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## Detection and characterization of the onset and cessation dates of the dry season in Western Equatorial Africa based on solar radiation

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Western Equatorial Africa (WEA) is characterized by a long and cloudy dry season extending from June to September. So far, no study has investigated the intra-seasonal characteristics of this dry season especially its onset and cessation dates. In our study, the onset and cessation dates are determined over the 38-year period 1983–2020, using daily surface solar radiation (SSR) data from CMSAF SARA-H-2. The maximum and minimum values of the cumulative anomalies of a regional index, for each year, are used to extract the onset and cessation dates. The mean onset date of the dry season in the region is May 17, the mean cessation date is October 3. We obtain very distinct anomaly patterns of SSR but also of low-level clouds and precipitation before/after the onset/cessation dates. The onset and cessation dates show strong year-to-year variability but no significant trend is detected over the 4 decades studied. Lastly, the cumulative anomalies for each year are also used to classify the dry seasons according to the SSR intra-seasonal evolution. Three types of years are obtained which are associated to different patterns of SST anomalies in the tropics.