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Dynamics and Diurnal Variations of Surface Radiation Budget over Agricultural Crops Located in Sudanian Climate

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ABSTRACT

Energy exchange between land and atmosphere are important in climatic processes. In this paper, the seasonal dynamics and diurnal variations of surface radiation components of agricultural crops are investigated. One year data are used to emphasize the separate contribution of each radiation balance component. From the energy budget equation and FAO empirical model, we compare the clear sky solar radiation and the incoming short wave radiation in order to highlight aerosols and water vapor role in the studied area. The analysis show two important results: 1) The relevance of the short wave radiation in the net radiation budget especially in the wet season and 2) The variations of the long wave radiation were small. Analyses provide an understanding of net radiation seasonal variations in the northern part of Benin.

KEYWORDS

Net Radiation; Short Wave Radiation; Long Wave Radiation; Sudanian Climate

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