



## **The Development of Geostationary Microwave Observation in China**

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Great achievements have been made in the regime of microwave observation from polar orbiting meteorological satellites and their microwave data have been successfully used in the retrieval of precipitation and temperature/humidity profile, as well as data assimilation. But right now, there is no microwave observation in GEO due to its technical difficulty even through some plans such as GEM, GOMAS were proposed. The plan to develop microwave instruments for geostationary meteorological satellites have been approved by Chinese government and this presentation will introduce the status of its development, including the requirement consideration, microwave forward model simulation, the retrieval of precipitation, instrument specification, potential data application..

The followings are concluded in this presentation,

- Microwave observation on GEO will greatly improve the capacity of current meteorological satellites
- The 54GHz and 183GHz bands are on the top of the priority for temperature and humidity profiling, followed by 118, 425 and 325,380 GHz respectively.
- Combined the 54 and 183 band together, better precipitation retrieval results could be expected
- Regarding the strong convective precipitation retrieval, the 54GHz and 183GHz bands can provide basic information for precipitation retrieval and the improvement with additional window channels is not very significant.
- The satisfied resolution for precipitation estimation is 5 to 10 Km and the tolerant value is 50km.