Operator Performance Lab
Two Instrumented Jet Aircraft
Providing low-cost two-ship tactical in-flight simulation & flight test services
INSTRUMENTED AERO L-29 DELFIN AIRCRAFT

REAR-SEAT MULTI-FUNCTION DISPLAY
- Resolution of 1920x1080, 21" Diagonal
- Touchscreen
- High brightness
- Daylight readable

FLIGHT HARDENED COTS COMPUTERS
- 5 PCs, 1 Linux computer
- Provides easy customer software integration and flight test

COGNITIVE AVIONICS TOOL SET (CATS)
- Software tool to synchronously calculate, record, and display human physiological state, performance, and aircraft state
- Capabilities
  - Software tools include cognitive workload based on physiological state
  - ECG monitoring

EYE TRACKER
- Binocular eye tracker integrated in F-35 helmet
- Dikablis Professional eye tracker installed in F-35 helmet
- Calculates, records, and broadcasts real time gaze and eye movement.

HIGH-DEFINITION AUDIO AND VIDEO RECORDERS
- Rear seat MFD framebuffer
- Helmet HMD framebuffer
- Pilot Facing camera view
- Eye Tracker computer framebuffer
- Front cockpit forward view
- Four-channel audio recording and linear time code

AIRCRAFT IN-LOOP (AIL) SIMULATORS
- Both L-29 aircraft are fully equipped to act as AIL simulators in the hangar
- Simulation-integrated controls allowing for full in-cockpit simulation
- F-35 HMD helmet fully operational in sim mode
- Can fly in any (virtual) location
- Integrated with Coalescence Mixed Reality system for full immersion
- Prepar3d simulation software fully integrated for flight and sim
- CORE sim software allowing A/G and A/A simulation

L-29 SPECS

CREW:
- 1 front seat, 1 back seat

WEIGHTS:
- Empty: 2,280 kg (5,030 lb)
- Loaded: 3,286 kg (7,244 lb)
- Max takeoff: 3,540 kg (7,800 lb)

PERFORMANCE:
- Powerplant: 1× Motorlet M-701C (8.7 kN (1,960 lbf))
- Maximum speed: 820 km/h (443 knots, 510 mph)
- Range: 900 km (486 nm, 560 mi)
- Service ceiling 11,500 m (37,700 ft)
- G-loading: Gz +7.5/-3.5 with stores
  +8/-4 without stores