configurations (see Section D.1.4). The results, summarized previously in Table 6 of Section 5.1, are repeated here in Table 27. Flight phases 0 - 1 go from liftoff through first-stage or booster cutoff, while flight phase 2 extends through second-stage or sustainer cutoff. Although failure probabilities for all flight phases are listed in Table 2, only malfunctions during flight phases 0 through 1 have significant effects on launch-area risks.

Table 27. Failure Probabilities for Atlas, Delta, and Titan

	Predicted Failure Probability	
Vehicle	Flight Phase 0 - 1	Flight Phase 0 - 2
Atlas	0.022	0.031
Delta	0.010	0.013
Titan	0.040	0.064

Absolute overall failure probabilities for Atlas, Delta, and Titan were based only on flight results from "representative" vehicle configurations. Because of the small number of failures in the individual representative samples, test results for all configurations (including Thor) were combined into a single sample and filtered to estimate relative failure probabilities for the five failure-response modes in program DAMP (see Section 5.2). The results for flight phases 0 - 2 and 0 - 1, together with recommended values for new launch systems, were summarized in Table 15 and Table 16, respectively, and are repeated here in Table 28 and Table 29.

Table 28. Recommended Response-Mode Percentages for Flight Phases 0 -2

Response Mode	Mature Launch Systems (F = 0.993)	New Solid Systems (F = 0.996)	New Liquid Systems (F = 0.999)
1	0.4	2.2	7.4
2	5.4	4.3	2.3
3	0.1	0.4	1.7
4	86.2	80.4	73.3
5	7.9	12.7	15.3

Table 29. Recommended Response-Mode Percentages for Flight Phases 0 - 1

Response Mode	Mature Launch Systems (F = 0.993)	New Solid Systems (F = 0.996)	New Liquid Systems (F = 0.999)
1	0.5	3.4	10.7
2	7.4	6.6	4.3
3	0.1	0.6	2.4
4	81.9	74.5	67.0
5	10.1	14.9	15.6

For Atlas, Delta, and Titan, absolute probabilities for the individual response modes were obtained by multiplying absolute failure probabilities from Table 27 by the relative probabilities shown in the second columns of Table 28 and Table 29. The results, presented originally in Table 17, are repeated below in Table 30. To obtain