

Correction on school geometry and density: approach based on acoustic image simulation



Models of simulated schools have been used to determine the intrinsic variability in echotrajectories due to beam pattern effect. This work concerns only morphometric and energetic parameters that can be extracted from echotrajectories. It appears that dST, the difference between school density and processing threshold is a key parameter, which directly influences the concerned detection angles. Relations, taking into account dST but also, Nbi, the relative school length image compared to the beam width, have been settled for the calculation of length and density corrections. In most cases, corrected values are obtained with errors less than respectively 5% for length and 0.5 dB for density (reverberation index), provided that the Nbi value is 1.5 or more. When Nbi is less than 1, it seems impossible to bring some pertinent corrections. The school energy does not need any correction. It is recommended to use threshold values not too low, to avoid detection through the side lobes. However this setting must be determined in order to obtain dST values greater than 10 dB. Thresholds between -60 and -65 dB seem adequate, at least for schools volume backscattering strength (VBS, Sv) values commonly encountered in the Bay of Biscay.

Auteurs du document : Noël Diner

Obtenir le document : EDP Sciences

Mots clés : acoustic, fish detection, fish schools

Thème (issu du Text Mining) : METHODE ET STATISTIQUES, MOT OUTIL

Date : 2001-07-15

Format : text/xml

Source : [https://doi.org/10.1016/S0990-7440\(01\)01121-4](https://doi.org/10.1016/S0990-7440(01)01121-4)

Langue : Anglais

Télécharger les documents : [https://www.alr-journal.org/10.1016/S0990-7440\(01\)01121-4/pdf](https://www.alr-journal.org/10.1016/S0990-7440(01)01121-4/pdf)

Permalien : <https://www.documentation.eauetbiodiversite.fr/notice/correction-on-school-geometry-and-density-approach-based-on-acoustic-image-simulation0>

[Evaluer cette notice:](#)