

**Registration/Abstract Submission Form for
The 13th Asia/Oceania Meteorological Satellite Users' Conference**

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Assimilation of NOAA-21/ATMS and CrIS in the JMA's NWP systems

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The Japan Meteorological Agency (JMA) plans to start assimilating data from the Advanced Technology Microwave Sounder (ATMS) and Cross-track Infrared Sounder (CrIS) onboard NOAA-21, which was launched in November 2022, into its Numerical Weather Prediction (NWP) systems in March 2024.

Temperature and humidity sounding channels of ATMS and CrIS onboard Suomi-NPP and NOAA-20 are currently assimilated in the Global Analysis (GA), Meso-scale Analysis (MA), and Local Analysis (LA). Those channels of NOAA-21 are planned to be assimilated in addition to the current satellites with the same preprocesses such as horizontal thinning and Quality Control (QC).

According to a preliminary experiment of GA without assimilating NOAA-21 data conducted for May 2023, the standard deviation of difference between observation and first-guess suggests that the data quality of NOAA-21 is similar to or slightly better than that of Suomi-NPP or NOAA-20. A test assimilation experiment of GA conducted for June 2023 shows that the additional use of NOAA-21/ATMS and CrIS improves the initial and forecast fields especially in tropics.

Further studies are ongoing, and the most recent results mainly about GA will be presented in the conference.