

ROCKET NEWS

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U.S. SPACE SHUTTLE MAKES FIRST APPEARANCE

Palmdale, Calif., — On a stretch of sunbaked desert 60 miles east of Los Angeles, the doors of a giant dust-colored hangar were opened last September 15th, and America's latest entry in the evolving business of space exploration was rolled out for inspection by members of the press, NASA space officials, and visiting dignitaries.

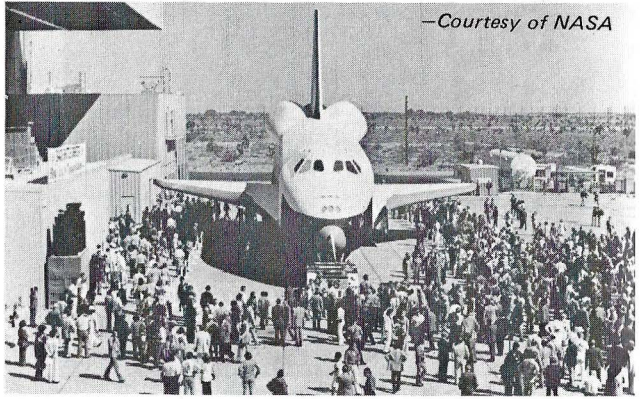
Costing \$6.9 billion, the Space Shuttle (named Enterprise in honor of the Star Trek vehicle) has the general look of today's wide-bodied jet, 122 feet long and about the size of DC-9 jetliner, with a 78-foot wingspan. It weighs in empty at 150,000 pounds and can lift 65,000 pounds into earth orbit. In the comparatively roomy pressure compartment, there is ample space for up to seven persons, including three crewmen, a payload master and three scientists. In the event the Space Shuttle is needed for a space rescue mission, it can bring as many as ten people back to earth.

At launch from Cape Canaveral, the orbiter will be attached to the side of a 154-foot-high tank that will provide extra power before dropping away and parachuting into the ocean for recovery and reuse.

After an actual mission, the orbiter will re-enter Earth's atmosphere, protected from the 2,300° re-entry heat by an elaborate cover of specially designed tiles that interlock over the craft, and it will land on 10,000 feet of runway which has been specially built at Cape Canaveral and at Vandenberg Air Force Base, Calif.

The Space Shuttle can be outfitted for another flight in as little as two weeks, or can be readied for a space rescue mission launch from standby status in just 24 hours.

Apart from its being completely reusable (up to 100



missions, perhaps more) Enterprise and its sister ship will be extremely economical. They will deploy and retrieve weather, communications and earth resources satellites which will enable scientists to study solar power. From Space Shuttle will come space stations, orbiting factories, launch platforms for other vehicles such as deep orbit satellites or planetary probes. And instead of costing \$600 to lift one pound of payload into orbit aboard Apollo; the Space Shuttle will lower the cost to \$150 a pound.

Will it really work?

For all the design and research that goes into a vehicle, there is always that moment of truth when it is asked to perform. On October 4, 1957, the Soviet Union launched Sputnik I, a tiny unmanned satellite, the very first of its kind ever. Suddenly in the eyes of the world, Russia was Number One in science; Sputnik I was a public relations coup quite possibly unmatched in history.

A few weeks later, the U.S. Navy (this was long before NASA) had readied on the launching pad a tiny grapefruit-shaped satellite to match the Russian feat. With newsreel cameras rolling and the eyes of the world

focused on the launch, the countdown proceeded to T minus two. . . T minus one. .

"Liftoff!" Whereupon the rocket tipped over and the whole thing exploded on the launch pad. The U.S. was even further humiliated! In January, 1958, an Army space team headed by Werner Von Braun managed to get a satellite into orbit, but by then the damage to America's reputation as a scientific leader was done, not to be truly recaptured until a decade later when Neil Armstrong uttered those immortal words, "One small step for man. . ."

Estes Industries is betting the Space Shuttle will work - and will perform everything required of it and then some. The reason: when the designs for Space Shuttle were finalized, Estes engineers set about designing a working model, faithful in scale . . . detail . . . and aerodynamics.

In flight after flight, the Estes Industries flying model Space Shuttle has proven itself a superb vehicle -- exciting to build . . . thrilling to watch in flight . . . and a handsome decoration for bookshelf or desk when not in use.

Estes now has the Space Shuttle in stock, and if you order now, you can have it in plenty of time for Christmas.