



# GOES-R Level 0 Data

A Presentation to the  
NOAA Science Advisory Board

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# Purpose



Inform the SAB of NOAA's decisions on archiving GOES-R Level 0 data



# Background

- In 2013 NOAA decided not to permanently archive GOES-R Level 0 data, instead keeping a rolling 2-year cache for calibration/validation
  - The decision was based largely along budgetary lines, given the financial pressure on the program and the expected cost of permanently archiving all of the L0 data.
- Over the period of 2014-2015 NESDIS completed the development of the GOES-R ground system, retiring a number of significant program risks in the process
- In September 2015, following an evaluation, the SAB suggested NESDIS should:
  - Support a digital data curation standard practice of archiving the lowest-level satellite data possible for potential future reprocessing, in addition to archiving derived products.
  - Consider for future GOES-R satellites archiving both unprocessed data and derived products at the beginning and throughout the development Process.
  - Reach out to relevant communities, e.g. scientists and others, to examine in more detail the utility of maintaining a L0 copy of data for the long term.
- In spring 2016 NESDIS reviewed the sustained ground system requirements for the GOES-R program and defined a revised path forward for GOES-R



# NOAA NESDIS Response



NESDIS recognizes that consistent with its environmental data archiving mandate, NOAA should maintain long term storage of all satellite observational data at the lowest level necessary to retain full information content.

1. NOAA will establish long-term archival storage of the GOES-R Level 0 data prior to expiration of the two-year cache of L0 data.
2. NOAA has developed a draft Policy on NESDIS Environmental Data Management Planning that will be in effect prior to future satellite missions and will require long-term archiving of raw observations wherever feasible.
3. NOAA will utilize planned user engagements, such as the NOAA Satellite Conference, to discuss use cases for GOES-R L0 data.



# Next Steps

How do we ensure that we are thinking through the end-to-end approach to data management in the future?

- NESDIS Data Management Planning Policy will establish the NESDIS approach to data management and ensure that every program/project goes through a deliberative process to establish its Data Management Plan.
- The policy will be compliant with governing statutory and regulatory policy and with NOAA policies and directives. In addition, it is written with full consideration of "Best Practices" guidelines such as the NRC Recommendations for Environmental Data Management at NOAA.
- The policy will define expectations for data management planning for NESDIS Observing and associated Data Management Systems (i.e., full lifecycle).

*Bottom Line: For all future programs/projects, NESDIS will draft during the program development period a data management plan that will address **what** data will be archived. This will be a part of NESDIS' Quality Management System (QMS) process documentation.*



# Other NESDIS Actions



- In 2015 NESDIS initiated a review of its overall Quality Management System (QMS) processes (now called “NESDOCS”)
- NESDOCS is a public-facing site on the NESDIS website and contains directives and procedures for the entire NESDIS enterprise, including:
  - Program data management directives
  - Retirement and divesture of environmental satellite products
  - Conduct and implementation of architecture studies
- NESDIS continues to review our enterprise activities to identify high priority process updates are needed. Near-term priorities for NESDOCS include:
  - Flyout chart policy (in signature cycle)
  - Satellite extended life estimation policy (draft)
  - Launch call-up policy (rough draft)
  - Enterprise systems engineering directive (in internal coordination)
  - Revision to Risk Management directive to incorporate OMB A-123 requirements (early 2017)