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## Decadal Variability of Rainfall in Senegal : beyond total seasonal amounts

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The intraseasonal characteristics of rainfall have important implications for agriculture in the Sahel. For example, the development and yield of millet, sorghum and maize depend not only on the rainfall seasonal total amounts, but also on the onset of the rainy season and the seasonal distribution of rainy days as well as the occurrence of dry spells. However, the decadal variability of intraseasonal rainfall characteristics in the Sahel and in particular in Senegal has received little attention in the literature so far. In this study, we analyze the decadal modulations of the intraseasonal characteristics of the monsoon season in Senegal over the period 1918-2000. From daily rainfall data measured at different stations in Senegal, we have defined indices characterizing, among others, the number of rainy days, the average intensity of rainy days, the starting day and ending day of the rainy season. The spatial patterns of the mean indices generally show a north/south gradient and their temporal modulations show a clear decadal signal. Application of EOF (Empirical Orthogonal Function) analysis provides a main mode of variability showing same-signed loads throughout the territory. The associated PCs show strong decadal variability for most indices with a strong link to the Atlantic Multidecadal Variability. The exception are the indices related to the duration of the monsoon season, which show a weaker decadal variability with a clear trend.