

The Three-Dimensional Variational (3DVAR) Data Assimilation System Products **ANSWER KEY**

Question 1: Using the cursor readout, what are the maximum updraft helicity, vorticity, and mergedWcomposite values seen on the 1930 UTC Custer/Dewey storm?

Updraft Helicity: 218.6 s^{-2}
Vorticity: 1.03×10^{-2} s^{-1}
MergedWComposite: 21.8 m/s

Question 2: Using the cursor readout, what are the maximum updraft helicity, vorticity, and mergedWcomposite values seen on the 2035 UTC Blaine County storm?

Updraft Helicity: 685.7 s^{-2}
Vorticity: 2.61×10^{-2} s^{-1}
MergedWComposite: 31.2 m/s

Question 3: At what time (between 2200 and 2315 UTC) and what height (LL or ML) do you find the highest vorticity value? What is this vorticity value?

Time: 2255 UTC
Height: ML
Value: 3.11×10^{-2} m/s