

Mathematical models of thermal drift of gyroscopic sensors of inertial systems

V.E. Dzhashitov, V.M. Pankratov / Under the general editorship of the RAS Academician V.G. Peshekhonov

150 p.

St. Petersburg: SRC of Russia - CSRI "Elektropribor", 2001

ISBN 5-900780-30-9

Mathematical models of classical and promising gyroscopic inertial data sensors of various physical principles and laws of operation have been considered. Principles of operation and dynamics fundamentals of thermally disturbed inertial gyroscopic sensors, devices and systems based on them are stated. Mathematical models of thermal drift of float, dynamically tuned, electrostatic non-contact, wave solid-state, micromechanical and fiber-optic gyros have been constructed and investigated. Particular attention has been given to the new mathematical models of thermal drift making it possible to investigate the phenomenon of deterministic chaos in non-linear thermally disturbed dynamic systems with inertial sensors.

The book is intended for scientists, engineers and technicians. Also it can be useful for post-graduates and students of higher education institutes.

Bibliography: 16 references. 34 illustrations. 1 table.

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