

CLIMATE – POSTER #12

**Understanding the nature and sources of dust storms in the Four Corners Region during the period 2000-2012 by using surface based observations and satellite data**

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The increase of drought has become a subject of concern to communities living in the arid regions, especially when blowing dust, is one of the most meteorological phenomena in the south western United States area. Dust storms affect climate, weather, environmental and health. It is important to understand the main causes and sources of windblown dust impacting the Four Corners Region due to the adverse impacts on human health. Dust particles may be transported hundreds of kilometers from their source and may undergo chemical changes due to mixing in clouds and polluted air masses, and changes in particle size. Satellite data is used in this study to determine dust source behavior such as their movement over time and seasonal cycle. The analysis involves a combination of image processing and computer modeling during the period from 2000 to 2012 to help give us develop a conceptual model that will lead to more reliable dust storm predictions and warning advisories. Reliable dust forecasting is in great need for research data to support other research efforts in which people will be able to learn how to adapt to limitation of the climate change.