

NIKE PROJECT

PROJECT OVERVIEW

A 1/3 scale model of the Nike Hercules Missile.
2 Stage Cluster Rocket with 4 K700s in the booster, staging to a M1939. There will also be four H73 outboards in the sustainer.
Overall length of the rocket will be 173" (14.4 feet)
Sustainer diameter of 11.66 inches, Booster 13.2"
Three Altimeters: two in the sustainer, one in the booster.
Three Timers: Two for sustainer ignition, one for outboard ignition.
R/C Chicken Switch in Sustainer
Named "The Beast"

BOOSTER SECTION

4 tubes of 6.0" PML tube
75 mm Motor mounts (one per tube)
Fin material 1/2" Birch plywood, with foam lay-ups, and then covered in fiberglass
All motors nozzles will be tilted outward to point the thrust vector at the C/G of the rocket

SUSTAINER SECTION

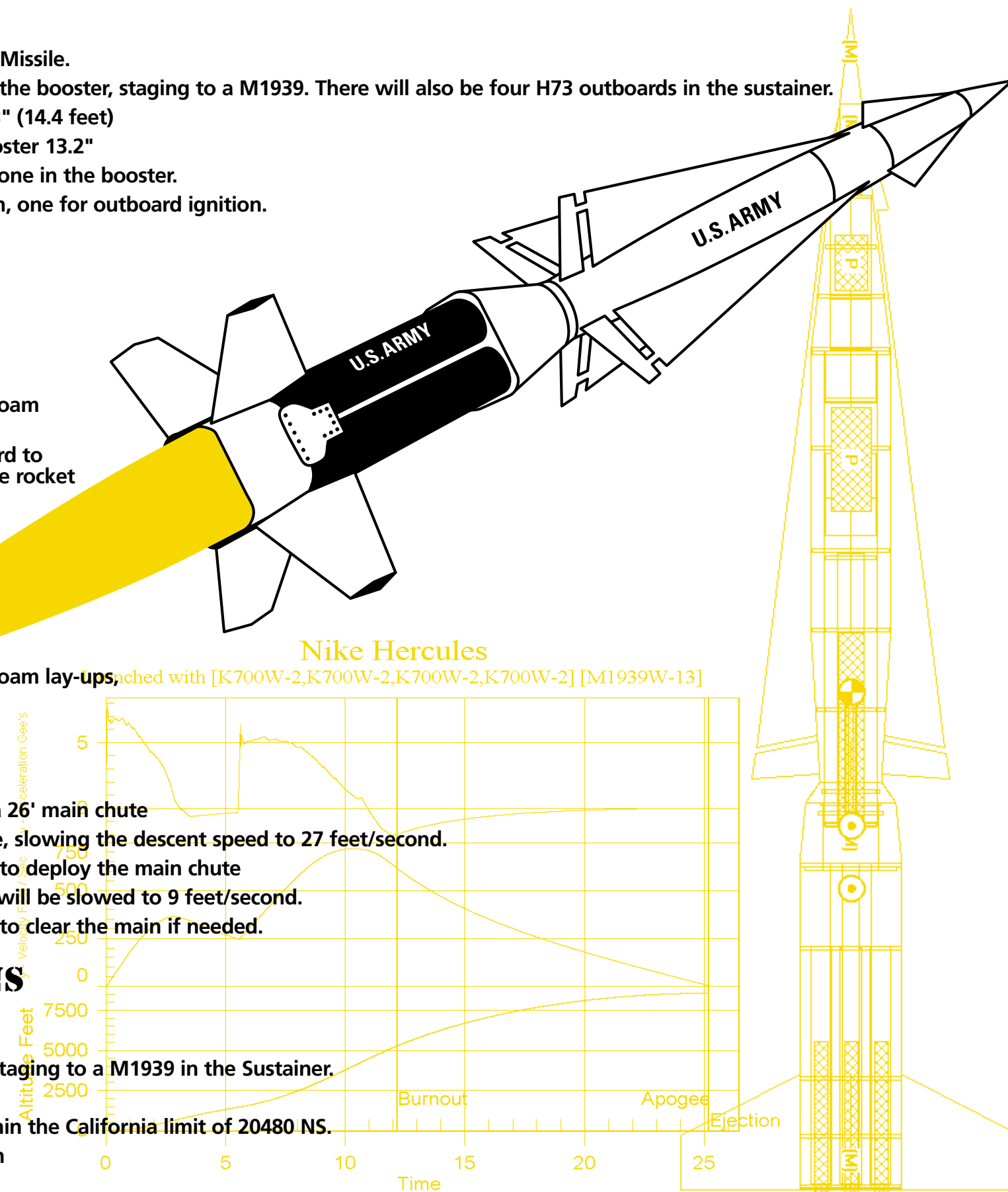
Length 120" (10 feet)
Diameter 11.66" (PML 11.41" tubing)
98 mm Motor mount
Four 38 mm outboards
Fin material 5/16" flywood core, with foam lay-ups, and then covered in fiberglass

RECOVERY

Booster Recovery: A single 15' chute
Sustainer Recovery: A 15' drogue and a 26' main chute
The drogue will be deployed at apogee, slowing the descent speed to 27 feet/second.
At 1500' the primary altimeter will fire to deploy the main chute
Descent speed after main deployment will be slowed to 9 feet/second.
At 1000' the backup altimeter will fire, to clear the main if needed.

FLIGHT CONFIGURATIONS

LDRS XX
Configuration
4 K700 motors in the booster section, staging to a M1939 in the Sustainer.
Air starting four H73 motors.
Total Impulse: 20410 NS (99% "N"), within the California limit of 20480 NS.
Altitude: 7,570 feet, Velocity: 0.54 Mach



FRONT



BACK

FULL SIZE

LAUNCH CREW



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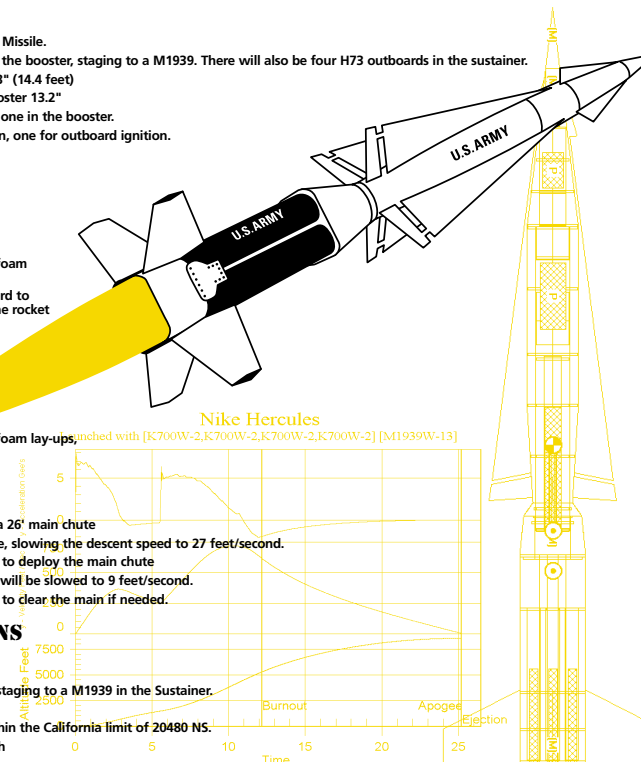
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