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Simulation of the Operating Conditions of the Lander Radar

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Abstract. The most critical stage of most space projects to explore the planets of the solar system and their satellites is the landing of the lander on the surface, the results of which depend on the success of the mission as a whole. An important role in the landing process is played by a radar, which measures the velocity vector and height of the lander relative to the surface. A certain confidence in the positive outcome of the landing process can be given by the results of ground tests, the authenticity of which depends on the reproduction degree of the expected operating conditions of the landing radar. The paper discusses approaches to simulating the operating conditions of a landing radar during ground tests.

Keywords: lander, radar, reflective surface, motion parameters

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