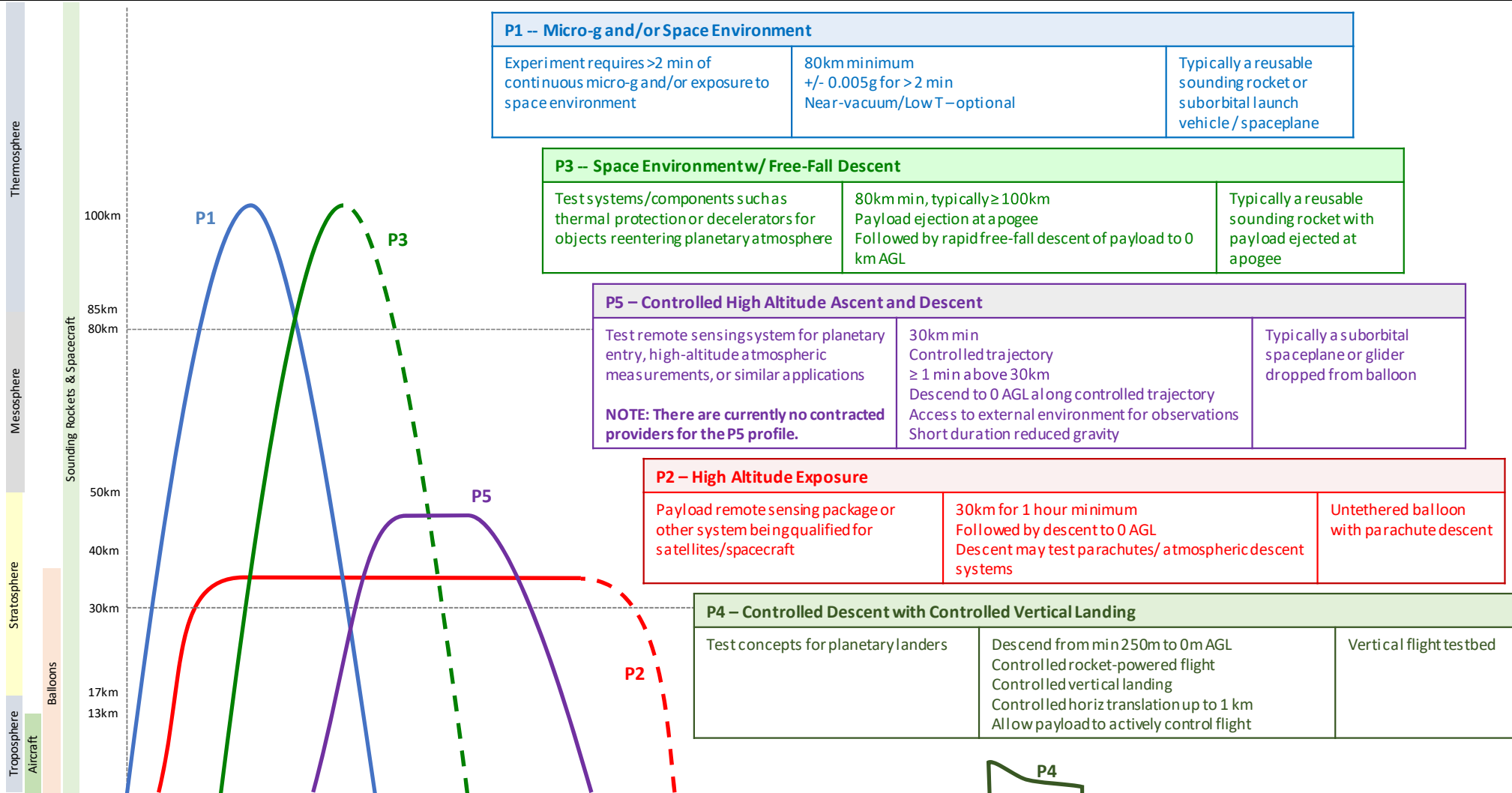


# SUBORBITAL FLIGHT TESTING PROFILES



P1 -- Micro-g and/or Space Environment		
Experiment requires >2 min of continuous micro-g and/or exposure to space environment	80km minimum +/- 0.005g for > 2 min Near-vacuum/Low T – optional	Typically a reusable sounding rocket or suborbital launch vehicle / spaceplane

P3 -- Space Environmentw/ Free-Fall Descent		
Test systems/components such as thermal protection or decelerators for objects reentering planetary atmosphere	80km min, typically ≥ 100km Payload ejection at a poge Followed by rapid free-fall descent of payload to 0 km AGL	Typically a reusable sounding rocket with payload ejected at a poge

P5 -- Controlled High Altitude Ascent and Descent		
Test remote sensing system for planetary entry, high-altitude atmospheric measurements, or similar applications  <b>NOTE: There are currently no contracted providers for the P5 profile.</b>	30km min Controlled trajectory ≥ 1 min above 30km Descend to 0 AGL along controlled trajectory Access to external environment for observations Short duration reduced gravity	Typically a suborbital spaceplane or glider dropped from balloon

P2 -- High Altitude Exposure		
Payload remote sensing package or other system being qualified for satellites/spacecraft	30km for 1 hour minimum Followed by descent to 0 AGL Descent may test parachutes/ atmospheric descent systems	Untethered balloon with parachute descent

P4 -- Controlled Descent with Controlled Vertical Landing		
Test concepts for planetary landers	Descend from min 250m to 0m AGL Controlled rocket-powered flight Controlled vertical landing Controlled horis translation up to 1 km Allow payload to actively control flight	Vertical flight testbed