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Geoacoustic characterization of the seafloor from a subbottom profiler applied to the BASE'07 experiment

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The most recent subbottom profilers present good performances in term of signal to noise ratio, resolution and penetration. These devices can thus be used to infer quantitatively the geoacoustic parameters of the seafloor.
We have previously developed inversion methods which aim to estimate absorption, reflection, penetration, impedance contrast and micro-roughness in sediments from the SBP 120 subbottom profiler, manufactured by Kongsberg. These methods have been tested against real data and geoacoustic parameters derived from the SBP 120 are fully coherent with in situ measurements, which tends to confirm the possibility of seafloor characterization with subbottom profilers.
In this work, the inversion methods are applied to a set of data acquired on the Malta Plateau during BASE'07 experiment.Geoacoustic parameters results are presented and discussed. They are in good agreement with the a priori knowledge of sediment properties in the area.