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Strategic Risk Management for Successful Space & Defence Programmes (4)

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PROBABILISTIC RISK ASSESSMENT AS PART OF THE RISK MANAGEMENT PROCESS AT JPL

Abstract

Risk Management has and is changing worldwide to include the use of more rigorous methods to understand and classify risk. Industrial accidents in many industries have forced operators, regulators and insurance companies, to take risk more seriously, and NASA has made significant strides in this area over the last few decades. The last two decades at NASA has seen a dramatic increase in the use of rigorous quantitative techniques on flight projects, including the use of Probabilistic Risk Assessment, and in identification of hazards within the System Safety Handbook (NASA/SP-2010-580). The Jet Propulsion Laboratory (JPL) is a Federally Funded Research and Development Center (FFRDC) managed for NASA by the California Institute of Technology, commonly referred to as Caltech. As such, NASA levies requirements through a Prime Contract. One such requirement is NPR 8000.4B, Agency Risk Management Procedural Requirements. This particular NASA requirement is placed onto flight projects through JPL rules and practices. NASA guidelines mandate the use of PRA on human crewed platforms, and for science missions, which affects JPL, the use of PRA must be considered. This paper will discuss the NASA Risk Management guidelines that pertain to JPL, and how the use of PRA is considered on flight projects in support of the Risk Management process.