# Analysis of ballistic problems of management of prospective manned transport vehicle descending from the artificial Earth satellite orbit for safe landing on the territory of Russia

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*The article considers a set of problems of a prospective manned spacecraft descent management. The problems create significant difficulties for high-precision landing of the return vehicle on the territory of Russia and safe engine compartment submergence in the Pacific Ocean. The tasks of selecting the landing areas are formed as well as the requirements for accuracy of the return vehicle descent control. The features of high-precision navigation during letdown were studied using data obtained from satellites. A comparative analysis of the principles of controlled descent with reference to the choice of control system algorithms is performed. Characteristics of the features of descent trajectory control software for high-precision landing are given. The principles of safe completion of the flight of the spacecraft engine compartment in order to prevent the fall of structural elements near areas with high population density are presented. The possible ways of solving the assigned tasks are indicated and a conclusion is made about the principle possibility of arranging the manned return vehicle landing on the territory of Russia taking into account the modern level of high technology development.*

***Keywords:*** *manned spacecraft, return vehicle, landing on the territory of Russia, submergence of the engine compartment*

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