

Mediterranean Marine Science

Vol 22, No 4 (2021)

Special Issue



Acoustic correction factor estimate for compensating vertical diel migration of small pelagics

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doi: [10.12681/mms.25120](https://doi.org/10.12681/mms.25120)

To cite this article:

BONANNO, A., BARRA, M., DE FELICE, A., GIANNOULAKI, M., IGLESIAS, M., LEONORI, I., VENTERO, A., ARONICA, S., BIAGIOTTI, I., TIČINA, V., CANDUCI, G., & GENOVESE, S. (2021). Acoustic correction factor estimate for compensating vertical diel migration of small pelagics. *Mediterranean Marine Science*, 22(4), 784–799. <https://doi.org/10.12681/mms.25120>

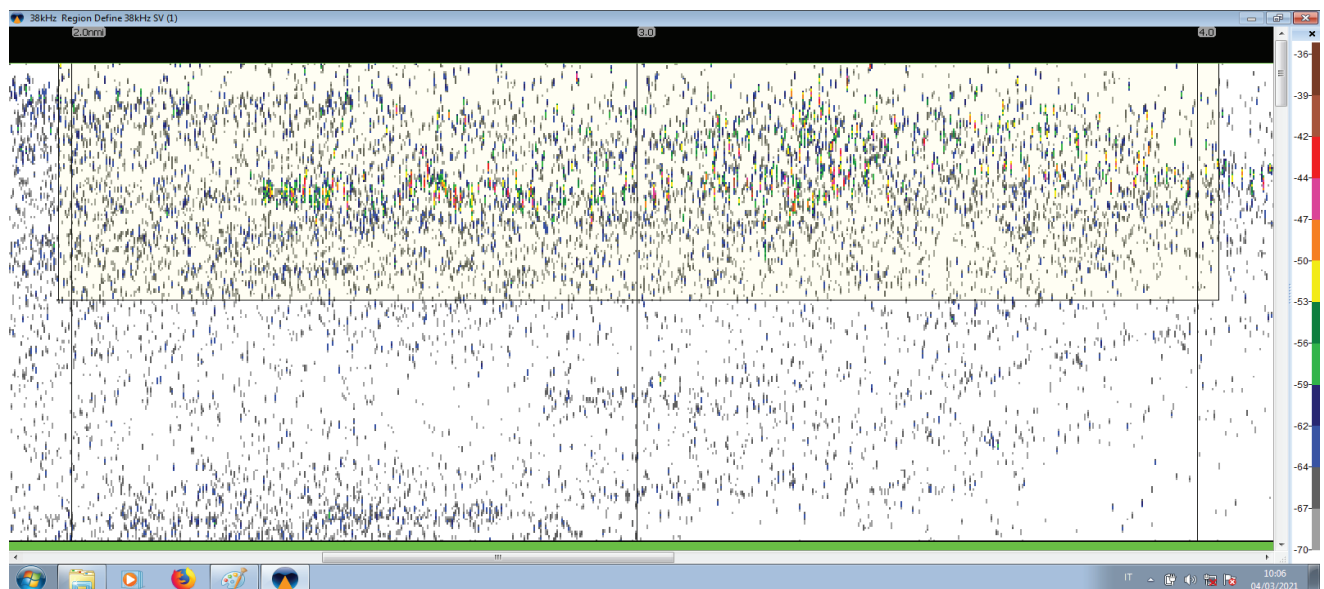
Contribution to the Special Issue: "MEDiterranean International Acoustic Survey (MEDIAS)"

Acoustic correction factor estimate for compensating the vertical diel migration of small pelagic species

Angelo BONANNO, Marco BARRA, Andrea De FELICE, Marianna GIANNOULAKI, Magdalena IGLESIAS, Iole LEONORI, Ana VENTERO, Salvatore ARONICA, Ilaria BIAGIOTTI, Vjekoslav TIČINA, Giovanni CANDUCI and Simona GENOVESE

Mediterranean Marine Science, 2021, 22/4, Special Issue

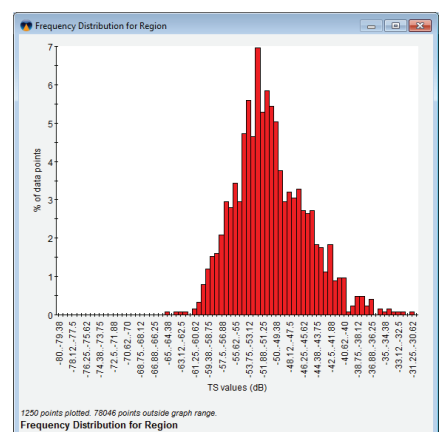
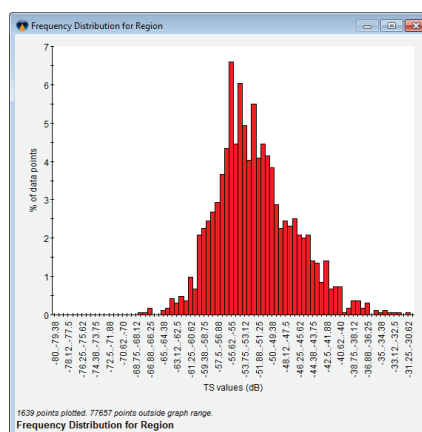
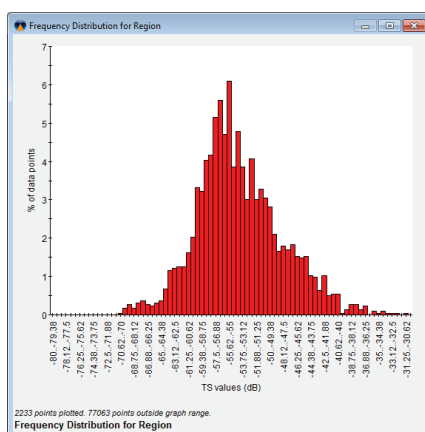
Figure 1S. Scattered targets (fishes and plankton) in the upper part of the water column and frequency distribution of TS values by setting different Sv thresholds (from -60dB to -52dB). As it is possible to observe, the use of higher Sv thresholds gradually reduces the presence of smaller TS values, likely associated to smaller targets.



Sv Threshold = -60 dB

Sv Threshold = -58 dB

Sv Threshold = -56 dB



$Sv_{\text{Threshold}} = -54 \text{ dB}$

$Sv_{\text{Threshold}} = -53 \text{ dB}$

$Sv_{\text{Threshold}} = -52 \text{ dB}$

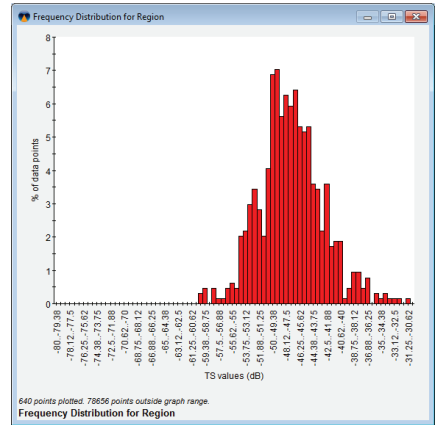
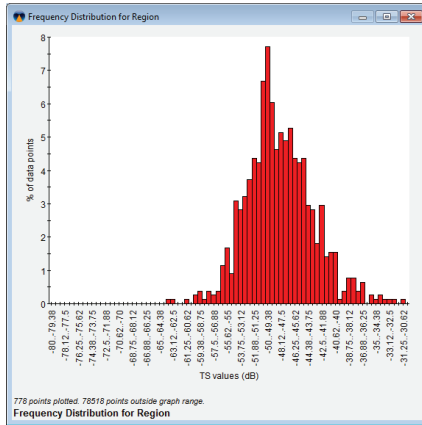
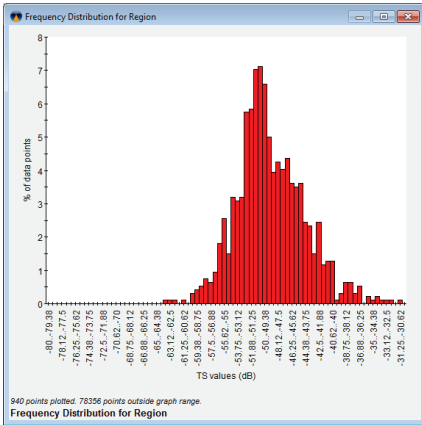
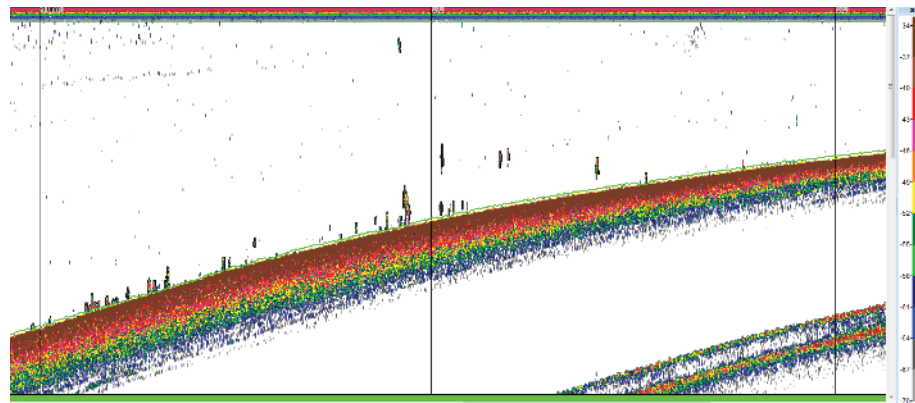


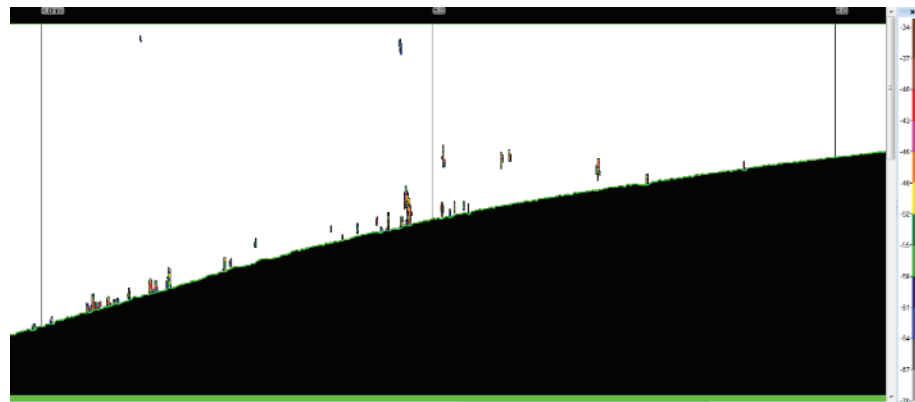
Figure 2S. Acoustic data collected along two transects in the Strait of Sicily.

Transect 38-39 Daytime echogram

$Sv_{\text{threshold}} = -70 \text{ dB}$



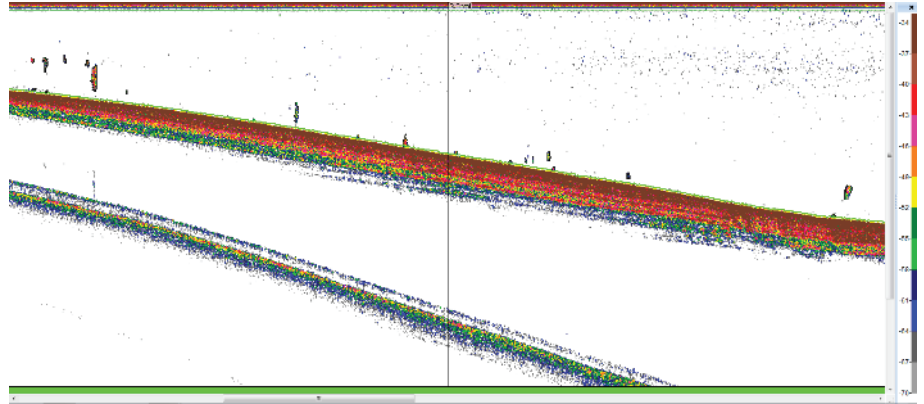
$Sv_{\text{threshold}} = -60 \text{ dB}$



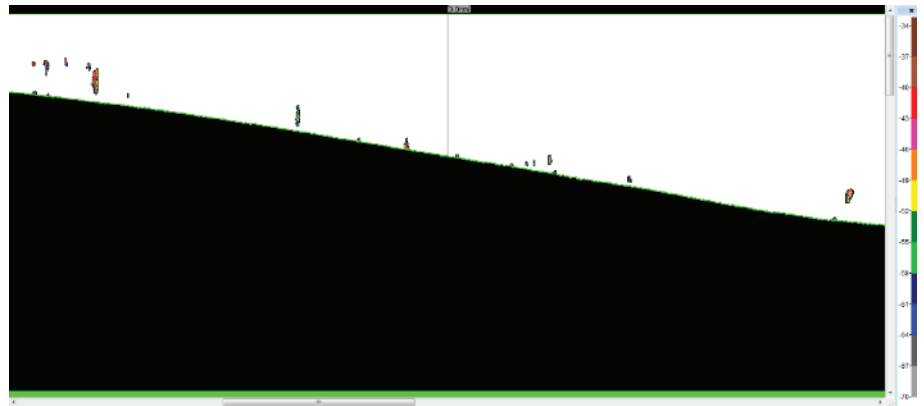
Transect 40-41

Daytime echogram

$Sv_{\text{threshold}} = -70\text{dB}$



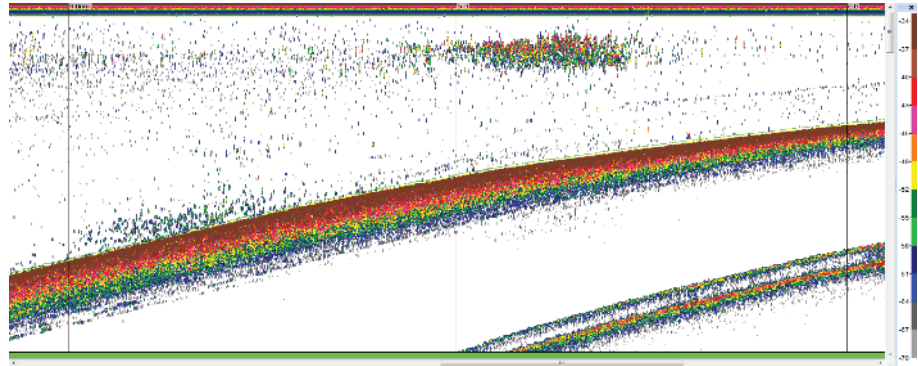
$Sv_{\text{threshold}} = -60\text{dB}$



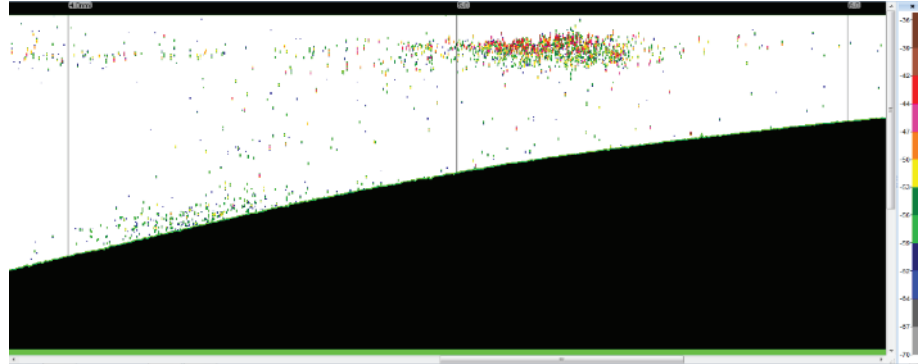
Transect 38-39

Nighttime echogram

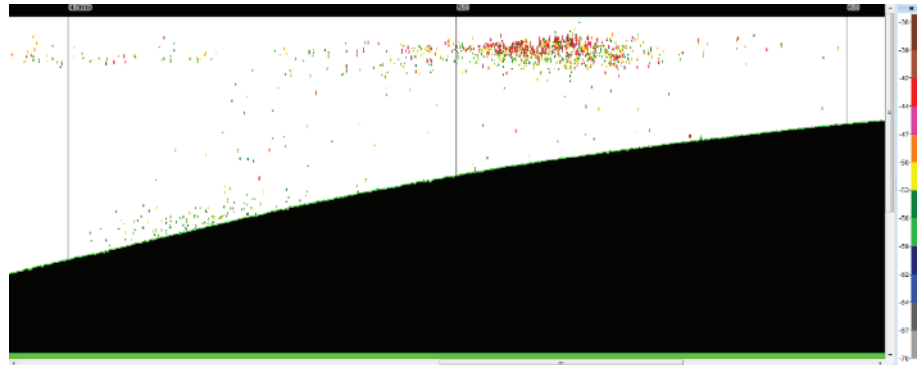
$Sv_{\text{threshold}} = -70\text{dB}$



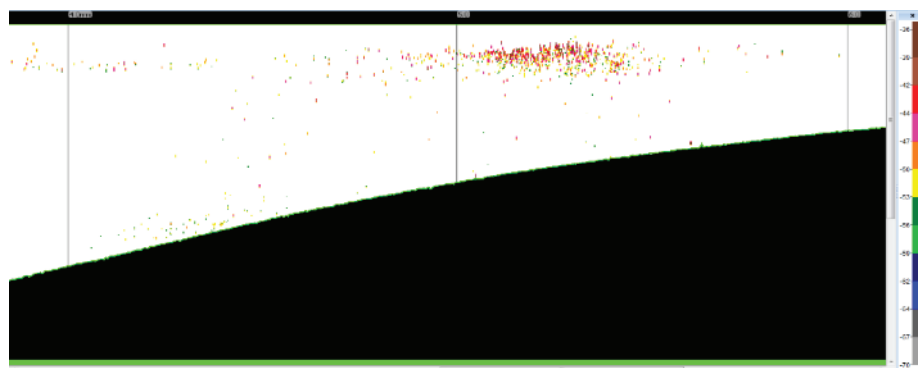
$Sv_{\text{threshold}} = -60\text{dB}$



$Sv_{\text{threshold}} = -56\text{dB}$



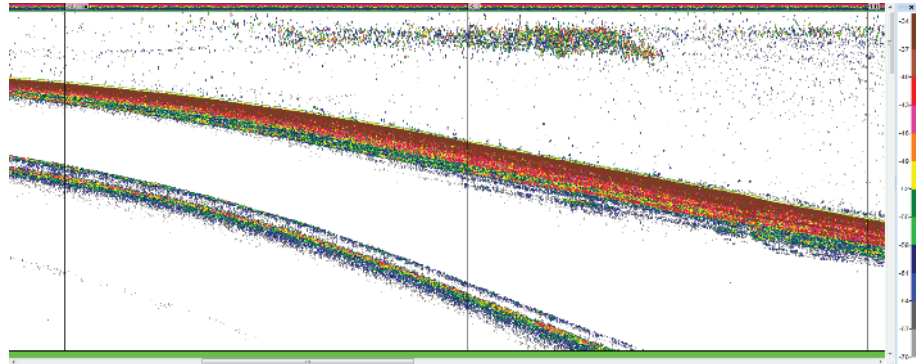
$Sv_{\text{threshold}} = -54\text{dB}$



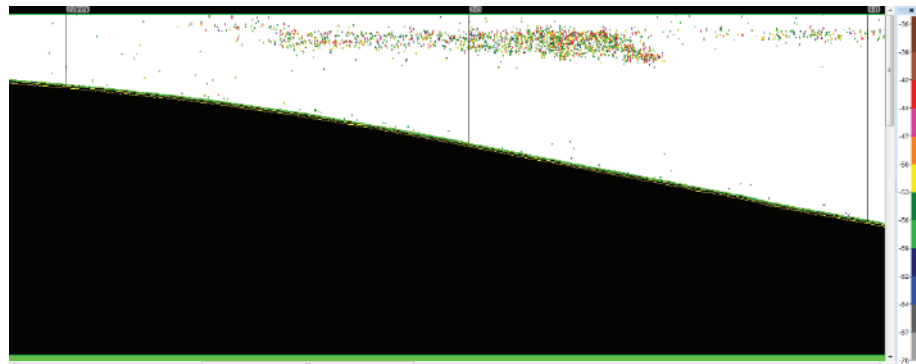
Transect 40-41

Nighttime echogram

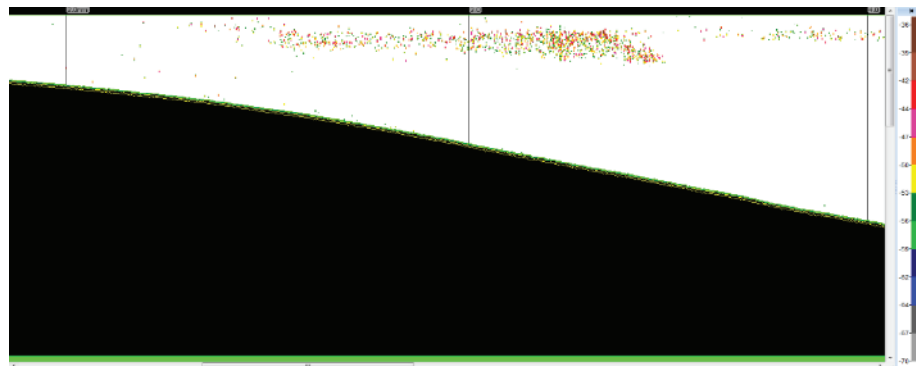
$Sv_{\text{threshold}} = -70\text{dB}$



$Sv_{\text{threshold}} = -60\text{dB}$



$Sv_{\text{threshold}} = -56\text{dB}$



$Sv_{\text{threshold}} = -54\text{dB}$

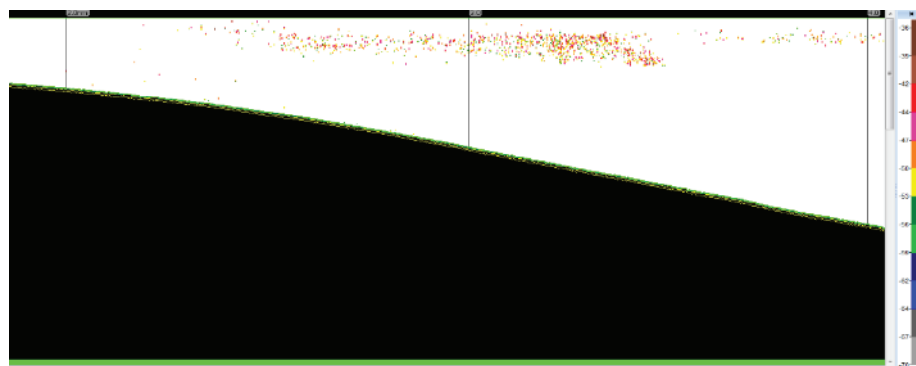
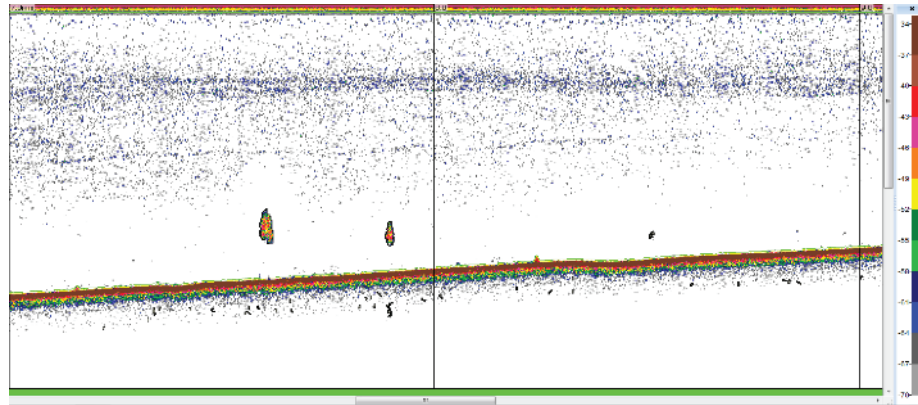


Figure 3S. Acoustic data collected along two transects in the Tyrrhenian Sea.

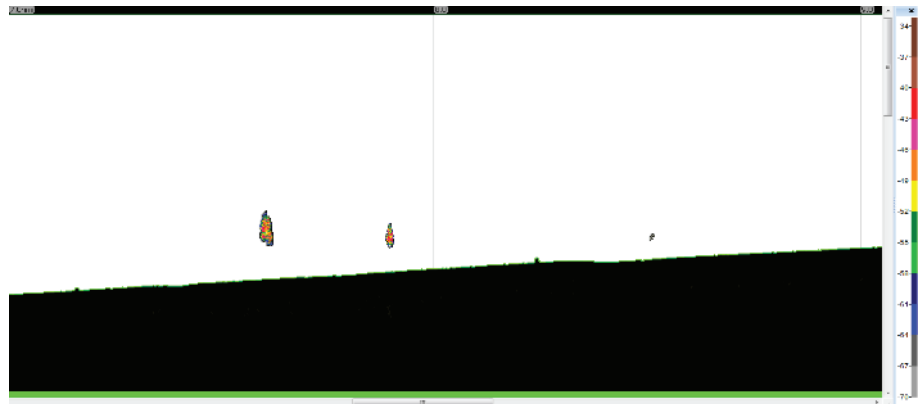
Transect 175-176

Daytime echogram

$Sv_{\text{threshold}} = -70\text{dB}$



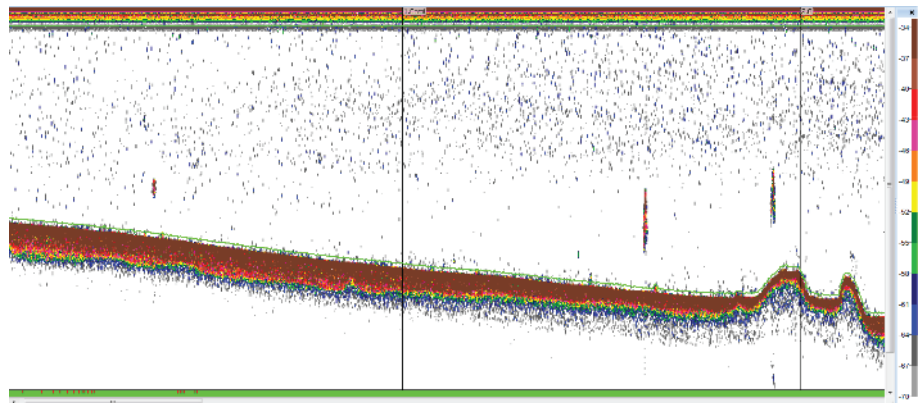
$Sv_{\text{threshold}} = -60\text{dB}$



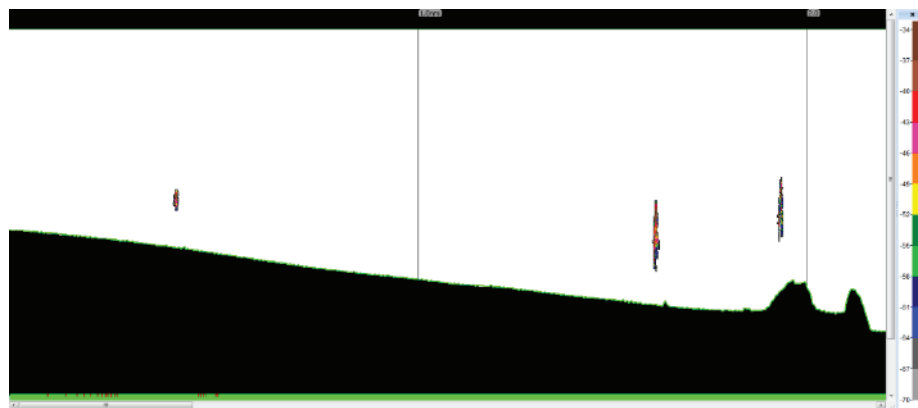
Transect 181-182

Daytime echogram

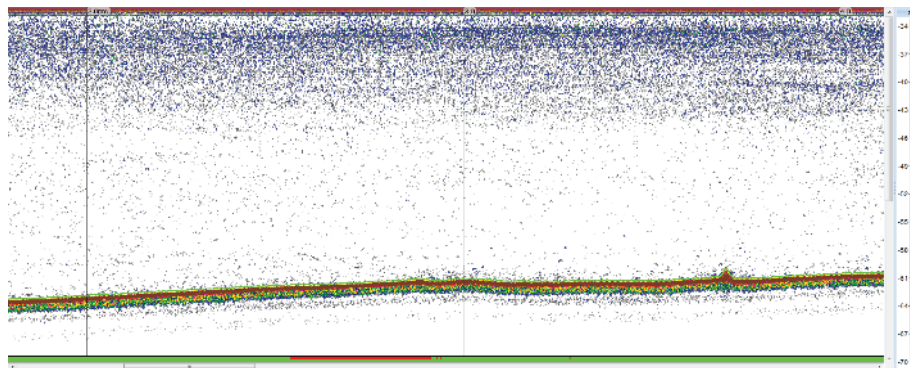
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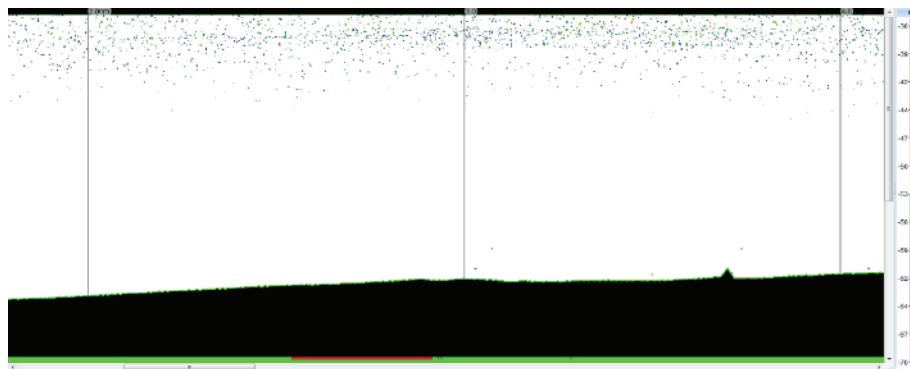
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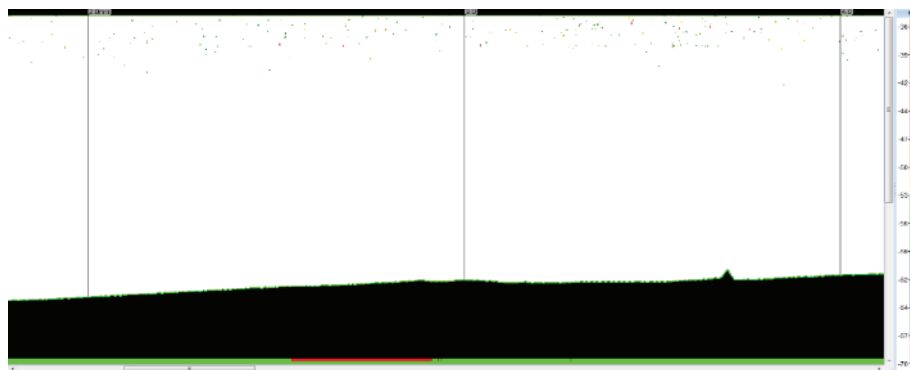
$Sv_{\text{threshold}} = -70\text{dB}$



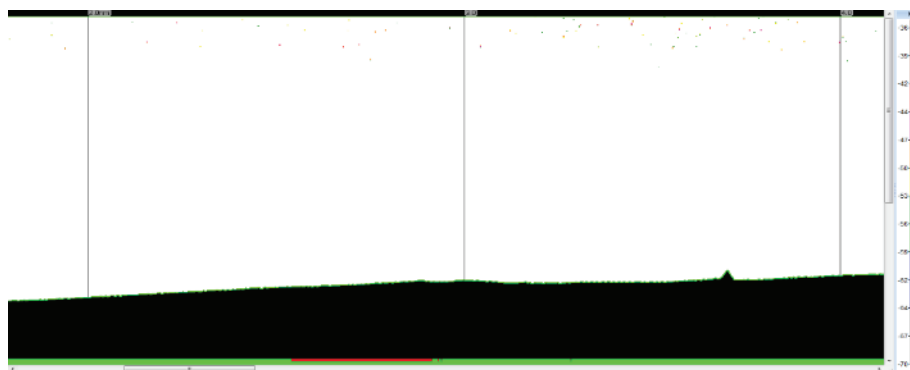
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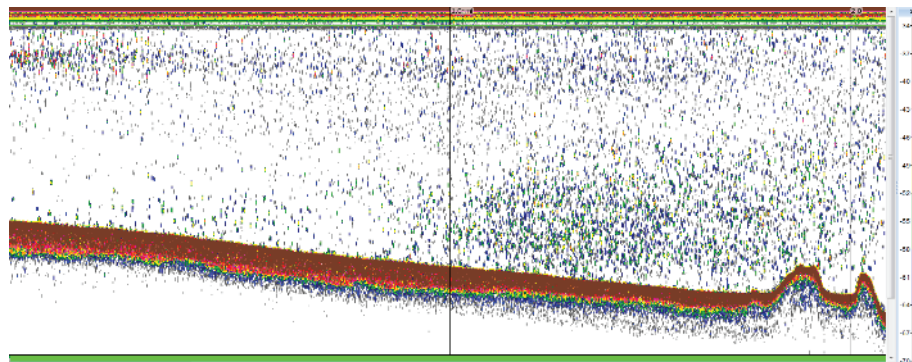
$Sv_{\text{threshold}} = -56\text{dB}$



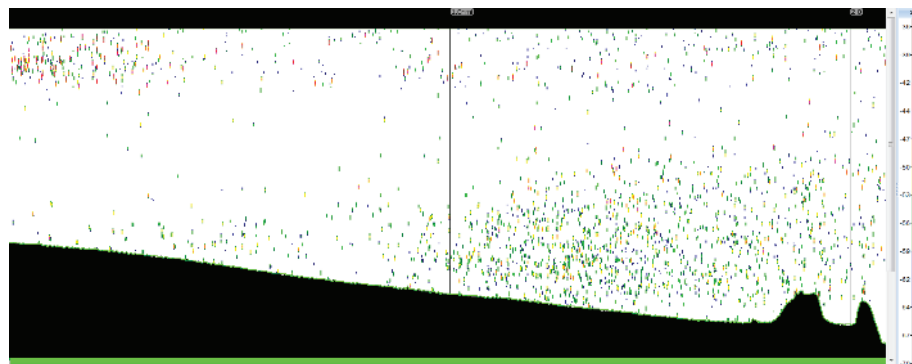
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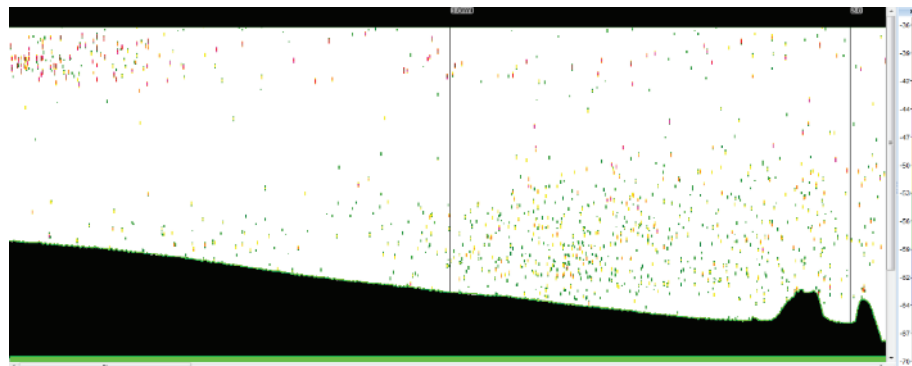
$Sv_{\text{threshold}} = -70\text{dB}$



$Sv_{\text{threshold}} = -60\text{dB}$



$Sv_{\text{threshold}} = -56\text{dB}$



$Sv_{\text{threshold}} = -54\text{dB}$

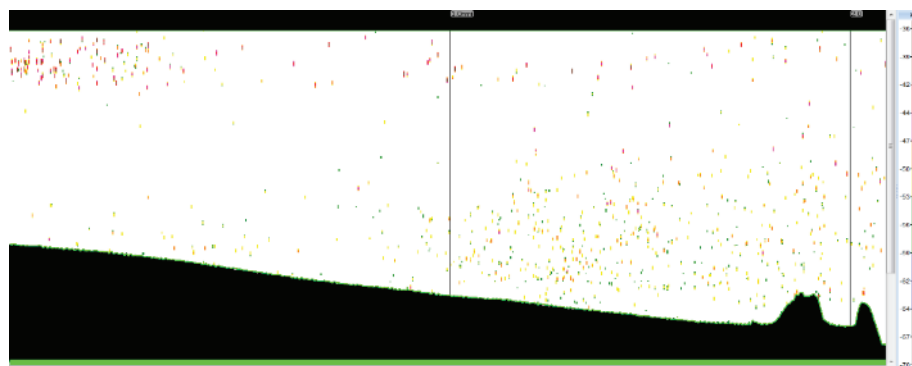
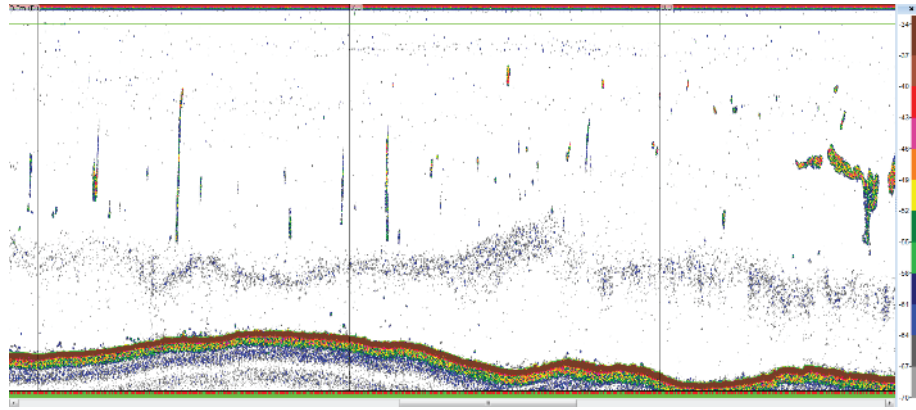


Figure 4S. Acoustic data collected in the Northern Spain area.

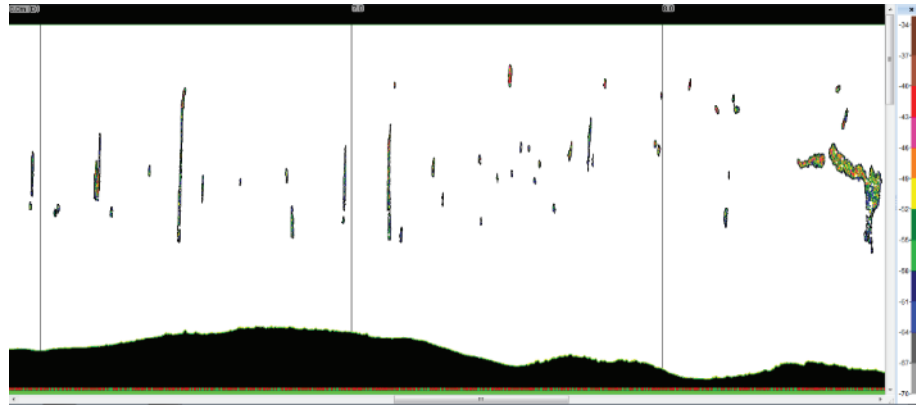
Transect N. 02

Daytime echogram

$Sv_{\text{threshold}} = -70\text{dB}$

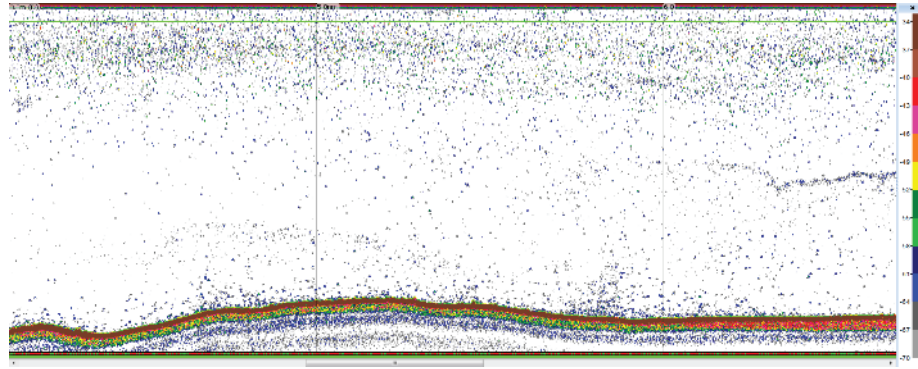


$Sv_{\text{threshold}} = -60\text{dB}$

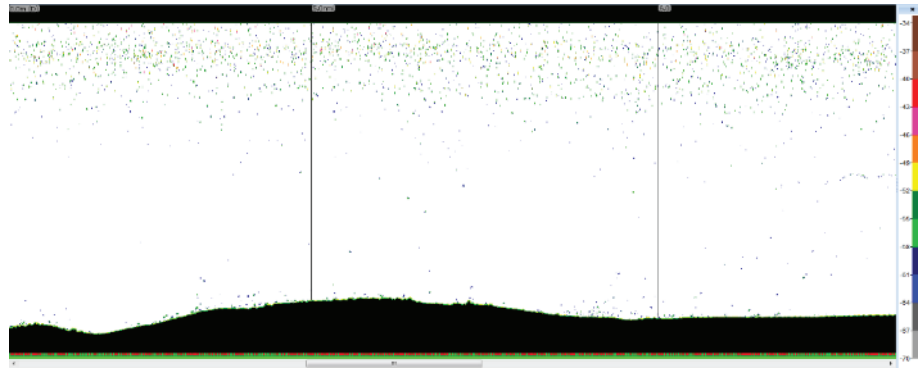


Transect N. 02 Nighttime echogram

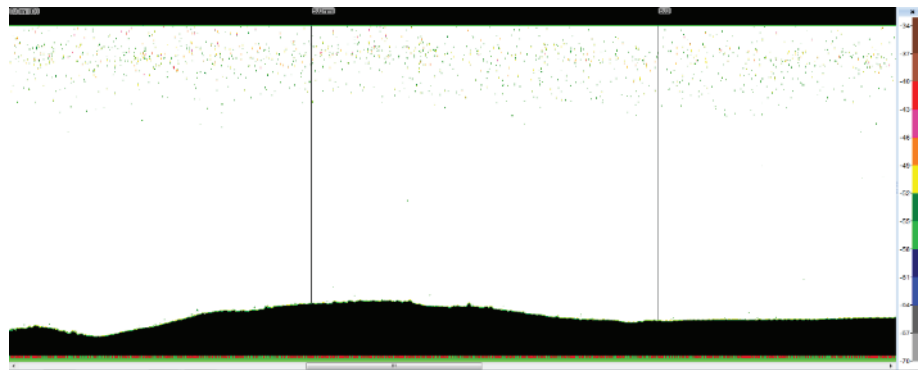
$Sv_{\text{threshold}} = -70\text{dB}$



$Sv_{\text{threshold}} = -60\text{dB}$



$Sv_{\text{threshold}} = -56\text{dB}$



$Sv_{\text{threshold}} = -54\text{dB}$

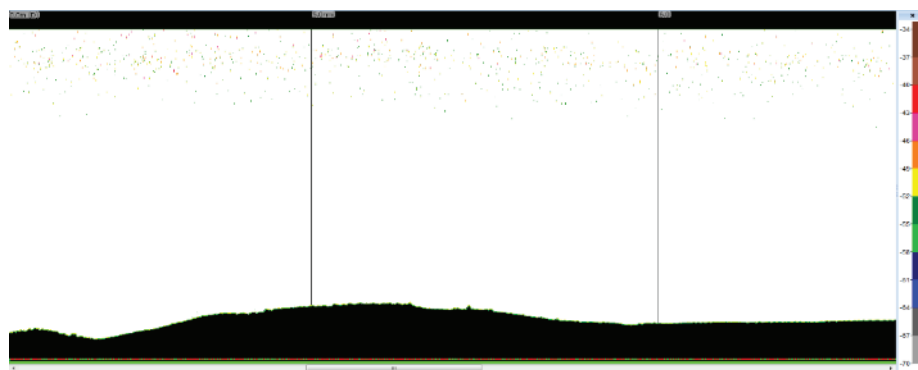
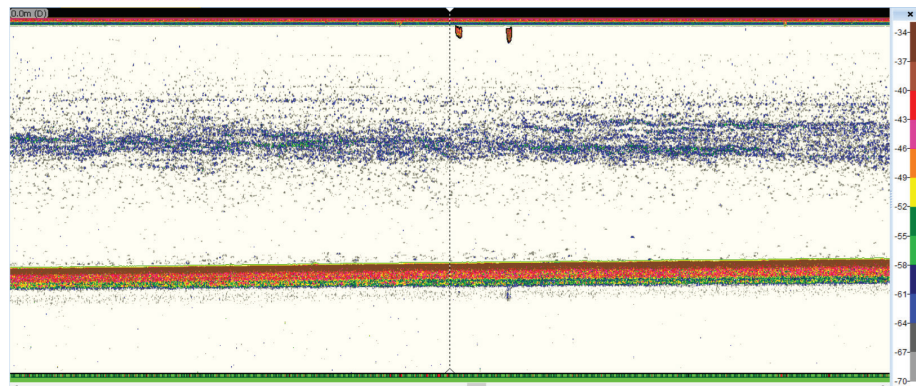


Figure 5S. Acoustic data collected along two transects in south-western Adriatic Sea.

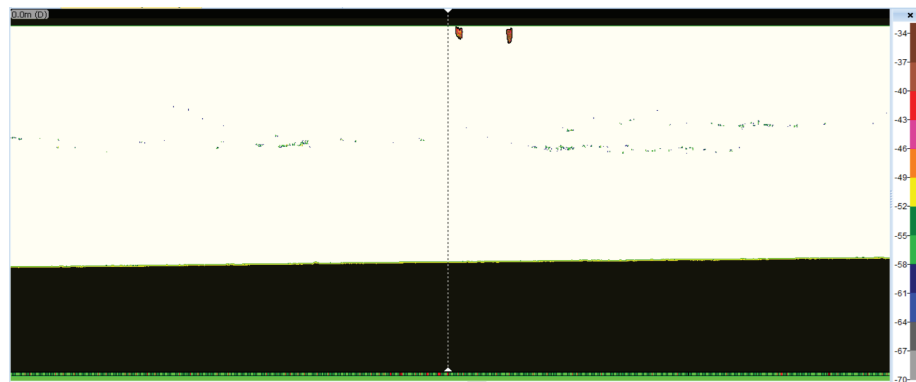
Barletta area

Daytime echogram

$Sv_{\text{threshold}} = -70\text{dB}$



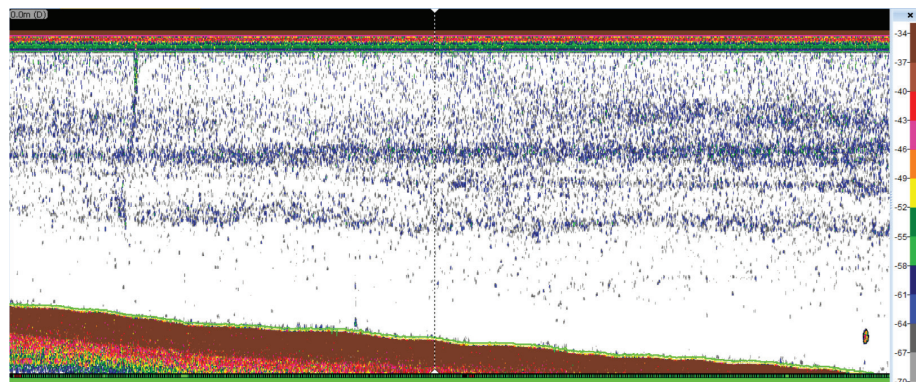
$Sv_{\text{threshold}} = -60\text{dB}$



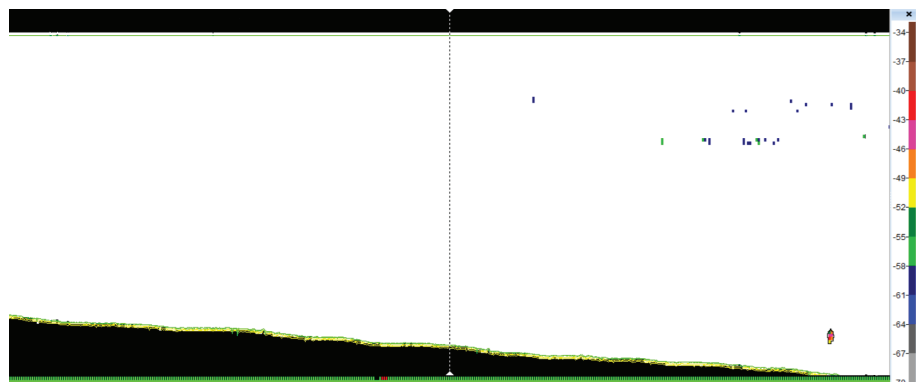
Vasto area

Daytime echogram

$Sv_{\text{threshold}} = -70\text{dB}$



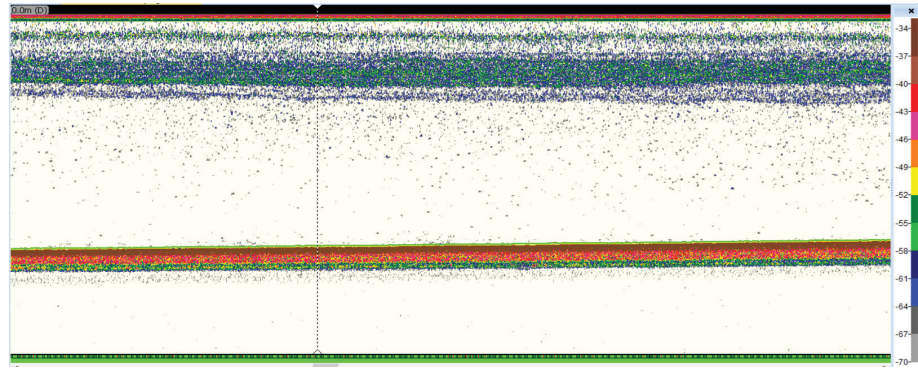
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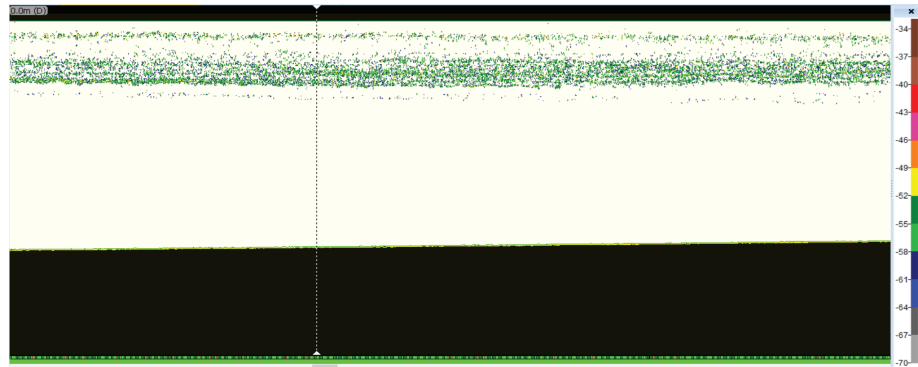
Barletta area

Nighttime echogram

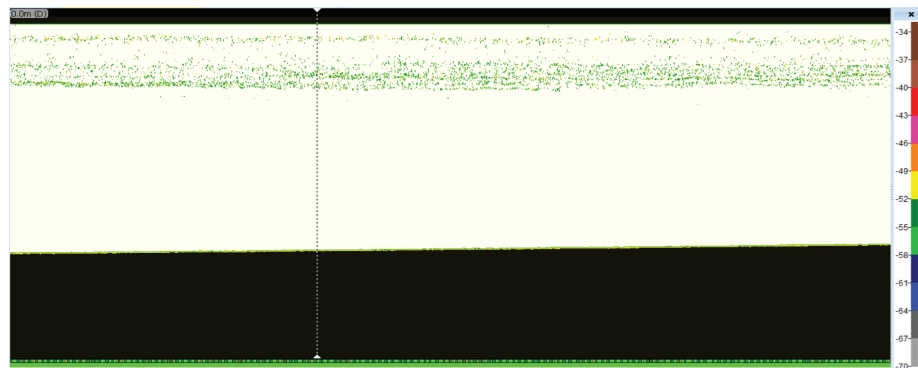
$Sv_{\text{threshold}} = -70\text{dB}$



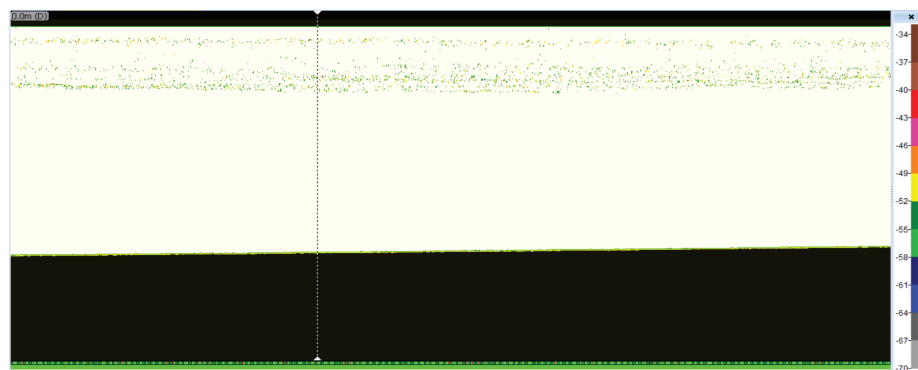
$Sv_{\text{threshold}} = -60\text{dB}$



$Sv_{\text{threshold}} = -56\text{dB}$



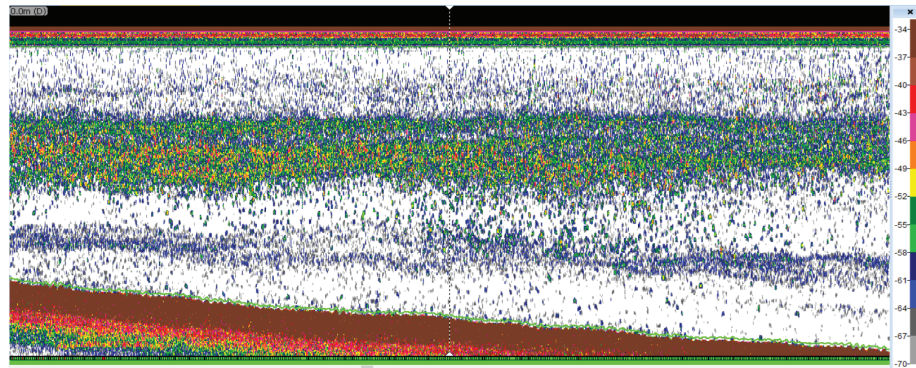
$Sv_{\text{threshold}} = -54\text{dB}$



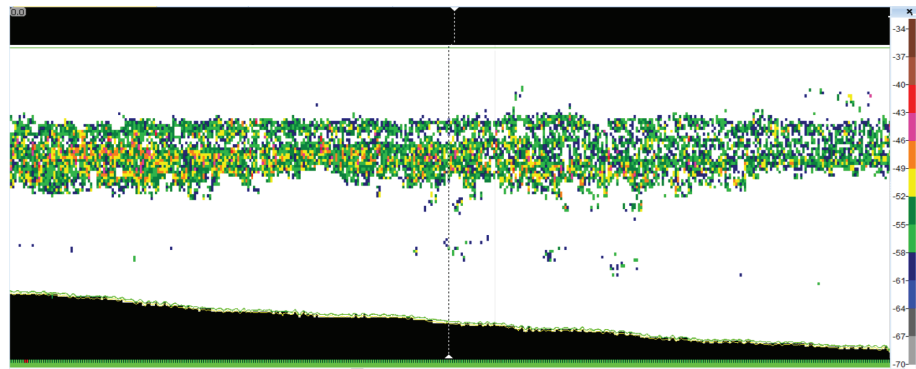
Vasto area

Nighttime echogram

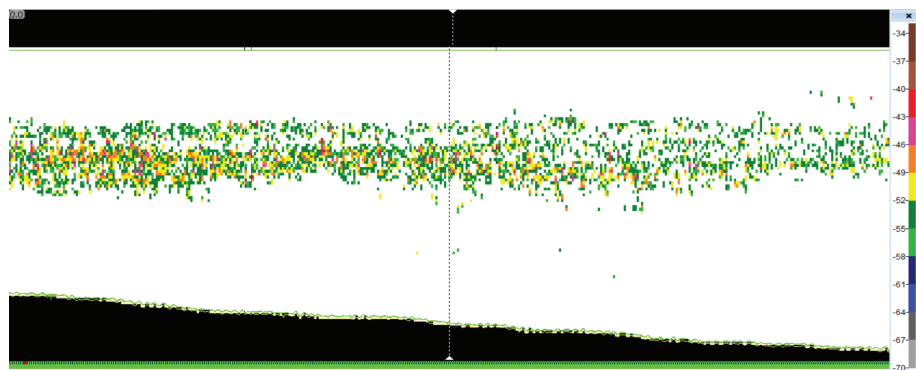
$Sv_{\text{threshold}} = -70\text{dB}$



$Sv_{\text{threshold}} = -60\text{dB}$



$Sv_{\text{threshold}} = -56\text{dB}$



$Sv_{\text{threshold}} = -54\text{dB}$

