



GSICS Research Working Group

Chair's Report

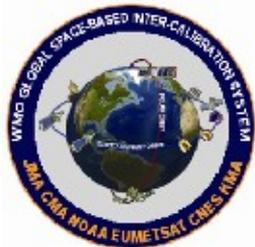
Fred Wu, NOAA/NESDIS

GSICS Working Groups Meeting

JMA Headquarters

Tokyo, Japan

January 28, 2009



Outline

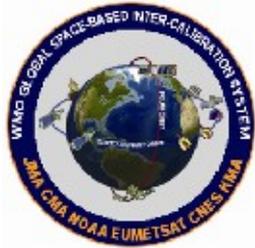
- ❖ Review the Past
 - Implementation
 - Algorithm
 - Impact
- ❖ Plan the Future
 - Core product
 - Communication
 - Commitment
- ❖ Notes:
 - Focus on GEO-AIRS/IASI, not GEO-GEO, LEO-LEO, Intra-satellite, UV/VIS/MW, band IR
 - Welcome thoughts and inputs



Operational Implementation



- ❖ Considered a major challenge a year ago, far from certain six or even three months ago.
- ❖ Pleased with and proud of recent progress at KMA & CMA.
- ❖ Anticipate further interactions with colleagues at KMA & CMA.



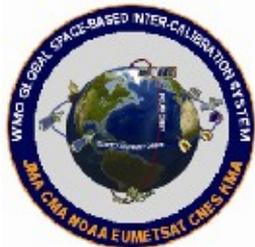
Mature Algorithm

- ❖ GSICS was originally envisioned (EXP-1) and attempted (GRWG-1) as a single algorithm.
- ❖ Recognized later (GRWG-3) the need for variety.
- ❖ “Baseline” and “Hierarchical Structure” were created and adopted
- ❖ All GPRCs are now experienced with implementing and describing GSICS algorithm



Tangible Impacts

- ❖ Instrument performance monitoring
 - Effects of decontamination of METEOSAT-8, GOES-12, and IASI
 - Monitoring contamination
 - IASI recovery
- ❖ Instrument anomaly diagnosis
 - GOES-11 patch change
 - GOES-12/13 SRF error, pre-launch and post-launch
 - GOES and MTSAT midnight blackbody calibration anomaly
- ❖ Instrument bias monitoring
 - EUMETSAT and JMA web sites
- ❖ Success stories from CMA & KMA
 - Need update



GSICS is Vibrant & Healthy



- ❖ Progress was planned ...
- ❖ ... and accomplished ...
- ❖ ... in a collaborative way ...
- ❖ ... that benefits members.
- ❖ Members contributed in many ways
- ❖ CGMS, CEOS, R/SSC-CM, CM-SAF, WIGOS, CLARREO, ...



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Core Product

What we do, really



❖ Why “core product”?

- Made initial impacts – how to sustain?
- Many subjects are interesting and worthwhile to pursue.
 - SRF, MTF, pre-launch characterization, post-launch maneuver, ...
- Must stay focused to generate **new** knowledge that makes **profound and sustained** impact.

❖ What “Core Product” must be?

- Important and useful
- Unique
- Within our reach



Core Product

What we do, really



❖ Candidates of core product

- We compare satellite measurements and quantify the difference, or bias relative to reference
- Discoveries, briefings, presentations, papers, etc. – **necessary, but insufficient**
- **Bias, with quantitative uncertainty, permanently archived for long term, specific for**
 - Instrument/Channel
 - Other relevant factors, e.g., time, scene temp & type, diurnal
- **Recommend correction if available (?)**
 - e.g., trend for time dependence, SRF or nonlinearity for scene temperature dependence, MBCC for diurnal dependence
- Re-calibrated radiances – **nice, but out of our reach**

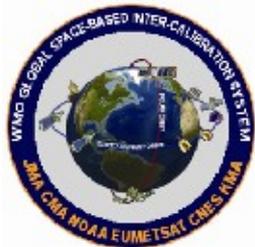


Core Product

What we do, really



- ❖ Review of core product help us stay focused
 - NOAA: pay more attention to “bias”, in addition to “recommended correction”.
 - EUMETSAT & JMA are good examples
- ❖ Generation of core product
 - Algorithm (Hewison)
 - Implementation (GPRCs)
- ❖ Delivery of core product
 - Harmonization of presentation (König/Kim)
 - Web sites & servers (GDWG)
 - Product Roster and Acceptance (Iacovazzi)
 - Users Workshop (Gärtner)
- ❖ **Invite your thoughts during discussion Thursday afternoon**

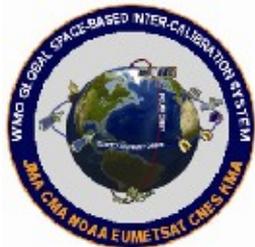


Communication

How to work together better



- ❖ Face-to-face meeting
 - Once a year or twice
 - Rotate or fixed venue(s)
- ❖ Web meeting
 - Promising new (or newly used) technology
 - Demonstration on Friday
- ❖ Mailing group
 - Review its effectiveness after a year
- ❖ Membership
 - Issues and proposed solutions
- ❖ **Invite your thoughts during discussion Friday morning**

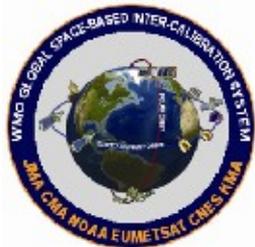


Commitment

Whether we get the things done

- ❖ Actions
 - Members please review your action(s)
 - In particular, GPRCs will review their implementation actions today
- ❖ 2009 Operation Plan
 - Itemized for each member (next slide)
 - Discussion on Thursday afternoon – review and bring up questions
- ❖ Forward looking
 - 3-5 minutes for each member on your agency priority
 - Brainstorm on strategy for future
- ❖ Like to hear ideas and initiatives from more members
 - We make GSICS what it will be.
- ❖ **Invite your thoughts during discussion Thursday afternoon**

	A	B	C	D	E	F	G	H
	Task Name	Lead	Description	Deliverable	Q 1	Q 2	Q 3	Q 4
1	Task Name	Lead	Description	Deliverable	Q 1	Q 2	Q 3	Q 4
2	Project meeting milestones		Governance					
3	GRWG/GDWG Joint Meeting	GDWG/GRWG	Resolving related data and science issues	Meeting report	Δ			
4	GRWG Web Meeting	GRWG	Support GSICS by resolving related scientific issues	Meeting report	Δ	Δ	Δ	Δ
5	Outreach and user interaction		Inform GSICS community & beyond and seek feedback					
6	GSICS Users' Workshop	GDWG-GRWG	Support GSICS by interacting and getting input from User community	Meeting report			Δ	
7	End-to-end demonstration	GCC, GDWG, GRWG, ExP	establish an end-to-end demonstration toward an operational GSICS by including beta-users in the GSICS process	Report from the beta users				Δ
8	Data Management and other cross-cutting tasks		Specify, organize, archive and disseminate GSICS data and information					
9	GSICS Twiki	All	Begin to create collaborative GSICS documentation using TWiki software running on NOAA server	LEO-LEO and GEO-LEO documentation 80 % complete	Δ	Δ	Δ	Δ
10	Result template	GRWG-GDWG	Improve and harmonize presentation of results in graphs and tables	Templates		Δ		
11	Product Acceptance Procedure implementation	GCC+ GRWG +GDWG	Establish scientific and data management criteria to be met by GSICS products	Criteria				Δ
12	SADE data request mechanism	GRWG-GDRG-CNES	Adopt a mechanism for SADE data requests from GSICS partners, implement by CNES	Interface implemented	Δ			
13	Additions to SADE targets	GRWG-CNES	Propose / evaluate new targets sites for inclusion into SADE, to be discussed at CNES at joint GRWG-GDWG+C24	Selected targets	Δ			
14	Instrument calibration	GRWG	Develop a procedure to calculate the best estimate of a calibration of a particular instrument channel at a given point in time	Procedure				
15	LEO-LEO UV, Visible, IR and MW Intercomparison		Evaluate LEO Satellite Instrument Calibration					
16	LEO-LEO product acceptance within GSICS	GCC, GRWG, GDWG, EP	Put LEO-LEO product through GSICS Procedure for Product Acceptance	GSICS EP Approval of LEO-LEO Product				Δ
17	Further developments (LEO-LEO)							
18	GEO-LEO Algorithm development/ Implementation		Evaluate GEO and LEO Satellite Instrument Calibration					
19	Further developments							



Summary

- ❖ **Review the Past**
 - **Implementation**
 - **Algorithm**
 - **Impact**
- ❖ **Plan the Future**
 - **Core product**
 - **Communication**
 - **Commitment**
- ❖ **Have a lot of work to do**
 - **Confident that we will make this a good meeting**