
Final ascent to the geostationary orbit with the electric propulsion engine

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The article describes the analysis of the schemes of completing spacecraft launch into geostationary orbit (GSO) using the electric propulsion system, the assessment of propellant mass and time consumption, and the required values of these parameters for completing spacecraft launch into the geostationary orbit from a transfer orbit. The family of transfer orbits was compared to determine the effectiveness of completing spacecraft launch. The problems associated with spacecraft stay in Earth's radiation belt are discussed. The advantages of completing launch of the spacecraft equipped with electric propulsion systems into the GSO are demonstrated.

Keywords: spacecraft, geostationary orbit, transfer orbit, electric propulsion system, effectiveness of completing spacecraft launch.

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