

demands are made for information-measuring systems in the areas of precision mechanics instruments, namely: the development of sensitive elements of the inertial navigation devices, the design of gyroscopic devices, geophysical instruments, coordinate measuring machines and the like.

Currently the accuracy of such devices is restricted to the precision of primary information sensors. Therefore, the development of effective methods and tools for measuring micro displacements that provide higher accuracy of measurements combined with microminiaturization of sensors as well as selection and analysis of criteria for assessing the quality of sensor circuitry is an urgent problem.

The angular displacements determination of suspended rotors must be performed with the help of radio frequency methods. The advantageous features of the method allow relying on the employment of highly stable frequency standards, the possibility of signal modulation by the spinning rotor and the introduction of the difference method for the conversion of primary information to suppress interference, and the possible engagement of simple-design filters.

Taking into account the possibility of signals modulation "coloring" by the rotor spinning and the differential diagramming of the primary transformations of measurement data against the background noise,

method for determining the angular displacement of two-coordinated suspension rotors has been developed.

The developed method can be used in the suspended gyroscope precession angles rotor phase meter that assumes the signals modulation "coloring" by rotor spinning and the differential diagramming of the measuring signals primary transformation. This method ensures the achievement of potentially admissible accuracy due to the availability of high precession standards, the implementation of differential measurement technique, and the provision of a narrow-band signal filtering.