Regional Patterns of ENSO and NAO impact on Precipitation extremes in the Iberian Peninsula

J. Loa, W. Cabos-Narvaez and Francisco Alvarez-García University of Alcala, Alcala de Henares, Madrid, Spain

(William.cabos@uah.es/Fax +34 918855051)

The impact of the El Nino-Southern Oscillation (ENSO) and the North Atlantic Oscillation (NAO) on the precipitation extremes occurring in the Iberian Peninsula is studied with the help of 55 years of meteorological data from around 40 weather stations in the area of interest.

The occurrence of extreme episodes is monitored through a threshold locally determined at each station. Connections with the ENSO and NAO climate signals are sought via correlation and composite analysis.

We identify not only the links between Iberian precipitation extremes and either of these two relevant climate signals independently, but also how possible interactions between these two phenomena might exert an influence on and be reflected in the variability of the Iberian rainfall extremes.

The response of precipitation extremes is characterized by different regional patterns that depend on the phases of ENSO and NAO as well as on the season. Here we show the results for winter, spring and autumn seasons.