

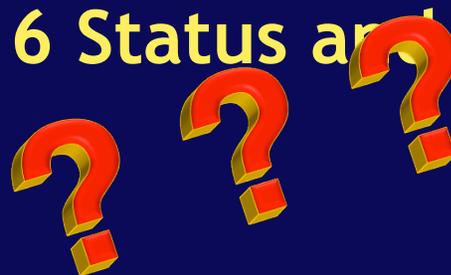




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Pasadena, California

# Version 6 Status and Plans



**Steven Friedman**  
**AIRS Science Processing**

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## V6 History

- **V6 Kickoff**
- **Planned Release**

**March 2007**

**July 2008**





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## V6 Milestones - MARCH 2007

- **Being, cautious, we planned “sufficient” time for all activities:**
  - Preliminary investigations / prototyping - six months
  - Total development time - greater than 1 year
  - Testing - three months

<b>V6 Kickoff – Science Team MTG</b>	<b>September 2006</b>
<b>Concept Development and Prototyping</b>	<b>March 2007</b>
<b>V6 Content Determination - Science Team MTG</b>	<b>March 2007</b>
<b>V6 Development</b>	<b>November 2007</b>
<b>V6 Status – closure issues - Science Team MTG</b>	<b>September 2007</b>
<b>V6 Code wrap-up (CCB controlled)</b>	<b>February 2008</b>
<b>V6 Candidate Build</b>	<b>February 2008</b>
<b>V6 Integration and Test</b>	<b>May 2008</b>
<b>V6 Delivery to GES DISC</b>	<b>May 2008</b>
<b>V6 Operational</b>	<b>July 2008</b>

*... but that's all  
"water under the bridge"*





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## V6 History

- **V6 Kickoff** **March 2007**
- **Planned Release** **July 2008**

**and now...**

- **This is our 7th Science Team Meeting discussing V6**
- **Re-planned Release** **Winter 2010**



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## Current Status of V6 Applications

- **Level 1B: Spectral calibration completed**
  - but, does not seem to warrant re-release of code
- **Level 1C: New PGE completed**
  - but, no longer planned for release
- **Level 2**
  - many improvements coded
  - but, still is incomplete
- **Level 3**
  - many ideas discussed
  - but, nothing is implemented

## V6 Level 1 Status

- **Level 1B will remain unchanged for V6**
  - V5 version of L1B is still good enough to go forward
  - Further upgrades will be deferred until V7
- **Level 1C possible release for V6**
  - Current thoughts are to provide algorithm for L1C calculations
  - May need to address additional issues
    - radiometric discrepancy between detectors
    - maybe  $C_{ij}$
- **GSFC has prototypes of new Level 1B and 1C code in-house now, should we decide to release these updates**



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## V6 Level 2 Status

- **Progress made in achieving key AIRS Project goals:**
  - Improved boundary layer sensitivity
  - Improved retrieval of surface emissivity
  - Improved OLR computation
  - Improved retrieval yield in certain tough to retrieve geographic regions
  - Retrieval of mid-tropospheric CO<sub>2</sub>
  - Improved testing methodology



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## V6 Level 2 Status

- **Work remaining before V6 Level 2 is complete:**
  - Incorporation of new RTA into the retrieval
    - variable frequencies, CO<sub>2</sub>, trace gases
  - Removal of bias trend over time in mid-tropospheric temperature and water vapor retrievals
  - Mitigation of the eventual loss of AMSU-A Channel 5
    - Modify MW+AIRS retrieval, new regression
    - Ensure that the AIRS-only retrieval is of high quality



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## Waxing Bias Trends... *Philosophically Speaking*

- **Removal of bias trends - still striving for enlightenment**
  - 2 yrs ago, rumors of bias trends routinely disputed
  - Last year, we reached acceptance (*I think*)
  - This year, striving to reach enlightenment
- **Since last Science Team Meeting**
  - NOAA back onboard, working regression, other issues
  - GSFC and JPL working on various potential solutions
  - Net-meetings conducted
- **We still need to agree on what we feel is an acceptable improvement for V6... 25%, 50%, 75% ???**
- ***We had hoped to have a completed prototype by now...***



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## Where Are We Now???

- **... really!**
  - **An unfortunate set of circumstances ...**
    - Contractual issues
    - Hardware problems
    - Tough problems
- ... and we have not completed a Level 2 baseline for testing
- **Hopefully, presentations at this Science Team will help us all understand where we are and what work remains to do**
  - **We still need to finish a candidate build for V6 and test it!**

## Wrapping-Up Level 2 V6 Our Development Milestones

Milestones	Previously Planned Completion Dates	Currently Planned Completion Dates	Comments
<b>Development and Test_</b>			
Science Team MTG		4/21/2010	
Wrap-up Research	12/16/09	6/18/2010	Net meeting to conclude
Initial Build	1/08/10	6/25/2010	1wk for clean-up
End-to-end step-through	3/12/10	8/13/2010	6wks verification
Testing	5/27/10	10/22/2010	10wks end-to-end test
<b>V6 Pack and Deliver L2</b>			
Delivery Build / Final Ck	6/8/10	10/29/2010	1wk
Pack and deliver	6/30/10	11/12/2010	2wks
JPL Documentation due	6/28/10	11/15/2010	
Hand-off to GES DISC	7/06/10	11/15/2010	
<b>V6 Data Processing</b>	8/17/10	12/15/2010	4wks



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- **We have a new V6 schedule**
  - Still, we have more questions ...
  - We need to deliver...
  - But, we need to ensure that what we deliver is significantly better than V5 to warrant a reprocessing campaign.
- **We are still committed to ensuring that V6 will only be released when we believe that we have a product we can be proud of.**

## Conclusions



