Learning from Propulsion System Failures

OVERVIEW

This class will go over notable and lesser-known spacecraft propulsion system failures and the principal lessons learned from these failures. Open to US Government employees only.

LEARNING OBJECTIVES

By the end of this course participants will be able to:

- Describe the basic theory and different techniques of root cause analysis
- Describe the findings from the Apollo, Challenger and Columbia investigation boards and other programmatic failures
- Describe the most common failure modes for spacecraft propulsion systems
- Describe examples of these failures and other historical propulsion system failures

WHO IS THIS FOR?

All space professionals who want to learn from spacecraft propulsion system failures. Open to US Government employees only.

INSTRUCTORS

Eric Cardiff is the founder of Virtucon Earth and Space, LLC, and former chief engineer for propulsion at NASA Goddard Space Flight Center. He received his Ph.D. in propellants from Penn State University in 2002, and has over 20 years of experience in design, build, test, and flight of spacecraft propulsion systems. Dr. Cardiff has worked on multiple high-profile mishap investigations and spacecraft anomalies, and has expertise in propellant handling. He has also contributed to the development of both ASCENT and HyperFlex propellants and propulsion systems.

Carl Guernsey is a retired Technical Fellow of the Jet Propulsion Laboratory, where he specialized in spacecraft propulsion systems. He played key roles in projects ranging from the Galileo mission to Jupiter to serving as the Chief Engineer for the propulsion systems on the Mars Science Laboratory. He was a member of the JPL Lesson's Learned committee for many years.

COURSE FEES

$600 per person for local onsite training

HOURS

Classroom Hours: 8 classroom hours