

DISCOVER-AQ Outlook for Monday, July 4, 2011

Strong thunderstorms rolled through the study area early this morning in response to the passage of the surface trough. These storms caused venting the boundary layer. High clouds have persisted over much of the region during the day, which combined with the venting, has led to much lower ozone than was recorded yesterday. A frontal passage will occur this evening with more thunderstorms likely in the region. The front will stall just to the southeast of the study area tomorrow, keeping the likelihood of clouds relatively high. The NAM model output statistics keep >50% cloud cover of the region much of the day tomorrow. The front is projected to push just far enough south to allow some clearing overnight Monday night into Tuesday. Some low to mid level clouds may develop Tuesday afternoon. We will take another look at this tomorrow. With more solar radiation available on Tuesday, ozone may return to near Code Orange levels at some sites. The smoke aerosol enhancement passing over today will be past us tomorrow, and aerosol conditions will be cleaner on Tuesday with sulfate being the predominant component. Due to the cloud situation tomorrow, we recommend not to fly the DISCOVER-AQ aircraft. The next opportunity appears to be early in the day on Tuesday.