

Atlas vehicles are fueled by a mixture of liquid oxygen and kerosene (RP-1). The latest IAS configuration also incorporates Castor IVA solid-rocket motors. The early Atlas core vehicle included a sustainer, verniers, and two booster engines, all ignited prior to liftoff. In the Atlas II, IIA, and IAS vehicles, the vernier engines have been replaced by a hydrazine roll-control system. Of the four Castor SRBs on the IAS, two are ground lit and two are air lit some 60 seconds later. Atlas vehicles are now typically integrated with the Centaur upper stage vehicle that is fueled with liquid oxygen and liquid hydrogen. Earlier flights used an Agena upper stage.

The entire Atlas history through 1995 is depicted rather compactly in bar-graph form in Figure 37. The solid-block portion of each bar indicates the number of launches during the calendar year for which vehicle performance was entirely normal, in so far as could be determined. The clear white parts forming the tops of most bars show the number of launches that were either failures or flights where the launch vehicle experienced some sort of anomalous behavior. Every launch with an entry in the response mode column in Table 41 falls in this category. Such behavior did not necessarily prevent the attainment of some, or even all, mission objectives.

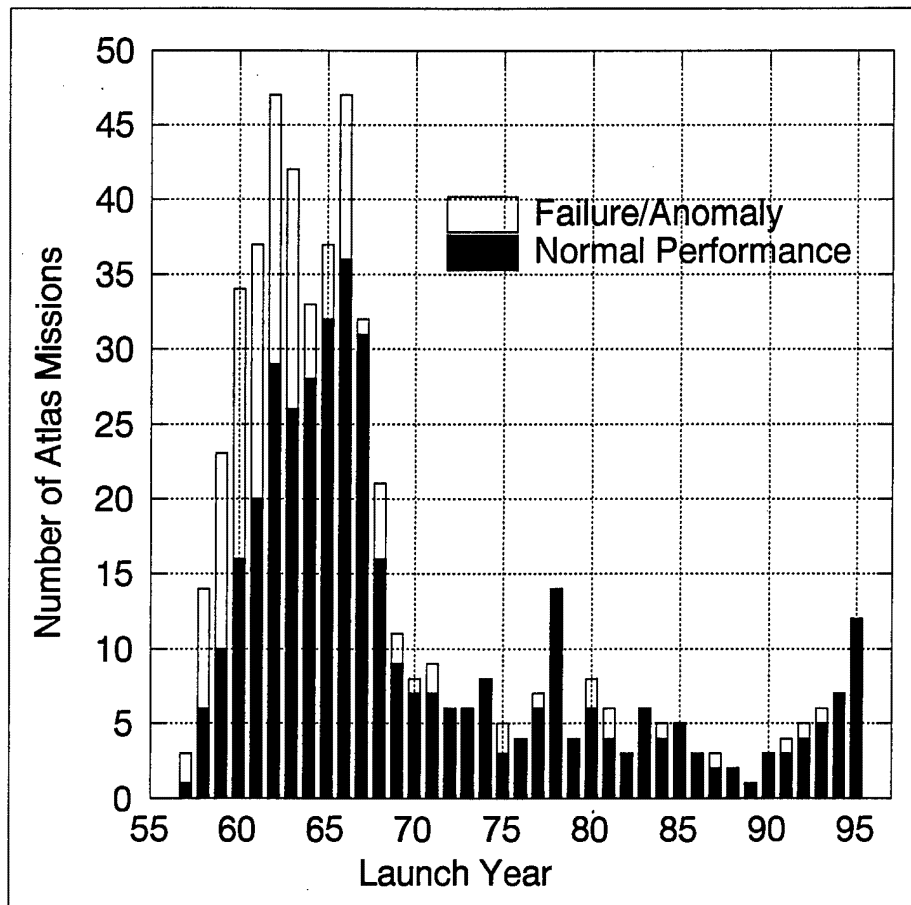


Figure 37. Atlas Launch Summary