Ito, K., 2022: Bias in near-real-time global sea surface temperature analysis of Japan Meteorological Agency associated with tropical cyclone passages in western North Pacific. *J. Meteorol. Soc. Japan*, **100**,
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Plain Language Summary: The near-real-time merged satellite and in-situ data global sea surface temperature (SST) of the Japan Meteorological Agency (hereafter, R-MGD) is subjected to the exceeding filtering of short-time-scale fluctuations. Therefore, the rapid SST change due to the passage of tropical cyclones (TCs) causes biases. The issue can be alleviated by putting more weight on the observations within 72 h.

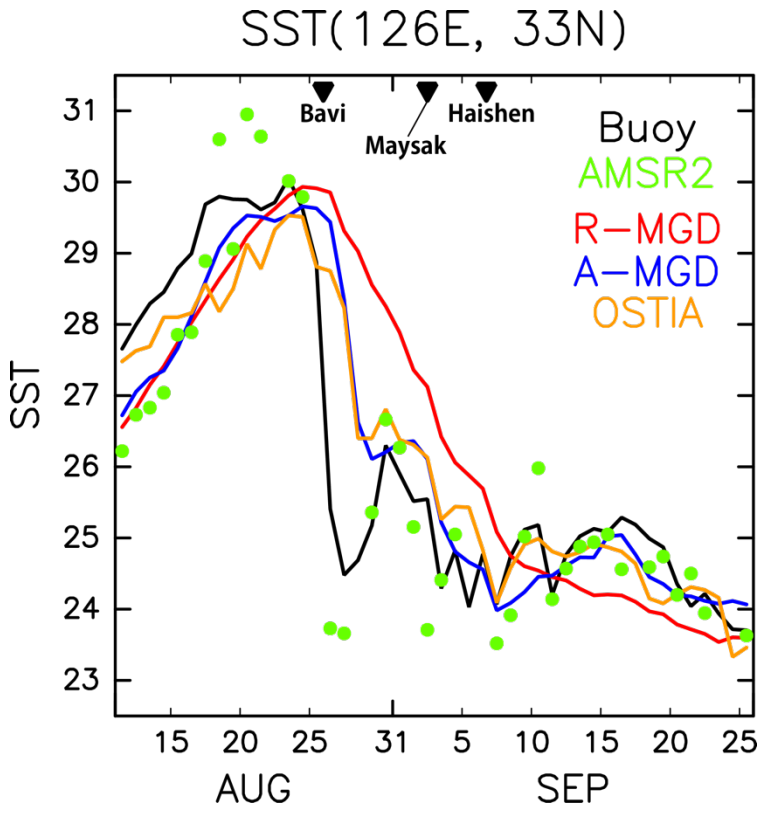

Figure 1. Example of TC-related SST change in the moored buoy (black), Advanced Microwave Scanning Radiometer 2 onboard the satellite (AMSR2; green), R-MGD (red), R-MGD modified by the observations within 72 h (A-MGD; blue), and analysis by United Kingdom Meteorological Office (OSTIA; orange). The triangles show the time of the closest approach of three TCs in 2020.

- Bias in R-MGD associated with the passage of TCs is qualitatively analyzed.
- Statistically significant biases range between -1 day and 4 days for positive biases and between +7 days and +14 days for negative biases within 500 km relative to the TC approach. The magnitude of positive SST biases is largely associated with cold subsurface water and intense TCs.
- The issue can be alleviated by putting more weight on the observations within 72 h through additional optimal interpolation. It also impacts on the intensity forecast of a succeeding TC.