



Building-in a Validation cycle for GSICS Products

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Issues

- Difficult to get User Feedback for GPPA
- Difficult for us to test impact on L2 products
- Need independent validation of GSICS Products
 - Ideally routine
 - For Quality Monitoring
 - In L1 and L2 space

Example

- GSICS Corrections generated for two GEO Imagers
 - Using GEO-LEO with hyperspectral IR reference
 - independently
- Difficult to cross-compare L1 observation directly
 - Because of different channels, SRFs, FOVs, angles, etc.
- But can compare L2 products in overlap region
 - If derived from common algorithms
 - As validation of GSICS products
 - Consistent inter-calibration



Closing the Loop

- Already received some feedback from users
 - Including impact on L2 products
 - Based on case studies
- But we could/should take this further
 - Provide comparison results on a routine basis
 - Comparing products before & after applying GSICS Correction
 - Work together to understand biases & their impacts
 - Requires long-term commitment and cooperation from partner projects performing sustained processing
- Need to identify suitable partners



Need External Partners – e.g. #1

- ISCCP
 - International Satellite Cloud Climatology Project
 - Already active as beta-tester of GEO-LEO IR Corrections
 - Received valuable feedback on usability of demo prods

Need External Partners – e.g. #2

- SCOPE-CM
 - Sustained, Co-Ordinated Processing of Environmental Satellite Data for Climate Monitoring
 - Obtained draft Statement of Requirements from:
 - Pilot Project 1: Clouds and Aerosols (AVHRR)
 - Pilot Project 3: Surface albedo from GEO Sensors
 - Pilot Project 5: Upper Tropospheric Humidity



Need External Partners – e.g. #3

- GHRSSST
 - Global High-Resolution Sea Surface Temperature
 - Invited to review GSICS GEO IR products
 - and provide feedback to GRWG
 - POC is XingMing Liang
 - Invited to a web meeting,
 - where Tiejun Chang will present his AVHRR inter-calibration
 - and where GRWG can seek feedback from GRHSST
 - MICROS @ NOAA/NESDIS/STAR
 - Monitoring of IR Clear-Sky Radiances over Oceans for SST
 - Active participation in GRWG meeting

Need External Partners – e.g. #4

- NWP Centres
 - Routinely process L1 satellite data
 - Comparing Observation with NWP Model (+RTM)
 - As 1st step of Data Assimilation cycle
 - Apply own empirical bias corrections
- JMA, NOAA & UK Met Office
 - Provided feedback on demonstration products
- Also MICROS



Need External Partners – e.g. #5

- GRUAN
 - GCOS Reference Upper Air Network
 - High quality radiosondes @ overpass time
 - Supporting ground-based instruments
 - Microwave radiometer, LIDAR, cloud radar, ...
 - Measure parameters such as IWV, cloud properties, ...
 - Provide time continuity between radiosonde launches
 - Now reviewing requirements for expanded network
 - GRUAN Workshop, Germany, 13-15 July 2012
 - Any input?



Need External Partners – e.g. #6

- Others?

Way Forward

- Can we formulate a framework for GSICS to interact with existing activities using global satellite data?
 - On an on-going basis
 - Routine processing
 - Human interaction
 - Mutual validation of GSICS Corrections & L2 products
- Through WMO?