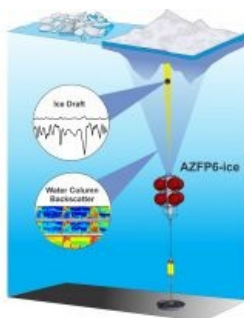


# ASL Introduces Upward-looking Sonar for Ice-infested Waters



ASL Environmental Sciences has announced the combining of its [Acoustic Zooplankton Fish Profiler](#) (AZFP) with its Ice Profiling Sonar (IPS) to provide a comprehensive solution for ice thickness detection and water column profiling of fish, zooplankton, bubbles and suspended sediments in ice-infested waters.

The AZFP6-ice is the next generation in high resolution, low power, continuous

recording subsurface instruments that are capable of long-term deployments of a year or more. The AZFP6-ice would typically be used in an upward-looking taut-line mooring as illustrated below but could easily be inverted to record the water column in a downward-looking orientation.

## High Spatial Resolution Ice Cover Measurements

Built into the ice profiling sensor is a logarithmic detector that resolves both strong and weak acoustic targets. In practice, this means that the signal from strong reflections such as the water-air interface at close range does not saturate, and weak targets such as the water-ice interface at long range are still measurable.

A narrow-beam 420kHz frequency channel on this instrument (identical to the one used on ASL's well-known [IPS](#)) is used for high spatial resolution ice cover measurements. The three other calibrated fishery acoustic channels of the instrument acquire details of constituent targets within the water column. The memory capacity of this new generation instrument has been upgraded from a single 32GB compact flash card to the now expanded 512GB capacity using dual 256GB SD cards, with plans to continue expanding memory capacity.

The first AZFP6-ice prototype with ice profiling capabilities was deployed in October 2021. ASL expects to formally launch this new instrument in early 2022.



Diagram of AZFP6-ice deployment showing the ice and water column profiling capabilities.