

## Cloud observation by next generation Earth observing satellites

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The use of some polar orbital satellites GCOM and EarthCARE for observing clouds is suggested in this paper. Since clouds exert an important influence on the planets water and energy balances and processes, more observations and understanding life-cycle of these particles are required. Adding to some passive sensors, the CloudSat and the CALIPSO present a new epoch in cloud observation with the purpose of revealing the particle transition. It is expected that the combined use of polar orbital passive/active sensors and geostationary satellites reveal details of cloud evolution process using multi-spectral capability and the vertical observation capability of active/passive sensors. In this paper, we would like to introduce recent progresses of cloud observations from satellites, to show multi-sensor views of cloud droplet growth process and comparison results between observations and models.

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