

**Convective Forcing Flutuations in a  
CRM: Relevance to the SP Problem**

Coarse-grained variables:

$$\bar{Q}, \bar{Q}_1 = Q_1(\bar{X}), \tilde{Q} = \left( \bar{V} \cdot \nabla \bar{\theta} - \overline{V \cdot \nabla \theta} \right) + \bar{Q}$$

(effective heating)

Coarse model variables:

$$Q = Q_R + Q_D + Q_{ls} + Q_1$$

Examine the difference  $Q - \tilde{Q}$