



# 2009 TAC Guidance and AWG Response

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# 2009 TAC Guidance



- Positive response to 2008 TAC comments and suggestions.
  - Thank you
- Activities are on track. AIT sees no show stoppers. Good progress has been made on day one algorithms.
  - Thank you
- Planned validation campaigns with Aircraft and ARM sites should proceed. (from 2008 Guidance)
  - Plan to develop detailed Basis of Estimate with GOES-R Senior Scientist to leverage activities with JPSS, other NOAA, NASA, and NSF planned field campaigns. GOES-R BOE for validation campaigns will be completed by May 2011.



# 2009 TAC Guidance



- TAC recommends that the product teams be maintained to allow incremental improvements to continue and to allow upgrade to the current GOES-R algorithms as appropriate, and that a strategy and process needs to be developed to accommodate updates for day one and day two. This will allow for both science improvements and for feedback from users via the Proving Ground or other programs.
  - Our ramping up of the sustained validation program within the AWG will provide the funding needed to sustain the product teams. The product teams will develop validation tools which they will also use to further validate the algorithms even after algorithm delivery. Any deficiencies from the deep-dive tools will be addressed.
  - Incremental updates to the algorithms (new sets of coefficients, etc) due to the deep dive assessment should be able to be accommodated by Harris. We also have a delta delivery for Sept 2012.
  - New and enhanced applications are pursued under GOES-R Risk Reduction science program (e.g. agricultural productivity index, time gradient severe storm index, RE index, Lightning/ABI blended precipitation).
  - Successful R3 projects will move to AWG for operational transition for Day 2.
  - Post GOES-R Day 2 products will go through the SPSRB process



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- Systematic radiance bias tuning needs to be undertaken in relation to use of the Community Radiative Transfer Model by the GOES AWG. Systematic LEO/GEO inter calibration particularly with AIRS, IASI and CrIS needs to be undertaken during the GOES mission
  - Agreed, we will build routine instrument intercalibration systems following GSICS guidelines. We will use CRTM coupled with NWP forecast/analyses fields to monitor biases over large spatial domains, etc, but ideally we want to correct for ABI biases using LEO to GEO intercalibration.



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- Noting the importance of many Option 2 products, and that the AWG is currently working on these products, the TAC strongly recommends that Option 2 products are included. This recommendation is consistent with a recent GAO report. A doubling of the number of products produced will greatly enhance the positive impact from the GOES-R system. Current option 2 products include important variables such as low cloud and fog, upper-level SO<sub>2</sub> and Convective Initiation. If not all option 2 products can be included, as many as possible should be included.
  - Option 2 products now approved for full implementation



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- The TAC recommends that the GOES-R/S are operated for an extended period following the engineering check-out phase. This would allow for sufficient time to check-out the radiance quality, product generation, product validation, data flow and user readiness. This commissioning phase needs to be longer than the current one month of NOAA science check-outs associated with current GOES. For example, GOES-13 took over 1 month, with legacy instruments, on a new spacecraft
  - Agreed. Still need to finalize length of post-launch checkout, but GPO understands the importance and considers strongly recommendations from the AWG and the GOES-R IRT (Paul Menzel).
  - Consider a low cost data processing/distribution and utilization demo



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- The program office needs to facilitate outreach and training activity for the data/products. The AWG should prepare high resolution ABI data sets to help prepare the users for the introduction of GOES-R
  - Agreed. Outreach and training is priority of R3 and Proving Grounds. AWG participates in both and is working with both to ensure their needs are met.
- An advanced geostationary sounder should be pursued as soon as possible. This will improve many ABI-only products, meet the original sounding requirements and restore several products that were previously on the GOES-R products list. The ABI soundings meet the specifications because they were relaxed after the advanced sounder was canceled.
  - Agreed, NOAA is considering different options, include the possible use of the advanced sounder which will be developed for EUMETSAT
  - MTG IRS specs will be known in June and GOES-R Flight Project will request accommodation study by Lockheed.