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# Assessing GPM products quality on extreme rainfall event

Jean Claude Berges
Paris 1, Geography, PRODIG, Paris, France (zebulon@univ-paris1.fr)

Global Precipitation Mission brings major improvement to rainfall measurement system. Related precipitation products are delivered with a temporal and spatial resolution compliant with flash floods modeling. However assessing the accuracy of these products on extreme rainfall events is still an open issue.

Two kinds of significant events are presented: Sahelian squall lines and orographic enhanced convective systems on Maghreb. The 2016 rainy season on Sahel has been above normal and the retrieval quality of two huge precipitation systems (14th June and 13th July) is investigated. On end of September 2016 northern Tunisia experimented severe floods produced by two series of local convective systems.

Although IMERG products are globally consistent some discrepancies appear. The mean bias seem linked with orographic lifting. It is obvious in Tunisia case but should not be neglected even in Sahelian squall line. On an other side, at the high temporal resolution scale, IMERG estimation does not match perfectly with geostationary IR data.

These observations raise the issue of defining a proper downscaling process from the full flow of GPM data.