
Press Release

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The Aquatec Group is delighted to return to ExCel, London for their 10th Oceanology exhibition from the 21st to 23rd March. The show will provide an opportunity for a significant product launch, a showcase for state of the art acoustic telemetry research, and the chance for visitors to learn more about Aquatec's instrumentation for sediment, pressure, and temperature monitoring and marine mammal activity recording.

A New Sediment Dynamics Instrument

Aquatec will be launching the **AQUAscat 1000** at Oceanology International, strengthening their presence in the sediment monitoring field. The AQUAscat 1000 is the only profiling instrument capable of identifying both suspended sediment load *and* size distribution from its measurements, and complements Aquatec's existing AQUAlogger 210TY optical backscatter data loggers. The AQUAscat uses multiple high-frequency, parallel acoustic beams to record acoustic backscatter from suspended sediment in the water column. Sound scattering by sediment particles varies both with frequency and particle size, so the use of multiple frequencies means that size information can be inferred. This is essential in determining suspended load.

The AQUAscat 1000 is the latest implementation of Aquatec's acoustic backscatter technology, which has been used by oceanographic institutions around the world for over ten years in laboratory and seabed deployments. Last year Aquatec developed an in-house sediment tower, so that instruments could be calibrated for commercial applications. Much of the pioneering theoretical work carried out over the past decade in research institutions both in the UK and in the USA has since been revisited to ensure that the data acquisition system for the new instrument was optimised for a wide range of suspended sediment scenarios.

The instrument is available as a fully configurable research or laboratory version. Now for the first time it is also available in a compact survey package, with built-in transducers and battery pack. This package is ideal for brief sea bed deployments or shallow water survey.

Showcasing Acoustic Telemetry Research

Aquatec's participation in two major European collaborative projects will be showcased during the exhibition. The SWARM project, just concluded, comprises a co-operative group of profiling floats targeted at environmental survey applications in shallow water areas such as the Baltic Sea. The floats use long range (up to 10km) acoustic communication and positioning developed by Aquatec to share data and provide regular data updates while minimising surface operation. Also just commencing is the DAMOCLES project, in which Aquatec will be developing even longer range acoustic communication and ranging for Arctic under-ice data acquisition.

Compact Oceanographic Instrumentation

Aquatec's familiar range of compact oceanographic instruments will be in evidence on the stand. The AQUAlogger 520 miniature pressure and temperature loggers now include a facility for precision water-level measurement, allowing tidal cycles to be measured inexpensively from the sea bed. The AQUAlogger 210TY optical backscatter turbidity logger now includes enhanced calibration for high turbidity environments. The AQUAclick range of marine mammal activity recorders, used for environmental impact survey both before and during submarine works, will also be on display for the first time.

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The attached image, available in high resolution, is the AQUAScat 1000S Acoustic Backscatter instrument.

The Aquatec Group is an underwater instrumentation group specialising in oceanographic instruments, underwater acoustics, marine mammal sonar, subsea data acquisition and transmission, established in 1990 in the UK.

