

HYBRID AUV FOR UNDERWATER NOISE CONTROL

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The article substantiates the appearance of an autonomous uninhabited underwater vehicle carrying a vector-scalar sound receiver on board. The device is equipped with buoyancy and moment of stability control systems that provide a change in its function. The proposed configuration, along with the usual function of an autonomous underwater vehicle, makes it possible to implement underwater glider modes for entering a remote area of underwater patrolling. At the same time, it is possible to implement a low-noise receiving hydroacoustic station with a controlled mode of movement in the water column and a radio beacon mode with navigation and communication tools. The prospects for the use of such a hybrid underwater vehicles are determined by the possibility of solving assignment problems on board in real time. Algorithms for detection and direction finding of a source of broadband noise by a data processing system as part of the vehicle are proposed.

Keywords: hybrid autonomous underwater vehicle, underwater glider, passive underwater environment monitoring system, vector-scalar sound receiver, detection of an underwater broadband noise source.

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