



# Early results of SLSTR SST Validation

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# Overview: SLSTR-A

- Operational since 05/07/2017
  - Introduction of Bayesian on 04/04/2018
- Reprocessed data from 19/04/2016 to 04/04/2018 now available via CODA REP

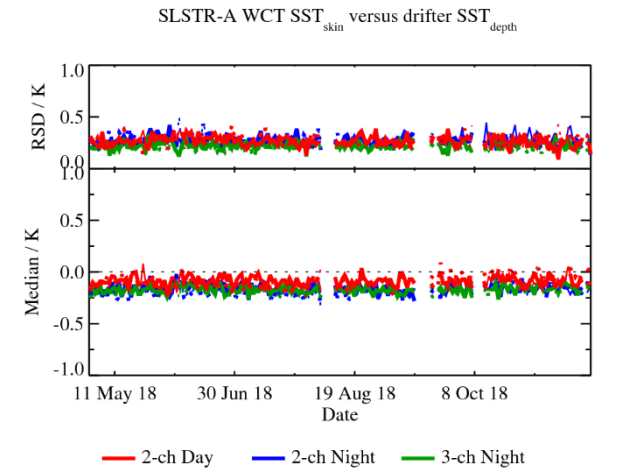
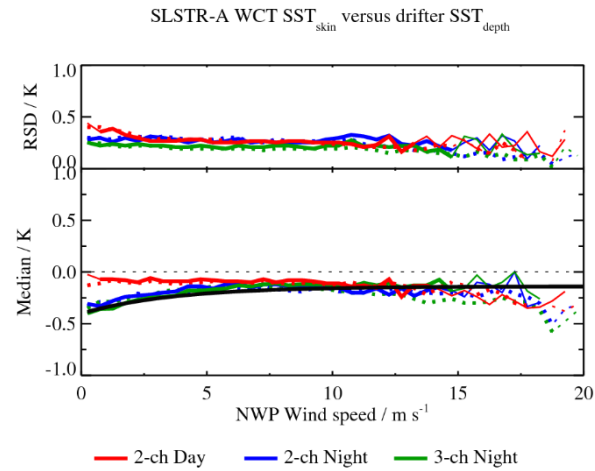
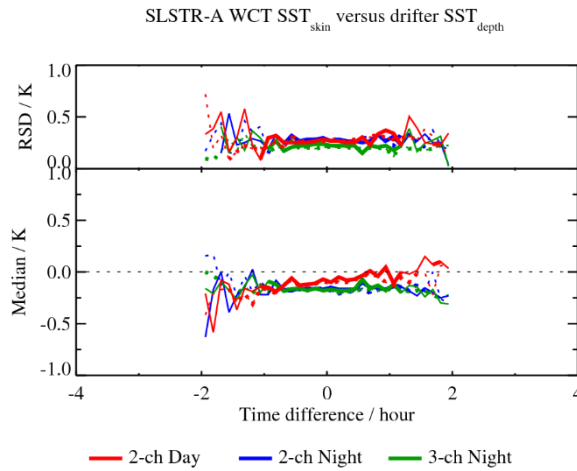
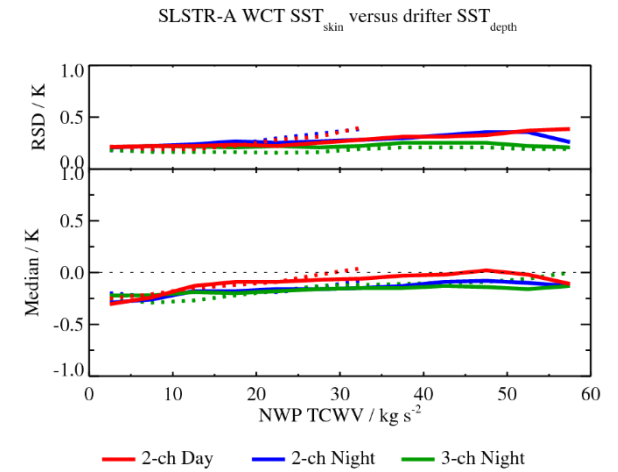
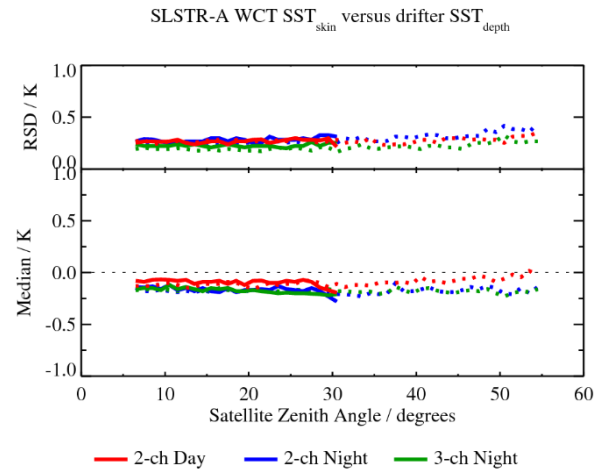
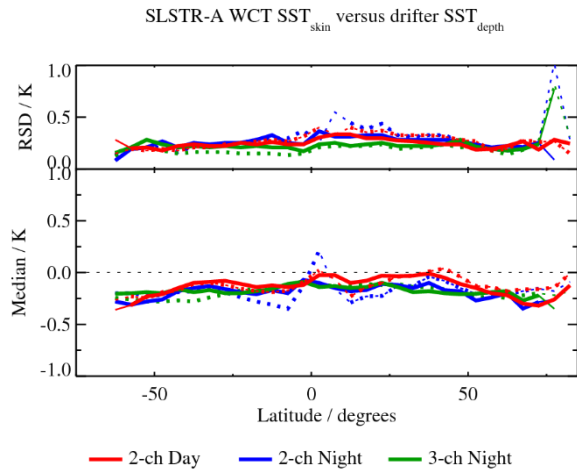
# Overview: SLSTR-B

- In production since 17/06/2018
- Released to S3VT on 08/11/2018
- Operational release expected in March 2019
  - Currently uses S3A ADFs (coeffs, SSES and ADI)

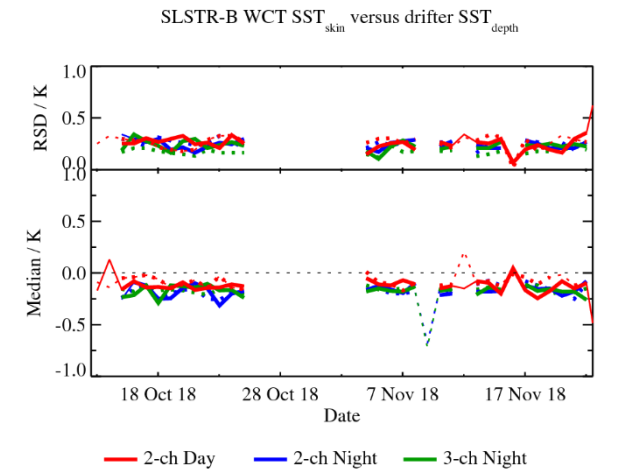
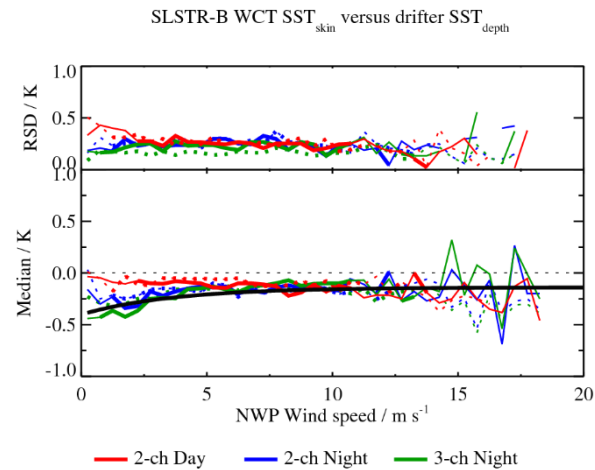
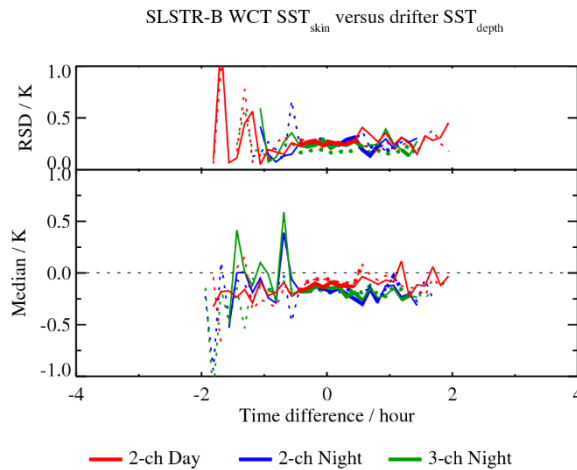
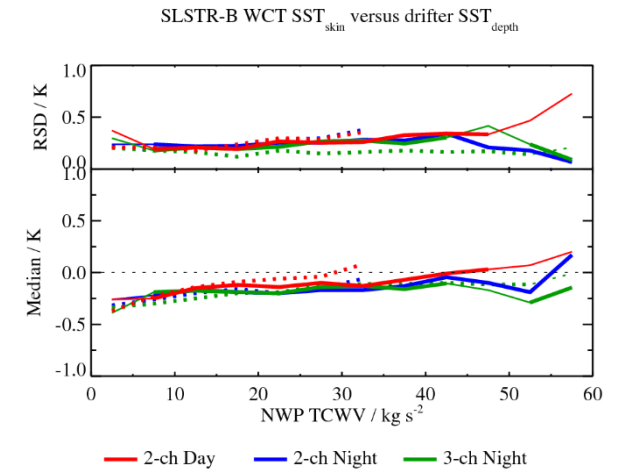
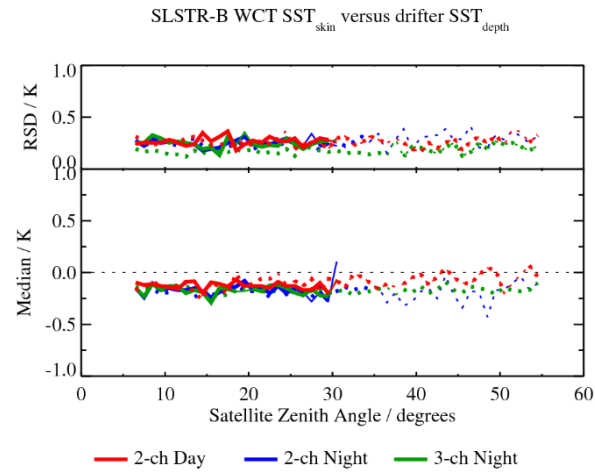
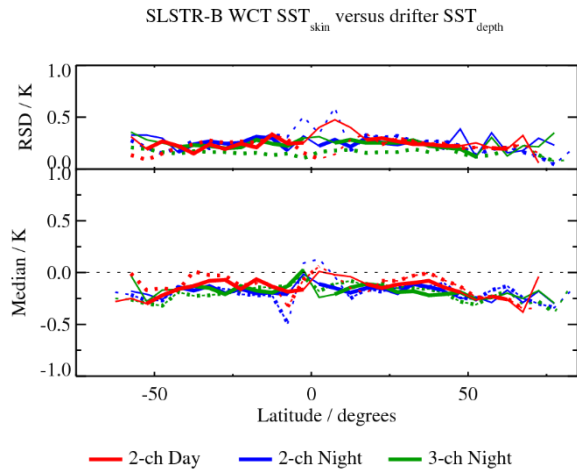
# Overview: SLSTR MDB

- **OSI-SAF MDB:**
  - SLSTR-A NRT (to be discontinued)
  - RBT, WCT, WST
- **EUM MDB:**
  - SLSTR-A & SLSTR-B
  - WST plus selected WCT and RBT
- **REPROCESSED MDB:**
  - S3A SL\_2\_WST – generation in progress
  - WST plus selected WCT and RBT

# S3A – After SSES update (evaluated on MDB)



# S3B – After SSES update (evaluated on MDB)

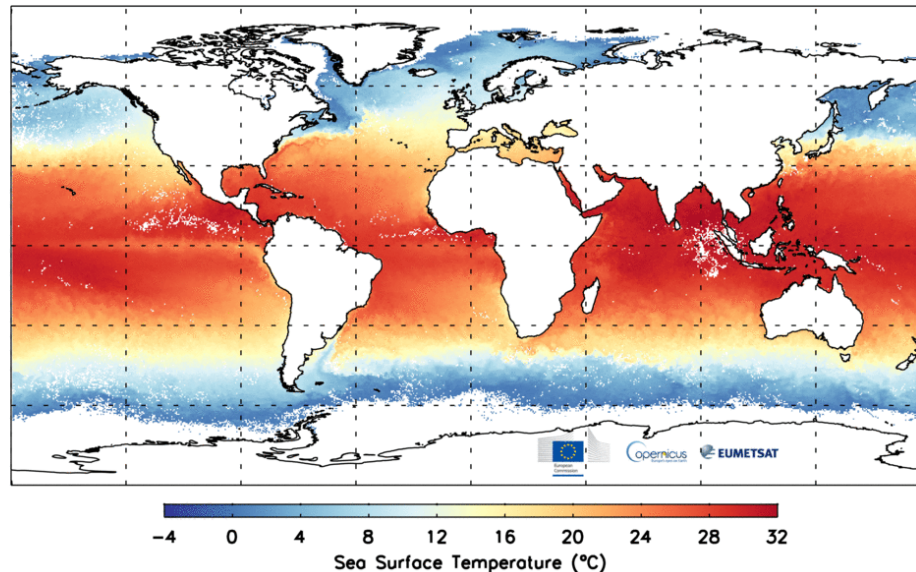


# Reprocessing – SLSTR-A Collection 003

- To form a consistent Collection 003 SST dataset users should use:

Time period	Timeliness	Applicable Product Notice
20160419 to 20180404	REP	S3A PN-SLSTR-L2M-05 - i1r0 - SLSTR L2M
20180404 to 20180802	NTC or NRT*	S3A PN-SLSTR-L2M-03 - i1r0 - SLSTR L2M
20180802 onwards	NTC or NRT*	S3A PN-SLSTR-L2M-04 - i1r0 - SLSTR L2M

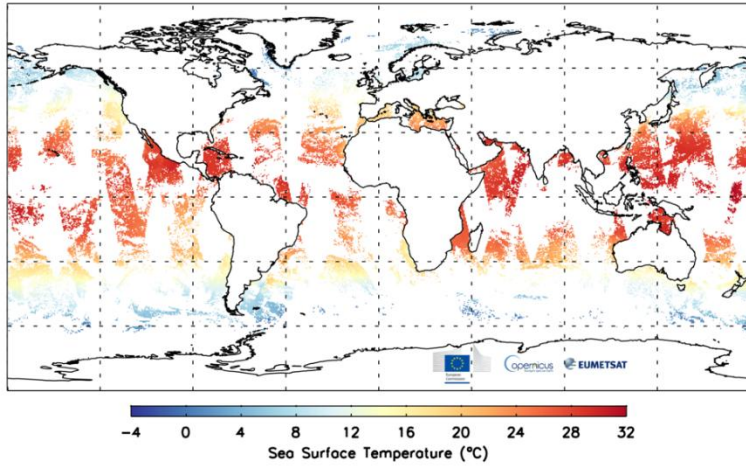
Copernicus Sentinel-3A SLSTR SST 20160501



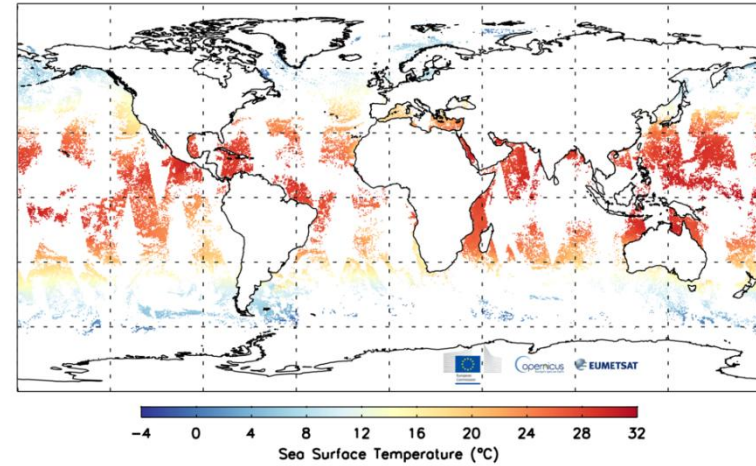
\* - NRT in case data are already downloaded, otherwise it is advised to collect NTC data for consistency (REP is produced in NTC timeliness)

# We now have SLSTR-A and SLSTR-B

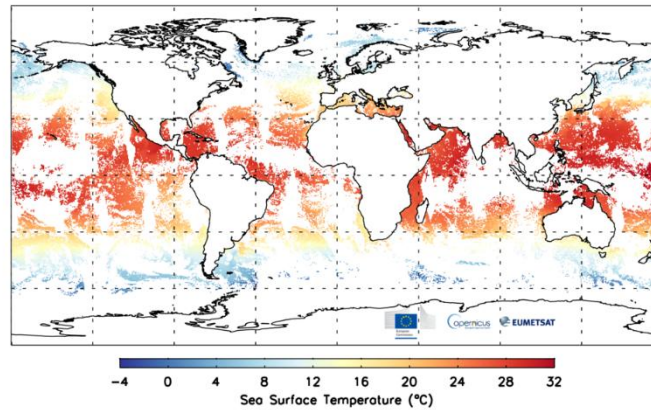
Copernicus Sentinel-3A SLSTR SST 20181106



Copernicus Sentinel-3B SLSTR SST 20181106



Copernicus Sentinel-3 SLSTR SST 20181106

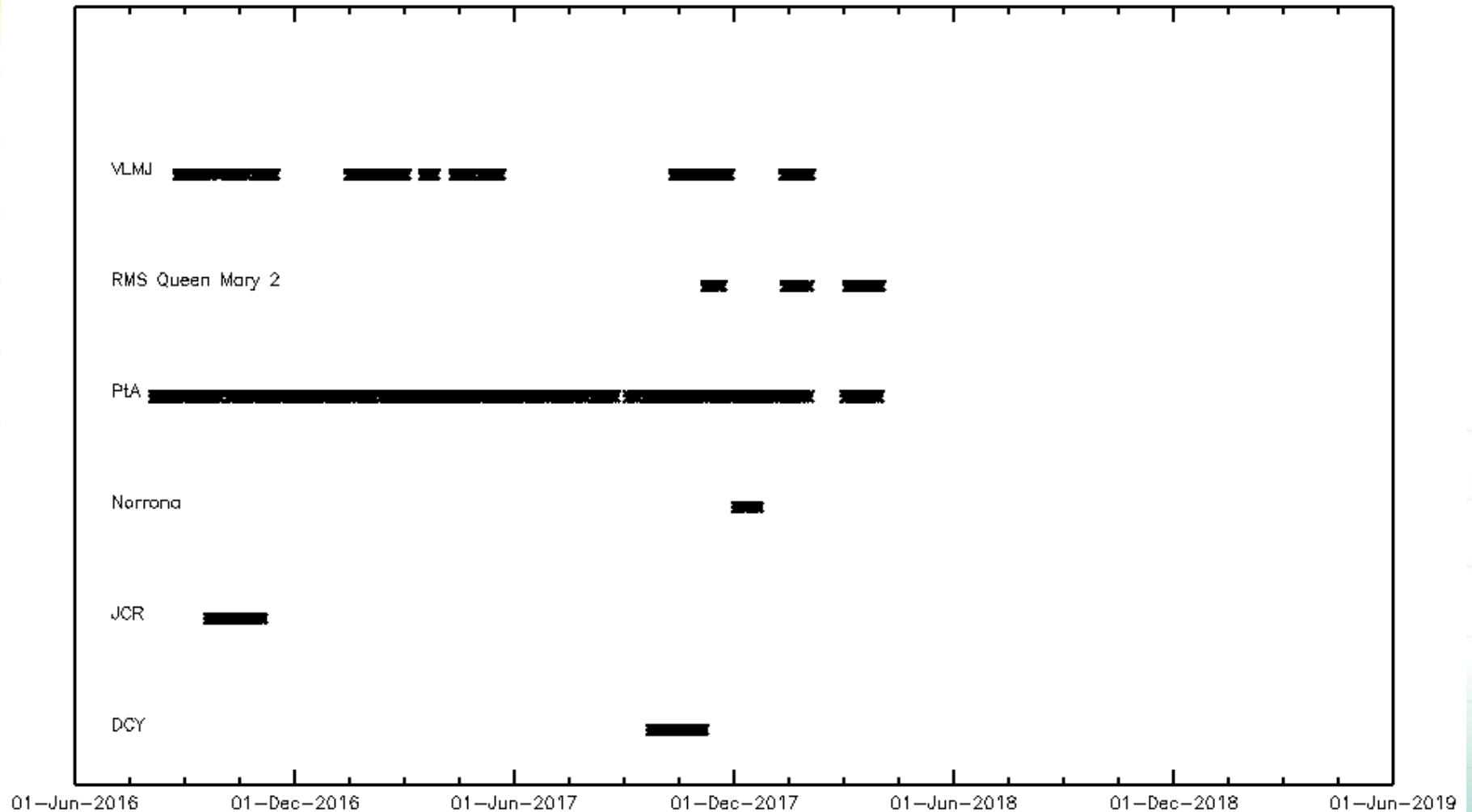




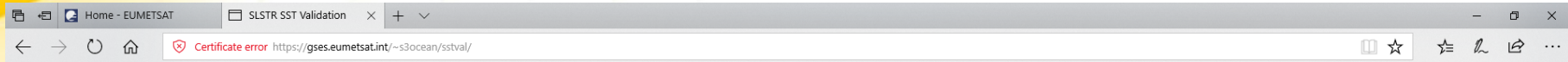
- Several updates to the Bayesian cloud mask have been proposed to address current issues:
  - Coastal “block” (ECMWF resolution)
  - “Saw-tooth” effect in-swath and edge-of-swath
  - Missing rows (tie point grid resolution)
  - Optically active waters
  - Fronts
  - Multi-way classifier (with sea-ice; aerosol)
  - Sun-glint in oblique view

# Radiometer data for SLSTR: Current REP MDB

SLSTR MDB radiometer match-up coverage



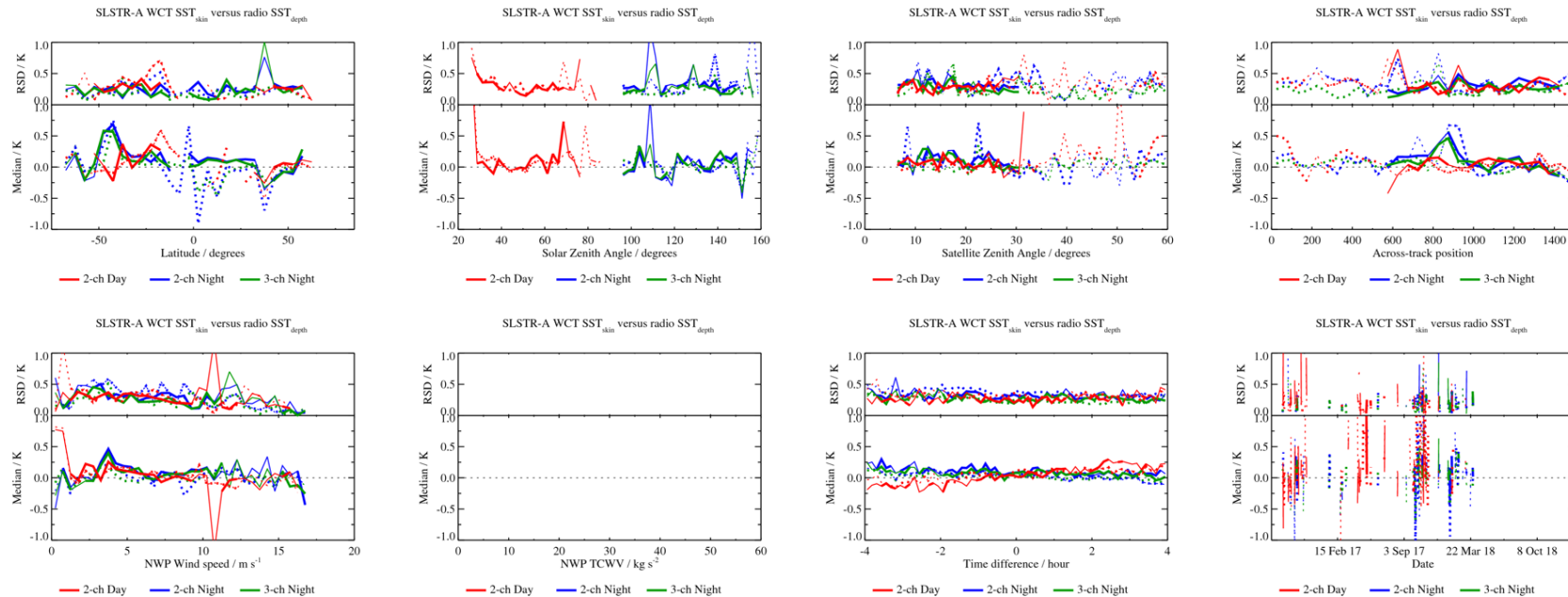
# SLSTR: Radiometer match-up results (1)



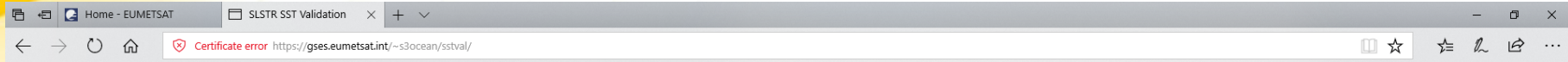
## SLSTR SST Validation Results

This page contains analysis results from the SLSTR-A SST MDB.

- S3A  S3B
- WCT  WST
- dependence  spatial  histogram/uncertainty
- drifters  Argo  moorings  radiometers
- skin vs. depth  skin vs. skin  OSTIA' vs. depth
- QL = all  QL = 2  QL = 3  QL = 4  QL = 5
- Apply SSES



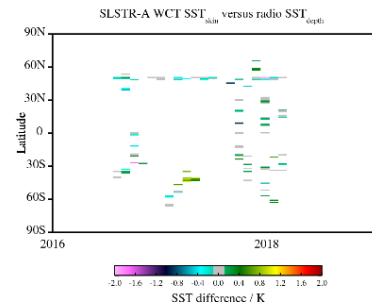
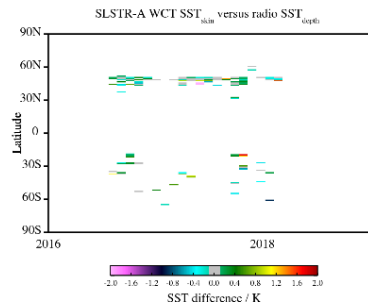
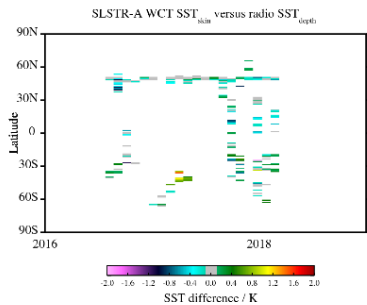
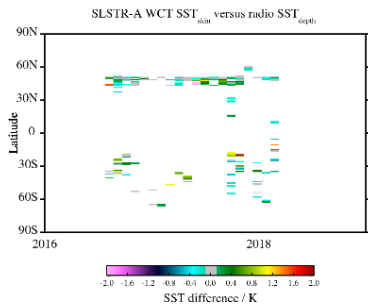
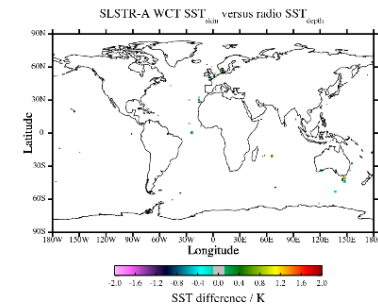
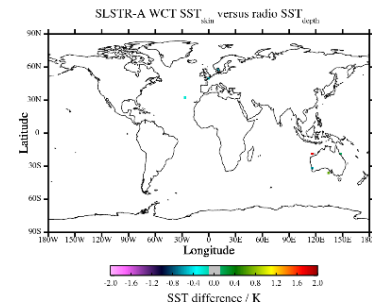
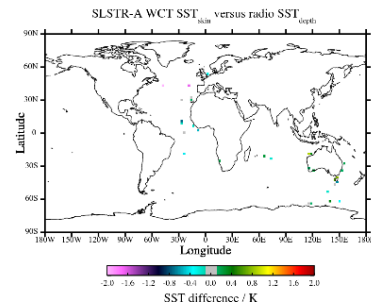
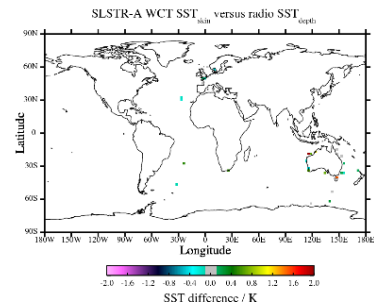
# SLSTR: Radiometer match-up results (2)



## SLSTR SST Validation Results

This page contains analysis results from the SLSTR-A SST MDB.

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- dependence  spatial  histogram/uncertainty
- drifters  Argo  moorings  radiometers
- skin vs. depth  skin vs. skin  'OSTIA' vs. depth
- QL = all  QL = 2  QL = 3  QL = 4  QL = 5
- Apply SSES



# Summary

- SLSTR-A and SLSTR-B performing in specification
  - N2 out of spec above 35 kg/m<sup>2</sup>
- SLSTR-B currently using SLSTR-A coefficients
  - Initial tandem phase assessment of SLSTR-A and SLSTR-B BTs showed good agreement
  - SLSTR-B harmonised to SvA in SST via SSES
- Full algorithm realignment to be done later in 2019
- Some issues observed with Bayesian cloud mask
- Radiometer MDB to be reprocessed for S3VT
  - Please make sure we have your data!