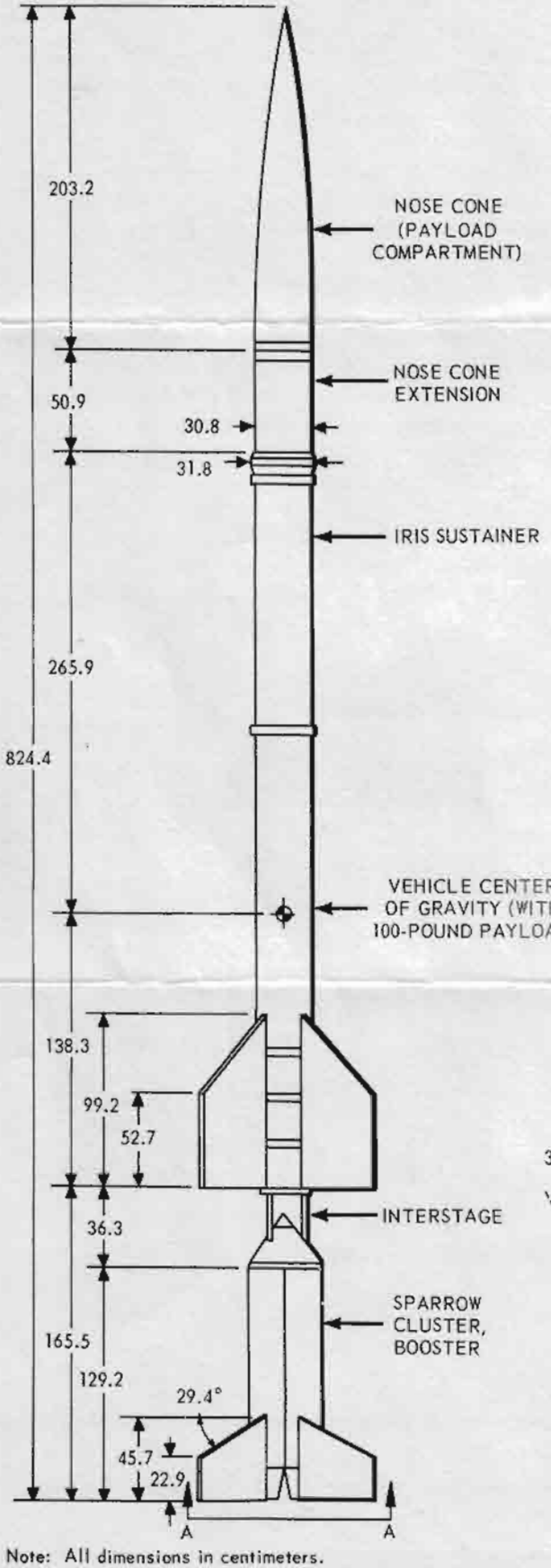
PROPULSION
DIVISION

UPPER ATMOSPHERE SOUNDING VEHICLES

IRIS®

HYDRA-IRIS VEHICLE



Note: All dimensions in centimeters.

	HYDRA-IRIS Standard Nose Cone	Plus 51 cm (20 in) Extension
Payload Capacity		
Volume	0.13 m^3 (4.5 ft^3)	0.16 m^3 (5.5 ft^3)
Length	203 cm (80 in)	254 cm (100 in)
Outside Diameter	30.8 cm (12.12 in)	30.8 cm (12.12 in)
Nose Cone Weight	5.45 kg (12 lb)	14.5 kg (32 lb)

Vehicle Performance, Typical for 121-Pound Payload

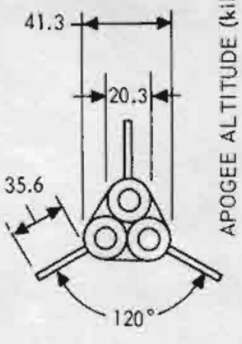
Apogee Altitude	277 km (172.4 miles)
Impact Range	267 km (166 miles)
Burnout Velocity (second stage)	2070 m/sec (6800 ft/sec)
Time to Apogee	298 sec
Nominal Spin Rate at Burnout (second stage)	2.6 r/s

Weights (excluding payload)

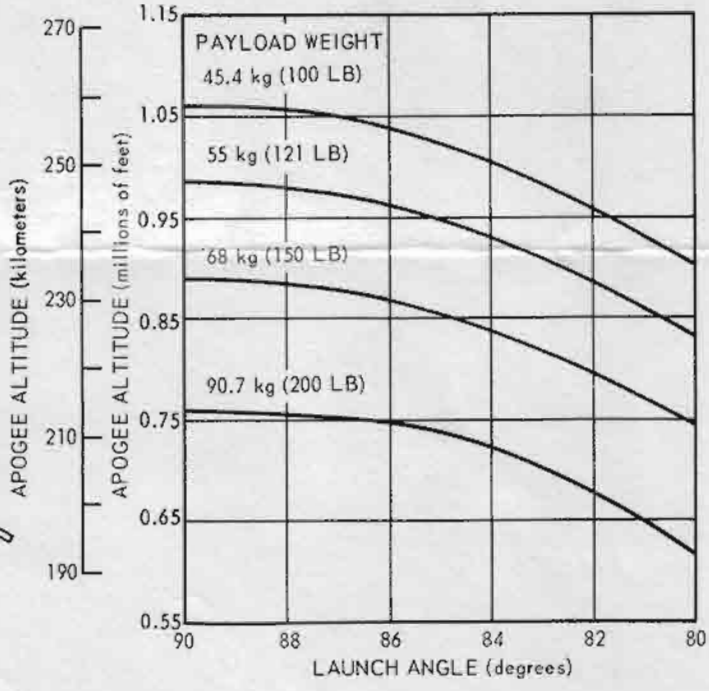
Launch	780 kg (1720 lb)
Second Stage Ignition	596 kg (1315 lb)
Second Stage Burnout	176 kg (377 lb)

Rocket Motors

First Stage	(3) Sparrow, Manifolded 30 amp ignition current
Second Stage	MARC 13A1 IRIS, 52 ks 3850 1 amp ignition current



SECTION A-A



ATLANTIC RESEARCH