Aircraft guidance system based on prior information on the target location

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Developing aircraft that navigates towards the target automatically within a given margin of error is an urgent issue. Hence, the paper considers an aircraft guidance system that implements terminal homing guidance. As a source of data on target location, we propose using popular radar seekers featuring two instrument channels: a goniometer and an altitude meter. We note that clutter or jamming will interfere with seeker operation and, as a result, significantly decrease the accuracy of the hit. This is why there exists an objective to develop guidance systems ensuring that the desired homing accuracy will be possible when the enemy adopts radar countermeasures. In order to implement this, we consider a method of restoring lost data using other, uncorrupted measurements as an information base. We designed terminal guidance algorithms for a given missile that show the efficiency of the system developed.

Keywords: *aircraft, homing accuracy, guidance system, interference*

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