

U.S. Air Force robotic space plane to land

After more than seven months in space, the USAF's secret unmanned *X-37B Orbital Test Vehicle* is set to return to Earth. The prototype, a potential replacement for the space shuttle, has been tracked by space hobbyists since its April launch as it carried out technology tests in orbit

Propulsion
Liquid-fuelled rocket engine for orbital manoeuvres

Payload bay
Unpressurized area similar in size to pickup truck bed. Deployable solar panels provide power in orbit

Guidance
Onboard GPS navigation and flight control. Autonomous re-entry and landing sequence

Twin angled tail fins

Air brake

Hydrogen peroxide tank

Thermal protection
Heat-resistant ceramic tiles shield craft from intense heat of re-entry

Experiment bay

JP-8 kerosene jet fuel tank

Avionics

Manoeuvring thrusters

Space shuttle to scale

X-37B

X-37B SPECIFICATIONS

Length	8.38 metres
Wingspan	4.6 metres
Launch weight	5 tonnes
Operating altitude	200-925km
Re-entry speed	Mach 25
Time in orbit	Up to 270 days