

# Met Office Technical Services



A unique combination of resources enables Exeter Advanced Technologies (X-AT) at the University of Exeter to provide manufacturing technical services to the Met Office. Work to date has included making equipment which has been installed onboard the Facility for Airborne Atmospheric Measurements (FAAM) aircraft - a modified BAE 146 which undertakes research all over the globe into atmospheric conditions. This aircraft was also deployed during the fire at the Buncefield fuel depot, flying through the smoke to collect samples for analysis.

Services provided range from sheet metal working and welding, to CNC machining and additive-layer manufacture (ALM). X-AT have contributed components for

- Nephelometer to measure light scattering by aerosol particles in the atmosphere
- Heimann Radiometer for remote measurement of surface temperature
- Infrared Interferometer for temperature profiling
- Broadband Radiometers to measure visible and near-infra-red solar radiation
- Ice Nucleus Counter - real-time measurements of atmospheric particles capable of acting as ice nucleation centres



Other work includes

- Manufacture of an array of Whole Air Sampling (WAS) bottles. The bottles are filled with air taken in flight and stored for post-flight analysis (usually by gas chromatography) in a laboratory.
- Mounting equipment for sensors in a van measuring road temperature.
- The production of a stand to mount an anemometer on a buoy in order to collect meteorological data from a remote area. This buoy is anchored to a chain 3000m long out in the Atlantic ocean.

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[www.metoffice.gov.uk](http://www.metoffice.gov.uk)

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