



Planning of rainfall intensity gauges networks

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The design of a network of rainfall intensity gauges depends on a number of requirements related to geospatial distribution, measurement uncertainty and real time availability of the data. In practice the required geospatial distribution or network density is found to be a complex issue, especially in mountainous regions. Typical rain gauge station spacings of 10 to 20 km are recommended, but cannot be met in many cases for reasons of economy or siting constraints. To plan or to design such a network the possibilities of alternative observations techniques should be incorporated. Remote sensing techniques like with the ground-based precipitation RADAR (and future high-resolution satellite based RADAR) are appropriate alternatives. Within this context accurate on site calibrations of such remote sensing techniques are of outmost importance, which can only be performed with well-calibrated and well-synchronized rainfall intensity gauges.

Aspects of the planning of such a hybrid observation network will be discussed by taking into account accuracy matters, geospatial resolution and timeliness issues.