

## 1.65P

### **ANALYSIS OF THE SEASONAL CYCLE OF THE AFRICAN MONSOON : REGIONAL APPLICATIONS ON CAMEROON**

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The African monsoon is characterized by the seasonal migration of the Inter Tropical Convergence Zone (ITCZ). Most of the studies of the African monsoon focused on the northern summer period and on the West Africa zone. Therefore, only few studies deal with the analysis of the African monsoon in Central Africa and outside the northern summer period. That's why we have focus our study in Cameroon whose latitudinal extension from Central Africa to the Sahelian area allows us to follow the whole migration of the ITCZ.

We will show first a statistical analysis of the seasonal cycle of rainfall over West Africa over the 1925-1992 period by using the monthly rainfall dataset of CRU with the  $3.75^\circ \times 2.75^\circ$  and  $0.5^\circ \times 0.5^\circ$  resolution.

Then, we will use the  $0.5^\circ$  monthly rainfall dataset to describe regional rainfall indexes over the Cameroon region by using the rotated extended Empirical Orthogonal Functions (EOFs). This method allows to point out the relationships between the seasonal cycle and the annual cycle. These relationships are given by the spatial patterns of the weight of each month on the interannual variability.

After regionalizing the seasonal cycle over Cameroon, we will study the anomalies of cotton production in the northern Cameroon. Thus, we will compute the correlation between cotton production and rainfall over this region of Cameroon. This study will be done by using in one hand the cotton production dataset provided by the SODECOTON (SOCIÉTÉ de DEVELOPPEMENT du COTON), and on the other hand the CRU  $0.5^\circ$  monthly rainfall dataset.

**Submitted by**

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## **African Monsoon Multidisciplinary Analyses**

### **1<sup>st</sup> International Conference**

**Dakar, 28<sup>th</sup> November – 4<sup>th</sup> December 2005**

### **Extended abstracts**

Isabelle Genau, Sally Marsh, Jim McQuaid, Jean-Luc Redelsperger,  
Christopher Thorncroft and Elisabeth van den Akker (Editors)

AMMA International

**Conference organisation:**

Bernard Bourles, Amadou Gaye, Jim McQuaid, Elisabeth van den Akker

**English and French editing :**

Jean-Luc Redelsperger , Chris Thorncroft, Isabelle Genau

**Typesetting:**

Sally Marsh, Isabelle Genau, Elisabeth van den Akker

**Printing and binding:**

Corlet Numérique  
14110 Condé-sur-Noireau  
France  
numeric@corlet.fr

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**AMMA International Project Office**

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Convective wind system with aerosols, named "haboob", Hombori in Mali, West Africa.