Development of operation algorithm for the guidance system of an air-launched object to a moving target

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In this paper we propose the operation algorithm and the functional diagram of the guidance system of an air-launched object to a moving target. The functional diagram includes a digital computer and a complex of optoelectronic devices. The algorithm on-the-fly takes into account the impact of air drag force on the launched object. The software based on the proposed algorithm is developed, which allows to carry out the guidance of the object to a moving target in semi-automatic mode. We present the block diagram of the program and provide the estimation of the guidance system uncertainty.

Keywords: guidance system, sight line, angle of allowance, guidance angle, sighting system, optical locator, digital computer, line and angle guidance error.

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