

METEOSAT - MVIRI - Mesoscale Convective Systems Tracking Climatology (LMD-LTHE) - 0.05

General information

Dataset name: METEOSAT - MVIRI - Mesoscale Convective Systems Tracking Climatology (LMD-LTHE) - 0.05

Created on: 2016-03-14

Useful in the framework of: OPERATIONAL-DATA > Satellite products

Purpose: In West Africa, recent decades have shown significant climatic evolution. In particular, droughts conditions are continuously observed over the Sahel since the 70?s while other regions exhibit a return towards neutral long term conditions. The intimate link between the rainfall and the Mesoscale Convective Systems calls for a concurrent analysis of the evolution of the MCS over the region. A first step is performed here by computing a homogeneous analysis of 24 years of METEOSAT data. MCS are hence detected and tracked in time using the infrared imagery. A simple MCS classification is developed based on the duration of the system and its speed of propagation. Four classes are formed using thresholds selected on a physical basis of 9 hour and 10 m/s, respectively. The long term average spatial distribution of the systems is presented as well as the interannual variability. A dedicated focus on the 2006 season is proposed. This work shows that in spite of its simplicity, the present MCS classification is useful to document convection in West Africa at various scales and should be of help to better understand the observed recent climatic variations over the region.

Contact(s)

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Instrument

Satellite: METEOSAT
Instrument: MVIRI

Parameter

Mesoscale Convective Systems Tracking

Parameter name: Mesoscale Convective Systems Tracking
Parameter keyword: Atmosphere > Clouds

Coverage

Temporal coverage

Date begin (yyyy-mm-jj): 1983-06-01
Date end (yyyy-mm-jj): 2006-09-30

Geographic coverage

Data resolution

Temporal resolution: 0000-00-00 00:30:00
Latitude resolution: 0.05
Longitude resolution: 0.05

Data use information

Use constraints: See AMMA data policy.
Data policy: AMMA data policy