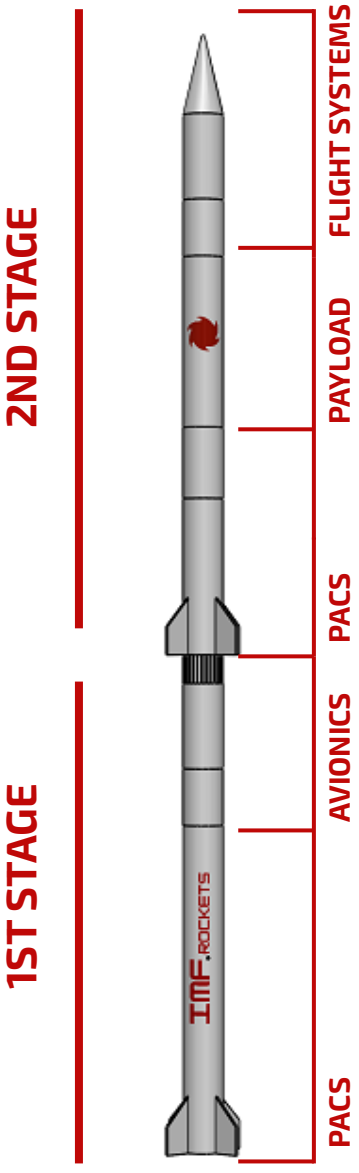
IMF.ROCKETS

PRODUCT DATA SHEET

HERMES-1

THE FEDEX OF SUBORBITAL TESTING

- STANDARDIZED 20U MICROGRAVITY PLATFORM
- RAPID-CADENCE QUALIFICATION FOR AEROSPACE HARDWARE AND IN-SPACE BIOTECH



HERMES BLOCK I

VEHICLE PERFORMANCE

Target Apogee: 100 km
Microgravity Duration: ~3 minutes
Microgravity Quality: ≤ 10^{-4} g
Max Velocity: Mach 5.1
Peak Acceleration: 12.1 Gs

PROPULSION ARCHITECTURE

Configuration: 2-Stage Solid Motor
Grain Geometry: Finocyl + BATES
Propulsion System: 2x APCP motors + CO2 RCS System
Peak pressure : 69bar
Peak thrust : 17.5KN
ISP: 234s

PAYLOAD INTEGRATION

Total Volume: 20U Standardized (40kg total mass)
Rail Specification: Cal Poly Standard
Interface: CAN BUS & Isolated Voltage Rails

VEHICLE DIMENSIONS

Total Length: 7,9m
Diameter: 273mm
Liftoff Mass (GLOW): 270kg

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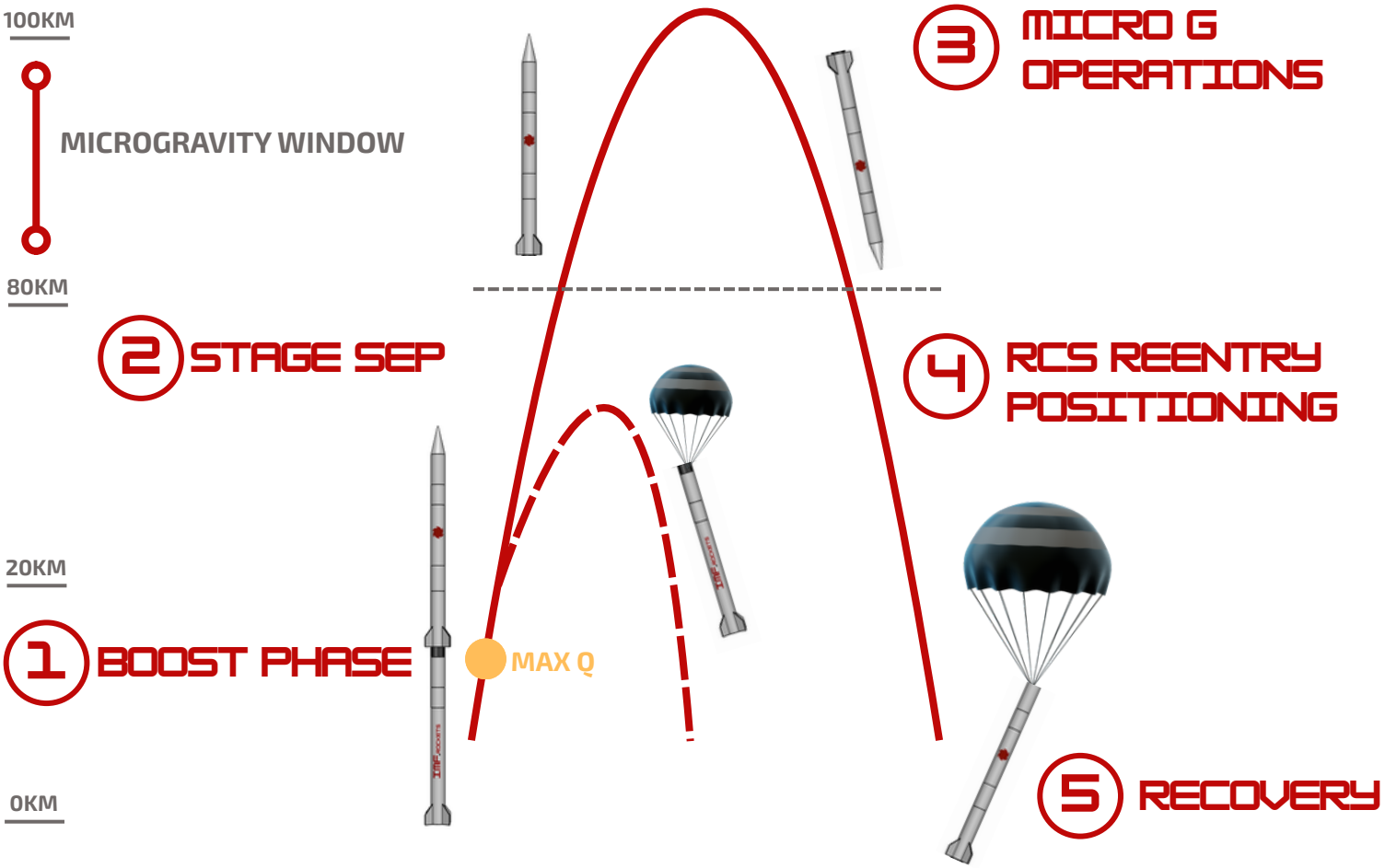

MECHANICAL ENVIRONMENT	
Peak Acceleration (Gs)	7.9
Vibration Standards	ECSS-E-ST-10-03C requirements
Random Vibration	6.5Grms (Target Qualification)
Max Dynamic Pressure	Occurs at T+10s
DATA & POWER INTERFACE	
Power Distribution	24V,12V,5V and 3.3V rails
Data Bus	CAN BUS
Launch Pad Umbilical	D&P access up to T-12 hours

TARGET SECTORS

50%

BIOTECH & PHARMA

30%

ACADEMIA & RESEARCH

20%

AEROSPACE & HARDWARE

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