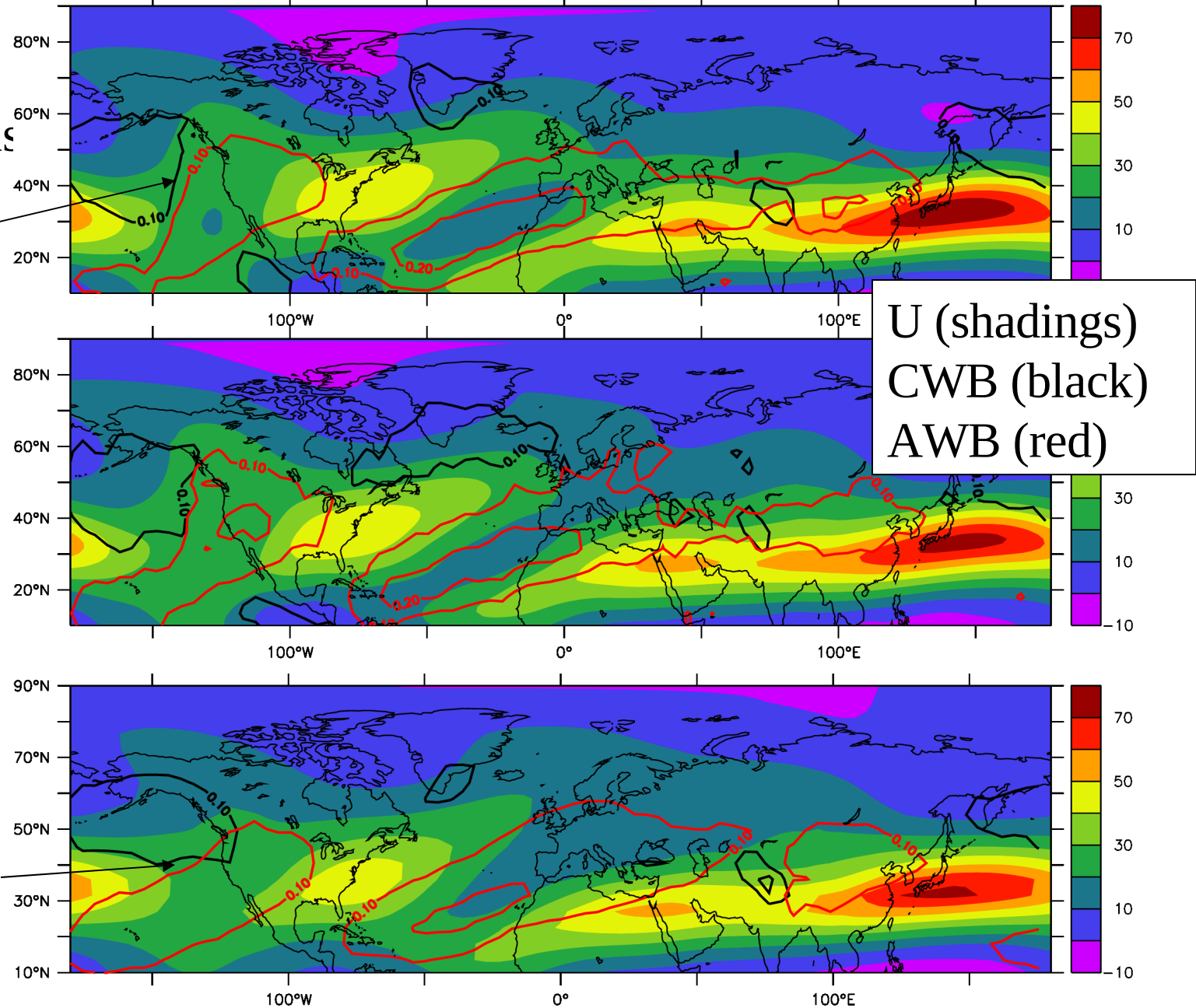
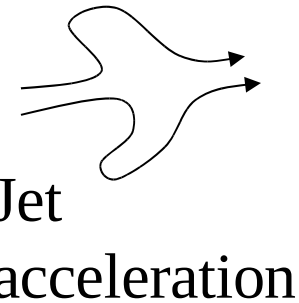
Fréquence déferlement ondes de Rossby HN (DJF, 200mb)

NPv4.12bis



APv4.0

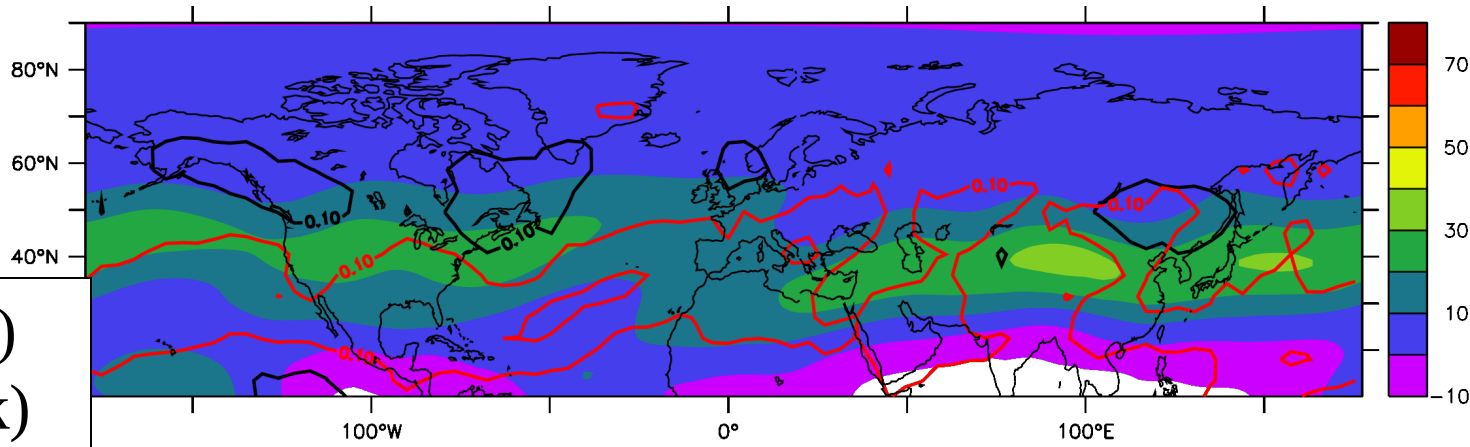
ERA-Interim



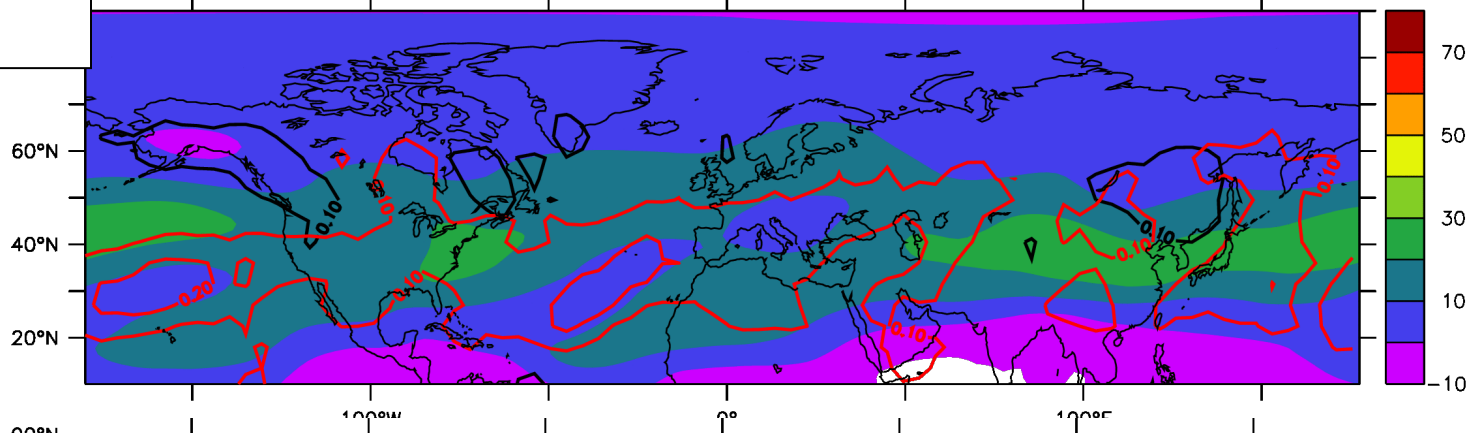
Fréquence de déferlement ondes de Rossby HN (JJA)

NPv4.12bis

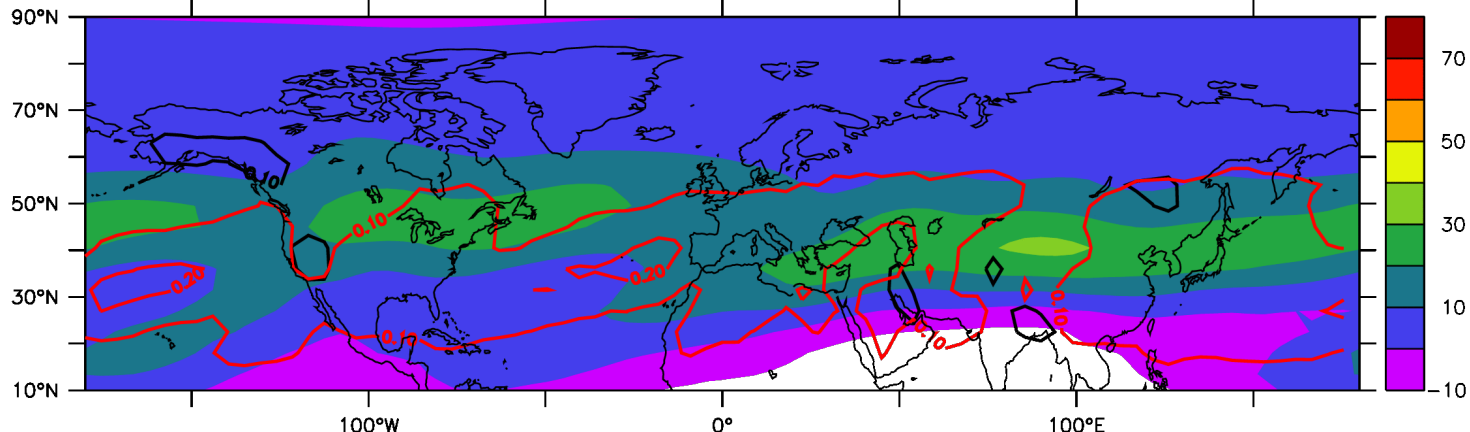
U (shadings)
CWB (black)
AWB (red)



APv4.0



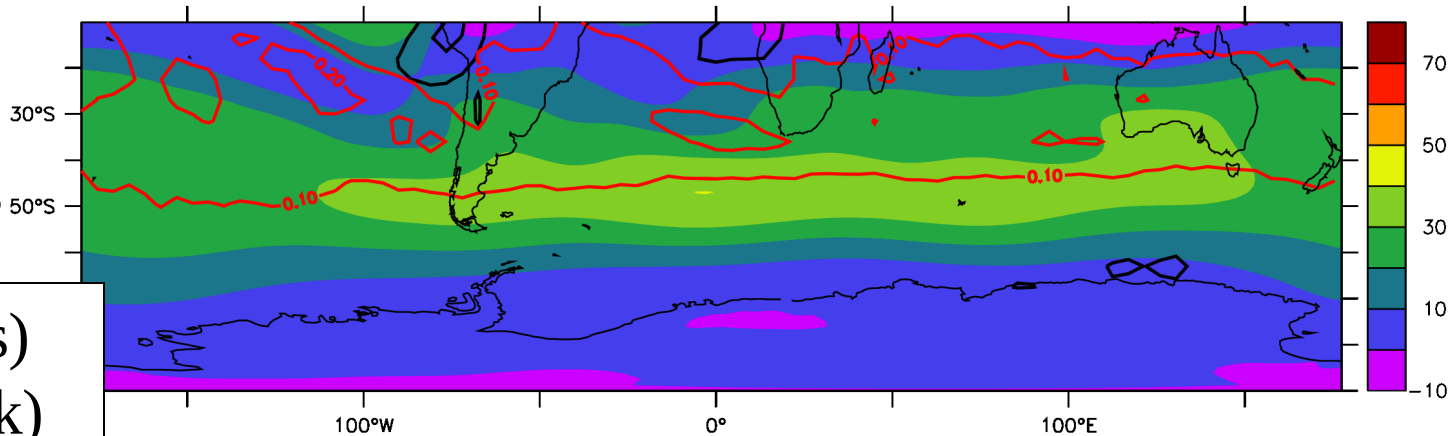
ERA-Interim



Fréquence de déferlement ondes de Rossby HS (DJF)

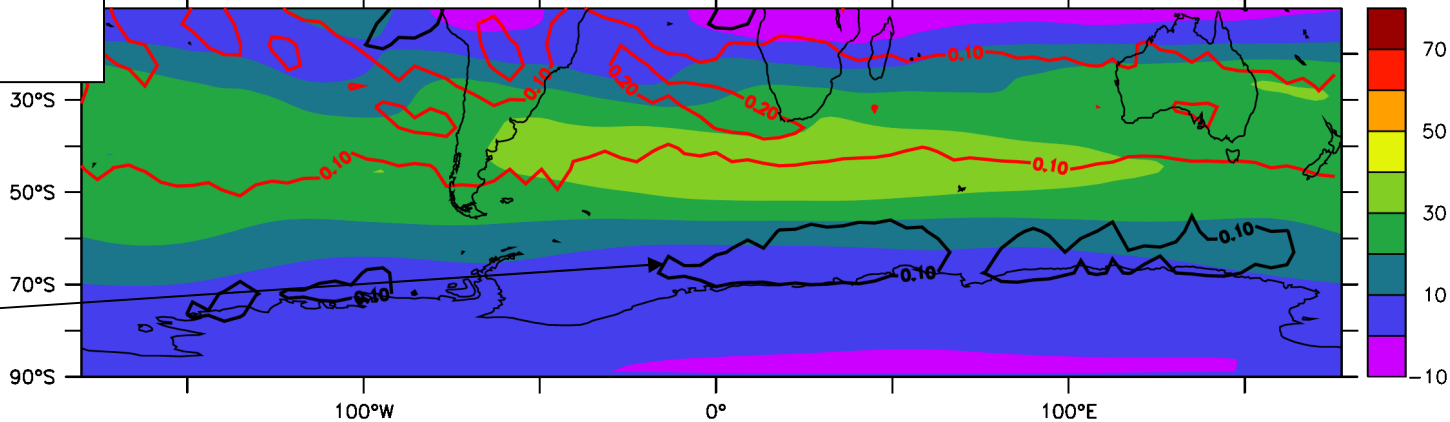
NPv4.12bis

U (shadings)
CWB (black)
AWB (red)

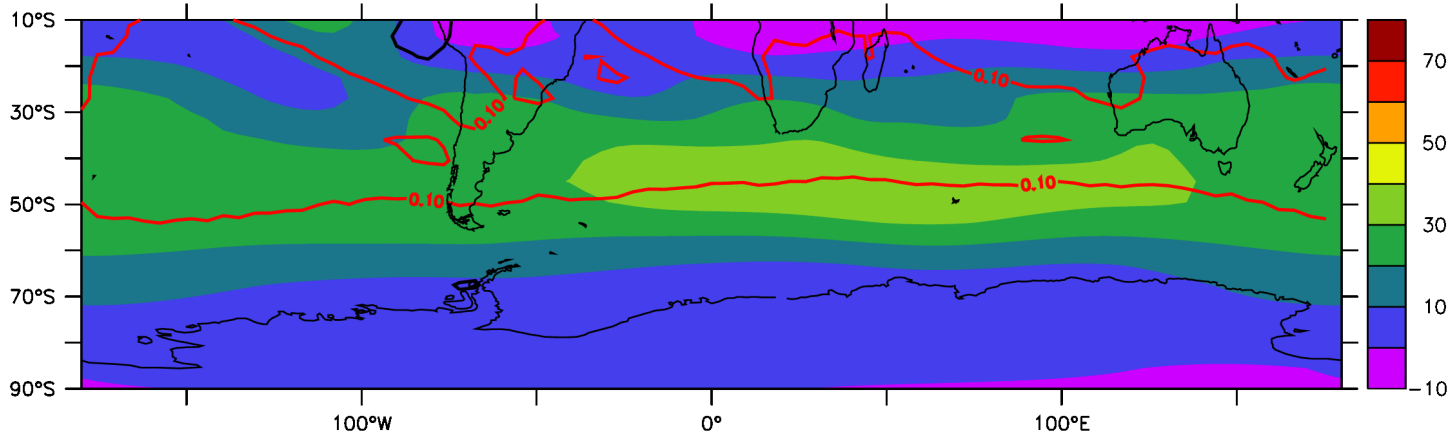


APv4.0

+ de CWB



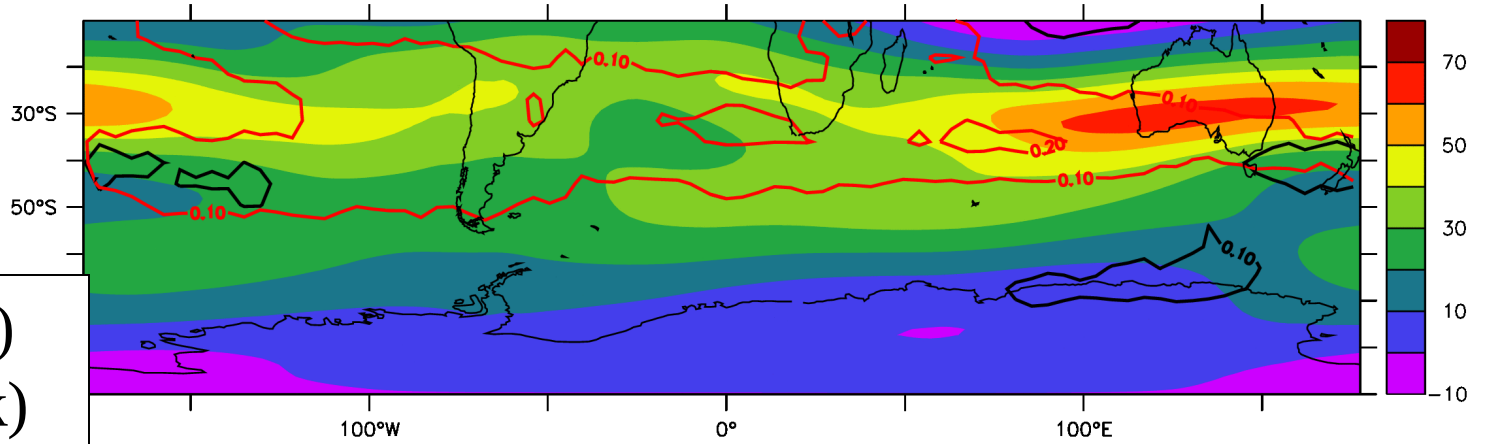
ERA-Interim



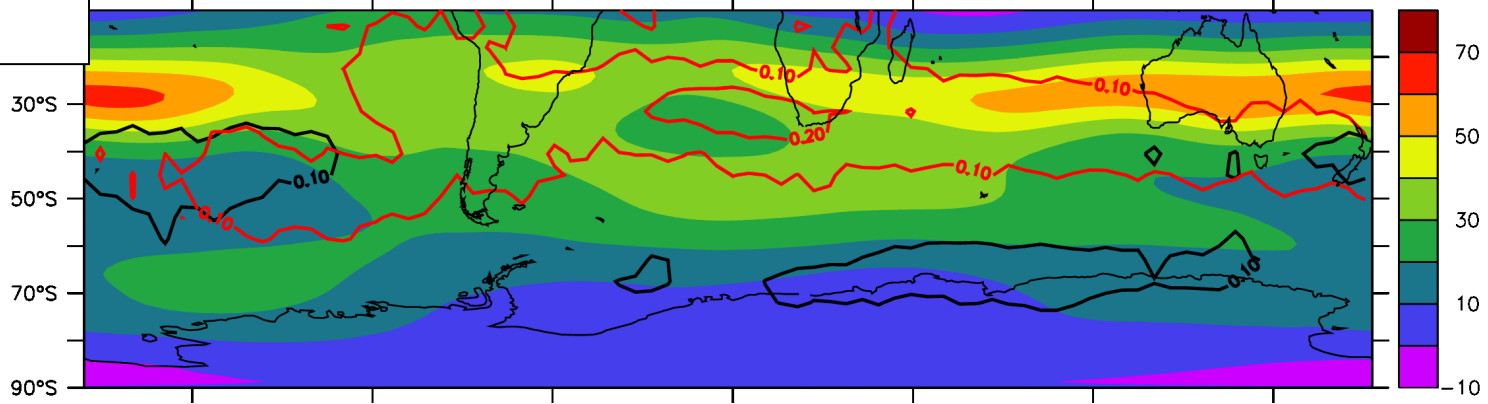
Fréquence de déferlement ondes de Rossby HS (JJA)

NPv4.12bis

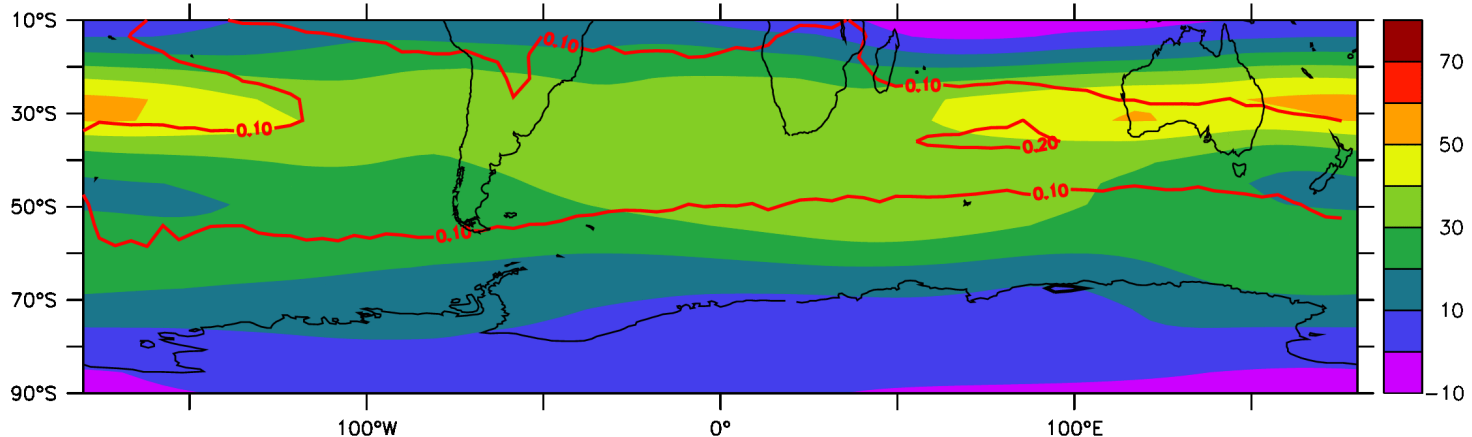
U (shadings)
CWB (black)
AWB (red)



APv4.0



ERA-Interim



Conclusions

- Augmentation de l'intensité des storm-tracks avec la nouvelle physique (+ proche d'ERA-Interim → amélioration) en hiver et en été, dans l'HS et dans l'HN.
- Amélioration de la représentation de la variabilité basse fréquence des moyennes latitudes dans l'HS (DJF et JJA)
- Position jet et variabilité basse fréquence bonne dans l'Atlantique Nord mais sur-représentation des phénomènes de blocages dans le Pacifique Nord-est en hiver (DJF)