



GPM PMM Inter-calibration (X-cal) Working Group Workshop

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GPM PPS Data Status and Support to the PMM X-cal Working Group

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Current Status of GPM Data Products



- **Algorithms to support first “science” test were delivered to PPS on March 31, 2013**
 - GMI L1A (counts), L1B (Tb), L1C (Tc), L2 (GPROF) all swath
 - SSMIS F16, F17 L1C, Base, and L2 (GPROF)
 - MHS, SAPHIR, MADRAS, AMSR2 L1Base and L1C (initially no intercalibration but GPM format)
 - Created L2 Ku/Ka/DPR products
 - Created L2 DPR/GMI combined products
 - Synthetic DPR data from TRMM PR, Synthetic GMI data from TMI, AMSRE, and MHS were used to run the tests
 - These were used in the GPM project end-to-end test on April 23, 2013
- **Swath product format substantially fixed but parameter addition will be accepted and not all calculations currently included in the tested code**
- **Full at launch algorithms delivered to PPS by 30 September 2013**
 - Includes full calculations
 - Includes L3 daily and monthly products
- **PPS operational acceptance testing mid Oct, 2013 to end Jan 2014**



Products delivered to the X-cal Team



- **PPS retrieves partner data from**
 - ICARE
 - GCOM
 - FNMOC
 - NOAA
- **From partner data create**
 - Reorbitized orbits to GPM (southernmost to southernmost orbit)
 - 1Base which is either Ta or Tb (depending upon partner or x-cal request).
 - Full content
 - Generate any missing information (e.g. incidence angles for all swath types, full geolocation for all swath types, etc)
 - Work product for the x-cal team
 - 1C product
 - Basically a user oriented product
 - General logical format for all radiometers
 - Intercalibration tables applied at this level



Current Versions being Used



- **AMSRE (most recent version provided by JAXA)**
 - June 2002 through October 2011
 - Currently running base and 1C (working with CSU x-cal team member to adjust the current intercalibration table)

- **AMSR2 (v1.1)**
 - Creating base and 1C products on new data as produced by JAXA (generally stay 3 days behind)
 - July 2012 through current

- **Megha-Tropiques**
 - SAPHIR
 - Currently retrieving non-orbital L1A1 & L1A2
 - V1.01 & V1.02 July 6 – August 31, 2012
 - V1.03 Sept 1-Dec 12, 2012
 - V1.04 Dec 13 , 2012 – Jan 17, 2013
 - V1.05 Jan 24, 2013 to present
 - MADRAS
 - Uses orbital L1A1 and L1A2
 - All ICARE data 2012 and Jan 2013 at V1.05



Current Versions being Used



- **MHS**
 - Metop A & B
 - NOAA 18, 19
 - July 7, 2012 through current MHS data
 - Current operational Ta data from NOAA
 - Apply antenna correction to the NOAA Ta product to get the GPM 1Base MHS product (Tb)
 - Create GPM 1C products (but currently no intercalibration applied)

- **SSMIS**
 - Currently ingesting TDR data from FNMOC
 - In GPM testing creating base and 1C products (but this outside the purview of X-cal)
 - With announcement by CSU of the availability of the SSMIS Level 1 product may begin creating 1C products (but perhaps taking off the F13 correction and apply the X-cal TMI-based correction)



Current GPM MOUs that include data exchange



- **NASA MOU with JAXA**
- **NASA MOU with CNES**
- **NASA MOU with ISRO**
- **NASA MOU with EUMETSAT (likely to be approved this summer)**
- **NASA currently working MOU with NOAA**