

A NEW CELLULAR AUTOMATA-BASED MODEL TO FORESCAST RAINFALL FIELDS.
STUDY CASE OF BOGOTA-CITY (COLOMBIA)

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ABSTRACT

A new cellular automata-based model to forecast rainfall fields is presented. The model is implemented and validated with rainfall data gathered at Bogota-City (Colombia). In order to obtain proper transition rules, this approach employs tools of data mining such as decision trees entropy-based models. It also uses high temporal resolution (consecutive) rainfall fields to build a geodatabase to obtain pattern tables aimed at encapsulating rainfall dynamics. Results show not only a new methodology to employ CA in a rainfall model, but also promising approach to envision new nowcasting meteorological models.