

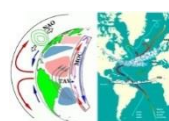
36- Title: First tridimensional pelagic fish school observation from scientific multibeam echo sounder in Africa

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Abstract: Since the 70's, numerous fisheries acoustic surveys have been carried out in Africa, particularly off West African coast. Traditional echo sounders, single and split beam, usually only detect a slide of fish schools occurring over the continental shelf, due to their low depth or and wide size as well as the avoidance reaction in front of a cursing vessel. The Simrad ME70 (70–120 kHz), is a high resolution scientific multibeam echo sounder, characterized by calibrated narrow beams and low sidelobe levels, which allow tridimensional rebuilt of an entire fish school. Early trials were performed in the middle of 90's using a Reson Seabat 6012 multibeam sonar (455 kHz) in vertical beaming, in Senegal and Ivory Coast. In this work we present preliminary result obtained during the AWA cruise off Senegal, Gambia and Mauritania. The upwelling during March 2014 was strong and seldom schools were observed in the beginning of the survey over Mauritanian shelf, but cluster of large schools were detected in Senegal. Using dedicated software (movies3D) we have extracted fish school descriptors. Consistency in fish school descriptors was validated between the Reson sonar and Simrad SM 20 ones in previous study, i.e. schools descriptors extracted are comparable, we assume that also could be the case with ME70. Such hypothesis will allow comparing the change in Senegalese fish school characteristics since early records in 1997-99. Such new scientific multibeam system (ME70) will allow new fishery research applications on African small pelagic fish schools for stock assessment and behavioural studies.

PREFACE-PIRATA-CLIVAR Tropical Atlantic Variability Conference



August 25th – 27th 2015, Breakwater Lodge, Cape Town, South Africa

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