

# NASA RANGE SAFETY PROGRAM 2005 ANNUAL REPORT

## **NASA Expendable Launch Vehicle Safety Program**

NASA-STD-8719.8, *NASA Expendable Launch Vehicle Payload Safety Review Process Standard*, 1998 documents the payload review process for Expendable Launch Vehicle (ELV) payloads. As part of the process, the standard requires a Payload Safety Working Group for each payload. The standard is outdated and problems have been encountered on particular projects involving multiple NASA Centers or international partners where conflicting requirements were not able to be resolved. To solve these shortcomings, the NASA Headquarters Office of Safety and Mission Assurance established a Program Development Working Group in 2004 to update the ELV payload safety review process and replace the current NASA standard with a NASA policy directive and a NASA procedural requirements document.

### **Key Features of the New Program**

An Executive Team was appointed to organize and facilitate the working group activities, to coordinate with external organizations, and to ensure consistency with current NASA independent technical authority implementation. The Executive Team consisted of members from Headquarters, Goddard Space Flight Center, the Jet Propulsion Laboratory, and KSC Safety and Mission Assurance organizations and held its first meeting in March 2005.

The team's goal was to develop a program with improved structure and processes for ensuring NASA ELV payloads are designed, transported, processed, tested, integrated with the launch vehicle, and launched safely. Key features of the new program include:

- A more formal approval process performed jointly with the Air Force approval process (for launches from Air Force ranges)
- Consistent requirements and processes for all NASA ELV payloads
- Continuation of the Payload Safety Working Group and a phased safety review approach
- An ELV Payload Safety Panel to resolve conflicts, process waivers, and certify payloads are ready for shipment and launch

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## Current Status

A final draft of the NASA Policy Directive, *NASA Safety Program for Expendable Launch Vehicle Payloads*, was completed in December 2005 and is in the review cycle. An initial draft of the procedural requirements document was also completed in December 2005 and is being reviewed by the development team for final revisions. An interim NASA policy letter is being developed to kick off the new program in early 2006.

In addition to the new policy directive and procedural requirements document, an ELV Payload Safety Office will be established to implement the new program. This office will support ELV payload user operations and, jointly with NASA Headquarters, conduct independent assessments, surveys, and staff visits of NASA Centers and programs. The office will also participate in the Payload Safety Working Group, coordinate with the ELV Payload Safety Panel, and develop training courses for working group and safety panel members, as well as program managers and engineers.

