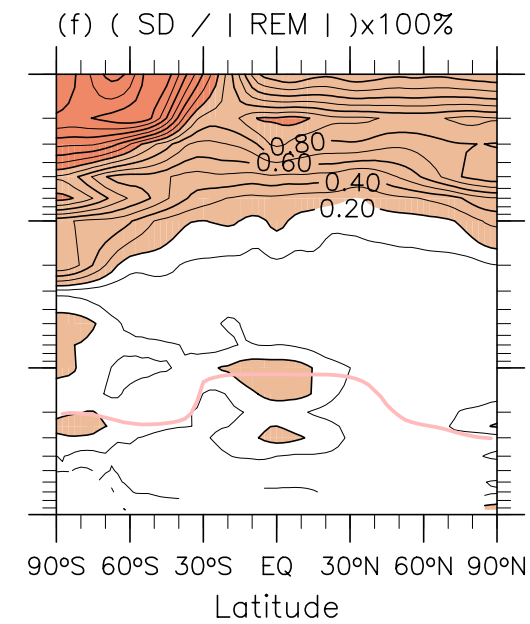
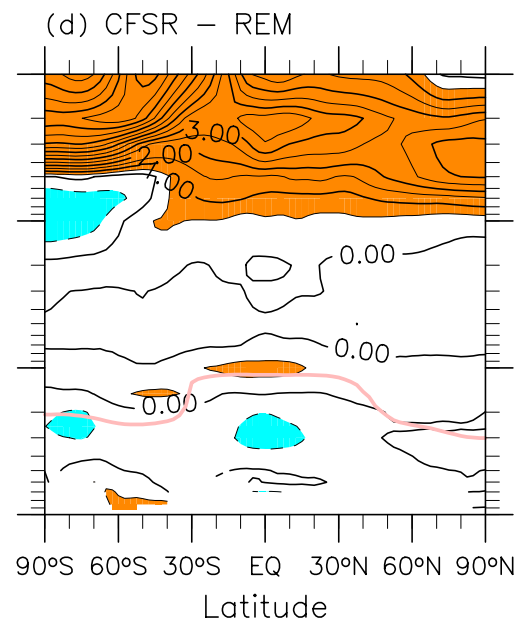
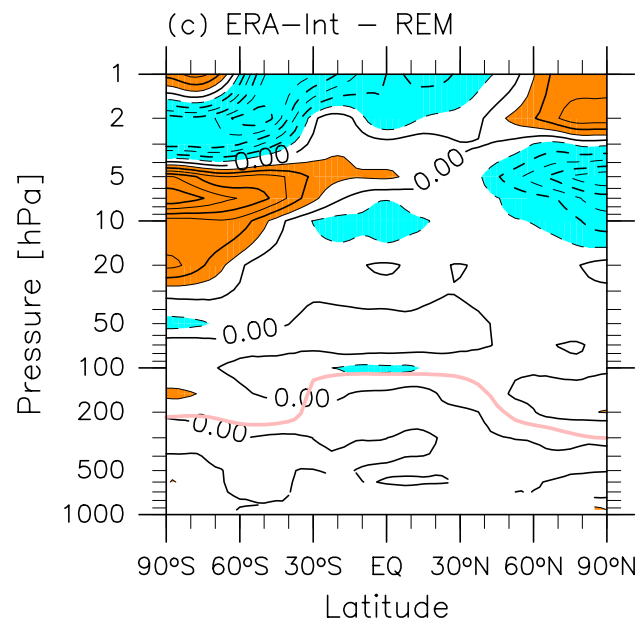
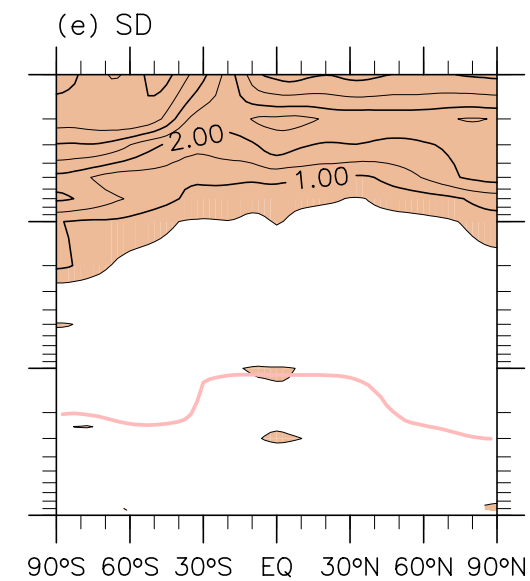
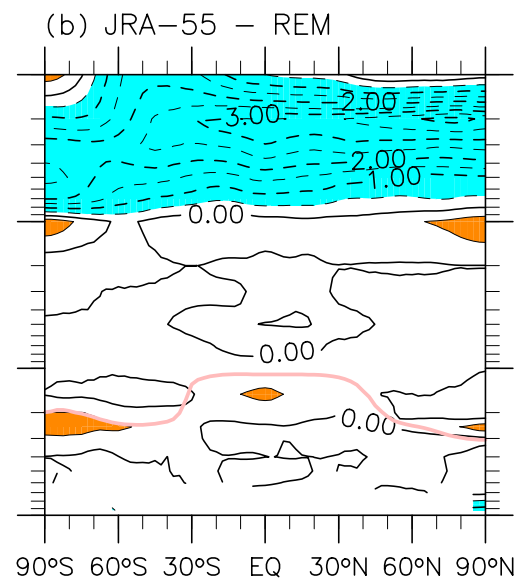
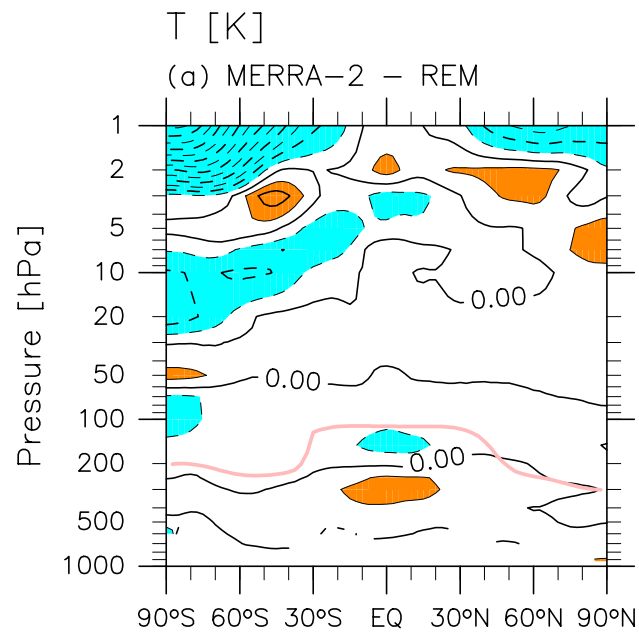


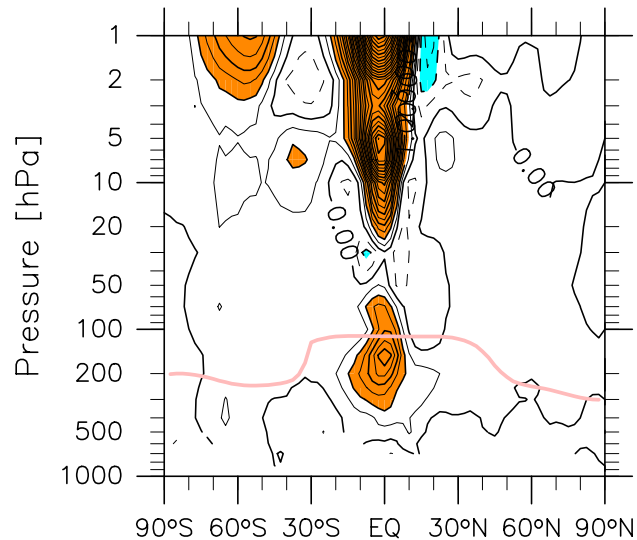
JJA (81-10)



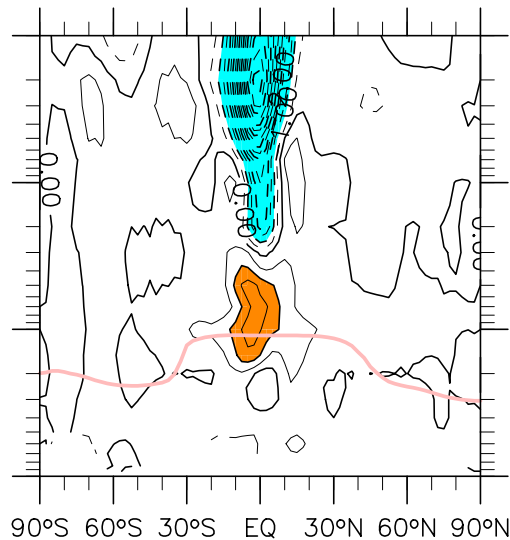
JJA (81-10)

u [m/s]

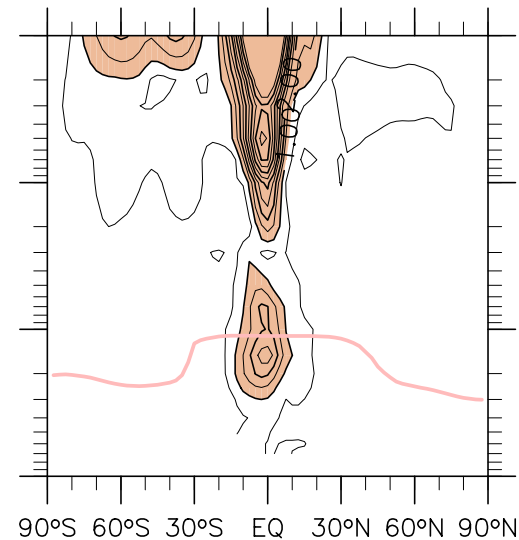
(a) MERRA-2 - REM



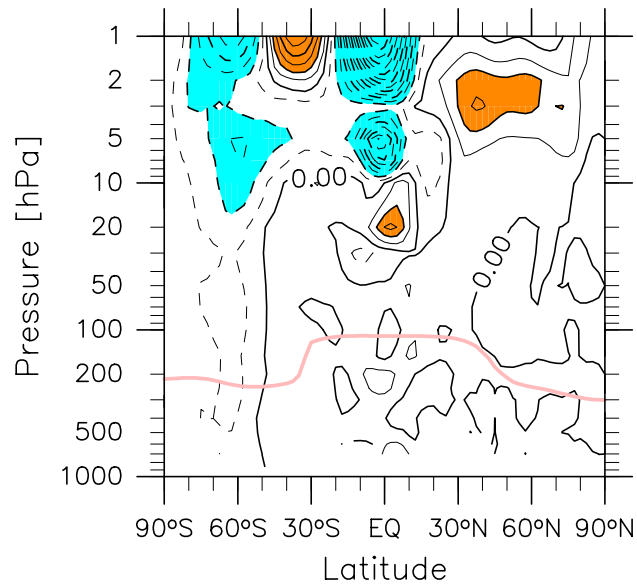
(b) JRA-55 - REM



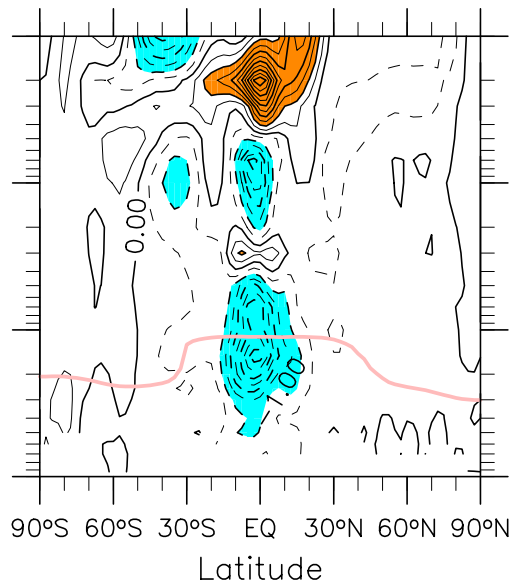
(e) SD



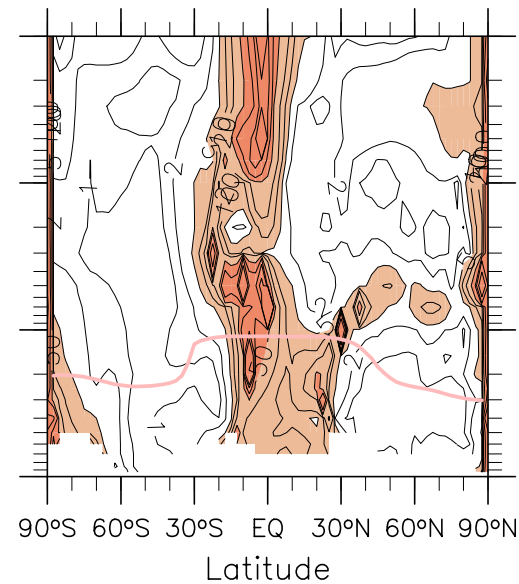
(c) ERA-Int - REM



(d) CFSR - REM



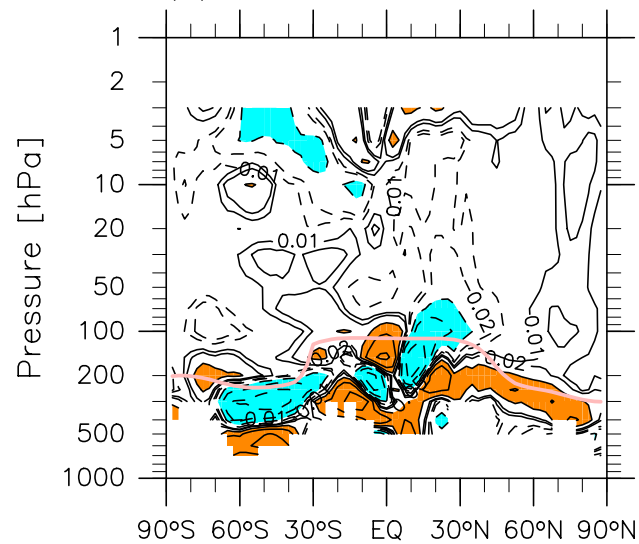
(f) (SD / | REM |) x 100%



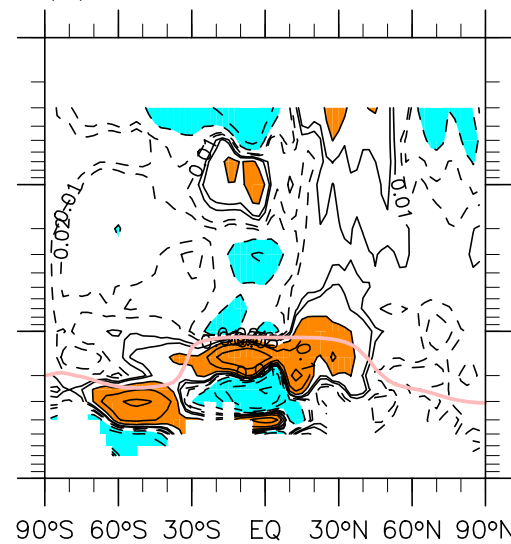
JJA (81–10)

v_{res} [m/s]

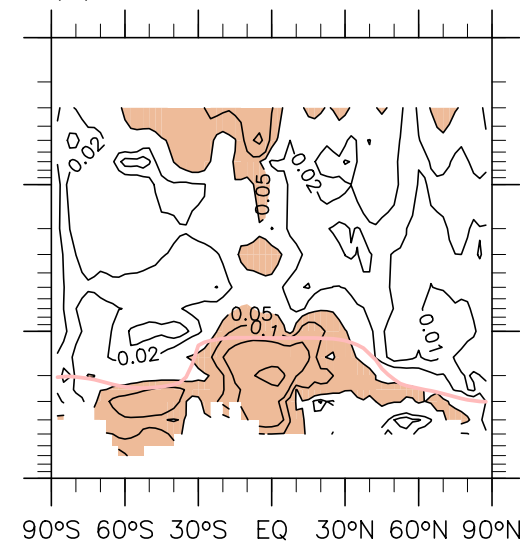
(a) MERRA-2 – REM



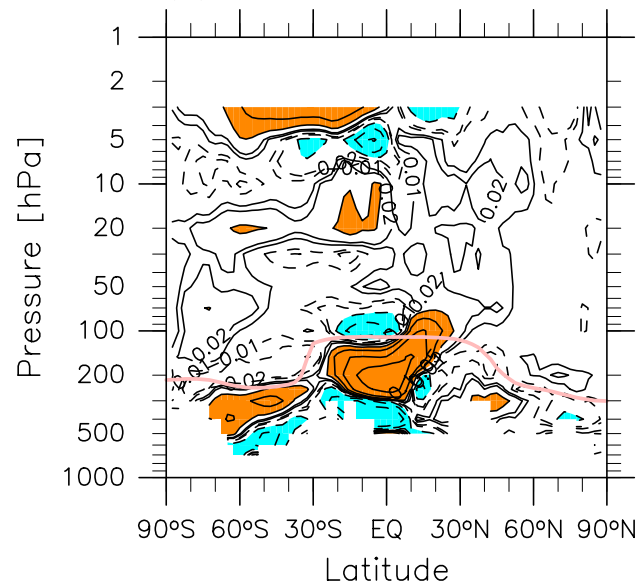
(b) JRA-55 – REM



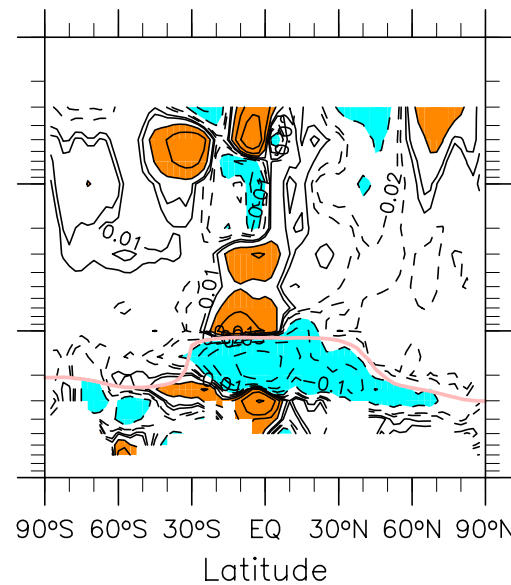
(e) SD



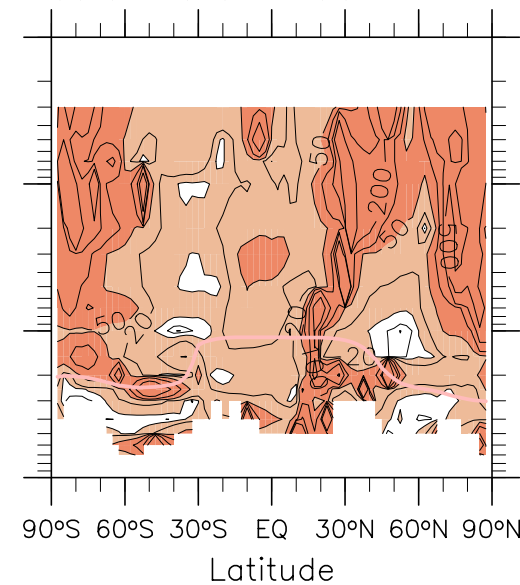
(c) ERA-Int – REM



(d) CFSR – REM



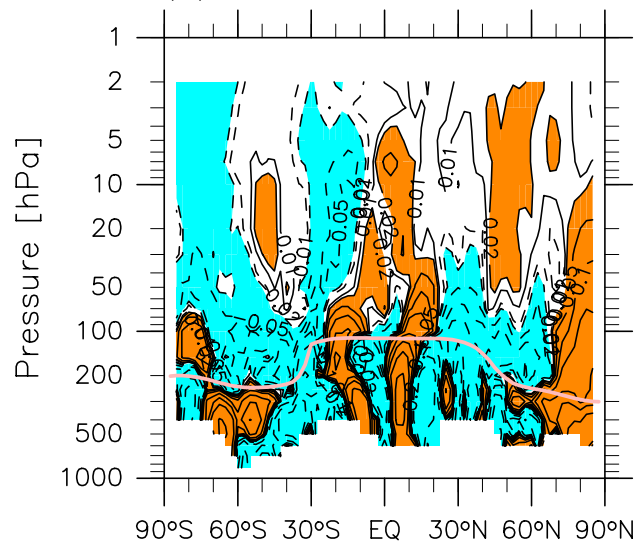
(f) $(SD / |REM|) \times 100\%$



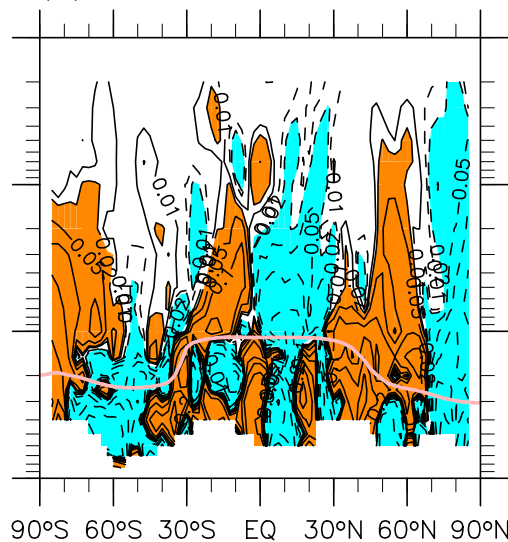
JJA (81–10)

ω_{res} [mPa/s]

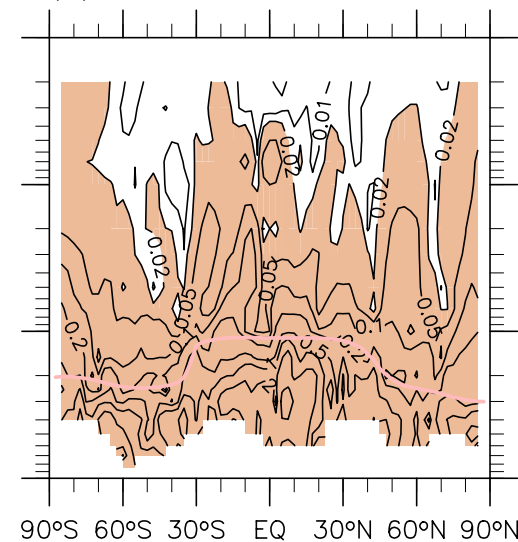
(a) MERRA-2 – REM



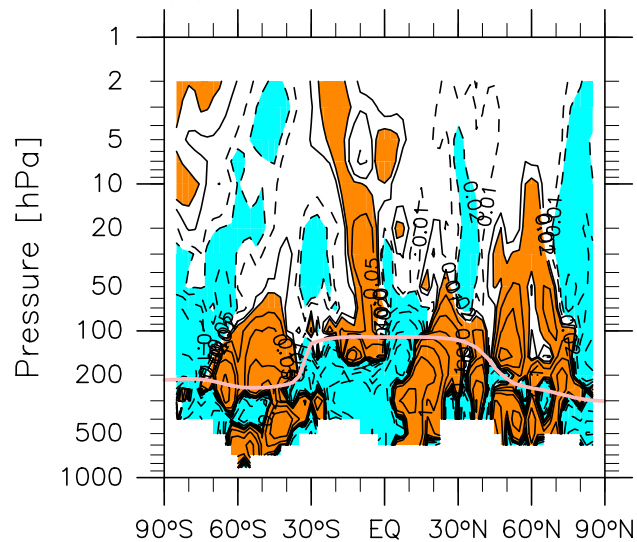
(b) JRA-55 – REM



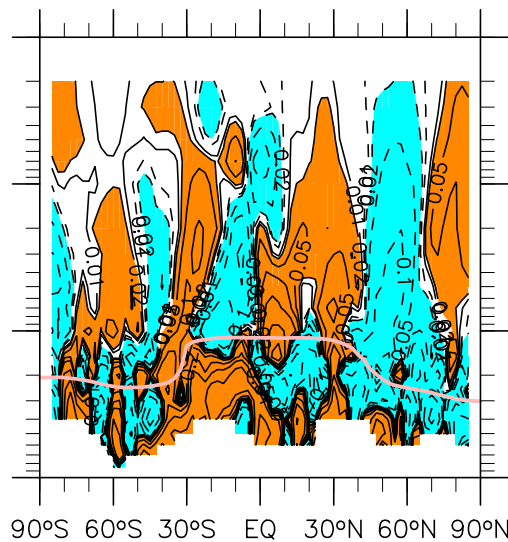
(e) SD



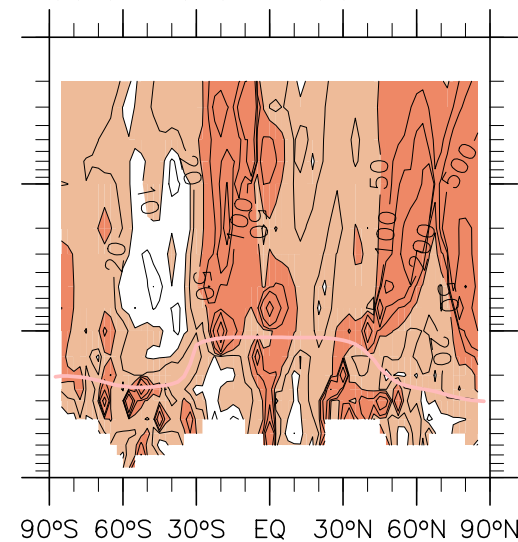
(c) ERA-Int – REM



(d) CFSR – REM



(f) $(\text{SD} / |\text{REM}|) \times 100\%$



Latitude

Latitude

Latitude

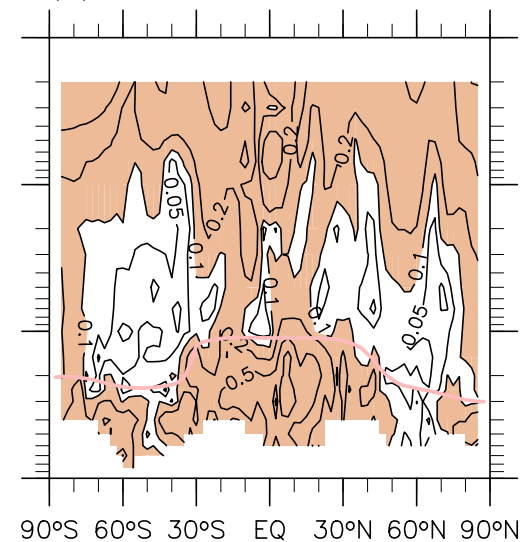
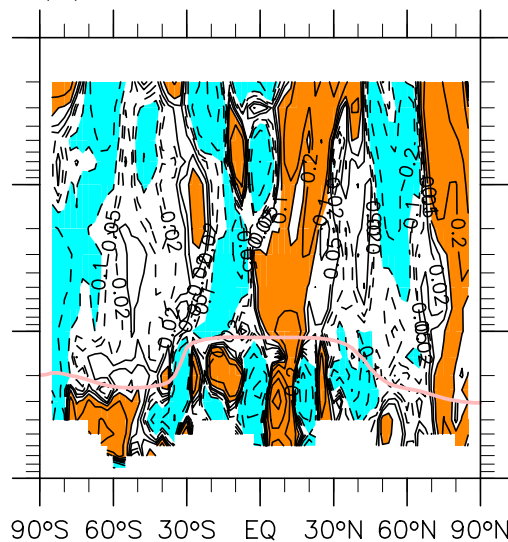
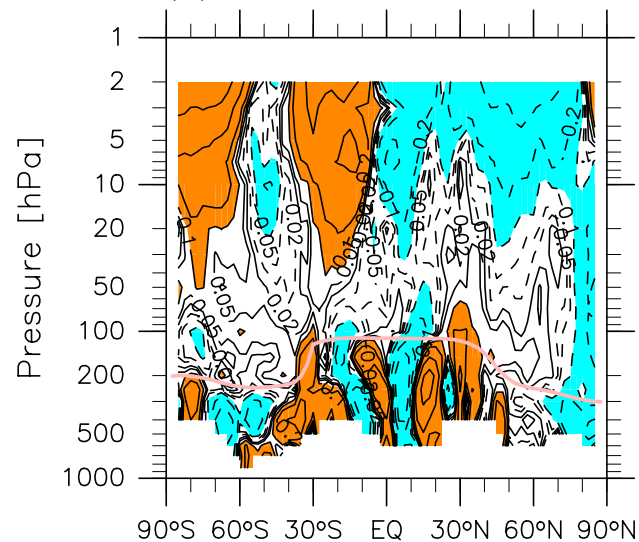
w_{res} [mm/s]

JJA (81–10)

(a) MERRA-2 – REM

(b) JRA-55 – REM

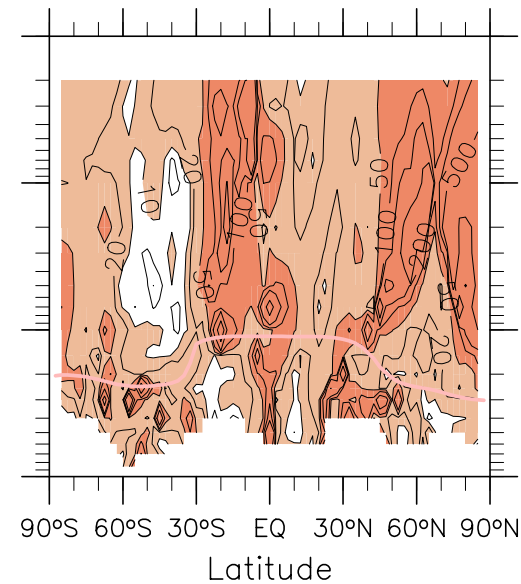
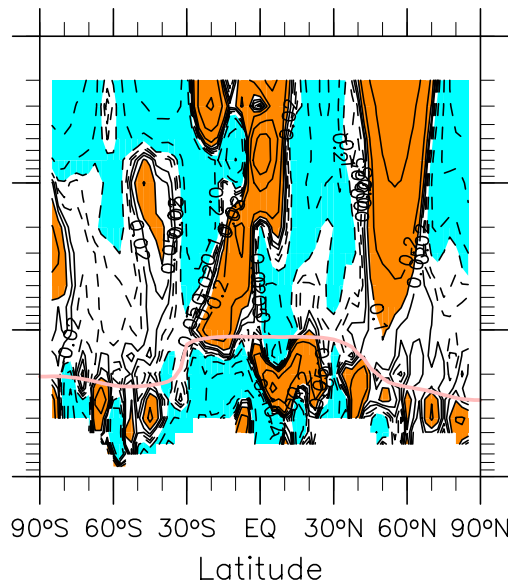
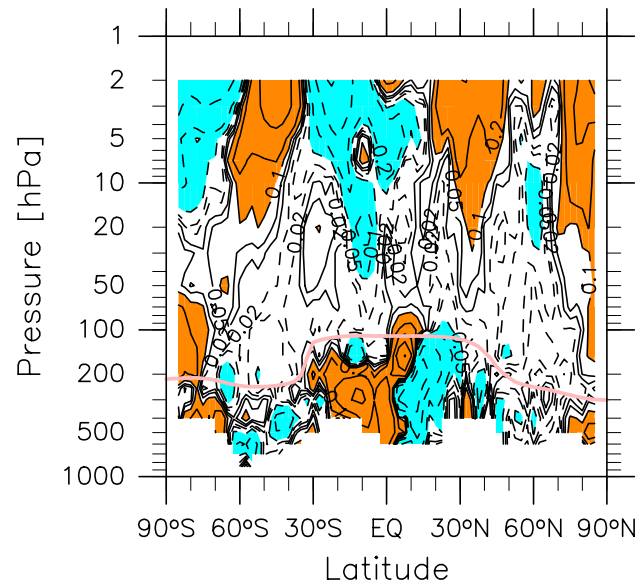
(e) SD



(c) ERA-Int – REM

(d) CFSR – REM

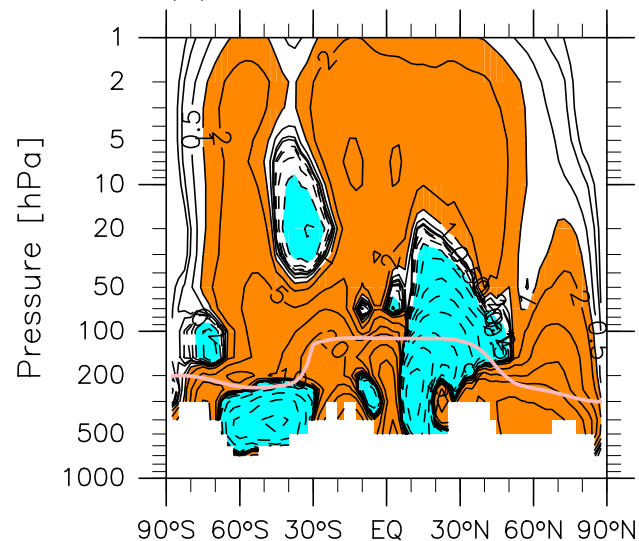
(f) $(SD / |REM|) \times 100\%$



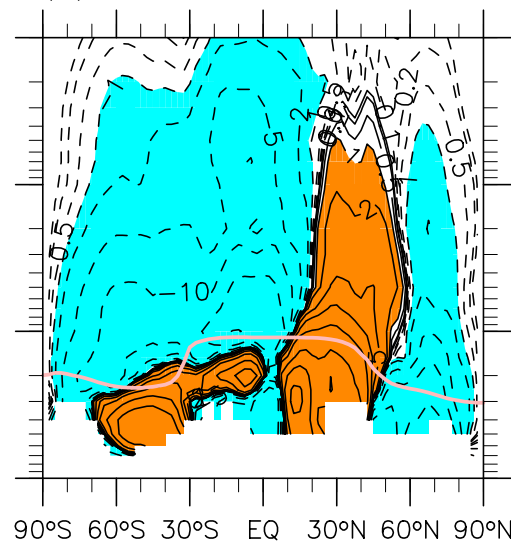
JJA (81–10)

ψ_{vres} [kg/m/s]

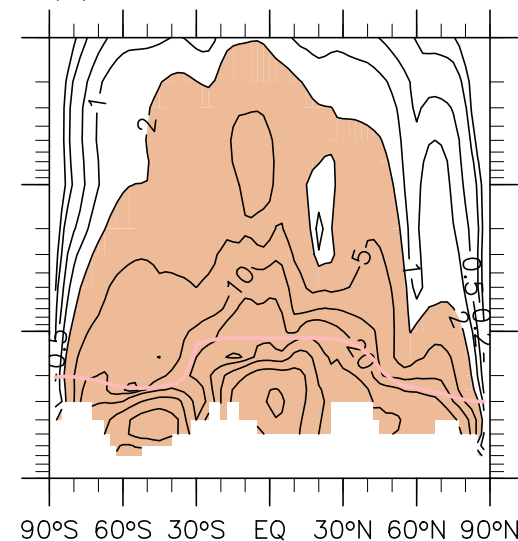
(a) MERRA-2 – REM



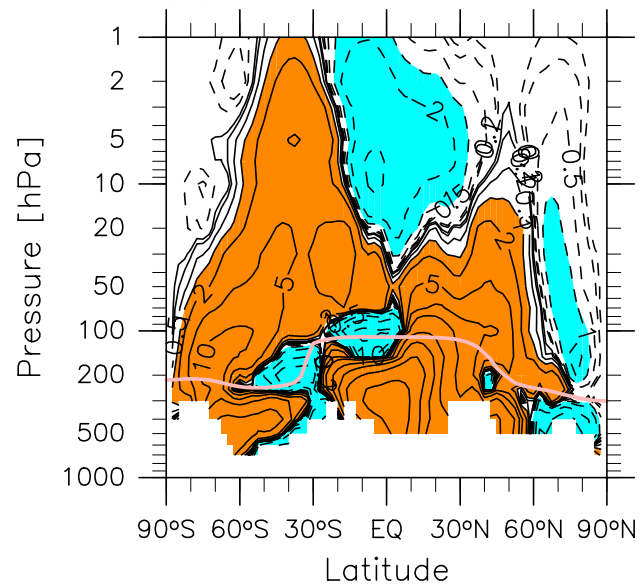
(b) JRA-55 – REM



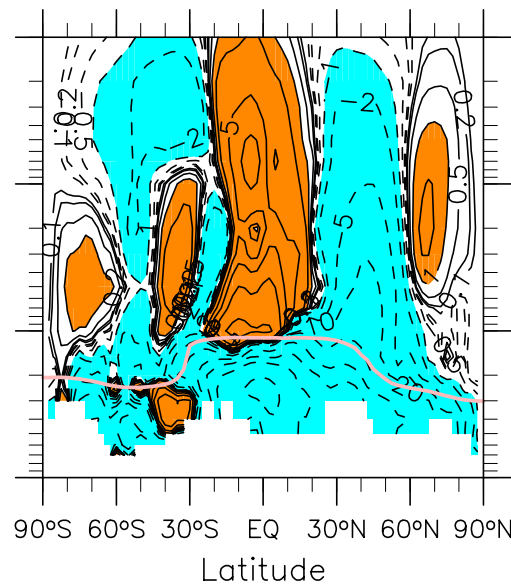
(e) SD



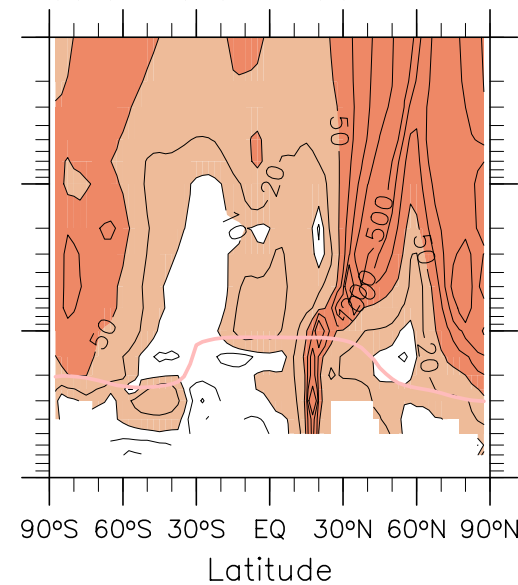
(c) ERA-Int – REM



(d) CFSR – REM



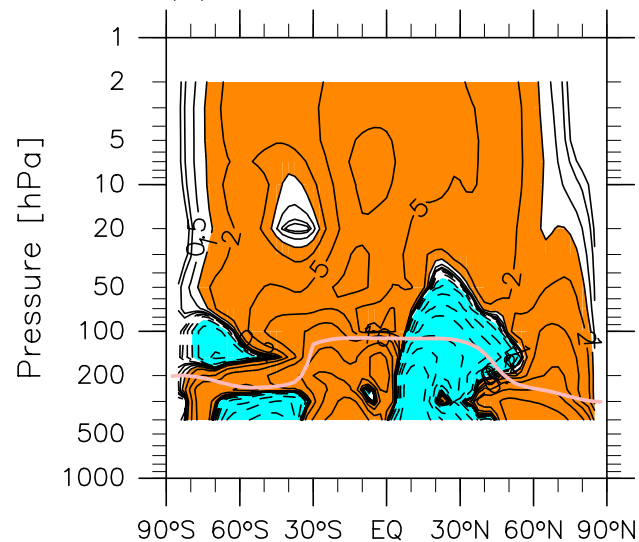
(f) $(\text{SD} / |\text{REM}|) \times 100\%$



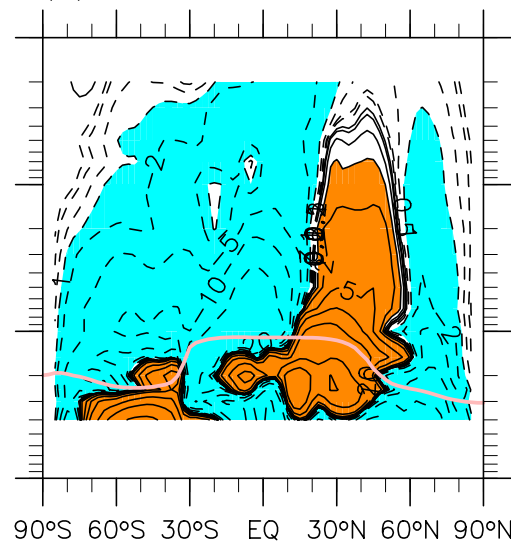
JJA (81–10)

ψ_{wres} [kg/m/s]

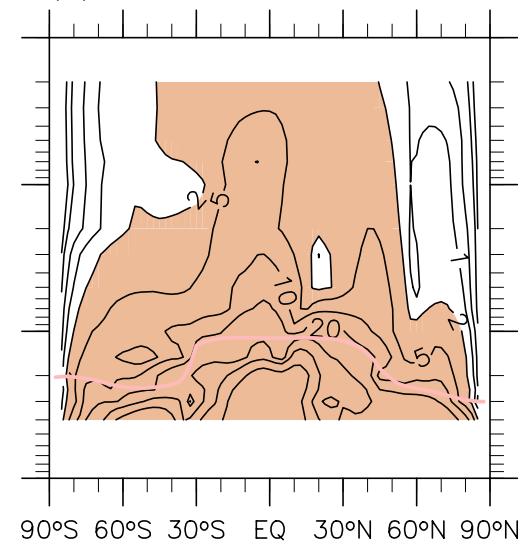
(a) MERRA-2 – REM



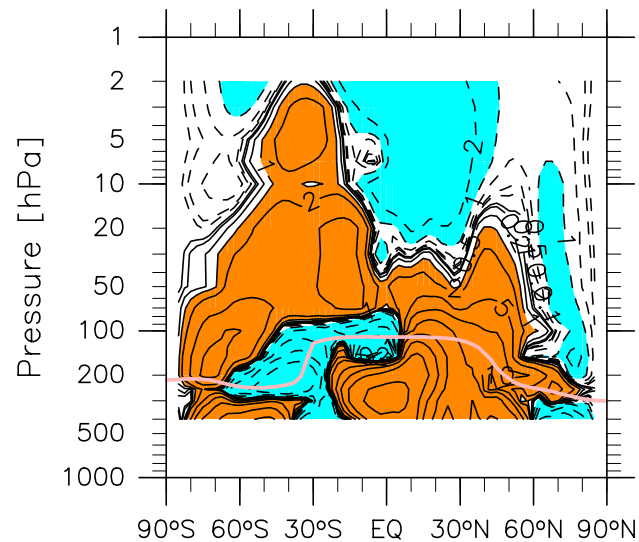
(b) JRA-55 – REM



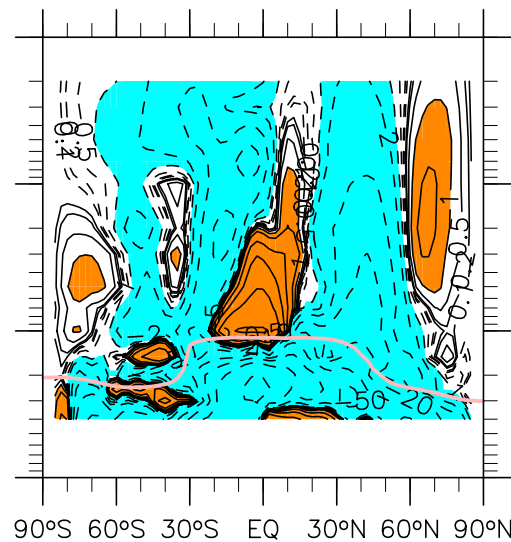
(e) SD



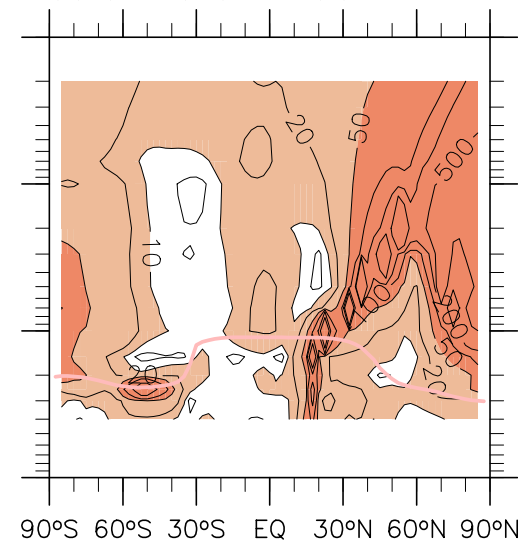
(c) ERA-Int – REM



(d) CFSR – REM



(f) $(\text{SD} / |\text{REM}|) \times 100\%$



Latitude

Latitude

Latitude

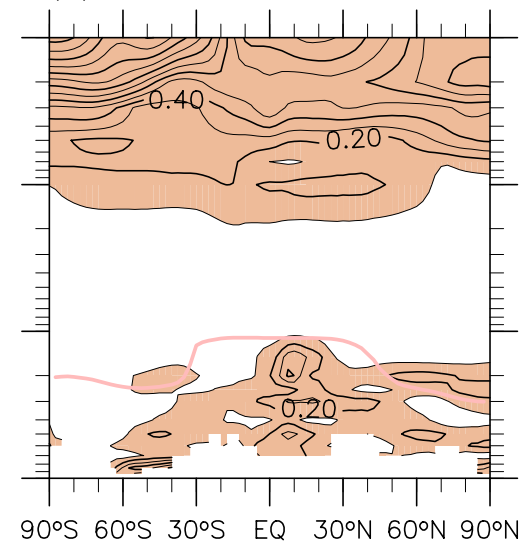
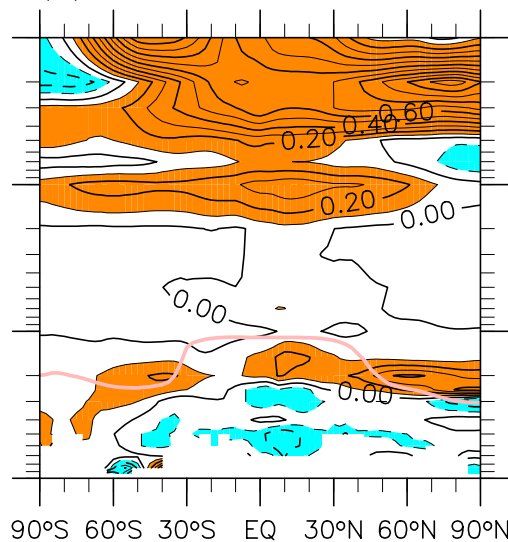
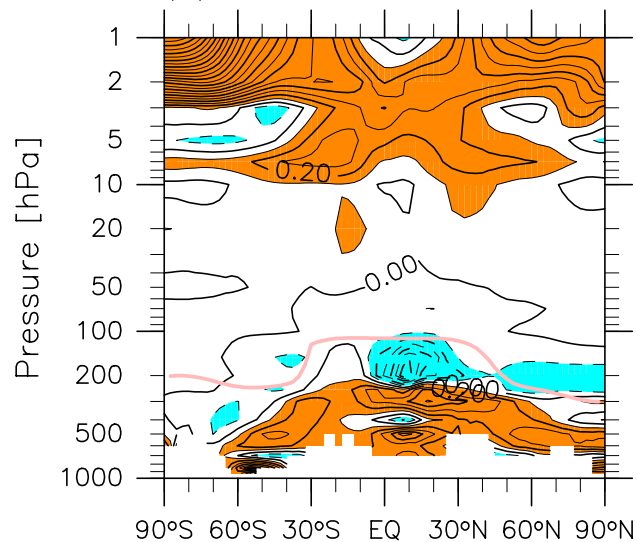
Q_longwave [K/d]

JJA (81-10)

(a) MERRA-2 - REM

(b) JRA-55 - REM

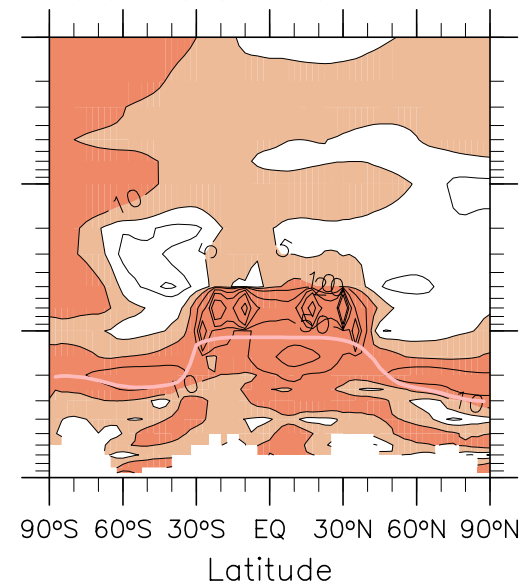
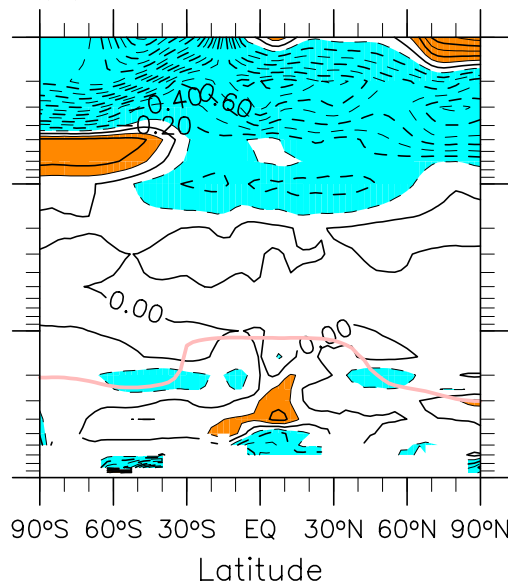
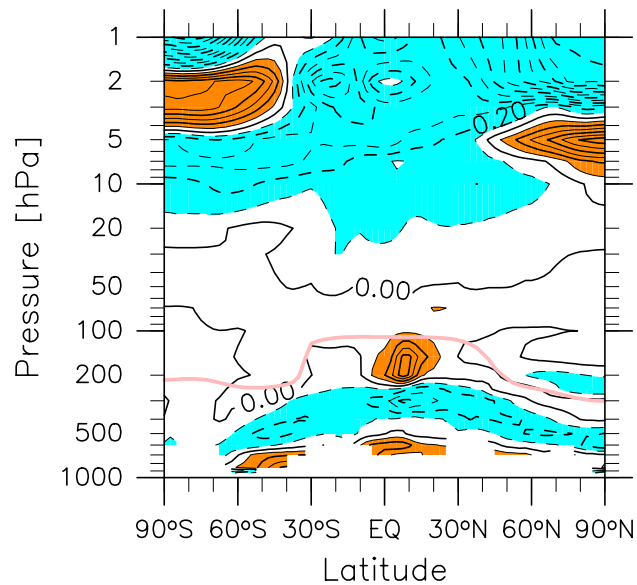
(e) SD



(c) ERA-Int - REM

(d) CFSR - REM

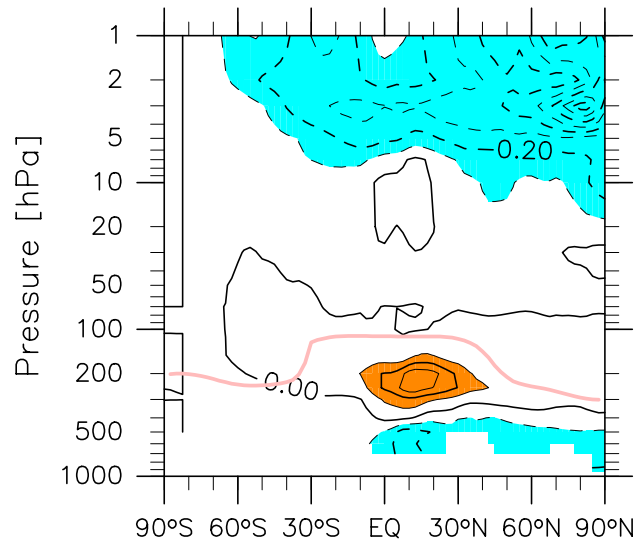
(f) (SD / | REM |) x 100%



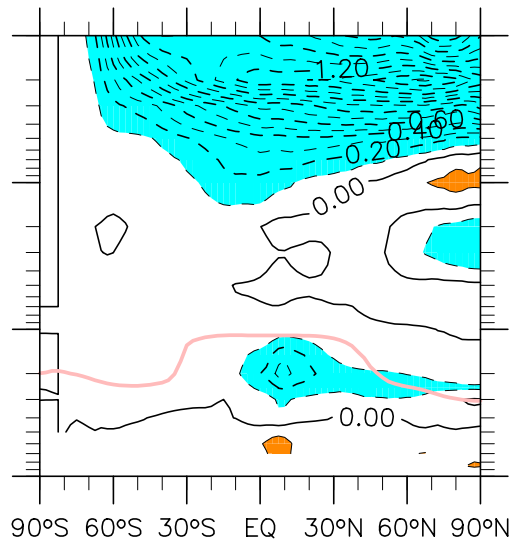
Q_shortwave [K/d]

JJA (81-10)

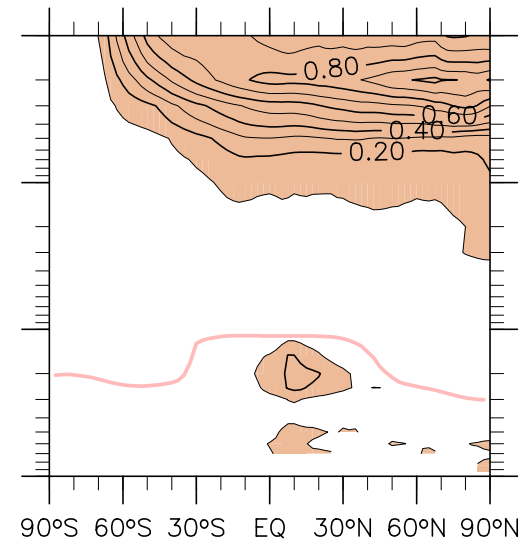
(a) MERRA-2 - REM



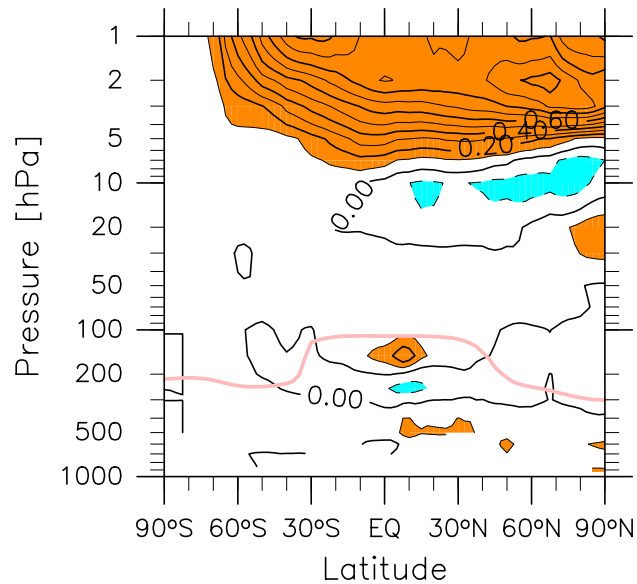
(b) JRA-55 - REM



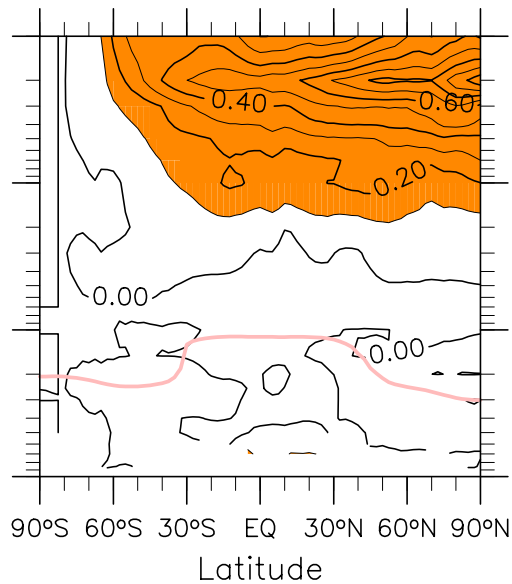
(e) SD



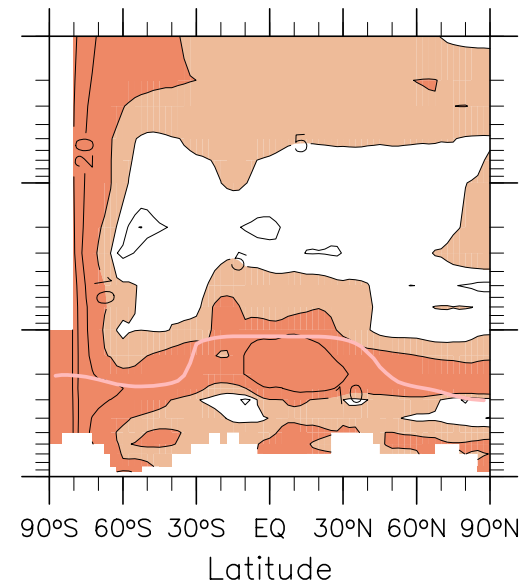
(c) ERA-Int - REM



(d) CFSR - REM



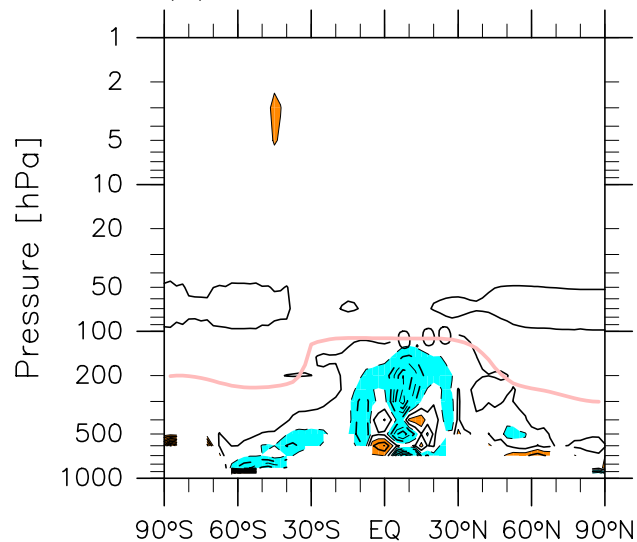
(f) (SD / | REM |) x 100%



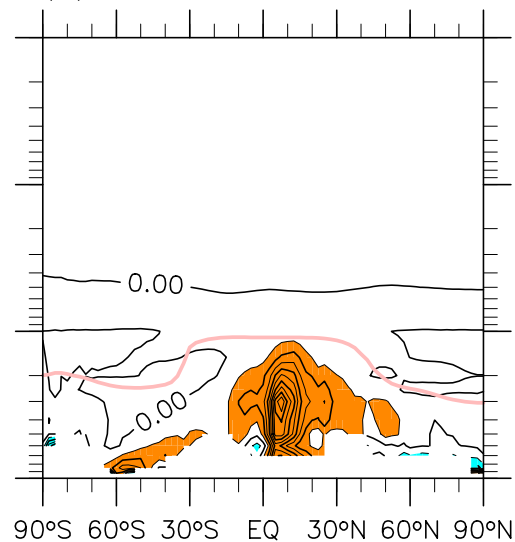
$Q_{\text{total}} - Q_{\text{rad}}$ [K/d]

JJA (81-10)

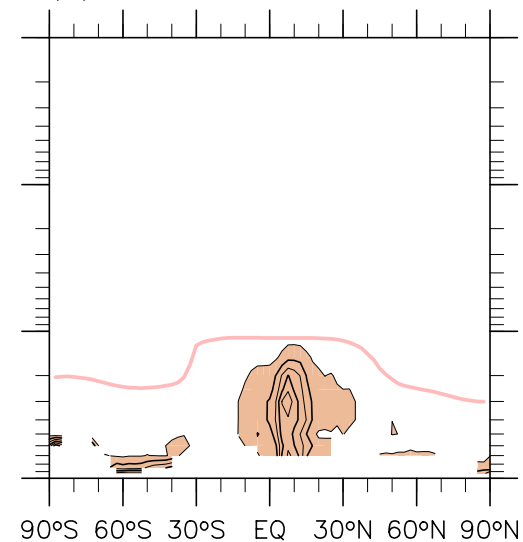
(a) MERRA-2 - REM



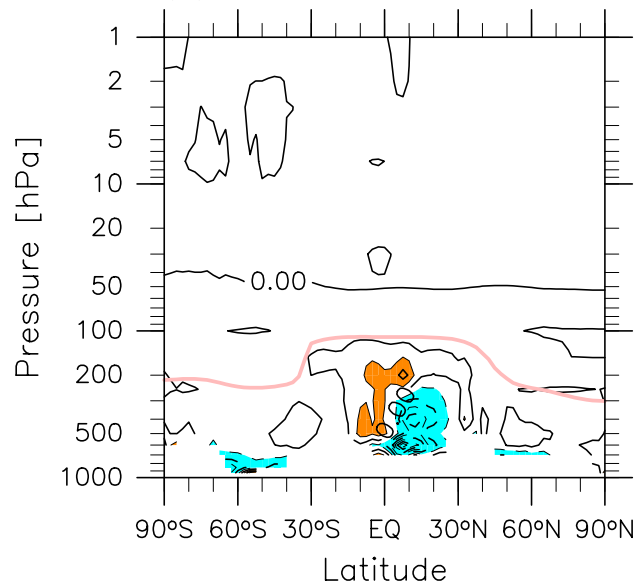
(b) JRA-55 - REM



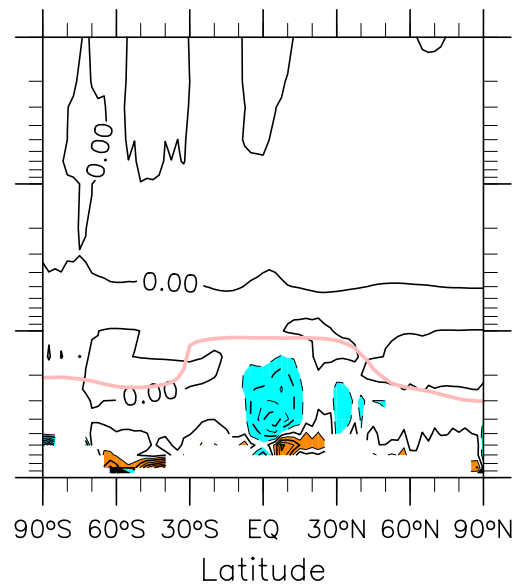
(e) SD



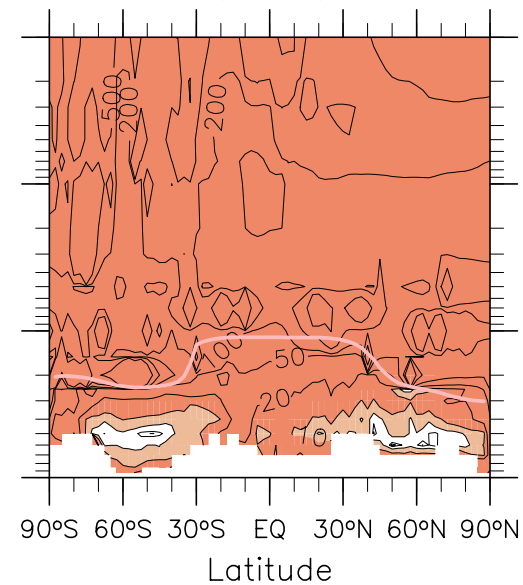
(c) ERA-Int - REM



(d) CFSR - REM



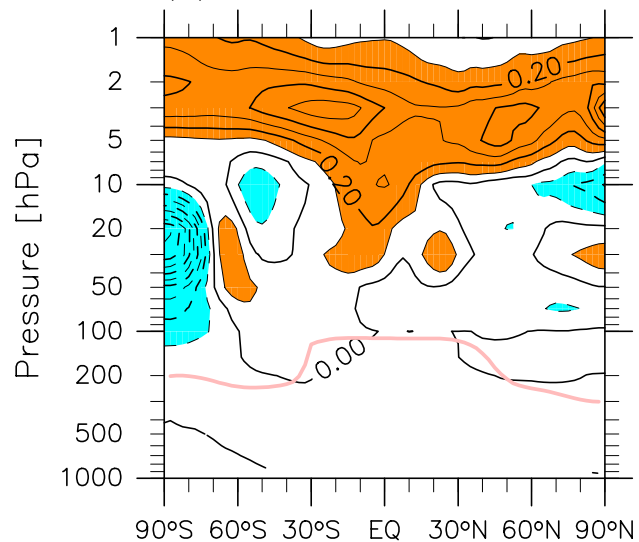
(f) $(SD / |REM|) \times 100\%$



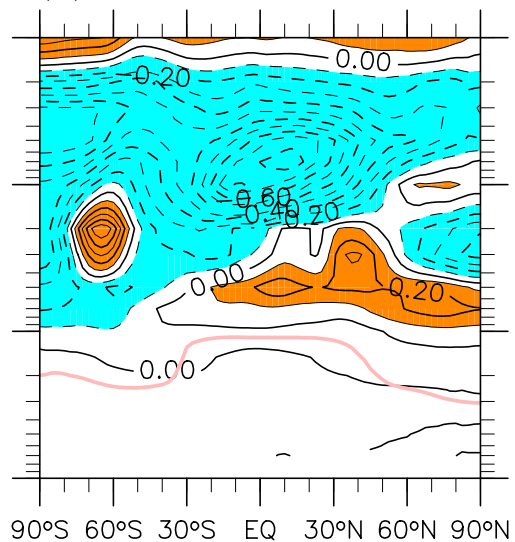
Ozone [ppmv]

JJA (81–10)

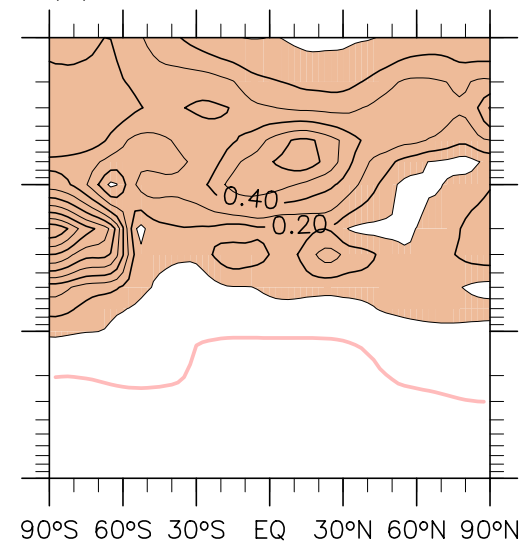
(a) MERRA-2 – REM



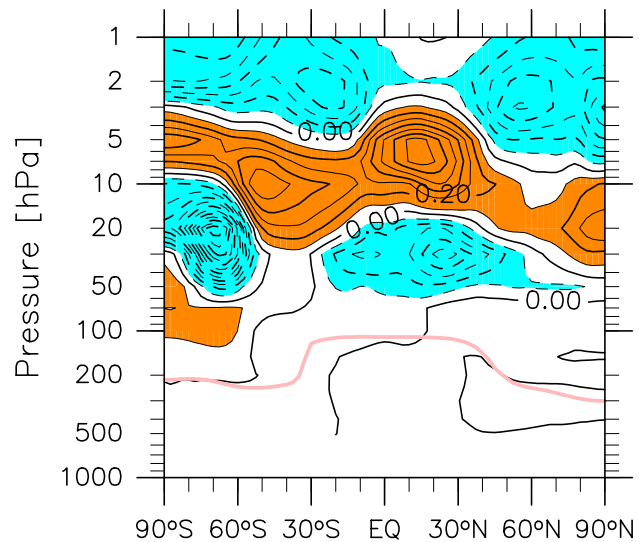
(b) JRA-55 – REM



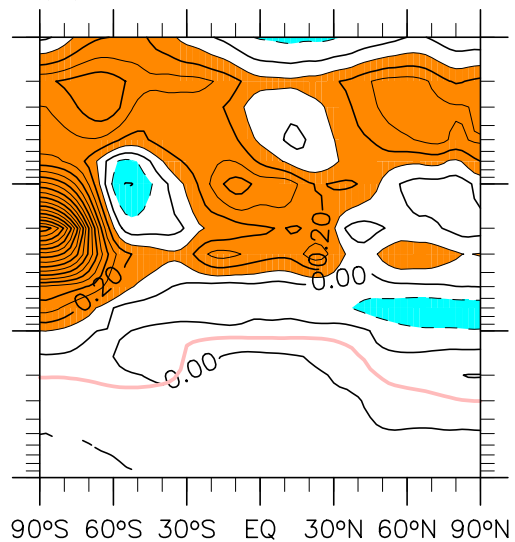
(e) SD



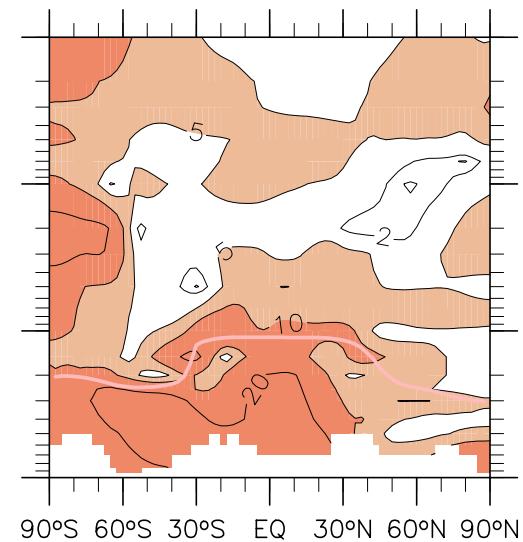
(c) ERA-Int – REM



(d) CFSR – REM



(f) $(SD / |REM|) \times 100\%$



Pressure [hPa]

Pressure [hPa]

Latitude

Latitude

Latitude

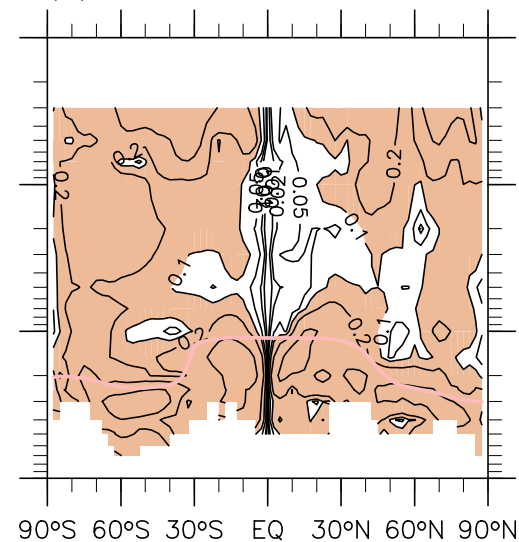
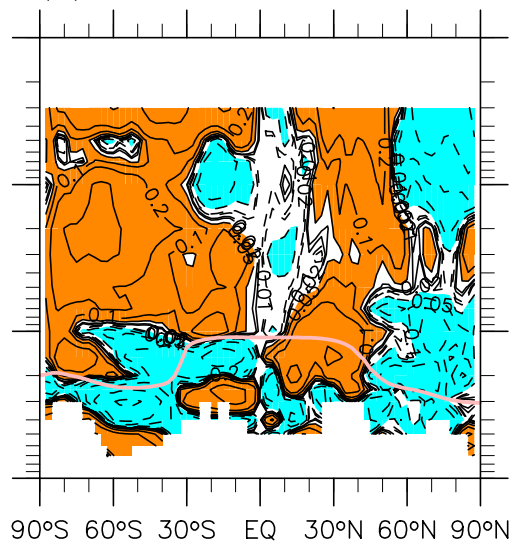
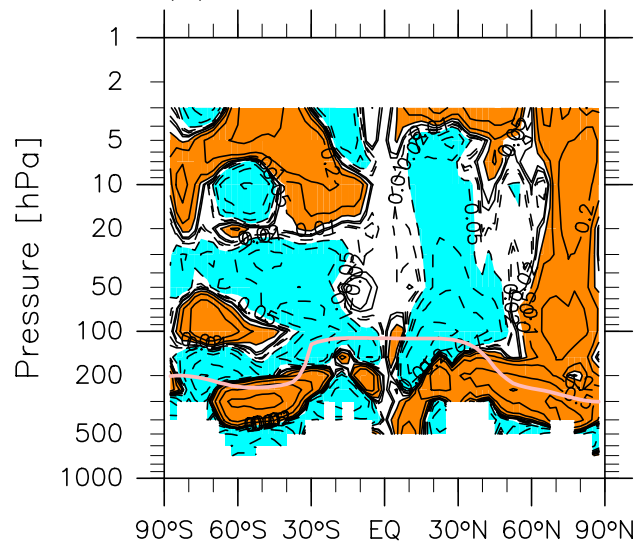
$+f_v^*$

JJA (81-10)

(a) MERRA-2 - REM

(b) JRA-55 - REM

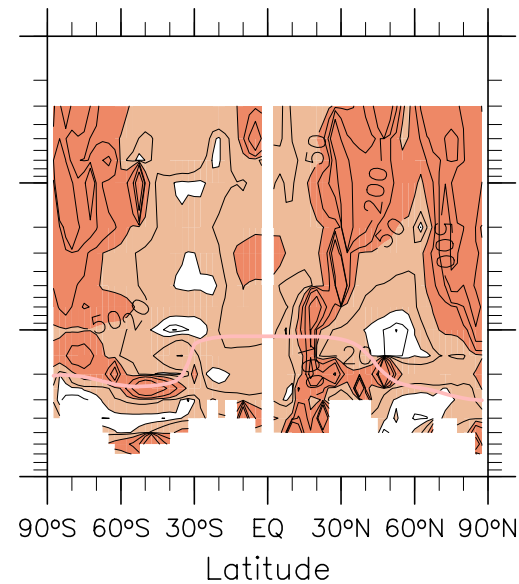
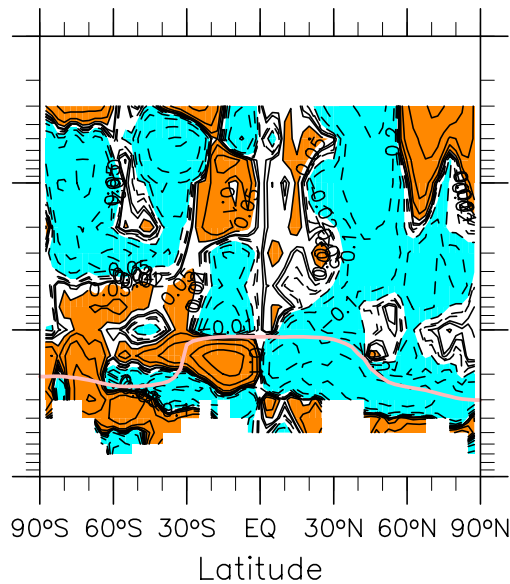
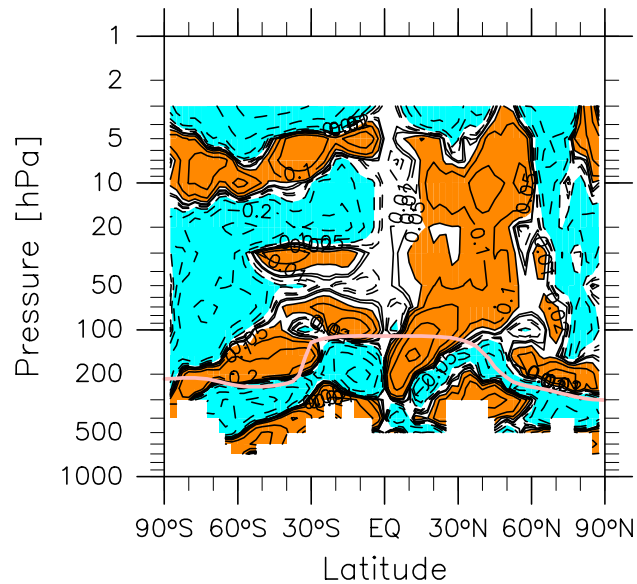
(e) SD



(c) ERA-Int - REM

(d) CFSR - REM

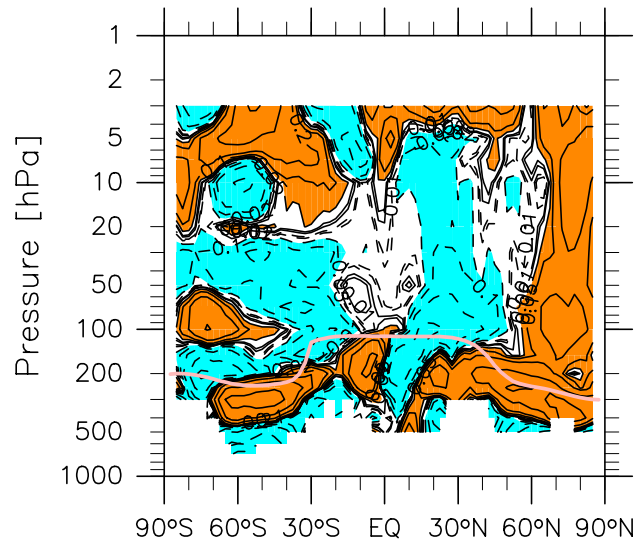
(f) $(SD / |REM|) \times 100\%$



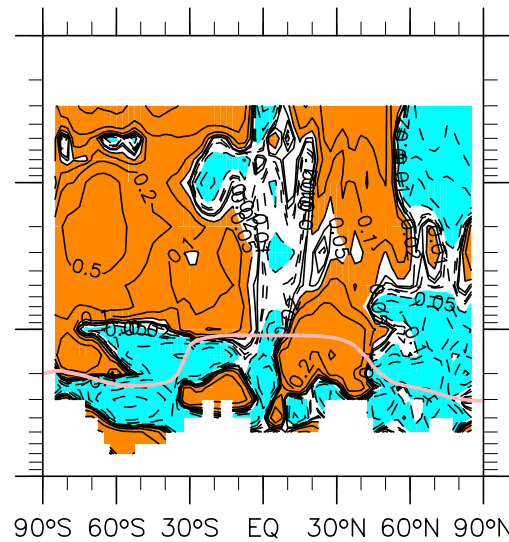
$$+fv^* - v^* \frac{\partial u}{\partial y} - \omega^* \frac{\partial u}{\partial p}$$

JJA (81–10)

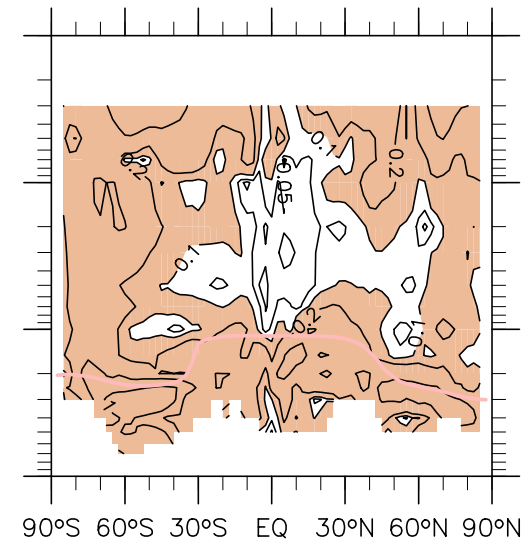
(a) MERRA-2 – REM



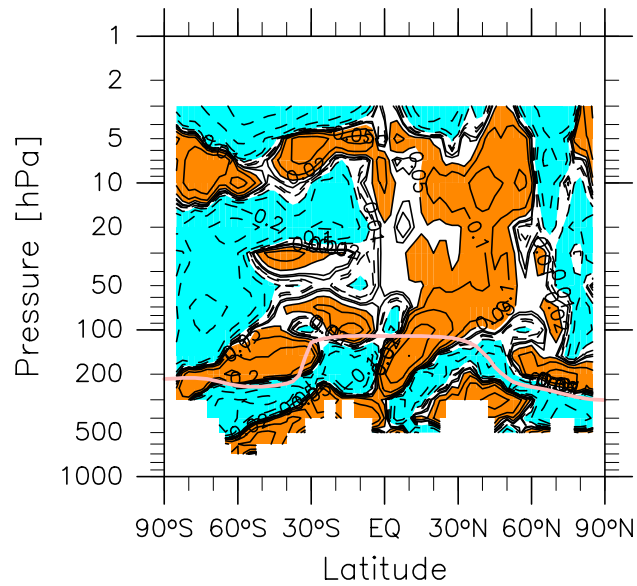
(b) JRA-55 – REM



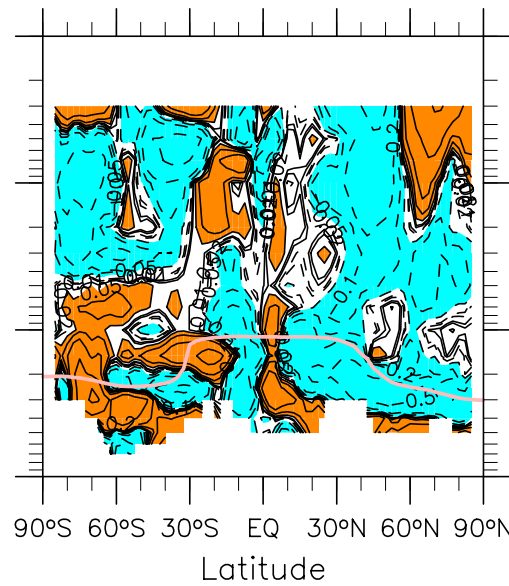
(e) SD



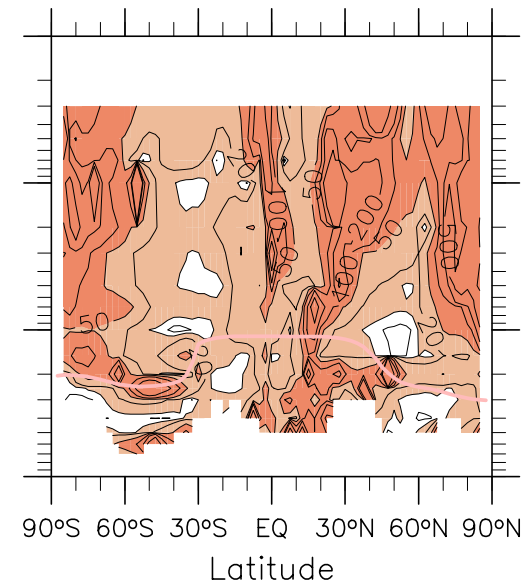
(c) ERA-Int – REM



(d) CFSR – REM



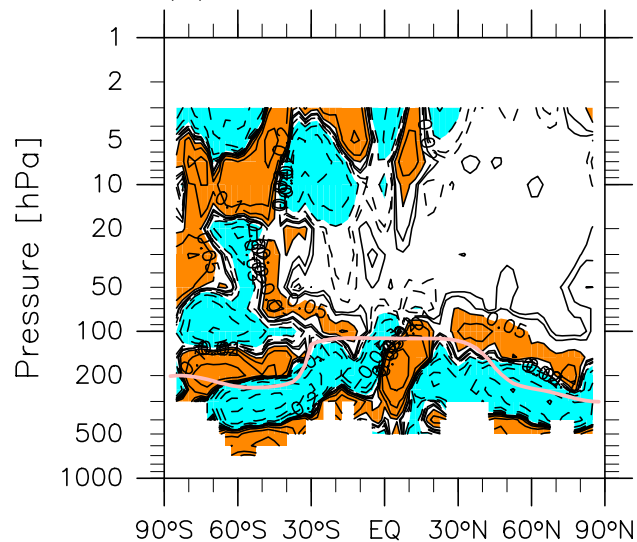
(f) (SD / | REM |)x100%



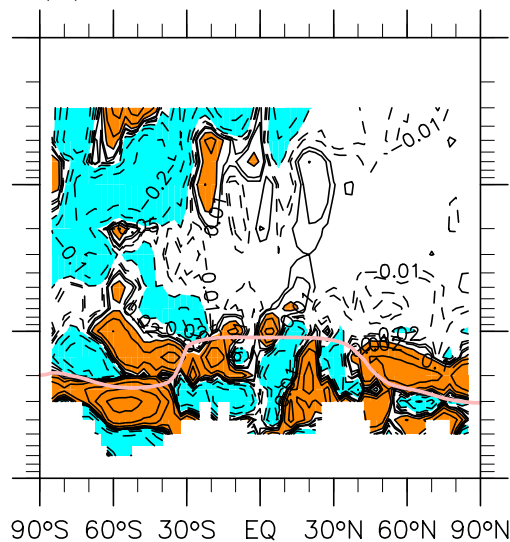
EPFD

JJA (81–10)

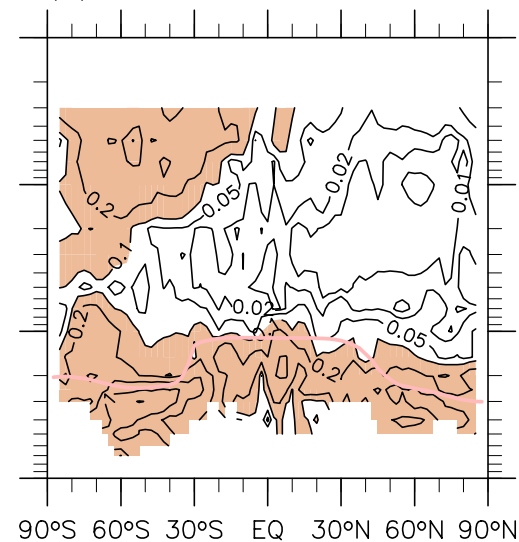
(a) MERRA-2 – REM



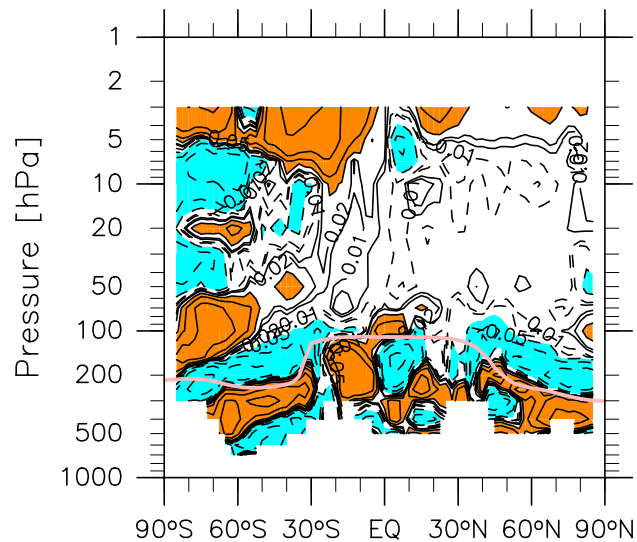
(b) JRA-55 – REM



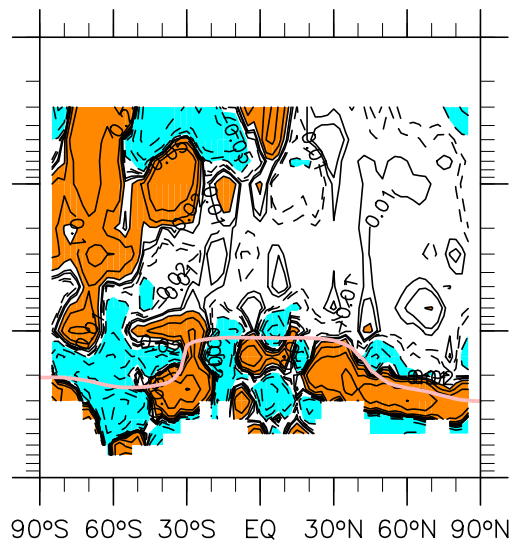
(e) SD



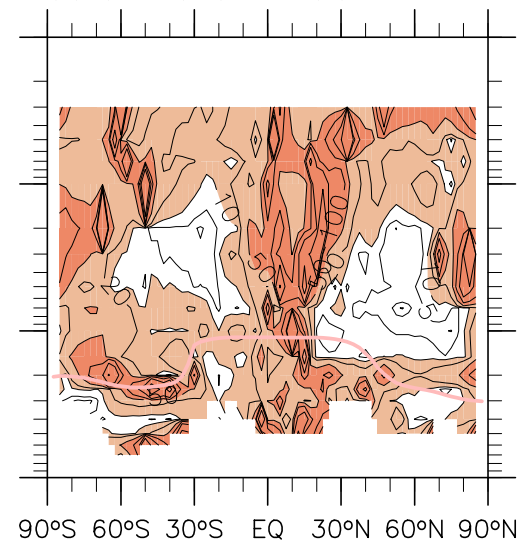
(c) ERA-Int – REM



(d) CFSR – REM



(f) $(SD / |REM|) \times 100\%$



Latitude

Latitude

Latitude

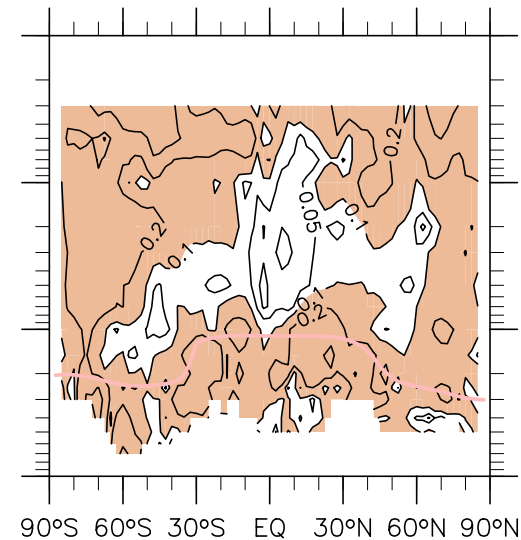
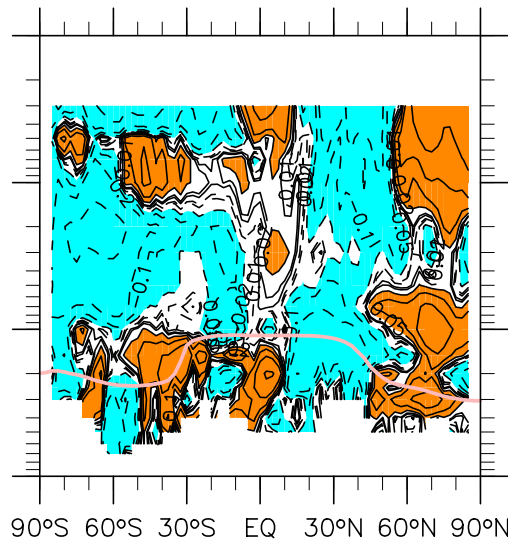
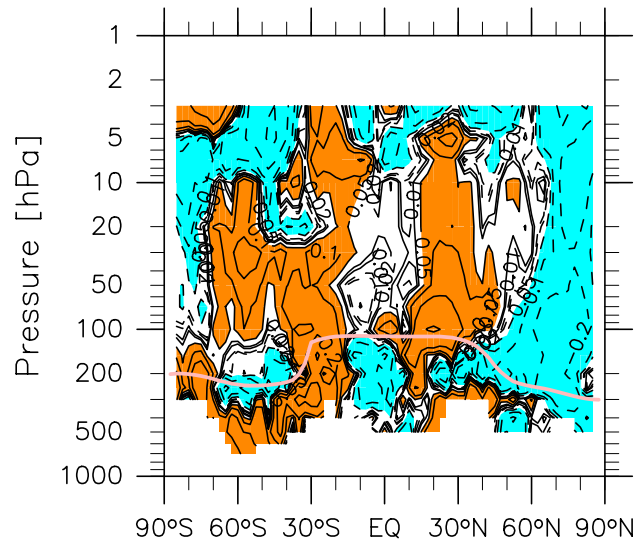
Residual_u

JJA (81-10)

(a) MERRA-2 - REM

(b) JRA-55 - REM

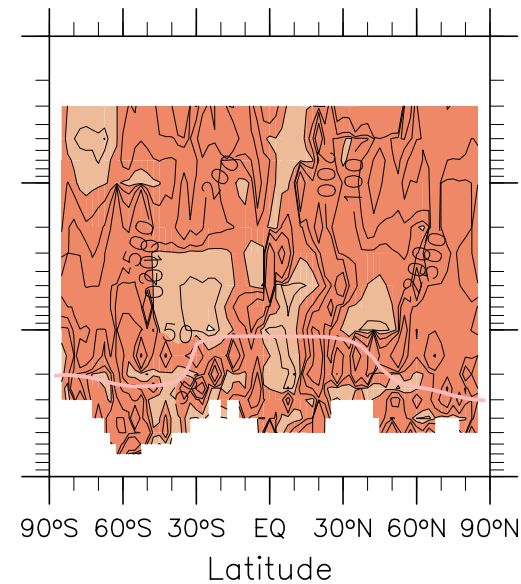
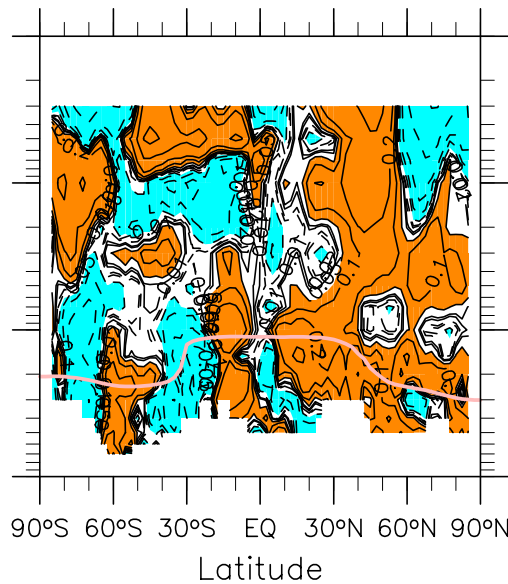
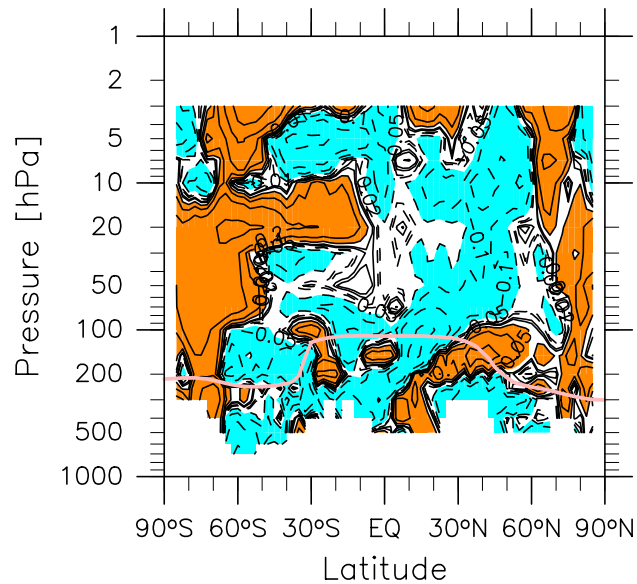
(e) SD



(c) ERA-Int - REM

(d) CFSR - REM

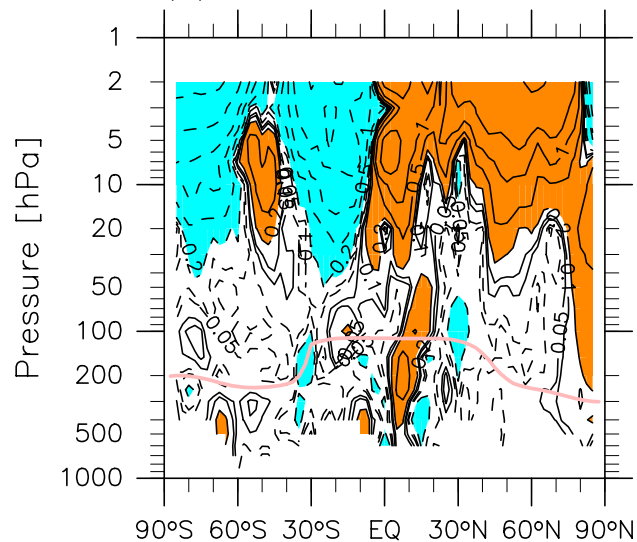
(f) $(SD / |REM|) \times 100\%$



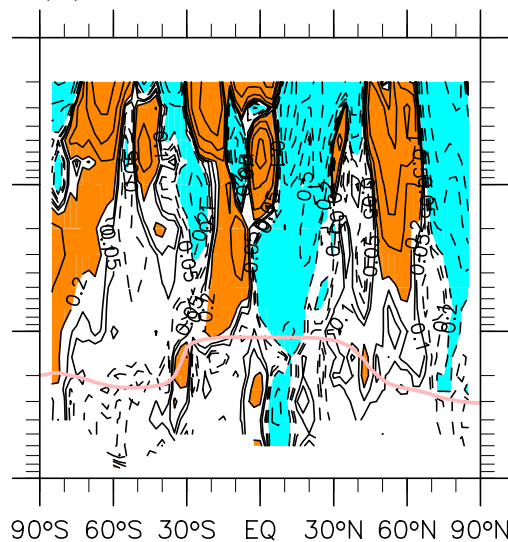
$$-\omega^* \partial\Theta/\partial p$$

JJA (81-10)

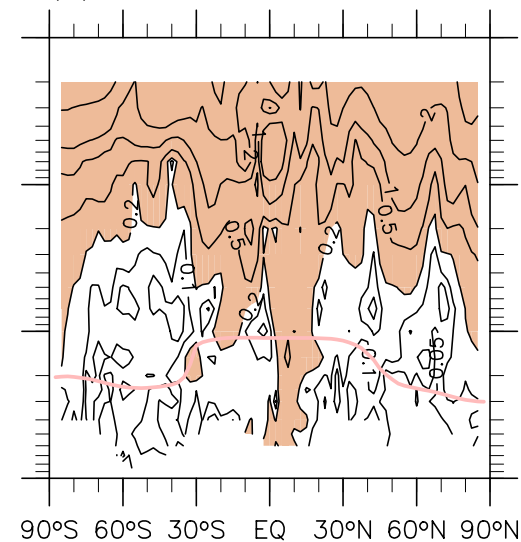
(a) MERRA-2 - REM



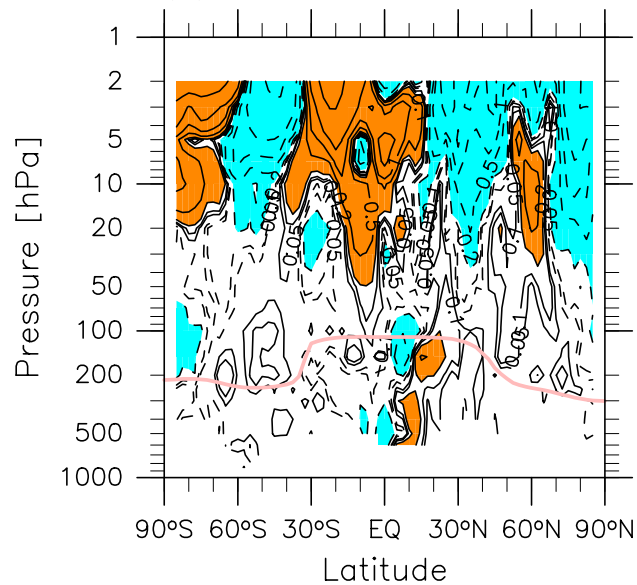
(b) JRA-55 - REM



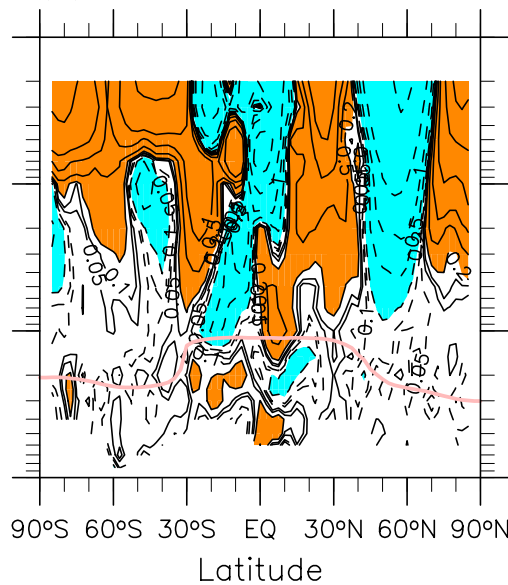
(e) SD



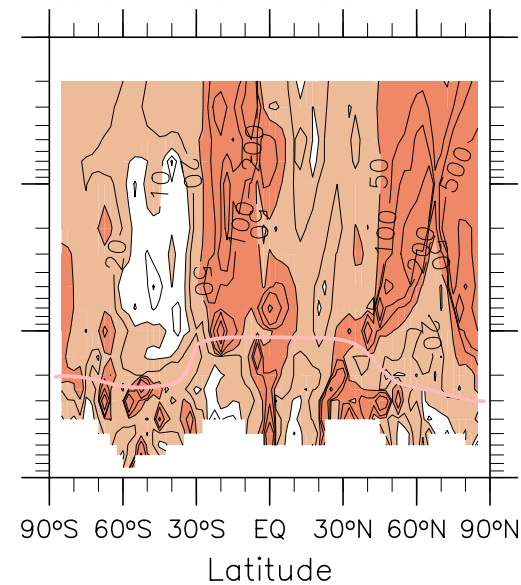
(c) ERA-Int - REM



(d) CFSR - REM



(f) (SD / | REM |) x 100%



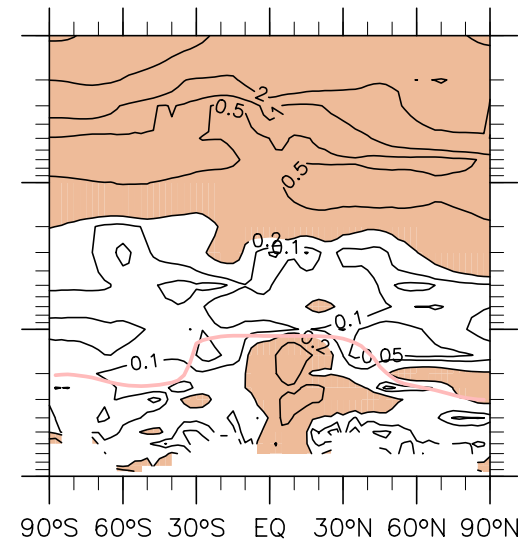
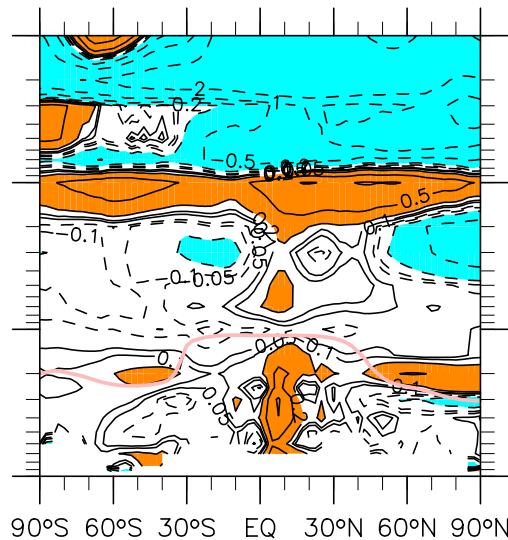
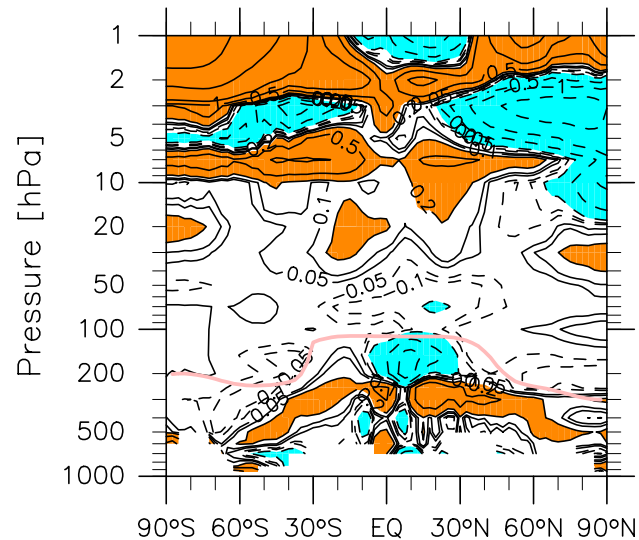
Q_{total}

JJA (81–10)

(a) MERRA-2 – REM

(b) JRA-55 – REM

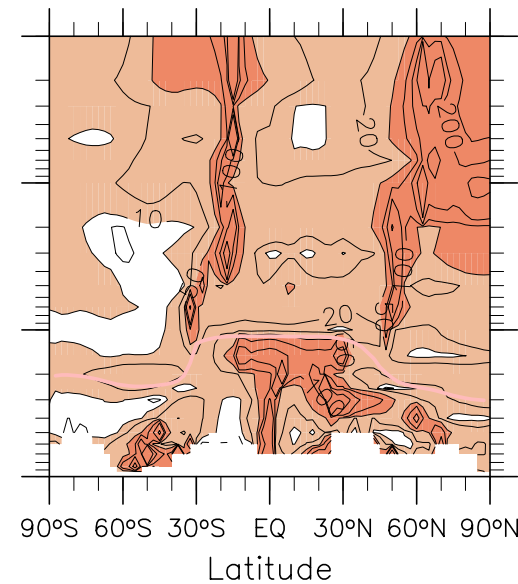
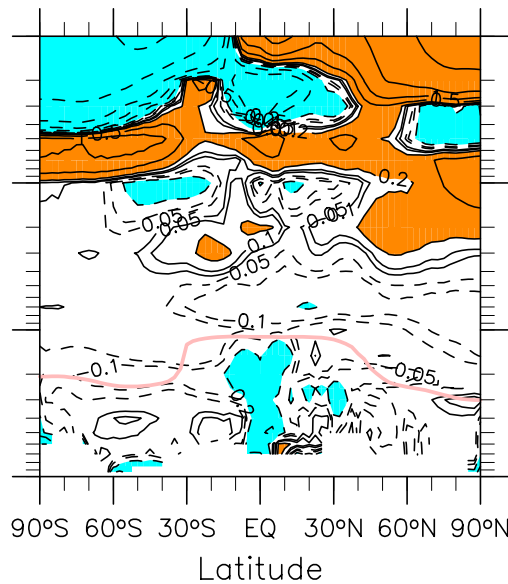
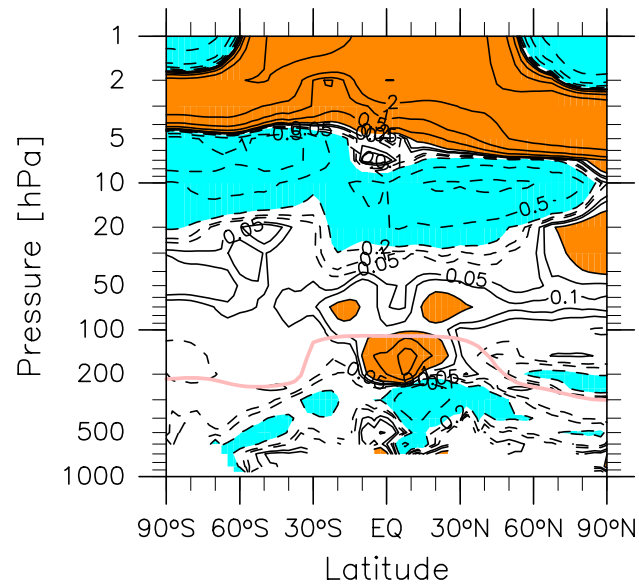
(e) SD



(c) ERA-Int – REM

(d) CFSR – REM

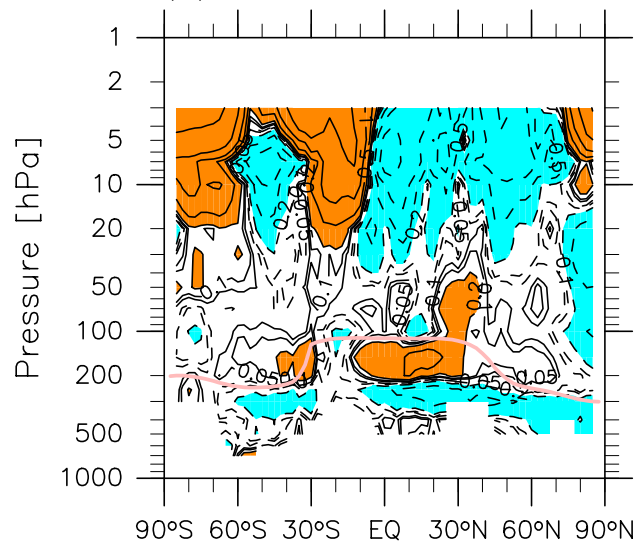
(f) (SD / | REM |) x 100%



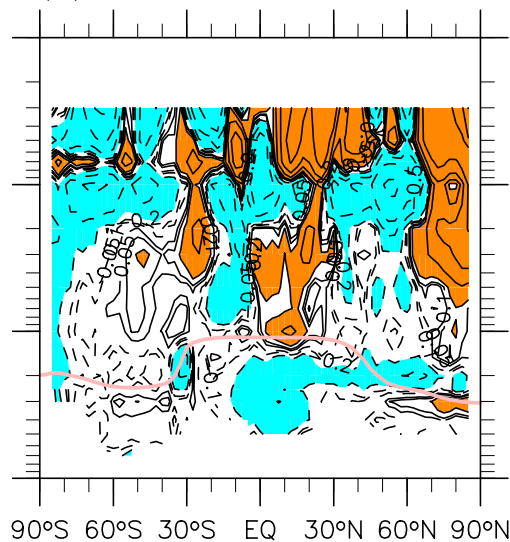
Residual_Θ

JJA (81-10)

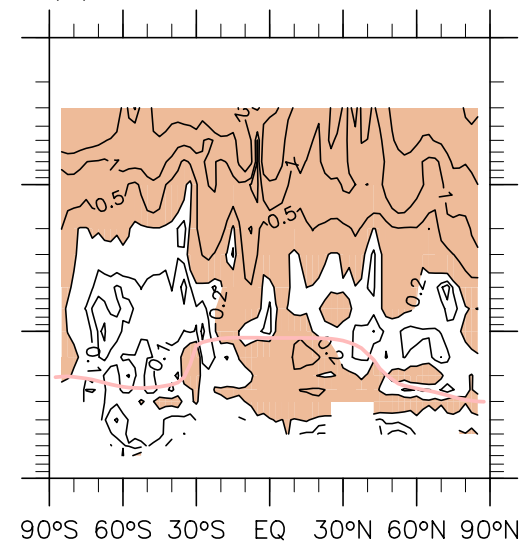
(a) MERRA-2 - REM



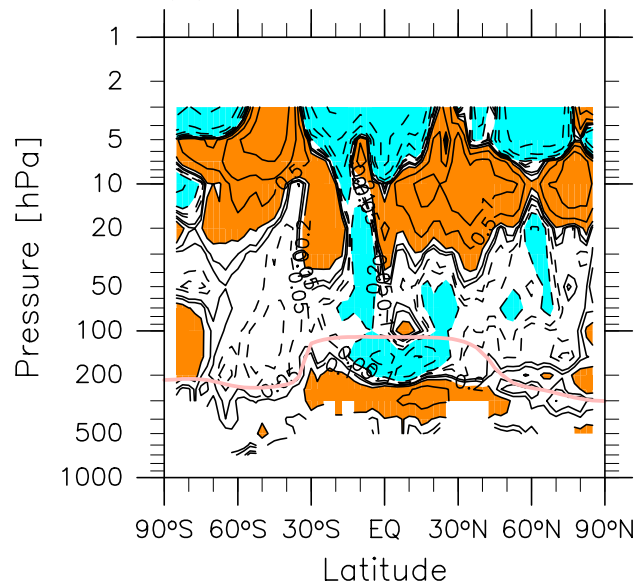
(b) JRA-55 - REM



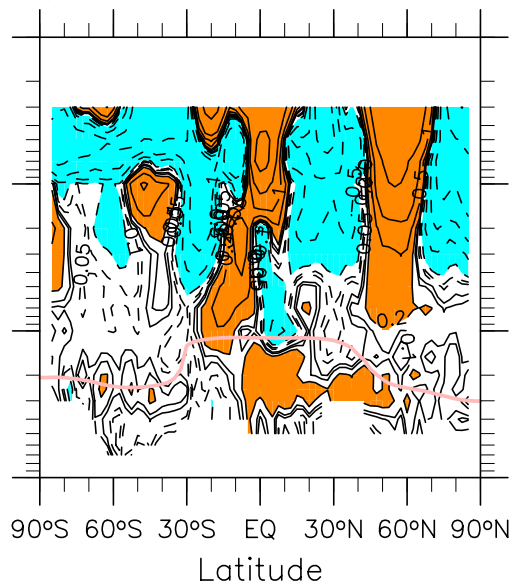
(e) SD



(c) ERA-Int - REM



(d) CFSR – REM


$$(f) \left(\frac{SD}{|REM|} \right) \times 100\%$$
