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Radiation Budget estimates at TOA over Africa: comparison between the ERBE (1985- 1989) and CERES (2000- 2004) records

A. Ben Rehouma, M. Viollier and M. Desbois

LMD/IPSL, Ecole Polytechnique, 91128 Palaiseau Cedex, France (Asma.Ben-Rehouma@lmd.polytechnique.fr / Fax : (33) 01 69 33 30 05 / Phone : (33) 01 69 33 45 54)

The CERES instruments started to deliver data from the Terra satellite on March 2000 and continue to work well. Five years of data (flux estimates at the Top Of the Atmosphere) are available and can be compared to those from the ERBE period (1985-1989). We have analysed the monthly means products (ES4 and SRBAVG). For zonal means, the recent LW and SW fluxes are shown respectively higher and lower by a few W/m². However, the observed differences are close to the uncertainty range due to impact of differences in instruments and orbit characteristics. Further reprocessing, validation and cross-checking with other climatological parameters are required to make these observations more reliable. We then focus our study in analysing the interannual and regional variability of both sets of observations. Africa, and more specifically its western part, have been selected in order to contribute to the African monsoon Multidisciplinary Analysis (AMMA) studies.