

International workshop. Cetacean echolocation and outer space neutrinos:  
ethology and physics for an interdisciplinary approach to underwater  
bioacoustics and astrophysical particles detection



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## Look who's talking –classification of whale sounds using the Whale FM Citizen Science project

*Saturday, 19 October 2013 16:10 (50 minutes)*

Long term acoustic monitoring, which is required for assessing impact of anthropogenic activities on marine mammals, leads to increasingly large acoustic datasets that need to be classified. Although significant improvements have been made in applying automated methods to categorize marine mammal calls, scientists often still have to rely on human judgment to classify calls into call categories, which is challenging especially for vocal species.

The Whale FM project was launched in November 2011 to investigate the feasibility of Citizen Science for classifying large acoustic datasets. The aim of the project is to establish the call repertoire of vocally active marine mammal species, such as killer whales and pilot whales, using Citizen Science. The Whale FM project builds on previous successes of Citizen Science in the fields of astronomy, and is a first interdisciplinary attempt to apply this approach to the field of bioacoustics on a large scale. The Whale FM dataset contains approximately 15,000 recorded calls of vocally active whale species: Norwegian and Icelandic killer whales and Norwegian long- and Bahamas short-finned pilot whales. To date, approximately 14,000 volunteers have matched calls almost 217,000 times in the Whale FM project, demonstrating the capacity of Citizen Science to handle large acoustic datasets. I will present initial results of the Whale FM dataset, and discuss the benefits and challenges of applying Citizen Science to classification of marine mammal calls.

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