

26.04.2018, 15:15

KlimaCampus Kolloquium

Sharon Nicholson

The myth of the ITCZ over equatorial Africa and other myths concerning African climate

African climate is frequently a topic of discussion because of the devastating droughts that affect much of the continent. Much of the discussion is in the lay press and rumors abound. Unfortunately, many have been believed by the scientific community and get repeated in journal articles. This talk exposes some of the myths and makes the more serious claim that issues concerning the ITCZ should be included in the category of "myths". The common explanation for the progression of the rainy season over Africa is the seasonal excursion of the ITCZ. The ITCZ paradigm stems from a time when tropical rainfall was assumed to be associated mainly with localized convection. Its development was also linked to the emergence of mid-latitude frontal concepts. The paradigm has numerous shortcomings, including the diversity of definitions and the large number of parameters used to identify the ITCZ. A historical look at the concept shows that its use over Africa has long been controversial, with many eminent tropical meteorologists harshly criticizing its applicability over this continent. However, the seasonal excursion of the ITCZ remains the classical explanation for African rainy seasons, especially in the equatorial region. This seminar underscores the shortcomings of the paradigm in equatorial Africa by examining various aspects of the circulation associated with the spatial and temporal patterns of rainfall during the equatorial rainy seasons. The overall conclusion is that a deeper understanding of the seasonal cycle in the equatorial regions of Africa still needs to be developed.

**Sharon Nicholson, from the Department of Earth, Ocean & Atmospheric Science, Florida State University is guest of M. Claußen (MPI-M).
Bundesstraße 53, Room 22/23 (ground floor)**