

## Classification of technological processes in terms of their implementation on a space industrial platform

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The purpose of this article is to develop a classifier and classification of technological processes in space to implement them on a space industrial platform. In the nearest future, mankind may face global challenges, first of all, the global warming problem and the problem of limited terrestrial resources. One of the obvious solutions to these problems is the industrialization of near space first and deep space and celestial bodies in the future. The initial stage of space industrialization is the construction of space industrial platforms in Earth orbits. The problem of space industrial platform construction is many-sided and requires various information. Currently, there exist works that are concerned to some extent or another with the implementation of a number of technological processes in space, which are studied by scientists and developers in the relevant fields. Implemented in space, unique technological processes allow one to obtain materials with qualitatively new characteristics. The article presents a set of criteria for the classification of technological processes in space, a classifier developed on their basis for the classification of the processes in terms of their implementation on a space industrial platform, an analysis of technological processes to be implemented in space, and a set of their parameters to be provided on the platform. Using the classifier, functional diagrams of various technological processes implementable in near space are analyzed. The functional diagrams contain basic and auxiliary modules according to the process type. A relationship between the process and basic parameters of an industrial platform is shown. The freight flow, the communication and control channels, the power supply, and the thermal regime, ventilation, and vacuumizing assurance of the platform are determined and shown schematically.

**Keywords:** *space industrial platform, technological processes, vacuum and zero gravity, substances and materials, space debris.*

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Received on June 1, 2022,  
in final form on June 27, 2022