ID: **P1.1-663** Type: **e-Poster**

# of diurnal cycle of rainfall over peanut basin in Senegal

Tuesday, 29 June 2021 11:30 (15 minutes)

In this study, the diurnal variation of the rainfall amount, frequency and intensity, and the rainfall with different durations, as well as its intra-seasonal variability are analysed using rainfall data from 18 stations over Ndiaganiao (area located in western Senegal) during the period 2007-2015. Our results show that the mean rainfall amount and frequency peaks are observed around 1800 GMT for the whole season, while the intensity peak is observed between 1300 and 1400 GMT. It was also shown a strongest spatial variability with intensity compared to amount and frequency. Analysis of duration of rainfall events shows a higth occurence (up to 80\%) of short duration (1 – 3 hours) and these events are the main contributors (75\%) to the rainfall amount. However, the most intense events have a longer durations (4 – 5 hours). Finaly, our results show a strong intraseasonal variability of diurnal cycle in term of amount, frequency and intensity. Indeed, rainfall events occur between 1200 and 1400 GMT during the installation phase of the West African Monsoon (WAM) in June. In the height of the WAM (August-September), the amount and frequency show a similar feature with a peak observed around 1800 GMT.

Promotional text

This work can contribute to the achievement of the SnT2021 objectives.To identify how climate variability and its dynamics can impact socio activities. And help to clarify the key mechanisms influencing convection at the mesoscale, and assess their representation in atmospheric

Primary author: Mr FALL, Cheikh Modou Noreyni (University Cheikh Anta Diop of Dakar, High Polytechnic School of Dakar, Dakar Senegal)

Co-authors: Mr WANE, Dahirou (University Cheikh Anta Diop of Dakar, High Polytechnic School of Dakar, Dakar Senegal); Mr DIONE, Cheikh (African Centre of Meteorological Applications for Development (ACMAD), Niamey, Niger); Mr GAYE, Amadou Thierno (University Cheikh Anta Diop of Dakar, High Polytechnic School of Dakar, Dakar Senegal)

Presenter: Mr FALL, Cheikh Modou Noreyni (University Cheikh Anta Diop of Dakar, High Polytechnic School of Dakar, Dakar Senegal)

Session Classification: T1.1 e-poster session

Track Classification: Theme 1. The Earth as a Complex System: T1.1 - The Atmosphere and its Dynamic