

SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUES (D6)
Commercial Space Flight Safety and Emerging Issues (1)

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DETERMINING APPROPRIATE FAILURE PROBABILITIES FOR PROBABILISTIC ANALYSIS OF
NEW COMMERCIAL SPACEFLIGHT VEHICLES**Abstract**

This paper details the approach employed by Australia's Range Safety Template Toolkit (RSTT) for determining Failure Response Mode (FRM) probabilities in aerospace vehicles.

Specific reference is made to the application of these probabilities of new commercial spaceflight vehicles.

This is required for determining FRM probabilities in situations when manufacturer data on vehicle failure characteristics is not available. It employs relative probabilities of failure, along with a system level failure probability derived from historical data, to determine the absolute probability of failure of each FRM.

The methodology behind failure response modes is also discussed, along with the process used in identifying them from a list of vehicle failure possibilities.