



Report from GHR SST RDAC

# JAPAN EXPLORATION AEROSPACE AGENCY

# JAXA RDAC Report

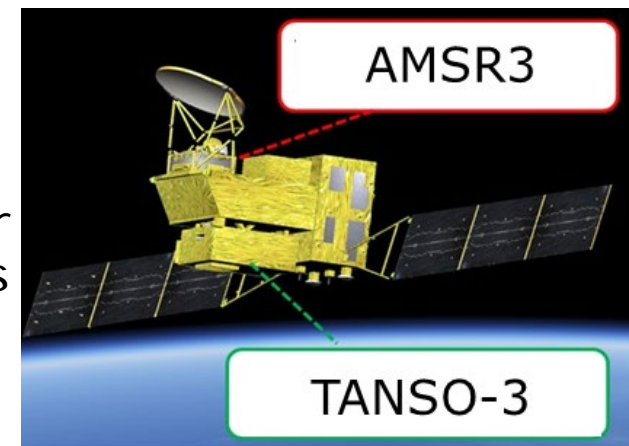
- JAXA's GDS 2.0 datasets are available from
  - JAXA Himawari Monitor (<https://www.eorc.jaxa.jp/ptree/>) for AHI SST
  - JAXA GHRSSST server (<https://suzaku.eorc.jaxa.jp/GHRSSST/>) for other SSTs
- Aqua/AMSR-E (MW)
  - Additional L2P SST for 10GHz update in summer 2020 with improved spatial filter
- GPM-Core/GMI (MW) (L1 received from NASA & JAXA/GPM)
  - L2P SST updated in Dec. 2019 with improved spatial filter to reduce random noises
- GCOM-W/AMSR2 (MW)
  - Ver.4 SST & wind speed is planned in summer 2020 with improved spatial filter to reduce random noises and released SST lower than 9 degC in 10G SST.
  - New 3-frequency SST will be introduced in Ver.4 to reduce RFIs.
- GCOM-C/SGLI (IR)
  - Released L2P SST Ver.1 in Jan. 2020 for 250m resolution (latest 7-day only) and 1km resolution (archived since Jan. 2020). L3C under consideration (any request?).
  - SST Ver.2 in summer 2020 with improved cloud mask.
  - See Y. Kurihara's poster at "Science 1: Retrieval Algorithms" for more details
- Himawari-8/AHI (IR)
  - SST Ver.2 in summer 2020 with improved cloud mask and to be consistent with SGLI.
- GOSAT-GW/AMSR3 (MW)
  - Started Development Phase since Dec. 2019, joint mission with TANSO-3 (GHG observation) led by MOE and NIES, to be launched in JFY 2023 (Apr. 2023 – Mar. 2024).
  - See M. Kachi's poster at "Science 1: Retrieval Algorithms" for more details.

# GOSAT-GW: Global Observation SATellite for Greenhouse gases and Water cycle



□ GOSAT-GW will carry two instruments, AMSR3 and TANSO-3.

- AMSR3, led by JAXA, will succeed AMSR series observations adding new high-frequency channels for solid precipitation retrievals and water vapor analysis in NWP.
- TANSO-3, led by Japanese Ministry of Environment (MOE), will improve observation capability of greenhouse gases from GOSAT-2/TANSO-2.
- Development Phase since Dec. 2019.
- Target launch is JFY2023.



□ AMSR3 specifications

- Will succeed AMSR2 observation capability.
- New 166 & 183 GHz channels for snowfall retrievals & water vapor analysis in NWP.
- Additional 10 GHz channels with improved NEDT (wider bandwidth) to reduce random noises for production of SST in better resolution.

Orbit	Type	Sun-synchronous, Sub-recurrent orbit
	Altitude	666 km, recurrent cycle 3days (same as GOSAT)
	MLTAN	13:30±15min (same as GCOM-W)
Mass		2.6 ton (Including propellant)
Power		> 5.3 kW
Design life		> 7 years
Launch vehicle		H-IIA rocket
Mission data downlink rate		Direct transmission with X-band: 400 Mbps Direct transmission with S-band: 1 Mbps (Only for AMSR3)
Instrument		TANSO-3 (for GHGs) AMSR3 (for Water Cycle)