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**TRAITS OF BOTTOM SONAR SOURCES OF NAVIGATION SIGNAL COORDINATION WITH USE OF TOWED ANTENNA MODULE**

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**ABSTRACT**

A method is proposed for implementing the optimal trajectory of towing an antenna module, which saves time when coordinating bottom sonar beacons without significant loss of accuracy. The designed method evaluates the towed antenna coordinates without using sonar navigation systems. In compliance with the results of flexible inextensible cord simulation the analytic dependences of towed antenna coordinates on communication line length and velocity of travel are determined. The algorithms of evaluation the towed antenna coordinates relative to carrier are developed, based on satellite navigation system data of its velocity of travel, antenna module course and communication line length.

**Key words:** towed antenna module; sonar source of navigation signals; satellite navigation system receiver; carrying coupling cable; sonar navigation system.

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