1164-62-9 **Bhikhari Tharu*** (btharu@spelman.edu), 350 Spelman Ln SW, Atlanta, GA 30314, and **Nirajan Dhakal** (ndhakal@spelman.edu). *Using Circular Statistical Method to Analyze Seasonality of Precipitation.*

Circular statistics is a branch of statistics that deals with directions, where random variables are represented by angles measured with respect to some starting point and sense of rotation. In this study, we used a circular statistical method for the assessment of seasonality of daily and monthly precipitation extremes over the contiguous USA. Historic precipitation time series over a period of 64 years (1951–2014) for 1108 sites were used for the analysis. Calendar dates for extreme precipitation were used to characterize seasonality based within a circular statistics framework which includes indices reflecting the mean date and variability of occurrence of extreme events. Our results showed that the precipitation seasonality varied across the contiguous USA with a more distinct pattern of seasonality strength in the Western and Mid-western region and a mixed pattern in the Eastern region. The circular statistical method allows for adaptive estimation of seasonal density and can precisely detect the multimodal distribution of the calendar dates for precipitation. Results from our study may prove valuable for both hydroclimatic change studies and sustainable water resource management. (Received December 02, 2020)