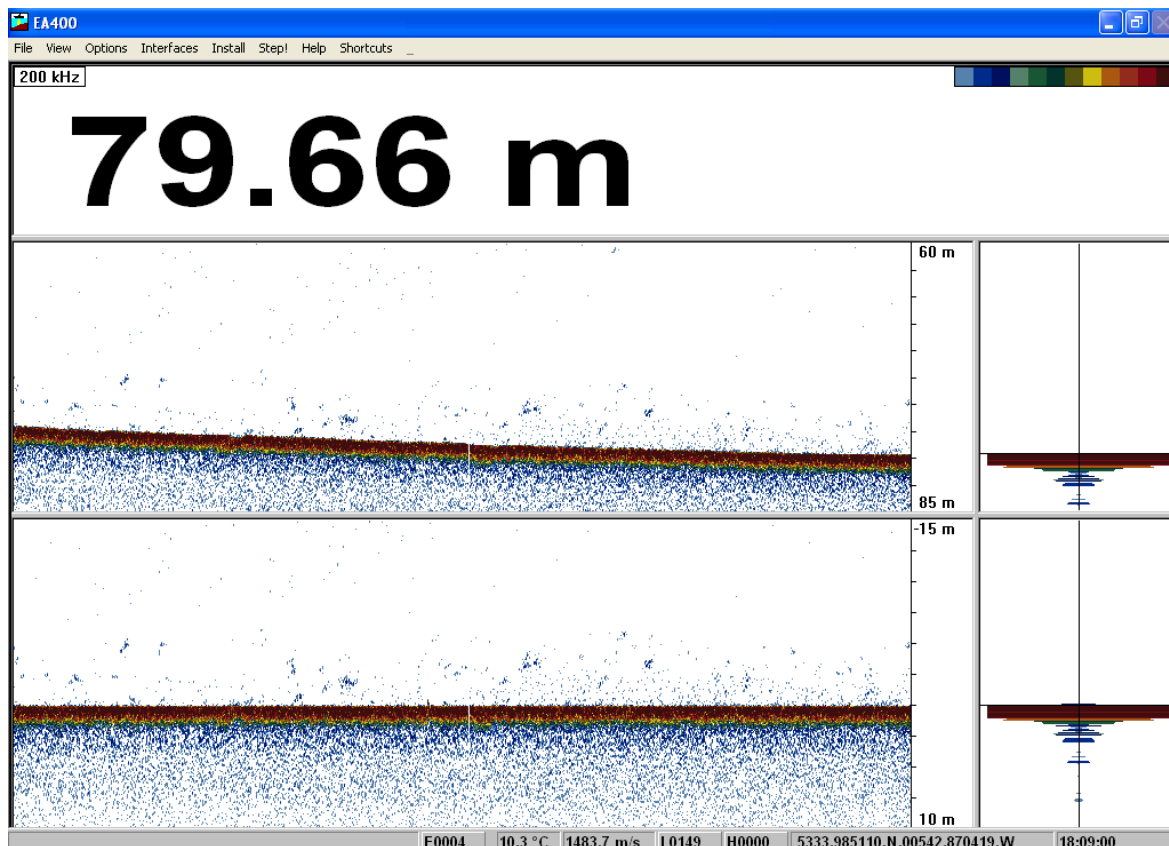


## Single Beam Echosounder (SBES)

Single Beam Echosounders, as the name suggests, emit a single beam of acoustic energy through the water column directly under the boat. An SBES works the same way as a Multibeam system, releasing a series of energy pulses in the form of sound waves, "enisonifying" (filling with sound) a small area underneath the boat. Water depth measurements can be made along the ships track meaning the output data is in profile.

SBES were the first types of sonar devices developed but are now less common as a typical multi-beam system is more efficient. INFOMAR still employs the Kongsberg EA400 SBES to measure water depth and as quality control for our MBES data. Additionally, multi frequency SBESs such as the [Kongsberg EK60](#) installed on-board the RV Celtic Explorer are used by fisheries scientists to estimate the relative abundance of fish in Irish waters. This information determines catch rates, management advice and national quotas for the following year (more information [here](#)).

Recommended operating guidelines (ROG) for SBES survey can be downloaded [here](#). SBES data collected by INFOMAR are available for download [here](#).



Depth profile generated by the EA400 SBES system on the RV Celtic Voyager