

Data Assimilation Experiments with Himawari-8 Optimal Cloud Analysis Products

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Himawari-8 Optimal Cloud Analysis (OCA) retrieves cloud properties such as cloud top pressure (CTP), cloud optical thickness (COT) and cloud top effective particle radius with a high resolution of 2 km. Data evaluation with conventional data and a preliminary assimilation experiment were conducted with the aim of utilizing them into mesoscale data assimilation to improve precipitation forecasts. Frequencies of cloud occurrence overall agreed well with those of surface and upper air observations especially at high levels. OCA data were assimilated as pseudo relative humidity, which caused increase in water vapor in analysis fields. The extended 24-h precipitation forecast showed differences in intensity and distribution of rainfalls from the control forecast without assimilation of OCA, suggesting a promising impact of OCA data.