Research and development of algorithmic support for the main modes of operation of the strapdown inertial motion control and navigation of small-sized spacecraft

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Developed and investigated Mathematical and algorithmic support for basic modes of operation of strapdown inertial navigation system (SINS) and the control system motion in the areas of manned flight of small-sized spacecraft was developed and investigated. To improve the accuracy of SINS algorithms for complex information processing with astro sensor were developed. The results (methods, models, software and algorithmic support) can be used when designing strapdown systems of orientation and navigation of the new generation for small-sized spacecraft, as well as for development of new and modernization of the existing software of SINS small-sized spacecraft.

Keywords: *astro sensor, strapdown inertial navigation system, a small-sized spacecraft, the control system motion and navigation, scheme correction processing circuit navigation information, Kalman filter.*

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