

<sup>1</sup> Supplementary materials: Wet and dry spells

<sup>2</sup> in Senegal: Evaluation of satellite-based and

<sup>3</sup> model re-analysis rainfall estimates

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<sup>10</sup> **Additional Figures**

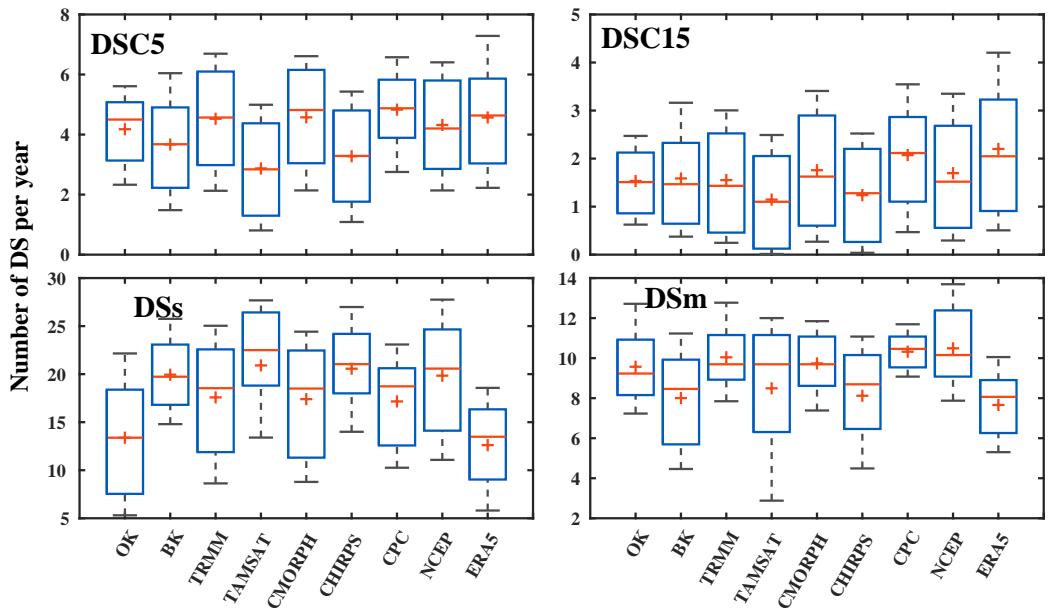


Figure 1: Climatological (1998-2010) distribution of the number of DSC5, DSC15, DSs and DS<sub>m</sub> for : TRMM, TAMSAT, CMORPH, CHIRPS, CPC, NCEP, ERA5, BK, OK. The + represent the mean value, the — represent the median value, the box represents the 25th and 75th percentile values, and the whiskers represent the extreme values.

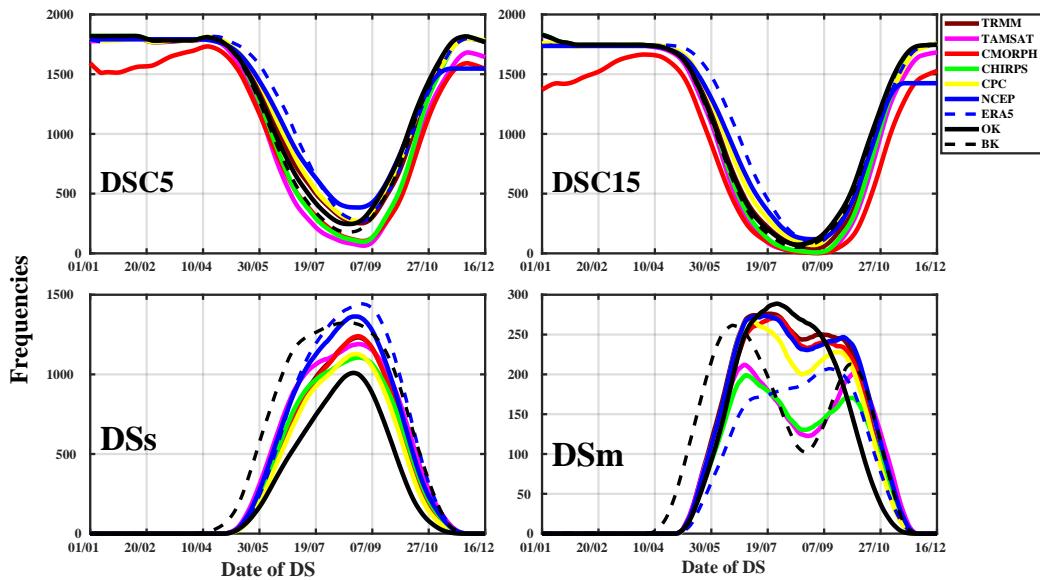


Figure 2: Climatological (1998-2010) distribution of the seasonal distribution of number of DSC5, DSC15, DSs and DSM for : TRMM, TAMSAT, CMORPH, CHIRPS, CPC, NCEP, ERA5, BK, OK.

Taylor Diagram of DS

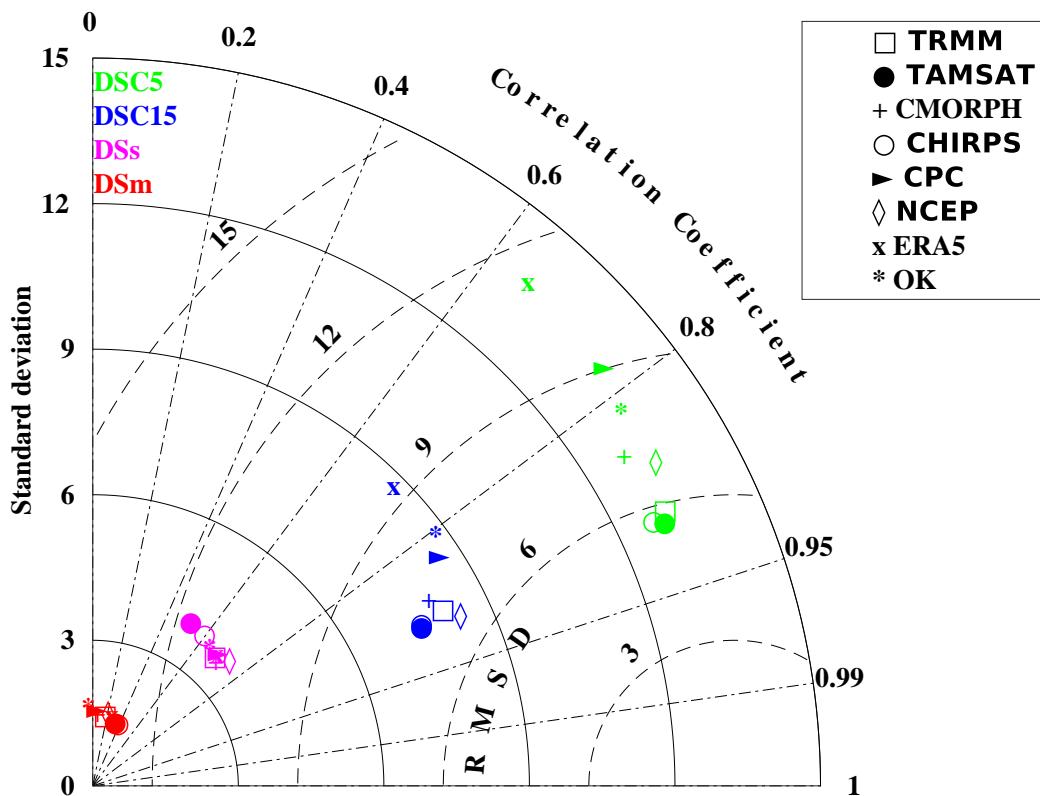


Figure 3: Taylor Diagram of the occurrence of DSC5, DSC15, DSs and DSM for : TRMM, TAMSAT, CMORPH, CHIRPS, CPC, NCEP, ERA5, BK, OK. BK product is considered as reference

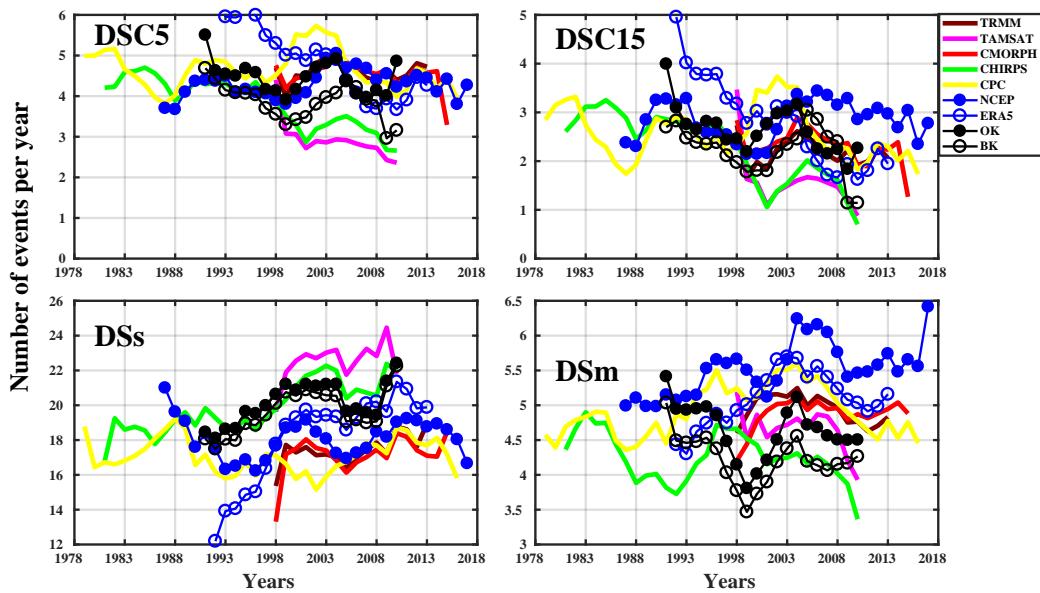


Figure 4: Interannual variability of the occurrence of DSC5, DSC15, DSs and DSM for : TRMM (1998-2013), TAMSAT(1998-2010), CMORPH (1998-2015), CHIRPS (1981-2010), CPC (1979-2016), NCEP (1992-2013), ERA5 (1987-2017), BK (1998-2010), OK (1998-2010)

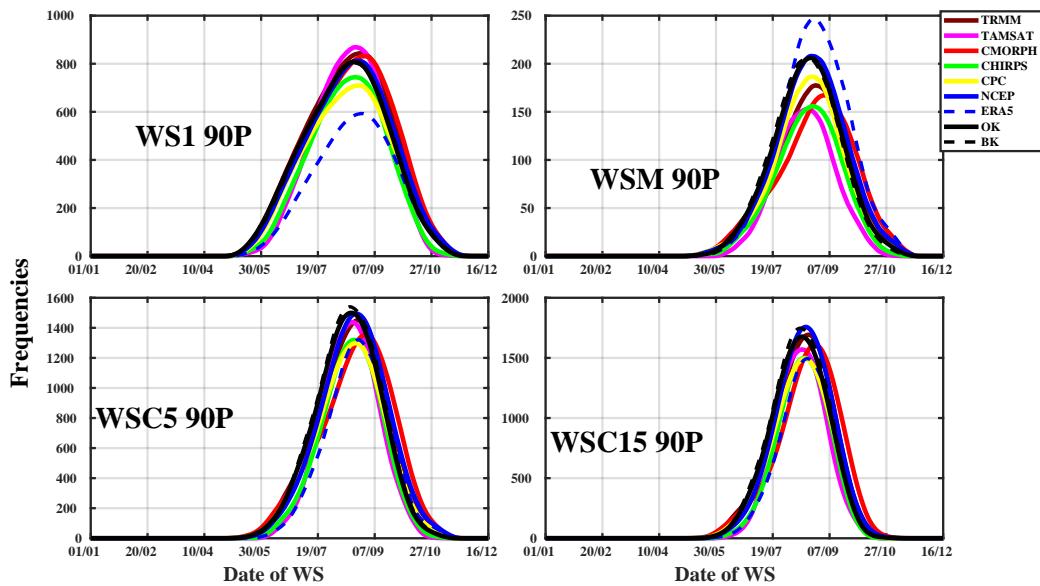


Figure 5: Seasonal cycle of the occurrence of WS1, WSM, WSC5 and WSC15 (90th) percentiles averaged for the period 1998-2010, for TRMM, TAMSAT, CMORPH, CHIRPS, CPC, NCEP, ERA5, BK, OK

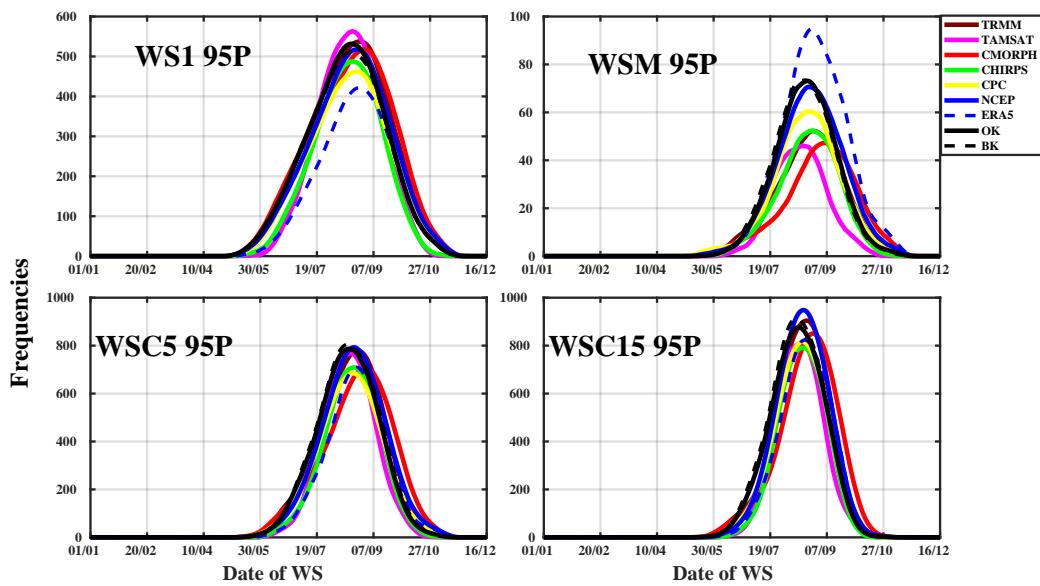


Figure 6: Same as figure S5 for the 95<sup>th</sup> percentile

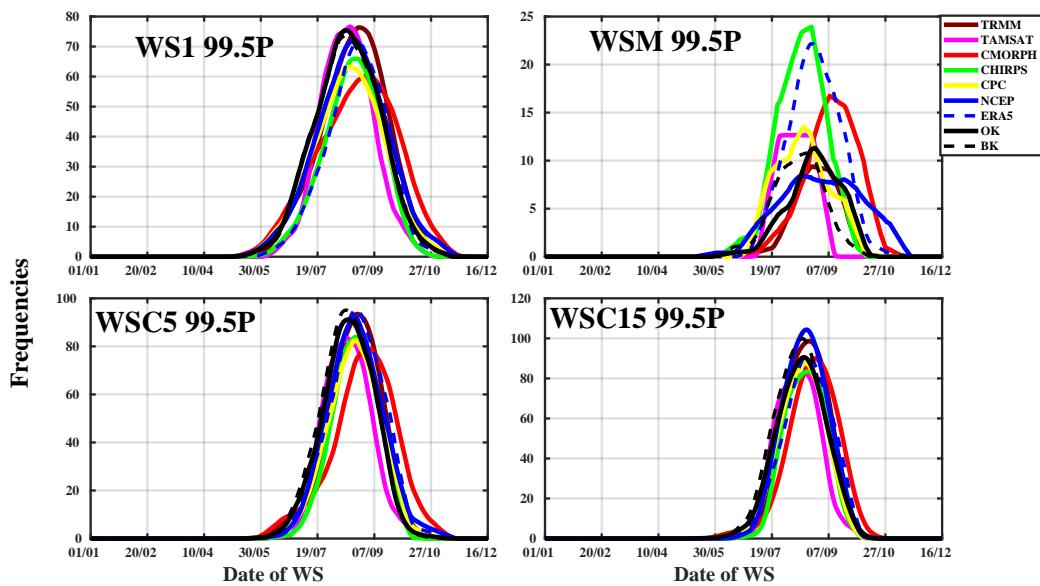


Figure 7: Same as figure S5 for the 99.5<sup>th</sup> percentile

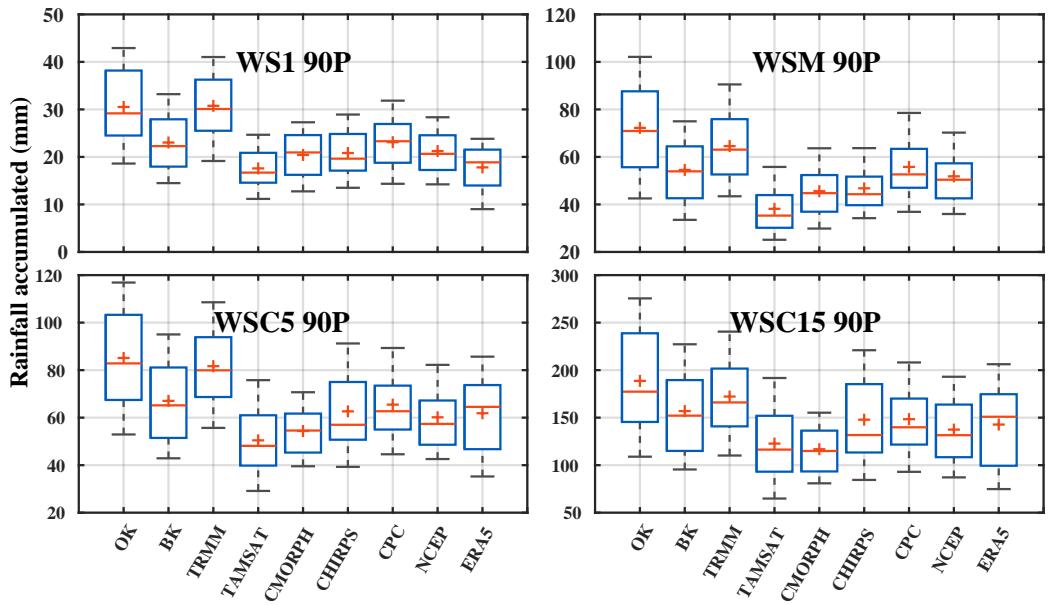


Figure 8: Yearly cumulated rainfall provided by WS1, WSM, WSC5 and WSC15 (90 $th$ ) percentiles, averaged for the period 1998-2010, for TRMM, TAMSAT, CMORPH, CHIRPS, CPC, NCEP, BK, OK. The + represent the mean value, the – represent the median value, the box represents the 25th and 75th percentile values, and the whiskers represent the extreme values

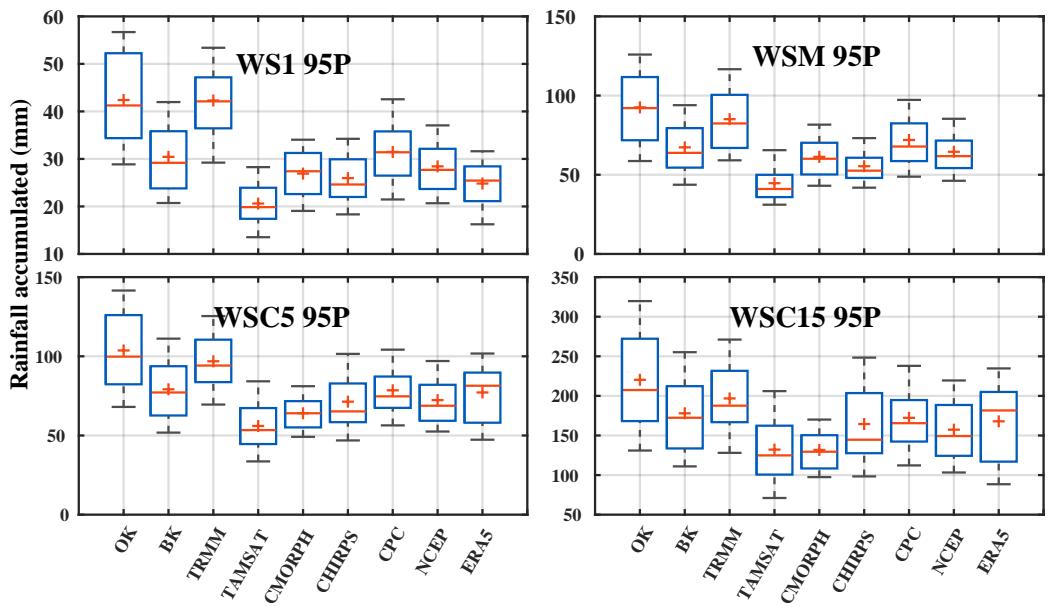


Figure 9: Same as Figure S8 for the 95<sup>th</sup> percentiles.

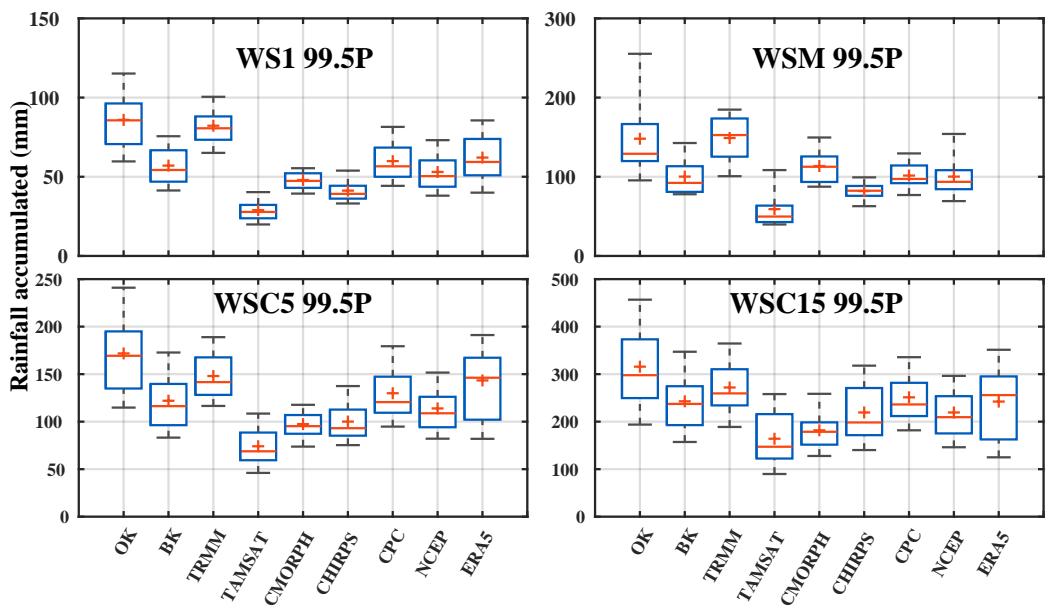


Figure 10: Same as Figure S8 for the 99.5<sup>th</sup> percentile.

Taylor Diagram of WS

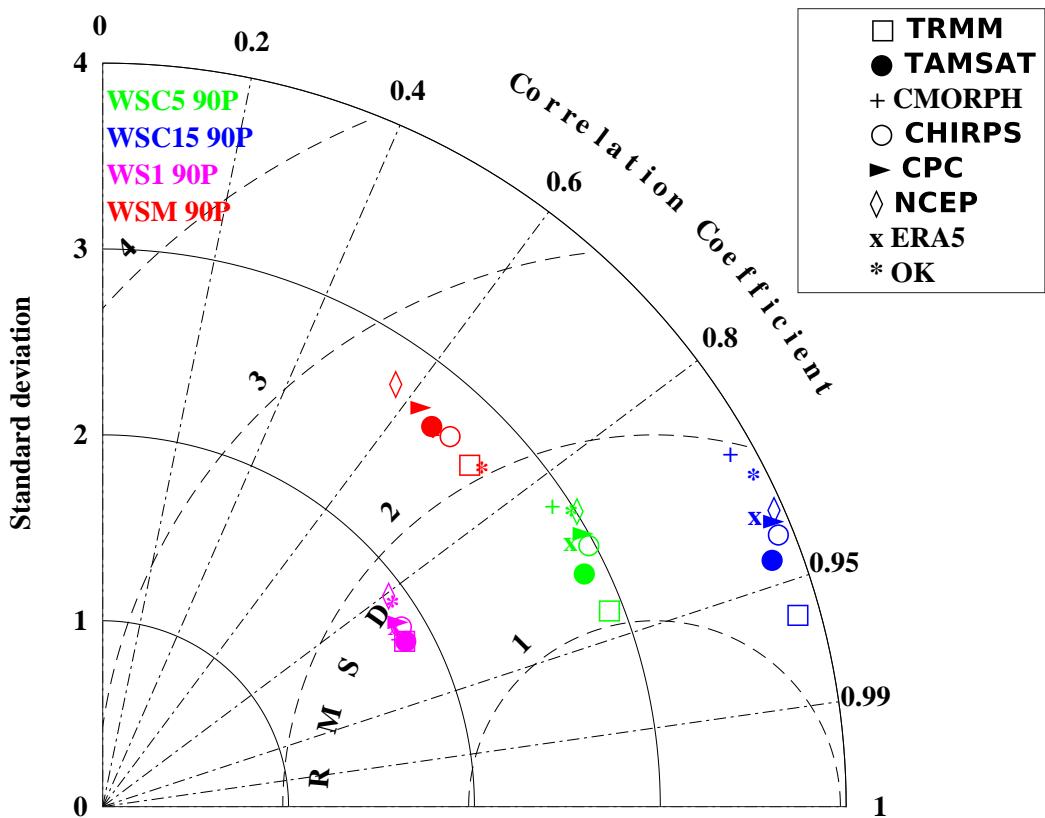


Figure 11: Taylor Diagram of the spatial distribution of the number of WSC5, WS1, WSM, WSC5 and WSC15 (90th) percentiles using TRMM, TAMSAT, CMORPH, CHIRPS, CPC, NCEP, ERA5, OK. BK product is considered as reference during the period 1998-2010

Taylor Diagram of WS

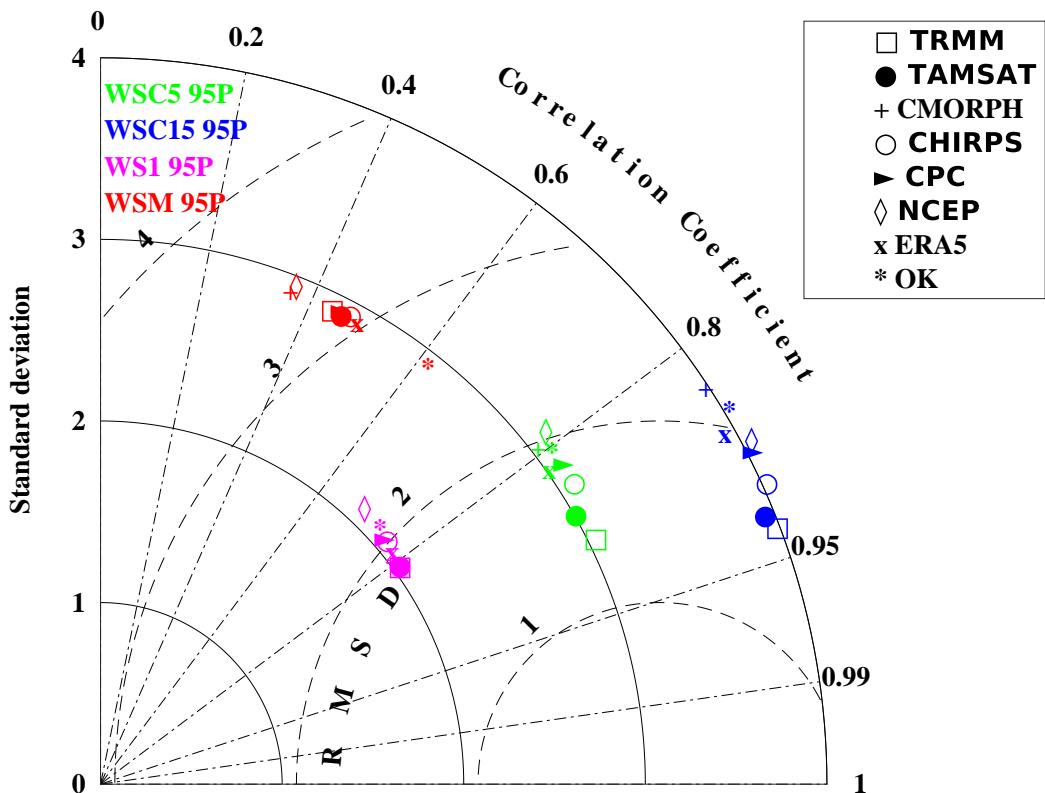


Figure 12: Taylor Diagram of the occurrence of WSC5, WS1, WSM, WSC5 and WSC15 (95<sup>th</sup>) percentiles using TRMM, TAMSAT, CMORPH, CHIRPS, CPC, NCEP, ERA5, OK. BK product is considered as reference during the period 1998-2010