

SCOPE-CM Project: UTH

Sustained generations of upper tropospheric humidity Climate Data Records from different sensors with multi-agency cooperation

Software Readiness (IR Sensors)

- Version 3.0 of the HIRS channel 12 dataset has been running in the operational environment.
 - Data are processed monthly with one month of latency.
 - Data cover the time period from November 1978 to the processing month of 2017.
 - New codes are being developed to process Metop-B HIRS.
- A local copy of the geosatclim tool from MeteoSwiss was installed at DWD for Meteosat data processing.
 - The tool allows the processing at predefined stations.
 - The validation tools have been adapted to allow comparison to a reference.
 - Given the availability of an updated Meteosat FCDR it is currently planned to reprocess FTH in fall this year.

Software Readiness (MW Sensors)

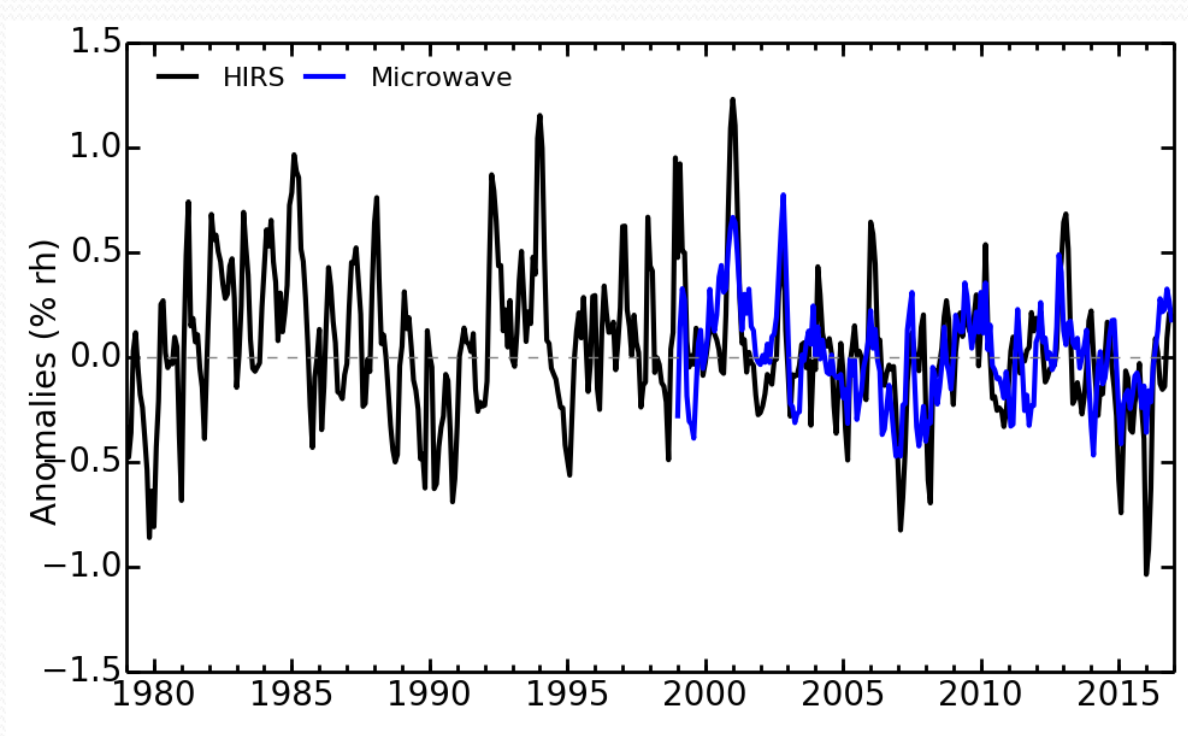
- Intersatellite-calibrated UMiami AMSU-B/MHS brightness temperature data set is extended to the end of 2016.
 - The data set will be updated by including MetOp-B and NOAA-19 observations.
- UMD/NOAA is processing 2010-2015 AMSU-B/MHS FCDR to extend the previous time series of 2000-2010.
 - The calibration coefficients are not dynamic yet.
 - Have a system in place to process FCDRs and generate TCDRs using bias corrected observations.

Product Validation and Documentation

- The WCRP report on the GEWEX water vapour assessment has been finalised and submitted to GDAP for review.
 - 1) intercomparison, 2) variability analysis, 3) consistency analysis.
 - Differences between HIRS UTH and Meteosat FTH have been described and understood
 - Phase shifts in regional responses in UTH and TCWV are described
- The stability of the MetOp-B and NOAA-19 record will be examined by the Umiami team.
- The UMD/NOAA team is writing a paper on a new calibration technique for AMSU-B/MHS observations.

Utility

- A section on UTH is being written for the State of Climate for 2016.



Maturity Matrix

HIRS

Software readiness	Metadata	User documentation	Uncertainties Characterisation	Public access, feedback and update	Usage
Coding Standards	Coding Standards	Formal description of scientific methodology	Standards	Public access/Archive	Research
Software Documentation	Collection level	Formal validation report	Validation	Version	Decision support system
Numerical reproducibility and portability	File level	Formal product user guide	Uncertainty quantification	User feedback mechanism	
Security		Formal description of operations concept	Automated quality monitoring	Update to record	

METEOSAT

Software readiness	Metadata	User documentation	Uncertainties Characterisation	Public access, feedback and update	Usage
Coding Standards	Coding Standards	Formal description of scientific methodology	Standards	Public access/Archive	Research
Software Documentation	Collection level	Formal validation report	Validation	Version	Decision support system
Numerical reproducibility and portability	File level	Formal product user guide	Uncertainty quantification	User feedback mechanism	
Security		Formal description of operations concept	Automated quality monitoring	Update to record	

MW (UMDNOAA)

Software readiness	Metadata	User documentation	Uncertainties Characterisation	Public access, feedback and update	Usage
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MW (Umiami)

Software readiness	Metadata	User documentation	Uncertainties Characterisation	Public access, feedback and update	Usage
Coding Standards	Coding Standards	Formal description of scientific methodology	Standards	Public access/Archive	Research
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Legend

