This chart shows a very sketchy flight profile from Earth to Mars. The third stage of Saturn V carries the payload into a parking orbit around the Earth, where the forward shroud would be shed. The two spacecraft are released separately, and are timed in such a way that due to minor velocity differences in spacecraft 1 and spacecraft 2, the two spacecraft arrive in Mars orbit about 10 days apart. This way the same set of ground stations on Earth can first handle one and then the other. In other words, rather than have the two payloads arrive simultaneously and cause a traffic-handling problem on Earth, this mode spreads them a little bit apart. From Mars orbit the two spacecraft would then dispatch their capsules, each possibly going to a different point on the Martian surface.

One last subject I would like to mention very briefly before closing is the work we have been doing toward a nuclear stage.

We have had a group of people engaged in the study of nuclear rocket propulsion systems, extending all the way back to 1957 when we were a part of the Department of the Army. Since becoming a part of NASA we have worked closely in support of the national nuclear rocket program, the ROVER project, under the leadership of Harry Finger's Space Nuclear Propulsion Office of NASA and the Atomic Energy Commission.

These studies have concentrated on the need for nuclear propulsion systems in our long-range space programs, and the most promising concepts for their application.

In view of the high cost of nuclear rocket engine and stage development, we favor what we call a modular vehicle approach. By de-

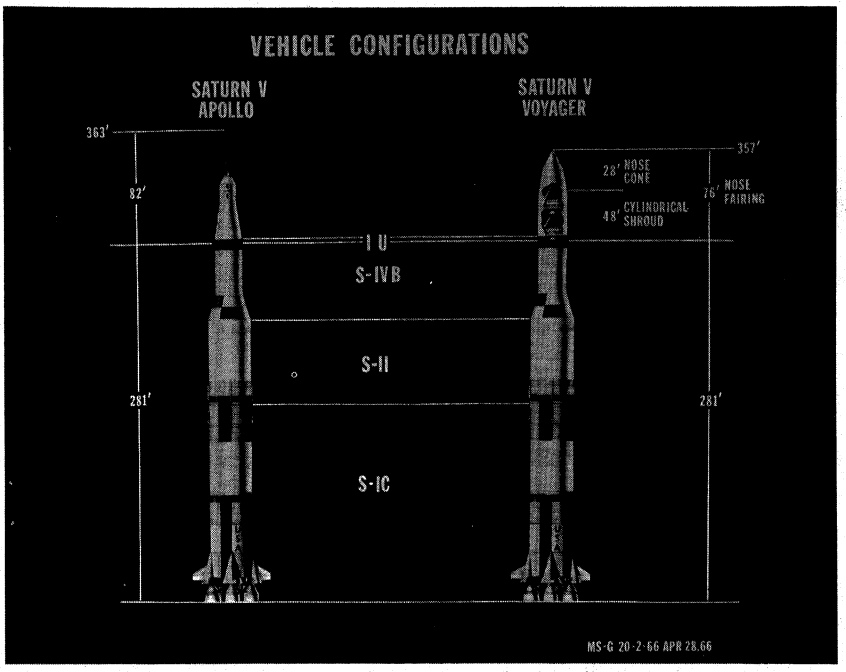

CHART 17