
Landing dynamics of space shuttle with mechanical landing device on frozen ground

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A model of space shuttle of landing process was developed. A procedure of determining reaction contacts between the elements of mechanical landing device and the body of spacecraft was offered. Dependences to determine interaction force of the landing gear tarel and ground were described. For the most critical case of spacecraft landing on frozen ground dependences on time parameters (describing such processes as overload, liner and angular velocities, clearance) were presented as well as the areas stability of landing process.

Keywords: *space shuttle, landing dynamics, mechanical connection, ground model, overload, stability of motion.*

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