vehicle was destroyed by the RSO at 152 seconds. Missile impacted about 60 miles downrange.

12. 120, 28 Feb 58, Response Mode 4, Flight Phase 1: Failure of fuel line caused premature main engine shutdown at 109.7 seconds.

13. 121, 19 Apr 58, Response Mode 1, Flight Phase 1: Failure of fuel system resulted in loss of thrust shortly after liftoff. Missile fell back on pad after reaching an altitude of about 4 feet.

14. 116 (Able I), 23 Apr 58, Response Mode 4, Flight Phase 1: A turbopump failure at 146.2 seconds resulted in main-engine shutdown and an explosion.

18. 123, 11 July 58, Response Mode 4, Flight Phase 1: Although the flight was regarded as a success, the main engine failed to respond to the guidance shutdown command due to a wiring failure. When the main engine was shut down 0.43 seconds later by a backup command, the vernier engines also shut down. A large overshoot resulted from the late shutdown.

20. 126, 26 July 58, Response Mode 4, Flight Phase 1: An inadvertent closing of the main-engine liquid-oxygen valve terminated thrust at 58.4 seconds. Missile components were recovered about 5 miles downrange.

22. 127 (Able I), 17 Aug 58, Response Mode 4, Flight Phase 1: A turbopump failure led to main engine shutdown at about 74 seconds. An explosion followed with impact about 10 miles downrange.

23. 130 (Pioneer I), 11 Oct 58, Response Mode NA, Flight Phase 2 & 5: Low upper-stage thrust reduced the planned orbital altitude from 250,000 nm to 90,000 nm.

24. 138, 5 Nov 58, Response Mode 5, Flight Phase 1: Shortly after liftoff the missile began drifting uprange and to the left, reaching a maximum uprange drift of 150 feet. It continued diverging to the left of the nominal flight path until a pitch-gyro failure caused an excessive pitch down. Shortly thereafter at 34.6 seconds, command destruct occurred.

25. 129 (Able I), 8 Nov 58, Response Mode 4, Flight Phase 3: After a normal boost phase, the third-stage (Allegheny Ballistic X-248-A3) solid-propellant motor failed to ignite.

26. 140, 26 Nov 58, Response Mode 5, Flight Phase 1: Erratic performance of the guidance-system inverter at 111.4 seconds resulted in erroneous accelerometer scale factors and a 37 mile overshoot of target. Flight was regarded as a success.

27. 145, 5 Dec 58, Response Mode 4, Flight Phase 1: Although the flight was considered successful, below-normal thrust throughout flight resulted in fuel