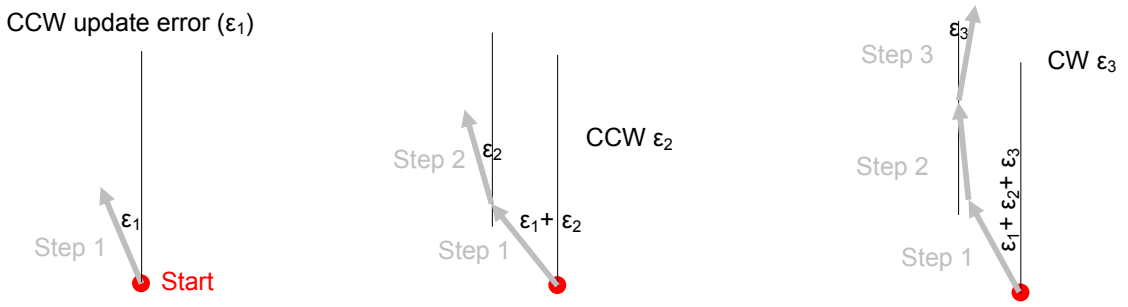
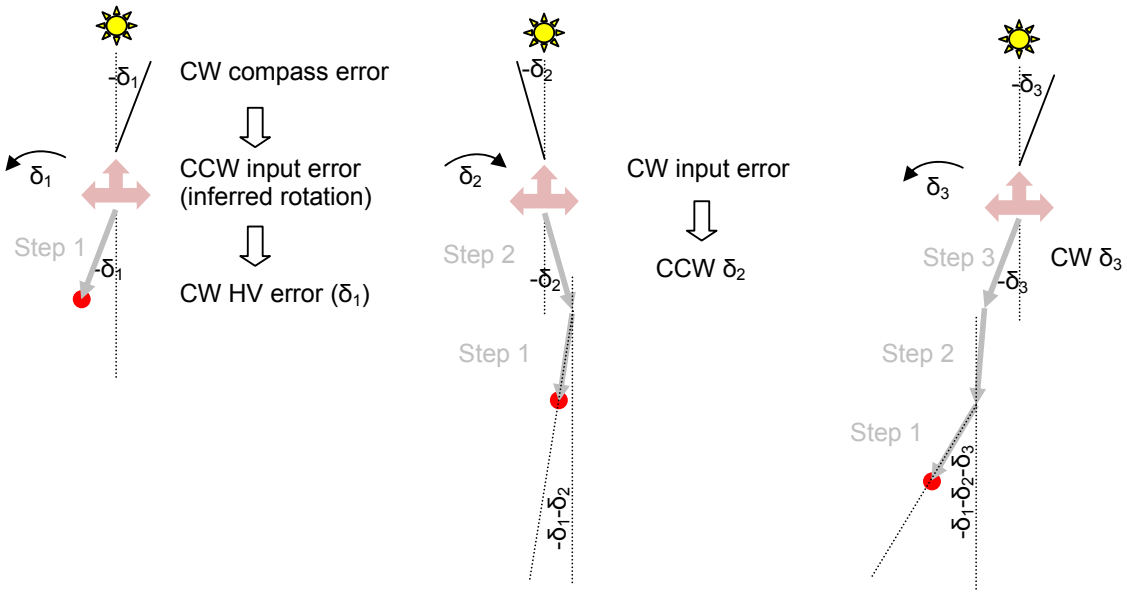
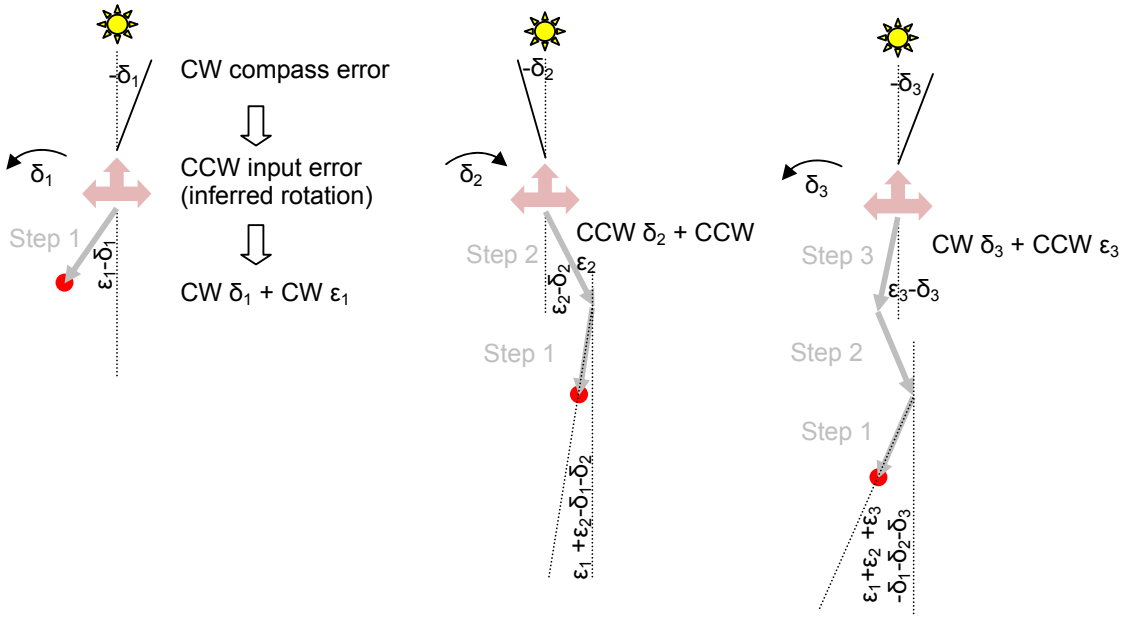
A. Allocentric polar PI in an allocentric framework (update error ε):



B. Egocentric Cartesian PI in an egocentric framework (input error δ):



C. Egocentric polar PI in an egocentric framework (input & update errors):