ESTIMATION OF TECHNOGENETIC SUBSTANCE FLOW DENSITY DISTRIBUTION IN TIME AND SPACE WITH REGARD TO LOCAL BREAKAGES OF SPACE VEHICLE COMPARTMENTS

Samara State Aerospace University

The paper considers an approach which makes it possible to estimate Technogenetic substance flow density distribution in time and space. The is a cloud of fragments of the broken space vehicle compartments. Specific indicators are chosen to estimate the cloud parameters. The solution of the problem involves modeling the breakage of a space vehicle compartment with a given number of fragments in the cloud. The fragments masses, ballistic coefficients, velocities and directions of flying are chosen. The orbits of the fragments formed and their further evolution are calculated. The author proposes making estimations for certain given values of volume calculated relative to the basic trajectory of the space vehicle broken. The modeling results for the chosen case of space vehicle breakage are given.