Report from JMA for GHRSST-XXIII

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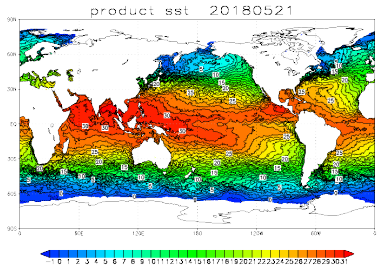
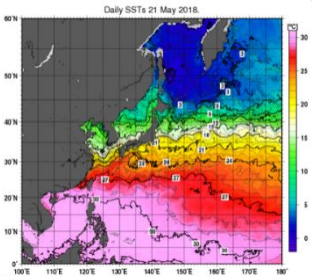
L4 0.25 deg. Global SST Product(MGDSST)



Input:
- AMSR2 L2 from JAXA,
- VIIRS/sNPP from NOAA/NESDIS
- AVHRR/NOAA-19 :GAC from NESDIS, LAC from MSC/JMA
- In-situ (buoys and ships) from GTS

L4 0.1 deg. Regional SST Product (HIMSST)



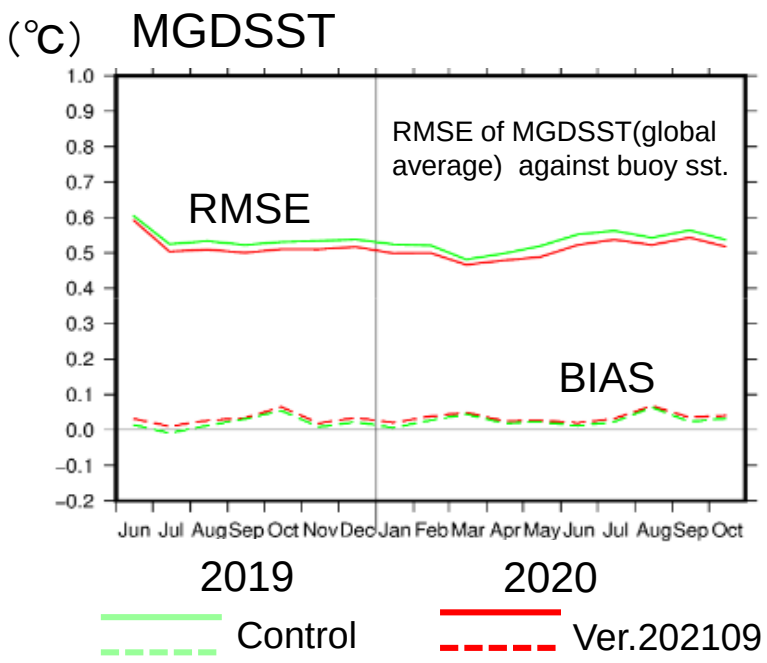
Input:
- Himawari-8 SST in addition to data used in MGDSST

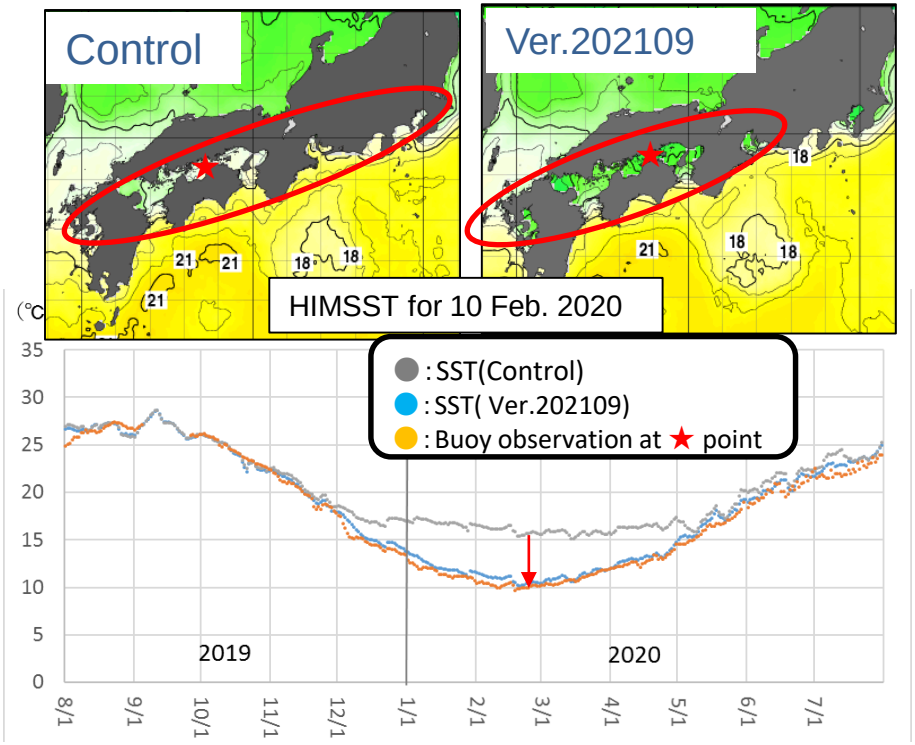
Main update since GHRSST XXII

MGDSST and HIMSST near-real-time analysis

- September 2021 (Ver.202109)
  1. Replace AVHRR/NOAA-18 to VIIRS/sNPP for both MGDSST and HIMSST.
     → RMSEs are slightly reduced (lower-left figure for MGDSST).
  2. Reduction of warm bias over the inner bay area in winter/early-spring for HIMSST (lower-right figure).
- November 2021 (Ver.202111)

  Removal of AVHRR/Metop-A data corresponding to the end of mission.





Buoy observation data at Yashima island (★) were provided by Kagawa Prefectural Fisheries Experiment Station.

Major changes expected in 2022

MGDSST and HIMSST near-real-time analysis

① Replace AVHRR/NOAA-19 to VIIRS/NOAA-20 for MGDSST and HIMSST.
② Introducing shorter time-scale SST components from AMSR2 into MGDSST.

Test1 applies only ①, and Test2 applies ① and ②.
→ Introducing ② is more effective to reduce RMSE for global average (lower-left figure for MGDSST).
→ Test2 shows clearer SST cooling after passing typhoons in East China Sea (lower-right figure).

The impact on the NWP system is being investigated.