PERIODIC RELATIVE ORBIT MANEUVERS
LIKE INERTIAL MANEUVERS

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ABSTRACT: Periodic relative motion about a circular orbit may be described in terms of the geometric orbital elements, constants of the linearized motion analogous to the classical orbit elements for two-body inertial motion. They describe the three-dimensional motion of the secondary spacecraft about the primary in the apocentral coordinates, which are defined by that motion and are analogous to the perifocal coordinates for inertial motion. With simple computations for relative plane change and relative orbit size change, trajectory planning can be done analogously to inertial orbit planning.

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