

Observation system simulation experiments for a hyperspectral infrared sounder onboard geostationary satellite

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At the Japan Meteorological Agency, we started preparation for the Himawari-8/9 follow-on satellites. Hyperspectral infrared sounder (HSS) is one of the instruments to consider to be installed in the follow-on satellites. By installing HSS on a new geostationary satellite, it is possible to acquire information on highly accurate profiles of temperature and water vapor at high frequency, and it is expected that accuracy of numerical weather prediction is greatly improved by using this new data in data assimilation system. In order to confirm this assumption, we evaluate the impact on numerical weather prediction when we install HSS on the follow-on satellites and assimilate their data with observation system simulation experiment (OSSE).

In this presentation, we report on the generation of HSS pseudo observation data and the initial results of OSSE in JMA's current global data assimilation system.

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