GEODETIC AND CARTOGRAPHIC ASPECTS OF «PHOBOS-GRUNT» PROJECTS ON THE BASE OF GIS-TECHNOLOGIES

At the beginning of XXI century after almost 20 years interval it is planned to go back to the Solar System bodies investigations by means of space flights. Now there are discussed and realized some projects on the Moon, Mars and its satellites, Mercury, giant-planets satellites and asteroids. Except USA, Russia, Japan the other countries namely India, China, Europe Union began to be active in this direction. The “Phobos-Grunt” project is being realized in Russia. The main goal of this project is to deliver to the Earth the soil probe from this Mars satellite. The base phases of the project include the spacecraft flight to Mars, its transmission to quasi-synchronized orbit relative to Phobos, surveying preliminary chosen landing site and picture processing in order to make more precise the landing site coordinates and relief features, the landing itself, the taking the probe and at last the start of spacecraft returning module with the soil probe to the Earth. Cartographic and geodetic aspects of the project are responsible for the all stages of the method making more precise the Phobos control point network and the landing site operative construction using computer modeling for process realization of automatic landing by means of laser altimeter.

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