



Preparing for Future Exploration

The opportunities to learn and gain knowledge from space flight and experimentation in space are endless. Payloads play a crucial role in the advancement of our scientific knowledge base.

However, the individuals in academia that prepare payloads often have little understanding of the constraints and requirements involved in sending equipment and experiments into space, or quality practices necessary to ensure safe and successful payload operations.

AAQ's website has been developed to ensure the success of payloads through proper design, production, testing and packaging – enabling them to withstand the rigors of launch, space flight and re-entry. Interactive, multimedia resources make it easy to learn from past successes and failures, and to design payloads that are simple, maintainable and repairable. Access to critical information on safety constraints, such as temperature levels and hazardous chemical storage, ensures payloads don't compromise the success of the overall mission or the safety of the people involved.

This website provides all of the tools needed to ensure that the parts, techniques and workmanship used to assemble experimental payloads meet NASA safety, quality and workmanship standards, thereby increasing the likelihood that experiments are successfully returned to earth.

To learn more about the Academy of Aerospace Quality:
<http://aaq.auburn.edu>



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Academy of Aerospace Quality

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Web-Based Support at Your Fingertips

The Academy of Aerospace Quality (AAQ) is a partnership between Auburn University and NASA that provides web-based support for academic programs that develop payloads and experiments for the International Space Station and other space flight venues.

These resources are designed to help institutions understand the unique and rigorous demands of space flight, and ensure that payloads and experiments are of requisite safety quality and reliability for transport and space operations.

Comprehensive and Easy-to-Use

AAQ provides a comprehensive package of information on all aspects of preparing payloads for space:

- **Requirements**
Review definitions of general quality terminology and information on NASA and industry standards
- **Systems**
Learn about quality assurance, process control, calibration and continual improvement
- **Process**
Review information on quality planning, design quality, inspection processing control and packaging
- **Product**
Access detailed lists of parts recommended by NASA's Electrical, Electronic and Electromechanical Parts Assurance Group based on evaluations, risk assessments and quality levels



Real-World Examples in a Multimedia Format

The website provides a variety of multimedia resources to help ensure payloads survive launch and re-entry, and perform safely and as intended while in space. Access these features and learn from the experience of those that have preceded you, as you build and test your payload.

- On-line and downloadable presentations offer information on NASA standards, proper assembly and lessons learned
- Brief text documents provide additional instruction on payload assembly
- Step-by-step instructions and photos make it easy to improve payload quality
- Short videos provide information on the topics of most interest
- Interactive learning tutorials and self tests help you advance your knowledge in specific areas
- Links to detailed information provide quick access to NASA standards for chemicals, temperature limits and other safety constraints that impact payload assembly
- Links to suppliers make it easy to find parts that are NASA approved



Interactive Features

A variety of interactive features allow users to share information and expertise:

- Bulletin Board
- Ask an Expert
- Chat Room
- Listserv
- User Survey

