

***Product Success:
One Organization's Story of
Turn Around and Improvement***

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APL

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APPLIED PHYSICS LABORATORY

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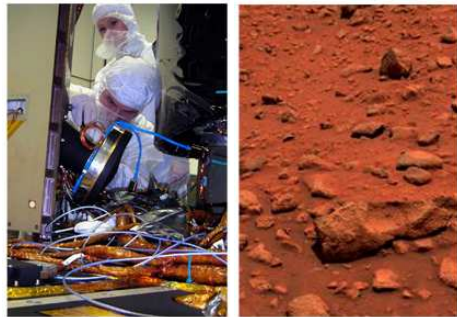


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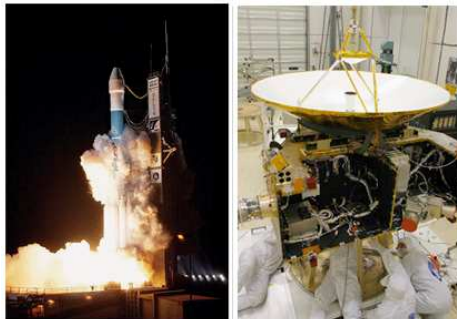
The Applied Physics Laboratory Space Department



- The APL Space Department has successfully developed and flown over 150 space science instruments since 1970.
- We have assisted NASA in space exploration from the Sun to Pluto, most recently with the STEREO and New Horizons missions.



- Currently, the Space Department has over 35 active projects and programs ranging from National Security Space studies of operational conceptions to full NASA space missions such as Radiation Belt Storm Probes (RBSP).



Setting the Stage...

- Assessments were conducted by NASA's team at APL in 2003 and 2005. Over 75 findings were issued (not counting observations) during the two assessments.
- APL received "red" and "yellow" scores with report findings such as:
 - “Top management commitment to quality and safety is not apparent.”
 - “Development and maintenance of formal quality records, plans, and procedures are incomplete and inconsistent.”
 - “No formal corrective/preventative action process is in evidence.”



“The demonstrated level of commitment to a systems approach to Safety/Mission Assurance falls short of supporting NASA's commitment of Safety First.”

Facing the Challenge...

- In June of 2007, APL still had over 60 open items with NASA from the audits held 3-5 years prior.
- While many topics had been addressed, there had been little follow-through with the sponsor, and little organization of responses to close the items.
- The new team hired into APL was tasked with resolving the open issues and ensuring that APL's Mission Assurance activities were sufficiently implemented and understood to ensure future improvement and success.
- The mission objective from management was clear:



“APL’s Safety and Mission Assurance activities must be as robust, internalized, standardized, and exceptional as our design, engineering, and science.”

Celebrating success...

- During the 2008 NCAS Assessment, APL received only 8 non-compliances, 21 observations, and 7 positive observations, all but four of which have already been implemented and found effective. Those will be closed this Spring and Summer.
- Report findings included comments such as:



“During this audit, APL demonstrated that it is a model for organizations required to redefine and transform their safety, quality, and mission assurance systems....”

“It is clear...that APL has fully embraced the need for a robust quality management system and has put the necessary staff and resources in place to support their commitment to continuous improvement.”

- Based on these results, APL moved forward with obtaining AS9100 Registration this winter and will head for CMMI Level 3 Certification this fall.

Changing the Paradigm...



- **Management has to be committed to supporting Mission Assurance improvement initiatives.**
 - **Management includes Program Management, Engineering, Fabrication, Integration and Test, Facilities, Operations, Business Services, Human Resources, and IT.**
 - **In most places, Mission Assurance would not exist without everyone else. “They” make sure “we” have jobs. Treat them as your customers.**
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- **Your harshest critics are often those who have NEVER tried to play by the rules, and those who have ALWAYS try to play by the rules. Listen to both.**
 - **The most critical managers to reach and the most important staff to partner with are the ones in the trenches trying to get the work done. Partner with them whenever possible.**
 - **Be willing to do whatever it takes to make Mission Assurance successful. Be known as the team willing to go the extra mile. Roll up your sleeves and help.**

Preparing for success at your location...

- **Start from where you are.**
- **Clean up the past.**
- **Set management expectations appropriately.**
- **Identify your greatest risk areas and place more emphasis on fixing them.**
- **Partner with the folks you need information from to help them prepare.**
- **Meet regularly with your core management team to get status updates and help with critical items.**



Preparing for success at your location...

- Take audits as an opportunity to get facilities involved with extra cleaning, pick-up, facility fixes, etc.
- Throw stuff out.
- Walk your facilities with your Safety Officers and Managers.
- Hold All-Hands meetings based on Mission Assurance.
- Hold your “No’s”.
- Encourage, reward, cheerlead, and smile.

