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ON THE POSSIBLE VARIANTS OF SPACE DISPOSAL OF RADIOACTIVE WASTE
ACCOMPLISHMENT**Abstract**

Study of the means for realizing the space disposal of radioactive waste (RW) leads to diversity of conceptual solutions concerned with basic technical aspects of the problem. Disposal object as well as disposal place and delivery method are polyvariant. The goal of this paper is to minimize the number of possible variants combinations in order to provide their more detailed examination. It is proposed the procedure for quantitative comparison of different variants combinations based on estimation of each variant by criteria of technical realizability, risks, realization term, cost, public acceptability. Three variants of disposal object, six variants of disposal place, three variants of delivery method and correspondingly 54 variants of their combinations are examined. It is determined that difference between combinations that scored minimal and maximal points makes up near 15. Therefore, the number of variants combinations under study can be decreased from 54 to 8-12. Variants adjacent to maximum area are: - waste of "dry" treatment method of spent fuel (SF) and untreated SF after water storage, as for disposal object; - heliocentric orbit and moving away the Solar system bounds, as for disposal place; - use of launch vehicles (single-launch and multi-launch version) as well as combined method using Space Lift (tether system) to deliver RW onto parking NEO and launch vehicles for further transportation, as for delivery method.