## The next generation GSMaP MWI precipitation algorithm: Improvement of the first guess of physical variables based on MWI TB statistical error analysis

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## 1. Introduction:

The current GSMaP Microwave Imager (MWI) precipitation retrieval algorithm uses a priori information as "the truth". We have been developing a next generation algorithm that assumes a priori information as the first guess and retrieves the physical variables including precipitation and precipitation types etc. from MWI TBs. The basic idea of this algorithm is to derive the statistically optimal values of the physical variables, based on Bayes' theorem. We assume multi-regime PDFs for precipitation profile and surface emissivity.



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TMI,GMI: Red, PR, KuPR:Green

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