

DJF (D80–F10)

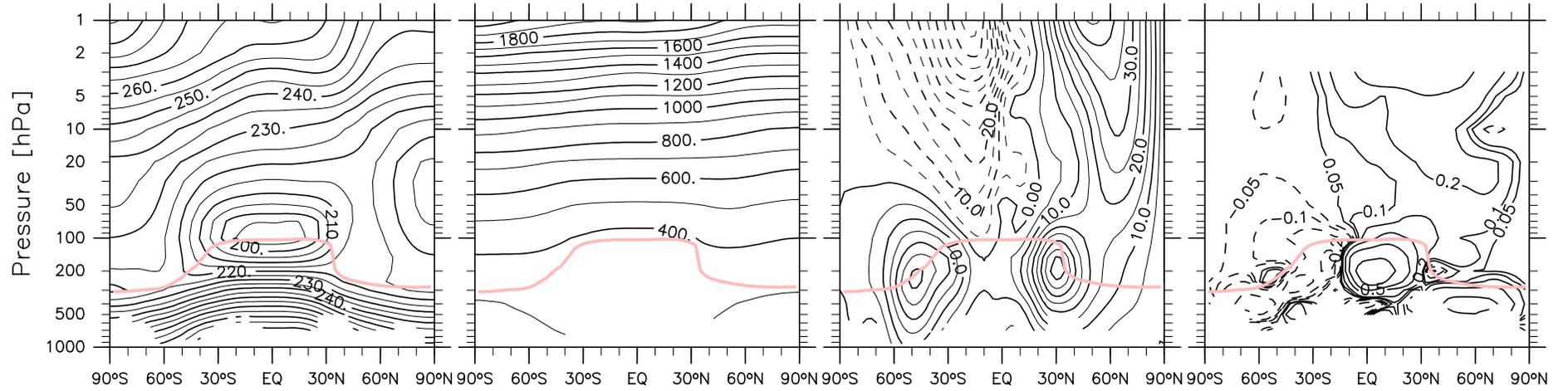
MERRA-2

(a) T [K]

(b) θ [K]

(c) u [m/s]

(d) v_{res} [m/s]

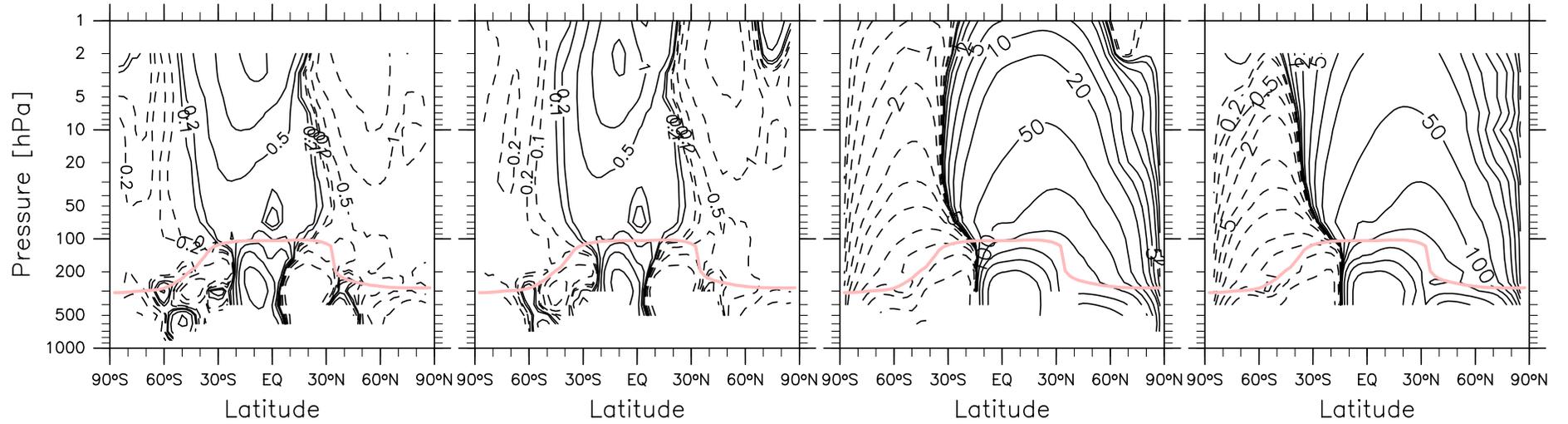


(e) w_{res} [mm/s]

(f) w_{res} from ψ_{vres} [mm/s]

(g) ψ_{vres} [kg/m/s]

(h) ψ_{wres} [kg/m/s]



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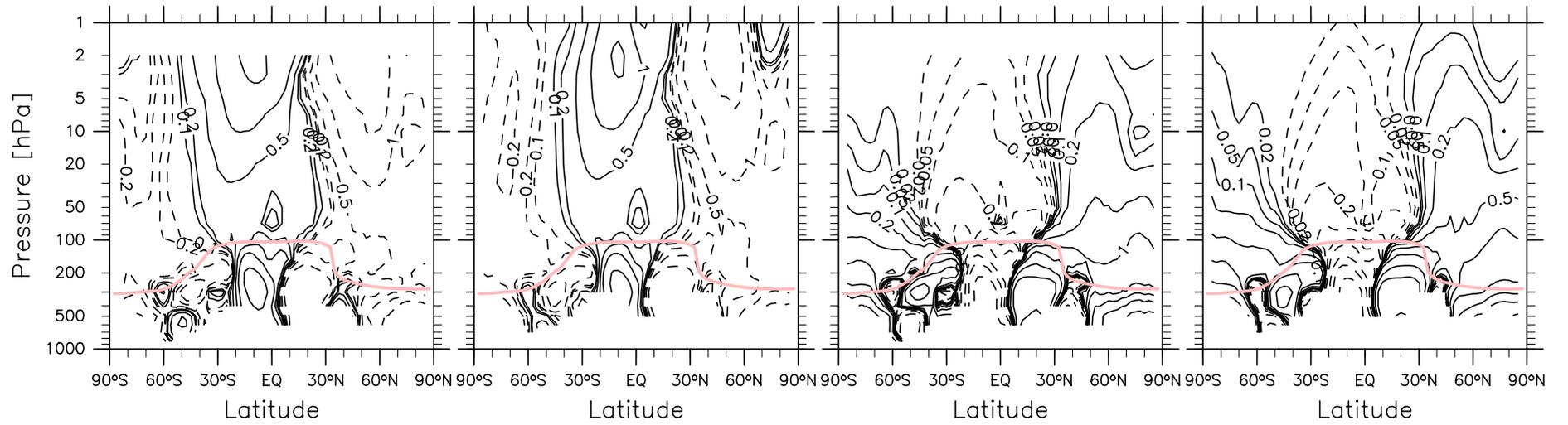
MERRA-2

(a) w_{res} [mm/s]

(b) w_{res} from ψ_{vres} [mm/s]

(c) ω_{res} [mPa/s]

(d) ω_{res} from ψ_{vres} [mPa/s]



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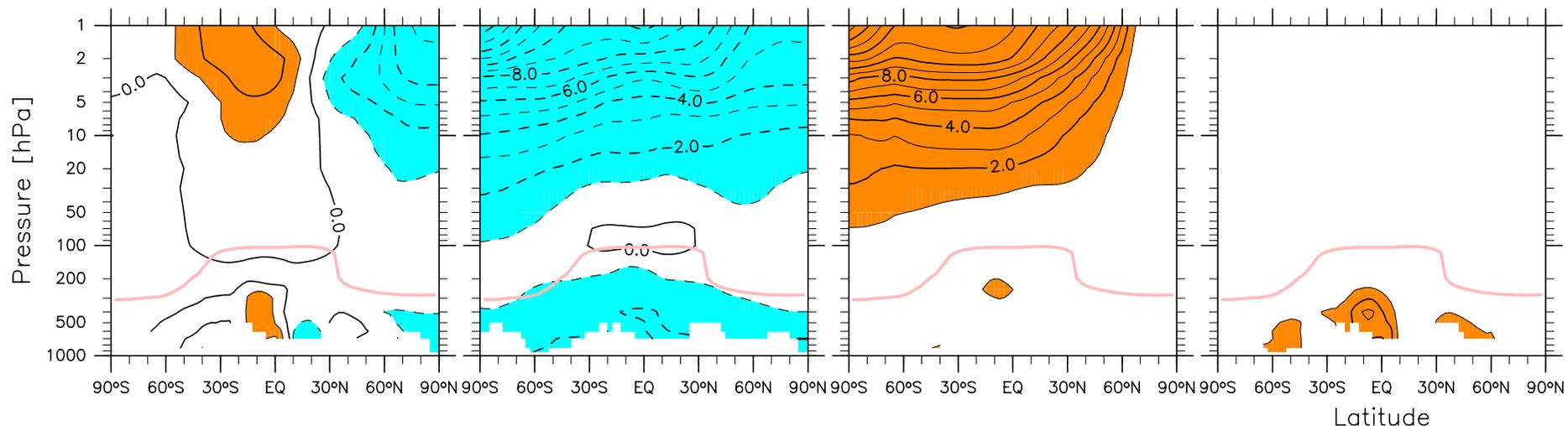
MERRA-2

(a) Q_{total} [K/d]

(b) $Q_{longwave}$ [K/d]

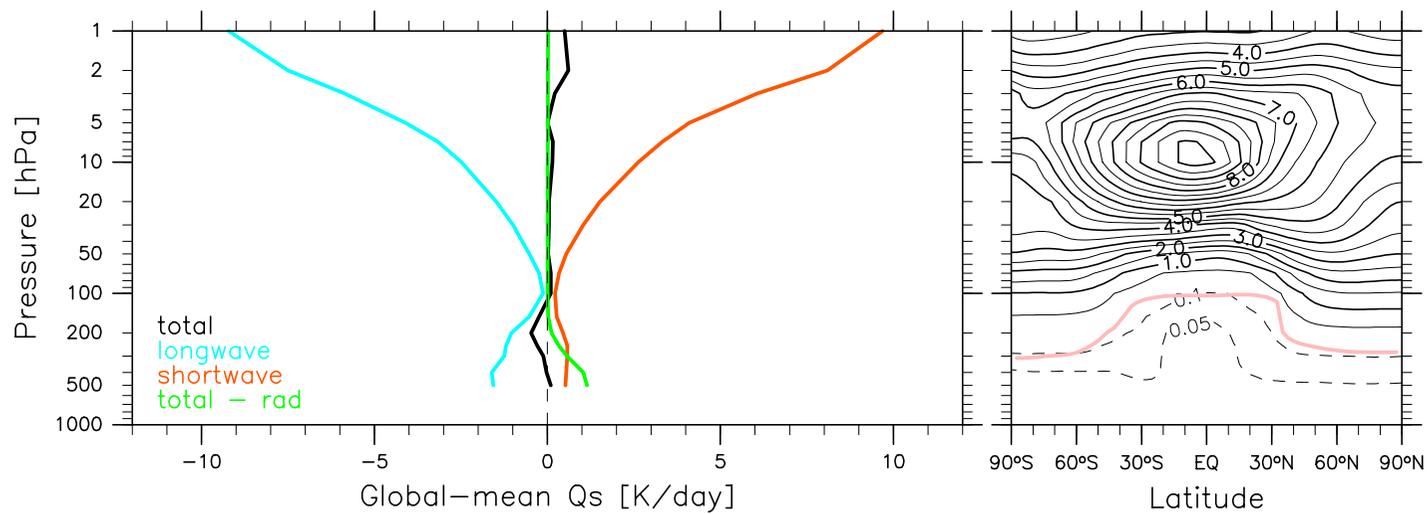
(c) $Q_{shortwave}$ [K/d]

(d) $Q_{total} - Q_{rad}$ [K/d]



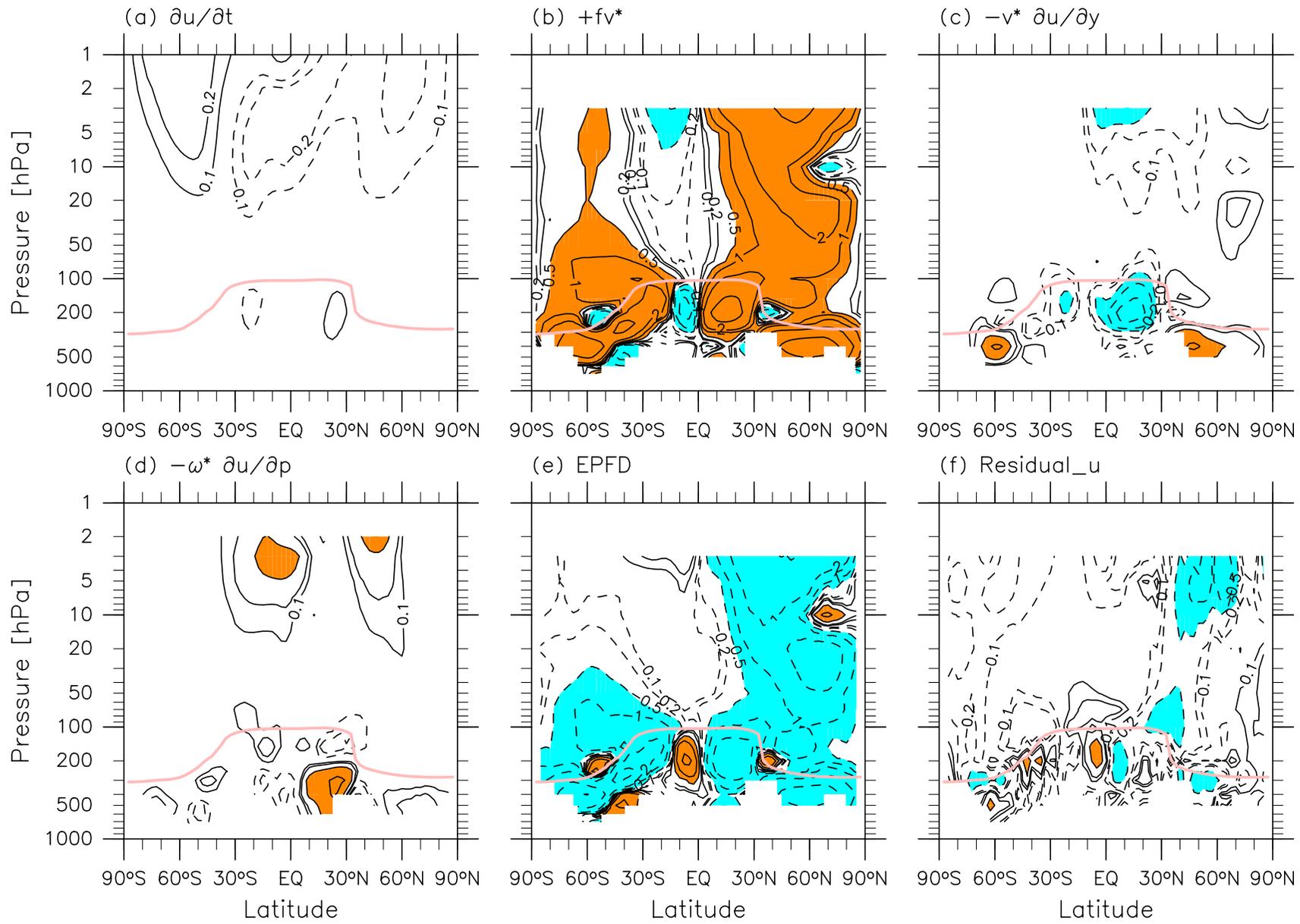
(e) Global-mean Q_s [K/d]

(f) Ozone [ppmv]



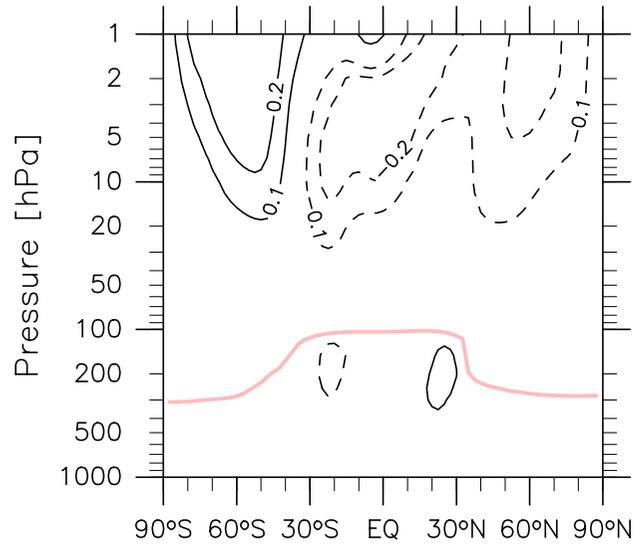
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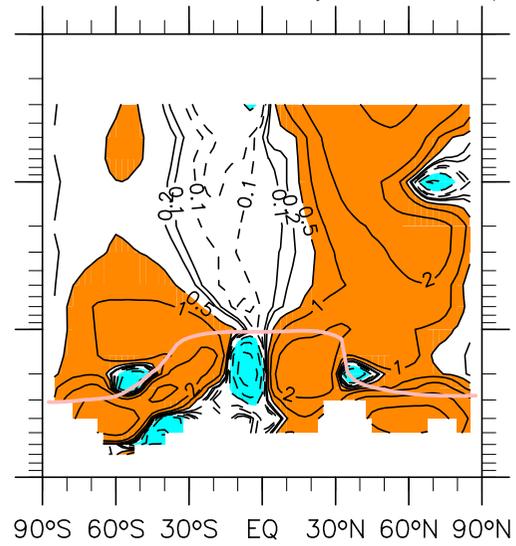
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(a) $\partial u / \partial t$

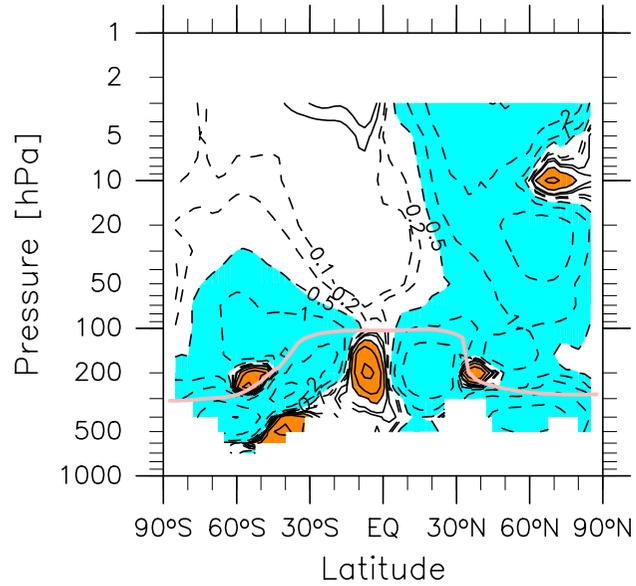


MERRA-2

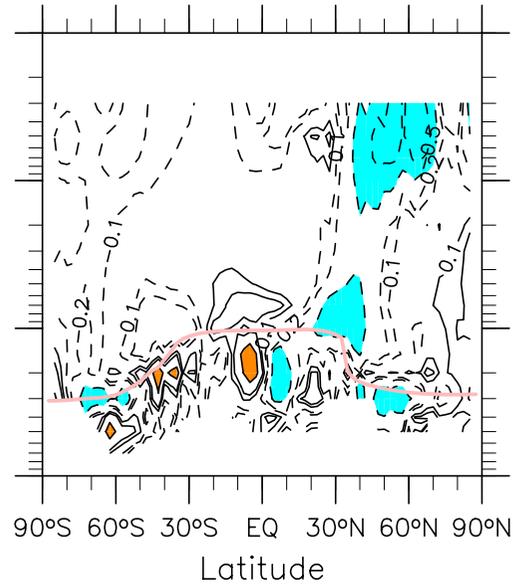
(b) $+fv^* - v^* \partial u / \partial y - \omega^* \partial u / \partial p$



(c) EPFD

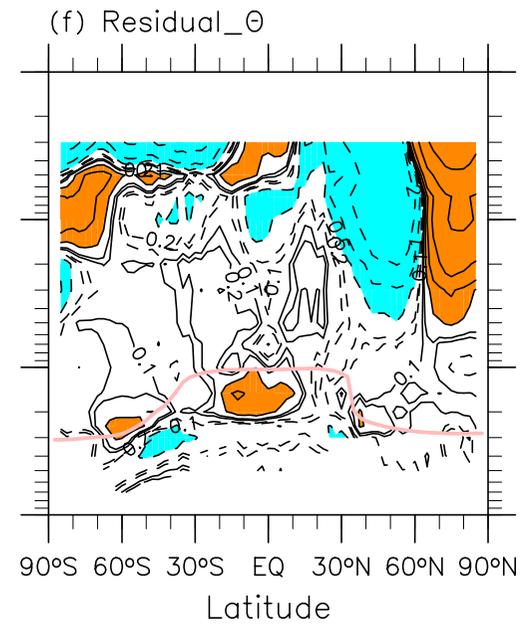
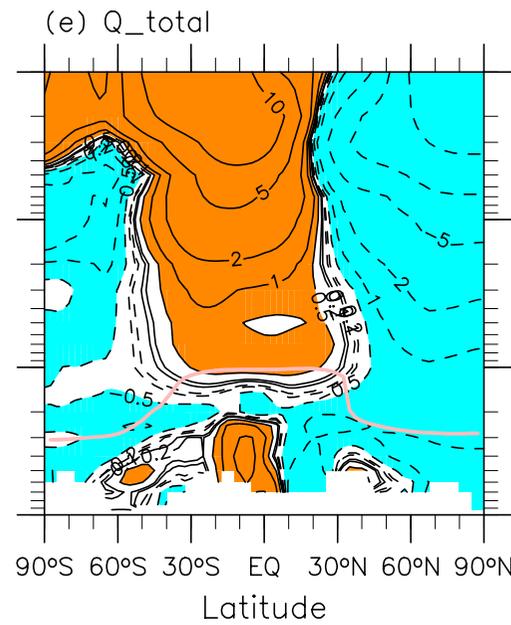
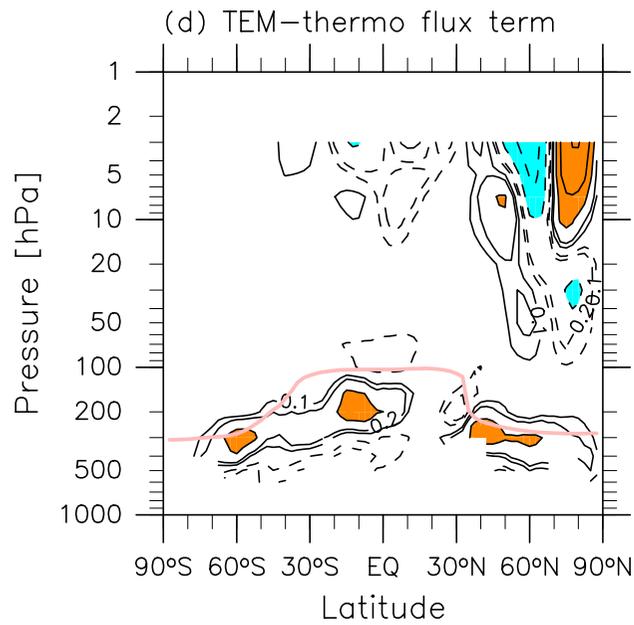
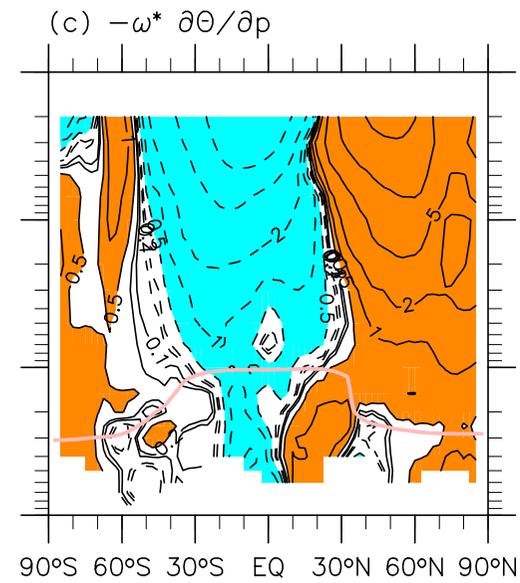
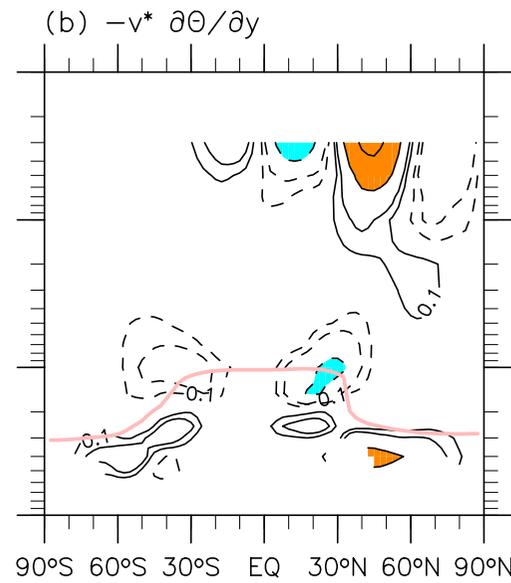
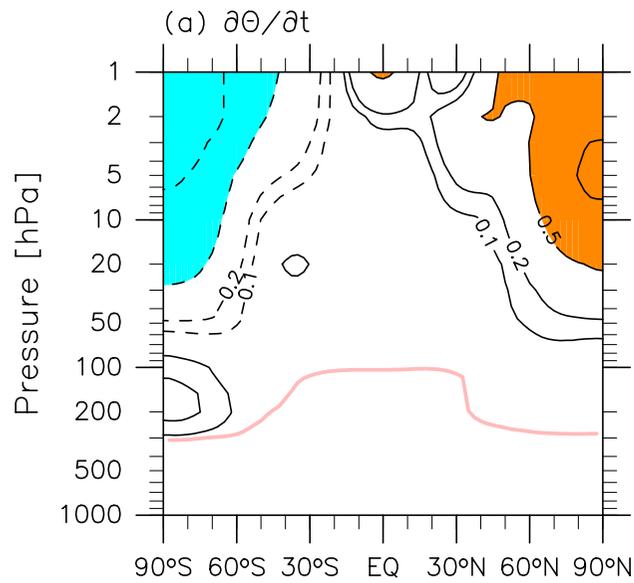


(d) Residual_u



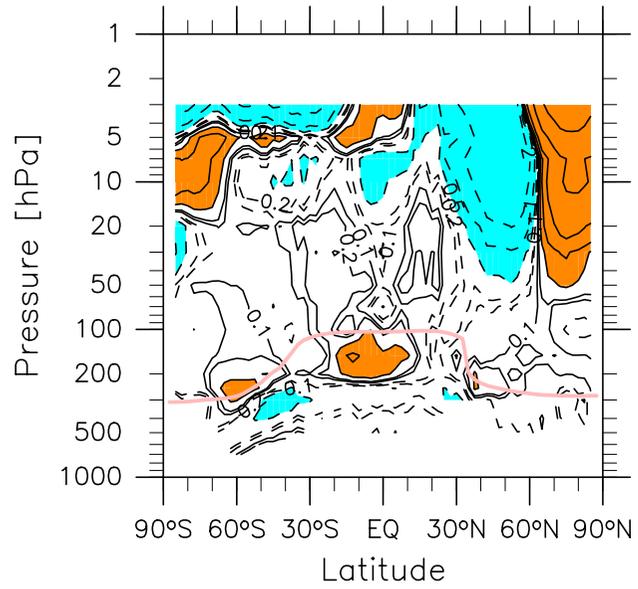
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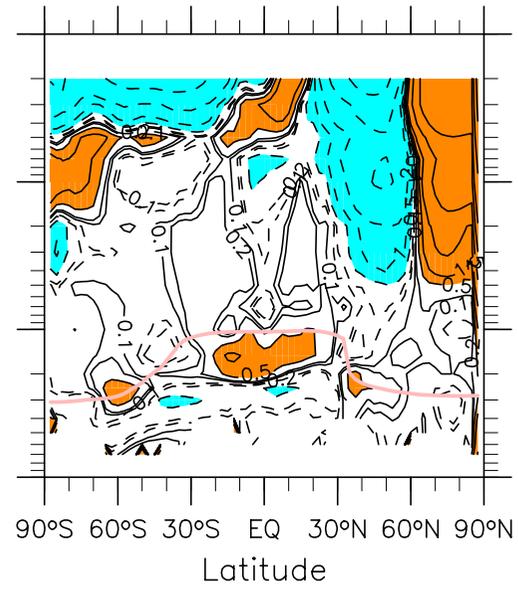


DJF (D80–F10)

(a) Residual_θ (TEM)



(b) Residual_θ (EM)



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(c) difference (TEM minus EM)

