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ABOUT RESULTS OF COMPARING THE EFFECTIVENESS OF DIFFERENT SCENARIO FOR LUNAR EXPLORATION

Abstract

The authors consider various scenarios for lunar exploration simultaneously by manned and automatic space vehicles. Have a problem to the evaluating effectiveness and the conducting comparative analysis of these scenarios, because scientific and technological results of those missions are difficult to formalize and quantify measured. Authors proposed the formalization methodology of this task, which is depend understanding five main objectives for exploration of the Moon. For compare missions proposed description 31 characteristics of the missions, which are describing the achievement of stated exploration goals. The method takes into account possible changes in weight ratios of these characteristics if parameters were achieved for various levels in the framework of this mission. As an example authors have considered nine variants of missions for exploration of the moon, combining manned and unmanned means, and (for example) one mission without manned vehicle. Using the proposed method, they give the comparison of these scenarios, recommendations on the most preferable of them.