

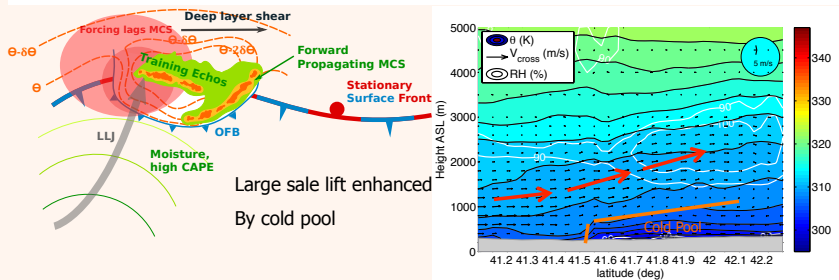
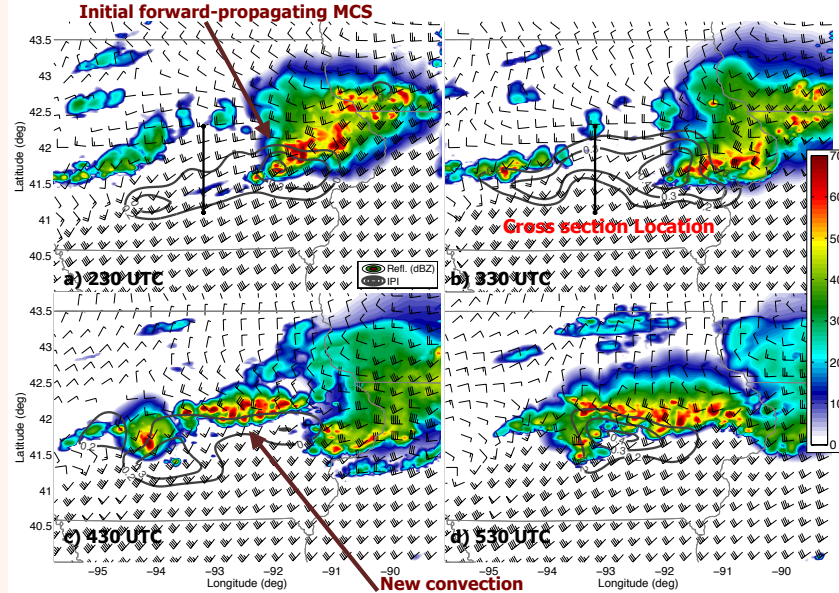
Dynamics Governing Heavy Rainfall Production in MCSs

Colorado State University

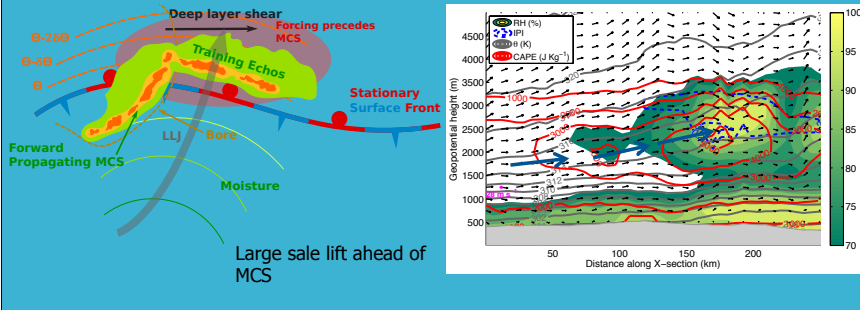
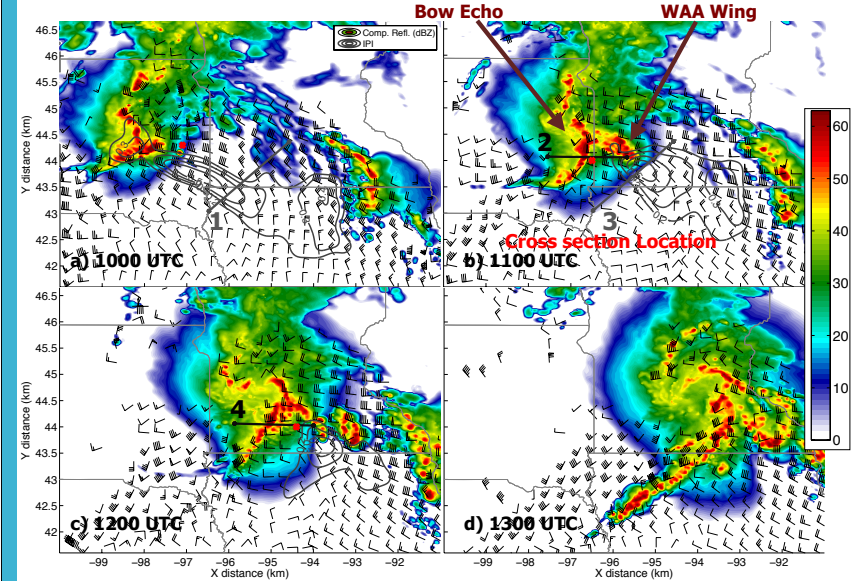
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28 July 2011 Iowa MCS



22 June 2015 north plains MCS



$$IPI(x,y) = \max_z \left(\frac{1}{N} WAA(x,y,z) \times CAPE(x,y,z) \times RH(x,y,z) \right) \quad N = 100 \times \max_x(CAPE) \max_{x,y}(WAA)$$

WAA as proxy for lift – 0 for CIN > 5 J Kg⁻¹ – parameter shows were necessary ingredients for new convection are present