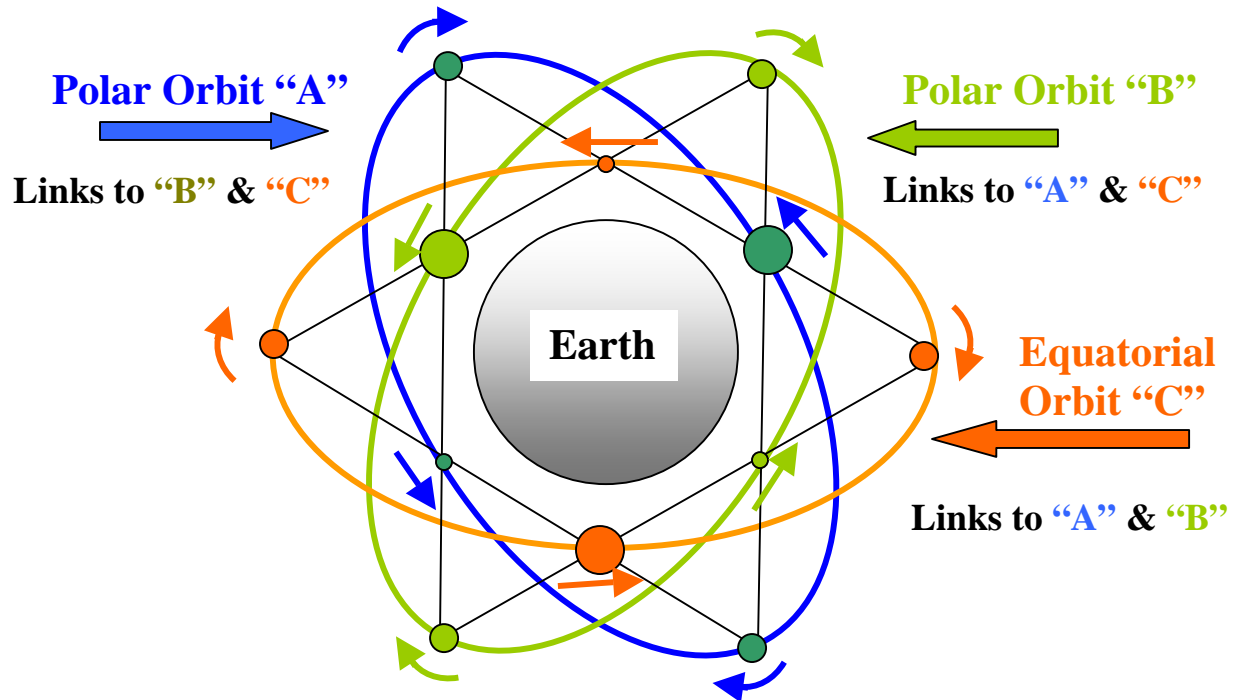


Counter Rotating Orbits of ROSÆ's Satellites



- Counter rotation is an important asset for ROSÆ's satellites, for it simplifies and increases reliability, lifetime, precision, and greatly lowers both satellite and booster rocket costs. Due to symmetry, all satellites use basic & simple orbit injection.
- If earth were a "billiard ball", the satellites would collide.
- But earth has a very predominate tri-axial gravity field at ROSÆ's MEO altitude.
- So the satellites will be perturbed in altitude, and for ROSÆ's resonant orbits, they will remain in error spheres whose probability of collision approaches zero.
- And the epochal precision needed is a function of the intra-satellite beam width, being very relaxed for millimeter wavelengths, but is more demanding at laser wavelengths.
- Early systems will startup with longer wavelengths.