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Error structure in radar-based precipitation estimates.

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Radar precipitation estimates have been traditionally used in a deterministic way. That is, trying to obtain the best rainfall field at a given moment and using it as “the truth” in quantitative applications (for example in hydrological models). However, the large uncertainties inherent to radar measurements make necessary to develop methodologies to associate “maps” of uncertainties to these estimates.

A possible way to describe the uncertainty associate to the estimates is through the use of ensembles (set of equiprobable scenarios) taking into account the different sources of errors and their structure.

The structure of some of the most important errors affecting radar precipitation estimates has been characterized. This will allow us to generate the above-mentioned ensemble of equiprobable precipitation scenarios for probabilistic applications.