

Table 38. Flight-Phase Definitions

Flight Phase	Description
0	SRM auxiliary thrust phase
1	First-stage thrust phase if no auxiliary SRM's carried, or First-stage thrust phase after SRM separation
1.5	Attitude-control phase after first-stage thrust phase or between first and second-thrust phases
2	Second-stage thrust phase
2.5	Attitude-control phase after second thrust phase or between second and third-thrust phases
3	Third-stage thrust phase, or third thrust phase if second stage is restartable
3.5	Attitude-control phase after third thrust phase or between third and fourth thrust phases
4	Fourth thrust phase, or Upper stage/payload thrust phase
5	Attitude control phase after Flight Phase 4, or orbital phase

In some cases, two flight phases are listed opposite an entry, e.g., 2 and 5. This means that some failure or anomalous behavior occurred during the second-stage thrusting period that did not prevent the attainment of an orbit, but did result in an abnormal final orbit. Other somewhat arbitrary decisions were necessary in assigning a flight phase when an expended stage failed to separate, or an upper stage failed to ignite. If, for example, the first and second stages failed to separate, any of flight phase 1, 1.5, or 2 could be assigned, depending on the exact cause of the failure. The detailed information needed to make the proper choice was sometimes lacking.

Table 39 is provided to assist in understanding how flight phases were assigned for Atlas, Delta/Thor, and Titan vehicles.

Table 39. Flight Phases by Launch Vehicle

Flight Phase	Atlas	Delta/Thor	Titan
0	Castor burn	Castor/GEM burn	SRM solo
1	Atlas booster	First-stage burn	Stage 1
1.5	Booster separation	Vernier solo - Sep 1/2	Stage-1 separation
2	Sustainer	Second-stage burn	Stage 2
2.5	Vernier/ACS solo	Coast between stg 2/3	Vernier solo
3	Agena/Centaur	Third-stage burn	TS/Centaur/IUS
3.5	-	Coast after stg 3	-
4	Second burn	Second burn	Second burn
5	Orbit	Orbit	Orbit