The Impact of Observational data on Numerical Weather Prediction

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A lot of observational data is assimilated in operational NWP system in JMA. In recent years, remote sensing data such as Satellite is increasing and dominates about 80% of total observational data. The data remaining 20% conventional observation such as SYNOP or Radiosonde, however, still serve as an important role for the NWP system. We show the impact of each observation on the NWP system and appeal how conventional observation is important.

JMA perform quality control (QC) about observational data operationally, and the QC plays an essential part to improve the initial value and forecast field. In some cases, we find the observational data includes false reports. We show these examples and emphasize substantiality of the observation network and the importance of its maintenance.

Finally, we introduce "the report on the quality of land surface observations in RA-II" that JMA publishes every six months as the lead center and "monthly global data monitoring report". By utilizing these documents effectively, we can maintain better observation in future.