

D.3.2 Delta Failure Narratives

The following narratives provide available details about each Delta failure since the beginning of the Delta program. The narratives are numbered to match the flight-sequence numbers in Section D.3.1.

1. Echo I, 13 May 60, Response Mode 4, Flight Phase 2.5: Attitude control lost during second stage coast period. Third stage spun up, but did not fire.
10. Tiros E, 19 June 62, Response Mode NA, Flight Phase 5: The flight was considered a success, although failure of the BTL guidance system resulted in a propellant-depletion shutdown of the second stage. The apogee of the final orbit was 175 miles above the planned value and well outside the three-sigma limit of 76 miles.
24. S-66, 19 Mar 64, Response Mode 4, Flight Phase 3: Spacecraft did not attain orbit. Third-stage burn of X-248 motor was interrupted after 23 seconds of a planned 42-second burn period.
26. Imp B, 3 Oct 64, Response Mode NA, Flight Phase 5: The flight was considered a partial success, although it failed to reach the desired orbital altitude. The apogee was some 52,590 miles below the planned value of 110,000 miles, but perigee was within 3 miles of the desired value of 105 miles.
28. Tiros I, 22 Jan 65, Response Mode NA, Flight Phase 2 and 5: Loss of WECO guidance during second-stage burn caused second stage to burn to oxygen depletion. As a result, spacecraft was inserted into an elliptical rather than a circular orbit.
33. OSO-C, 25 Aug 65, Response Mode 4, Flight Phase 2.5: Third stage ignited after spin up but before separation from second-stage spin table. Payload did not orbit.
34. GEOS A, 6 Nov 65, Response Mode NA, Flight Phase 2 and 5: The flight was considered a success, although failure of the BTL guidance system during second-stage powered flight led to a propellant-depletion shutdown of the stage. Actual apogee was 436 miles too high, and well outside the three-sigma limit.
38. AE-B, 25 May 66, Response Mode NA, Flight Phase 2 and 5: Due to WECO guidance failure (ground system locked on side lobe), second stage burned to propellant depletion, some 12 seconds longer than expected. As a result, the orbital apogee was 800 miles higher than planned.
39. AIMP-D, 1 July 66, Response Mode NA, Flight Phase 2.5 and 5: Although an alternate mission was accomplished, primary objectives could not be achieved because excess velocity imparted to the spacecraft prevented insertion of the