



Regional Precipitation Characteristics Observed in West Africa

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During the past three years (2006-2008), a study has been conducted in Mali, located in the central Sahel region of West Africa, to examine the rainfall characteristics during the summer rainy seasons (~June-October). The main objective of the study has focused on developing a precipitation climatology to better understand the natural variability and the impact on available water resources in the region. The study will examine observations of precipitation using primarily weather radar, rain gauges, and coincident satellite measurements.

Radar rainfall estimates will be used to characterize the precipitation spatial variability, intensity, duration, temporal characteristics such as the diurnal cycle, orientation, patterns, frequency of storms, and other attributes to that describe the precipitation patterns in Mali. The observations will be compared with the high resolution (3-h, 0.25 deg) satellite rainfall products (e.g., TMPA, PERSIANN, CMORPH) to determine the relationship of precipitation attributes observed in Mali with the precipitation observed in larger region of West Africa. The presentation will give an overview of the observed rainfall for the three years of observations and also provide a summary of the comparison between the ground-based radar and satellite observations.