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**Sperm whale monitoring with a deep acoustic platform: Results
from NEMO ONDE experiment and way ahead**

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Within the INFN NEMO Project on the underwater detection of high energy neutrino, a deep hydrophone station, named ONDE (Ocean Noise Detection Experiment), has been deployed on the seafloor 21 km offshore Catania (Sicily, Italy), at 2000 m depth. Acoustic data recorded in 2005 and 2006 provided long term information on the underwater noise and a huge amount of sperm whales' detections that indicate a presence of the species higher than previously believed. Only few sightings are available for the previous years and scarce literature is available for the area. With ONDE, in year 2005 sperm whales were detected in 117 of the 231 recorded days and in 31 of the 83 days in year 2006. Clicks were the most common vocalizations recorded. Chirrup and codas (dominated by the 3+1 pattern) were present frequently, but creaks, possibly indicating feeding actions, were seldom heard. The whales were often detected, solitary or in groups, for time segments of only a few hours. This, with the low rate of creaks, may mean they were just in transit. Based on these results, a new project named (Listening Into the Deep Ocean) has been set with INGV to create a Mediterranean wide network by upgrading existing underwater seismic detectors with broadband acoustic sensors.