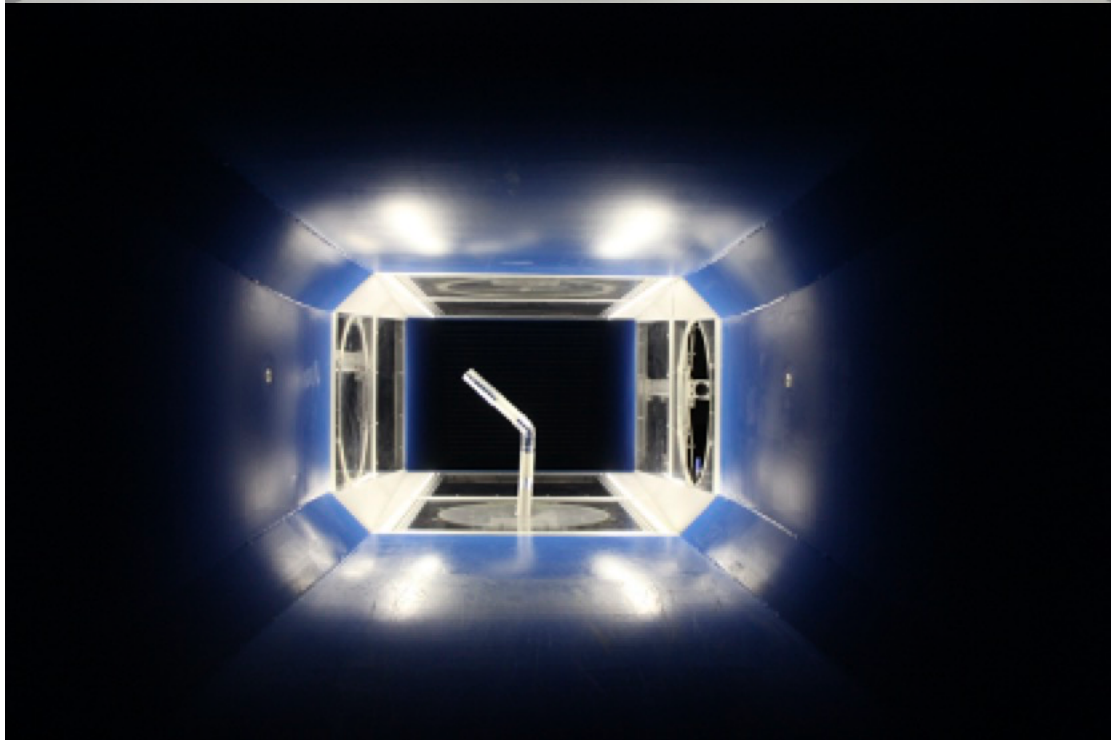
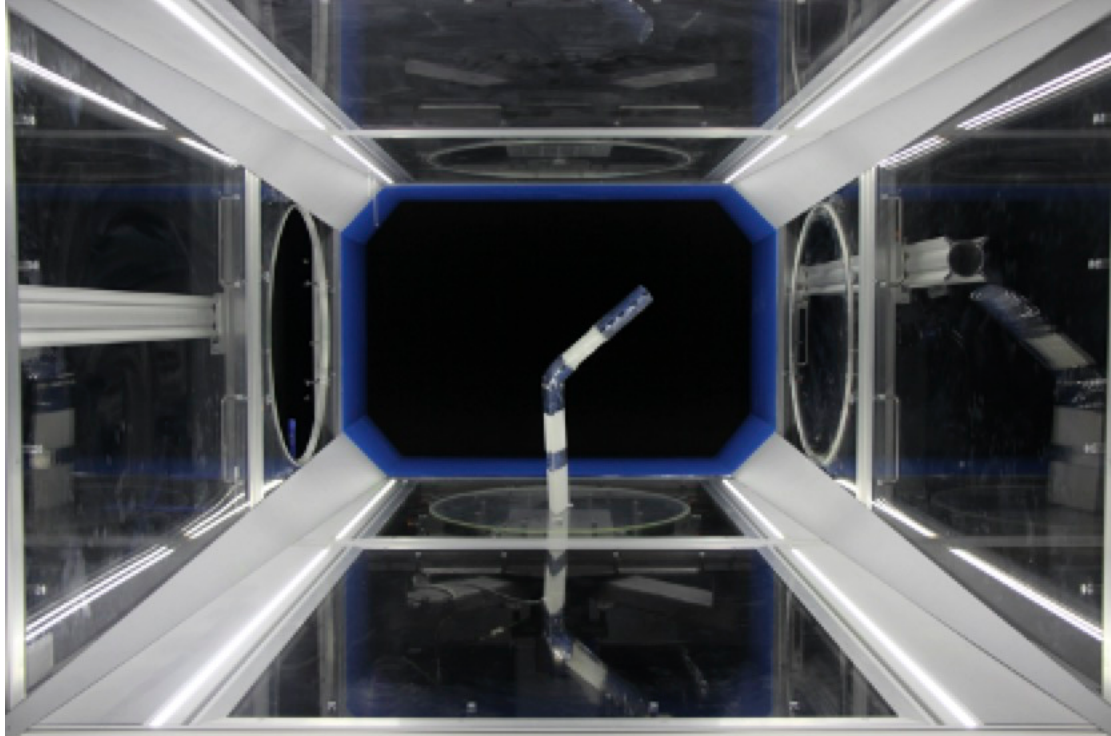
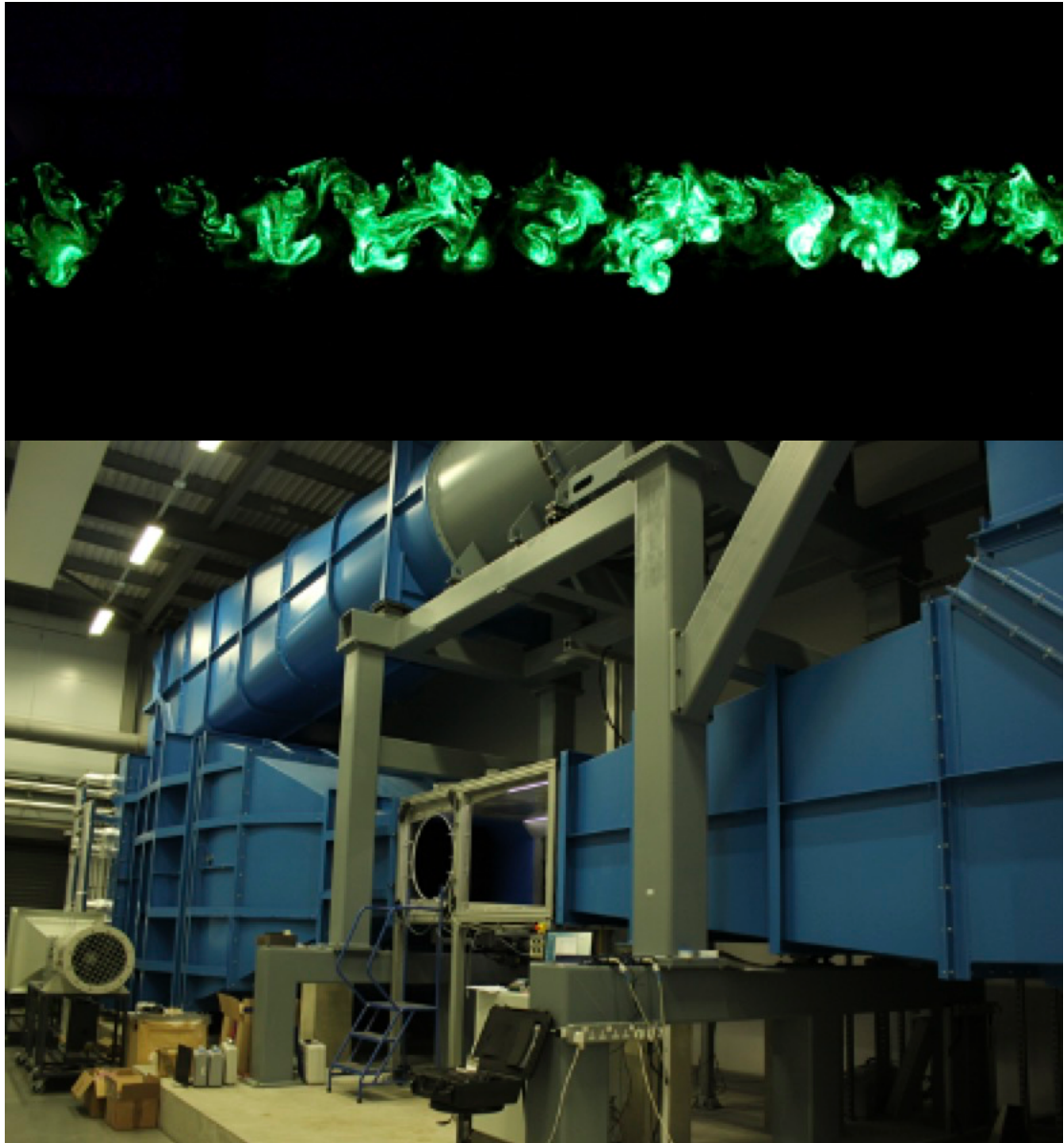


Swansea University Wind tunnel

Description of facility

Pictures:





General description

- Type: Closed loop type wind tunnel
- Size of test section: 1.5m x 1.0m x 2.5m (width x height x length)
- Configuration: closed test section
- Velocity range: up to 50m/s
Re number per m chord: 3.2 million
- Background Ti: below 0.3%
- Cooling: yes, 20°C ± 1°C
- Additional features:
- Turntable (diameter 0.7m)
 - Twin balances for model support

Horizontal and vertical model support options
Simultaneous Stereo PIV and DIC measurements
Gust Generation system
Dynamic Stall system (model pitching)

Measurement equipment:

Pressure: 2x 64 channel miniature scanivalve pressure scanner
Calibrator and Precision Manometer (FC0560)

Forces: 2x AMTI 6 component piezoelectric force balances

Velocity: hot-wire anemometry (hot-wires, X-wires),
Dantec Flow Unit for calibration,
Stereo Particle Image Velocimetry (PIV) up to 15 kHz
Stereo Digital Image Correlation (DIC) up to 25Hz

Temperature: Integrated pressure sensor

Additional equipment:

2-vane Gust Generation system

Wake rake for wing profile drag measurements

Traverse: 2-axis traverse system

Inflow conditions:

At the inlet plane: Dynamic pressure distribution
Flow angularity
TI variation with wind speed

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