

## USING A SPACE AND TIME MODEL TO DERIVE AREAL REDUCTION FACTORS FOR SHORT DURATION

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Short duration areal reduction factors (ARF) have not been calculated for Australian conditions due to a lack of dense rain gauge networks that have been operated over several decades. This paper describes a pilot project to assess the feasibility of deriving ARF from a space-time rainfall model which has been calibrated using radar rainfall data. Historical radar rainfall measurements were used to calibrate a space-time stochastic model of rainfall. The calibrated model was then used to generate plausible rainfall fields which were used to calculate the ARF for accumulations of up to six hours. The sensitivity of the derived ARF to storm movement and model parameters was investigated and interesting results regarding the importance of storm velocity on the ARF will be presented.