Case Study 2
Due: Tuesday, 17 April 2006 – by 1:00pm

This case study will focus on the dryline event in Texas and Oklahoma on 3 May 1999. Information and data is available on the class web site in the “Case Study Information” section.

Guidelines:
• Again, this case study will be written in journal article format and in third person.
• Write-up should be 14-16 pages, including figures
• Case studies must include the following sections:
  o Introduction
    ▪ Remember, it is crucial to form a good hypothesis here!
  o Data
    ▪ Be as specific as possible, include date/time if necessary.
  o Synoptic Overview
    ▪ Touch on main features with an eye toward Mesoscale Analysis.
    ▪ Doesn’t have to be limited to a single analysis time.
    ▪ Should be logically organized (for example, start with longwave pattern then move to shortwaves and finally surface features).
  o Mesoscale Analysis
    ▪ Should smoothly transition from Synoptic Overview and again be logically organized.
    ▪ Should quickly zero in on processes/mechanisms contributing to event.
    ▪ Main assertions must be supported with figures (or carefully reasoned from previously supported assertions).
  o Conclusion
    ▪ Tie everything together from previous four sections, reminding the reader why this study is so important and summing the evidence that supports the hypothesis.
  o References/Acknowledgements
• Figures
  o Hand drawn figures:
    ▪ Miller Diagram
    ▪ Cross section (include theta and mixing ratio)
      ▪ Best cross section is through ABQ>AMA>OUN>LZK
      ▪ Theta every 2 K and mixing ratio every 2 g/kg
      ▪ Cross section fields do not have to be on the same page
    ▪ Surface streamline analysis valid at the time of the cross section
  o Other figures
    ▪ Sounding(s)
    ▪ Satellite/Radar image
    ▪ The surface position of the dryline through a 24-hour period
There is a maximum of 12 figures, so choose your figures carefully! Don’t be afraid to plot more than one variable on a figure, as long as the figure is legible and makes sense. Four panel plots count as one figure, however there should be a reason that the four figures are plotted together.