

# The satellites orientation method using a torque magnetic drive

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Small values of external perturbation forces made it possible to use a torque magnetic drive (TMD) as a control system. Today, satellite orientation systems use pulsed-type algorithm for discharge of an angular momentum accumulator. The feasibility of using other algorithms (continuous, continuous-pulsed and algorithm of TMD operation using ‘forecast’ models of accumulated angular momentum and geomagnetic field) is not covered and not examined, although each has certain advantages for certain types of satellites and their conditions of operation in space. The article highlights satellites operating conditions in space, considers satellites orientation method using a torque magnetic drive and substantiates the necessity of satellite motion simulation with further establishing a technique for evaluation of orientation system given the effect of permanent magnetic and gravitational fields, the type of discharge of accumulated angular momentum, the height of trajectory and the nature of random perturbations.