SATURN V LAUNCH VEHICLE

Turning now to the Saturn V vehicle (fig. 19), some of the recent accomplishments in the program are shown in figure 20. The Ground Test Program is practically complete. Our facilities are essentially complete and for all intents and purposes, are supporting the entire program. The first stage is considered mature. I will discuss the second stage accomplishments and failures in detail later. We did lose one of our third stages—the stage for AS–503 which I will cover very briefly.

With regard to our Ground Testing Program, I have selected what is probably one of the most important elements, the component and subsystem qualification program (fig. 21) which is comparable to FAA certification of aircraft. On the Saturn V, approximately 3,500 components, valves, pumps, actuators, and so forth were selected to be qualified. Some 2,500 of these were qualified by prior application and use on ballistic missiles, Saturn I, and Uprated Saturn I vehicles. One thousand of these components had to be qualified by strenuous test prior to the flight of AS–501. These components have been subjected to rigorous conditions far in excess of those expected to be encountered during the actual launch and mission operation. These tests vary from vibrations for hour after hour on shake tables to thermal vacuum tests. Of the 1,000, only 11 remain to be qualified. In fact, I was

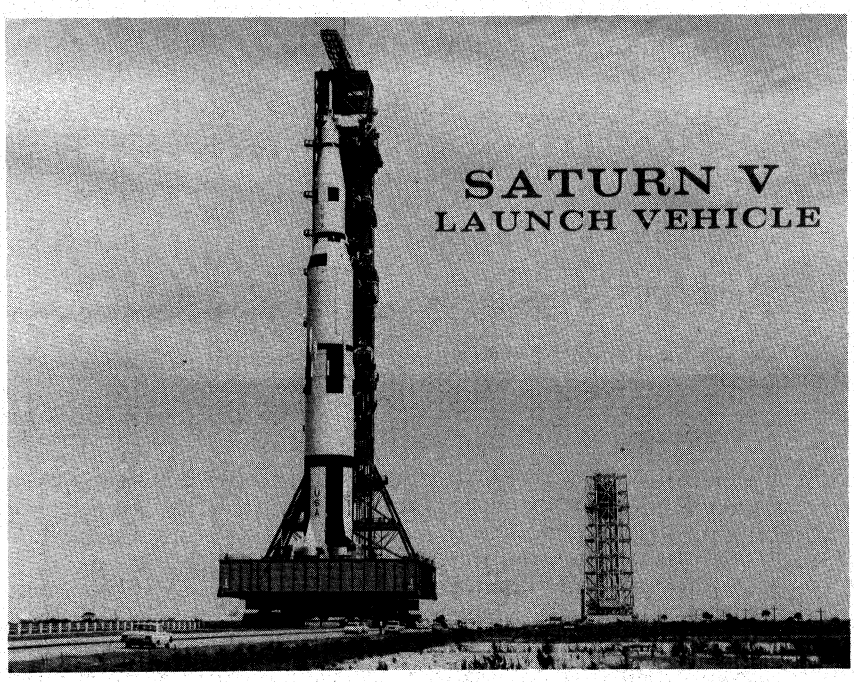

FIGURE 19