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11.1 The Gyrostat in Orbit; 11.2 Gyrostats with External Rotors; 11.3 Bias Momentum Satellites; 11.4 Problems; Appendix A Elements of Stability Theory; A.1 Stability Definitions
A.2 Stability of the Origin A.3 The Linear Approximation; A.4 Nonlinear Inferences from Infinitesimal Stability Properties; A.5 Liapunov's Method; A.6 Stability of Linear Stationary Mechanical Systems; A.7 Stability Ideas Specialized to Attitude Dynamics; Appendix B Vectrices; B.1 Remarks on Terminology; B.2 Vectrices; B.3 Several Reference Frames; B.4 Kinematics of Vectrices; B.5 Derivative with Respect to a Vector; Appendix C List of Symbols; C.1 Lowercase Symbols; C.2 Uppercase Symbols; C.3 Lowercase Greek Symbols; C.4 Uppercase Greek Symbols; C.5 Other Notational Conventions; References
Errata

Sommario/riassunto

Pointing a satellite in the right direction requires an extremely complex system - one that describes the satellite's orientation and at the same time predicts and either uses or neutralizes external influences. From its roots in classical mechanics and reliance on stability theory to the evolution of practical stabilization ideas, Spacecraft Attitude Dynamics offers comprehensive coverage of environmental torques encountered in space; energy dissipation and its effects on the attitude stability of spinning bodies; motion equation for four archetypical systems derived and used repeatedly throu
