

**TEAM
055**



Smart and Recoverable High-Powered Sounding Rocket System

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ELEVATOR PITCH

Our Smart and Recoverable High-Powered Sounding Rocket System is a game-changing solution—a **modular, cost-effective, and reusable** rocket system optimized for **multi-missions**.

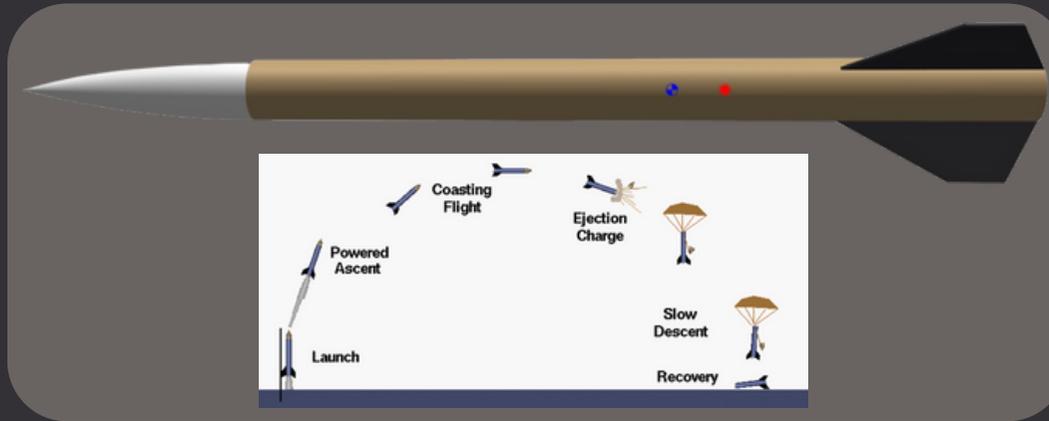
SPECIFICATIONS

 1km Apogee	 0.5U Payload Capacity	 740 N s Total Impulse
 1.69m Length 10cm Diameter	 Mach 0.6	 2km Telemetry Range

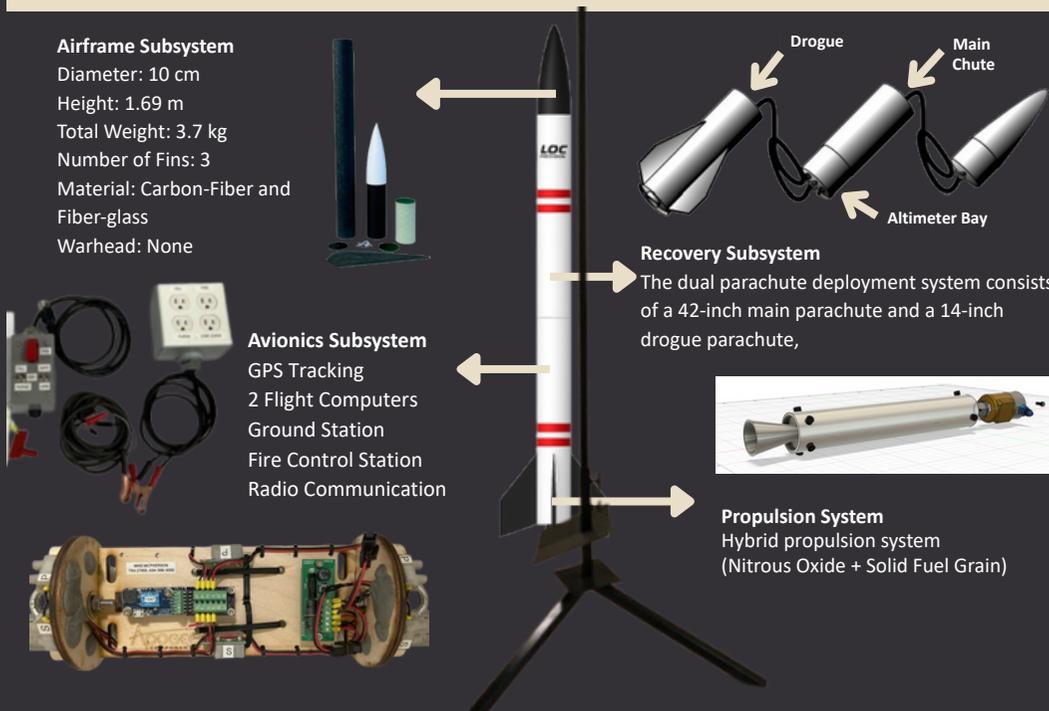
CONSTRAINTS

 Lightweight Material	 Hybrid Propulsion	 Real-Time Data Transmission
 Dual Parachute Recovery	 GPS Tracking	 Rail Launcher Compatibility

ROCKET SYSTEM DESIGN & METHODOLOGY

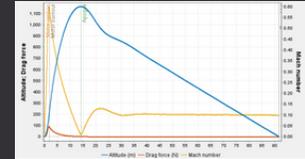


ROCKET SYSTEM PROTOTYPE ARCHITECTURE

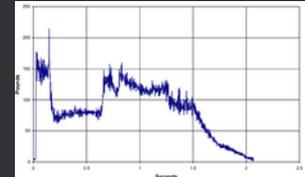


TESTING, VALIDATION & LAUNCH

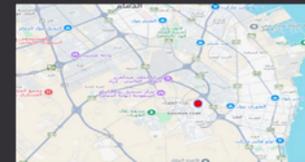
Airframe Flight Performance Profile



Propulsion On ground static motor fire test



Avionics Full system testing including sensors, power and telemetry checks.



Recovery On ground deployment test



CONCLUSION & FUTURE WORKS

Launch Event with the permission of H.E. Dr. Falih Alsulaiman, Governor of GADD