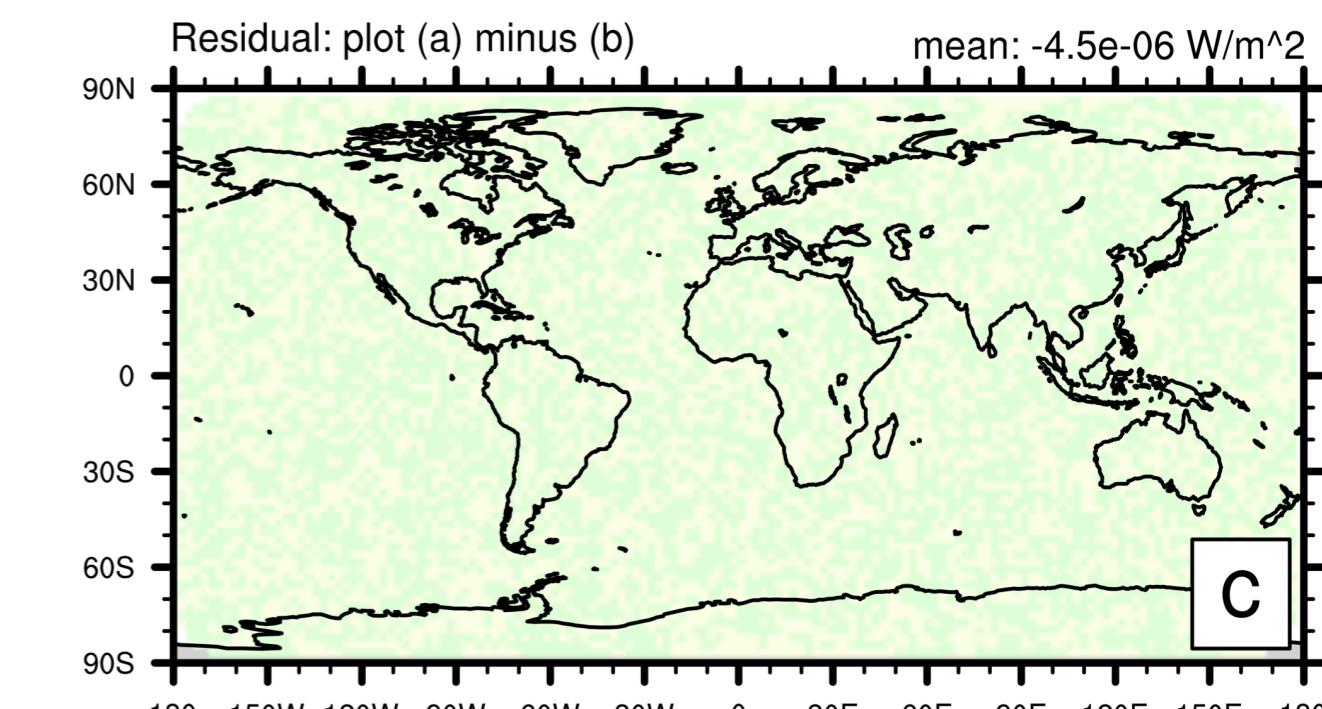
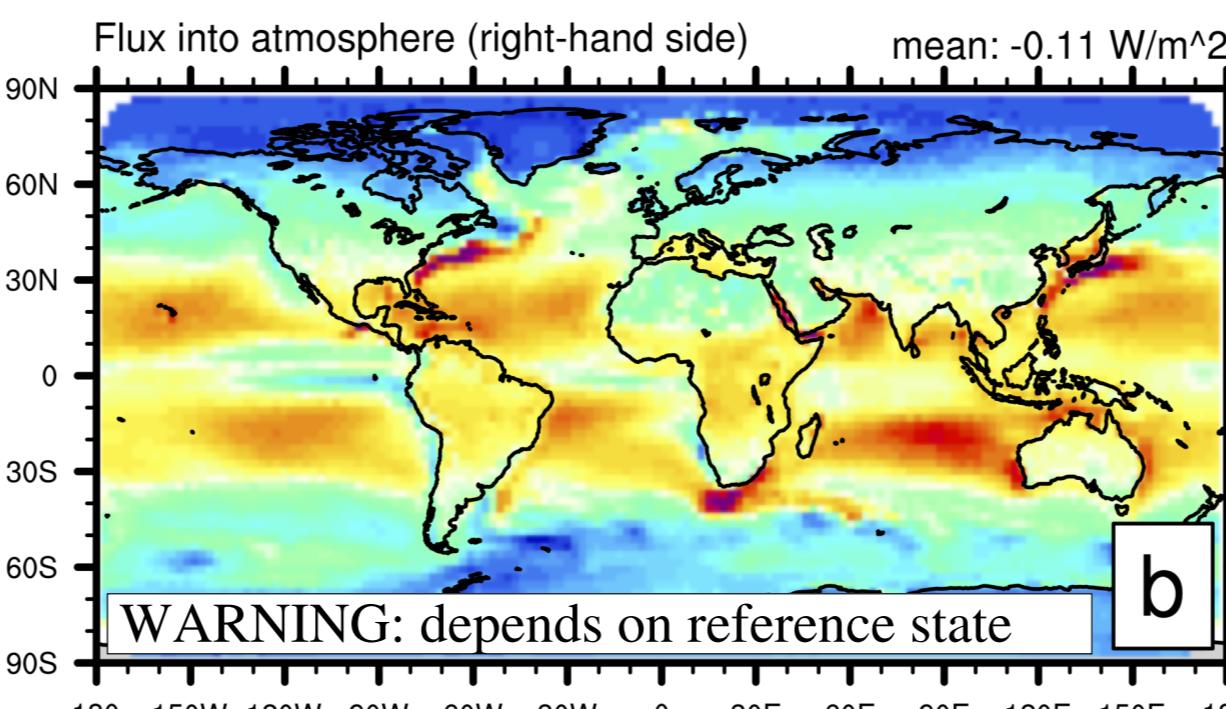
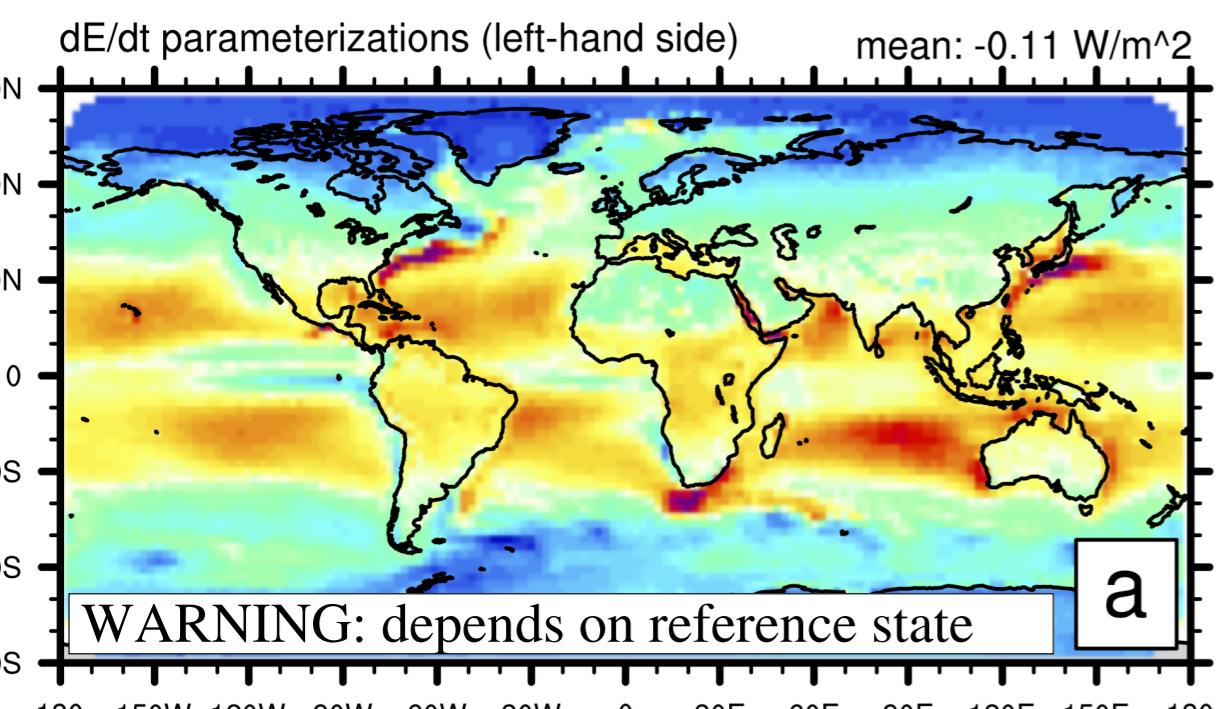


CAM parameterization total energy equation

$$\frac{\partial}{\partial t} \int \bar{\rho}^{(d)} \left\{ \left(1 + \bar{m}_{t=t^n}^{(H_2O)} \right) \left[\bar{K} + \bar{\Phi}_s + c_p^{(d)} (\bar{T} - T_{00}) \right] + \bar{m}^{(wv)} L_{s,00} + \bar{m}^{(liq)} L_{f,00} \right\} dz$$

= $-c_p^{(d)} T_{00} F_{net}^{(H_2O)} + \bar{F}_{net}^{(wv)} L_{s,00} + \bar{F}_{net}^{(liq)} L_{f,00} + \bar{F}_{net}^{(turb,rad)}$



$$-c_p^{(d)} T_{00} F_{net}^{(H_2O)} + \bar{F}_{net}^{(wv)} L_{s,00} + \bar{F}_{net}^{(liq)} L_{f,00} + \bar{F}_{net}^{(turb,rad)}$$

