



GLM PLT & Cal/Val Status

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GLM Annual Science Team Meeting

Cal/Val Tools Developers Forum

9-11 September 2015



Numerous Activities



- VaLiD Tool Development (Bateman et al.)**
- GLM Proxy Data Development (for various simulated testing)**
- Test/Tune/Mod L0-L1b & L1b-L2 Spec Algorithms (Mach)**
- Participate in Technical Interchange Meetings (TIMs)**
- Provide Independent Evaluations of Expected GLM Instr. Performance**
- Validation Field Campaign Planning, including AGS development**
- Support & Plan Pre-Launch Data Operation Exercises (DOEs)**
- Develop MSFC GLM Data Management Plan (DMP)***
- Update “Living Documents” (ATBD, Cal/Val Plans I & II, RIMP, ...)**
- Develop Post-Launch Product Tests (PLPTs)***
- Support Response to Aerospace Independent Assessment of PLPTs**

Overview of GLM Post Launch Product Tests (PLPTs)

GLM L2 001 series. Validate DE/FAR with Medium to Long Range Networks (7: ATDNet, BrazilDAT, ENTLN, GLD360, NLDN, RinDAT, STARNet)

GLM L2 002 series . Validate DE/FAR with Short Range Networks (11: NALMA, TLMA, DCLMA, FCLMA, NGLMA, HLMA, KSCLMA, NMLMA, OKLMA, WTLMA, WILMA)

GLM L2 003 series . Validate GLM DE/FAR with Very Long Range Systems (4: ABI, NEXRAD, SEVERI, WWLLN)

GLM L2 004 series. Validate GLM DE/FAR with Very Short Range Optical Systems (1: AGS)

GLM L2 005 series. Validate GLM DE/FAR with Space-based Optical Systems (2: ISS/LIS, TARANIS)

GLM L2 006 series. Validate GLM DE/FAR with Ground Based Electric Field Networks (2: HAMMA, KSCFMA)

GLM L2 007 series. Validate and Tune GLM L0-L1b Filter Parameters (0: WITHDRAWN)

GLM L2 008 series. Validate GLM Continuing Current Detection Mode (0: WITHDRAWN)

GLM L2 009 series. Validate GLM L1b-L2 Cluster/Filter Algorithm (1: Ops Code compared w/ATBD Spec (Mach) Code)

GLM L2 010 series. Validate GLM L0-L1b Filter Algorithms (7: Solar Glint, Contrast Leakage, Transfer Noise, Coherency, Radiation, 2nd Level Threshold, Crosstalk; again Ops Code is compared w/ATBD Spec Code)

GLM INR 011 series. Validate GLM INR (4: ABI, Laser Beacons, Landmarks, Lightning)

GLM RAD 012 series. Validate GLM Background Deep Convective Cloud Radiances, and Perform Radiance Baselineing for Long-Term Trending, by Comparing to Other Measures of Background Radiances (2: ISS/LIS, TRMM/LIS)

GLM RAD 013 series. Validate GLM Event Energy, and Perform Energy Baselineing for Long-Term Trending, by Comparing to Other Measures of Event Energy (3: AGS, ISS/LIS, TRMM/LIS)

... So Total of 44 PLPTs from our Huntsville CWG/AWG group.

MSFC GLM Data Management Plan

GRB

GOES-R
Satellite

Reception of GLM L2+ GRB by NSSTC
depends on NASA HQs & UAH funds
to complement 150K from NOAA

raw GRB

NSSTC

GHRC

L2+: Special 24/7 Ops can
have auto push of L2+ from
PDA (which we do qualify
for since local NWS needs
the data).

Bateman
Desktop
(VaLiD)

(remote Koshak
workstation also
runs VaLiD)

NSOF

GRB Product Unpacked

PPZ

ESPDS PDA

Auto push L2+
Website access
w/password.
Training Required.

GHRC
Processing
Server

POCC

GLM
Desktop
(display,
highlights,
ancillary)

WCDAS

Product Generation &
Packaging of L0, L1b, L2+,
for the GRB data stream

LZSS

2 yr storage of
L0

Other direct users

ISS LIS
POCC

GHRC
Storage
(L0, L2+, BG)

Mach
desktop

(L0-L1b
Algorithm Tests;
L1b-L2
Algorithm Tests)

L2+

CLASS
(L2+)

Manual Pull L0
NOAA CAC not required;
NASA PIV access will work

GLM Gridded BG Images:
GS STS → removable device
→ NSOF workstation
→ NASA Large File Transfer
→ IPATS (Alan Reth)
→ TBD electronic to NSSTC

L0: We will do manual-
pulls of L0 from LZSS and
you can't pull your card
out.

Optional direct L2+ pull from PDA