HAM6 Coordinate System Definitions

G1300086-v2

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SUS Euler Control Basis for HTTSs is not shown for clarity, but the origin is centered on the optic's C.o.M., +L extends out from the optic's HR surface, and is otherwise identical to the OMCS's Euler Control Basis.

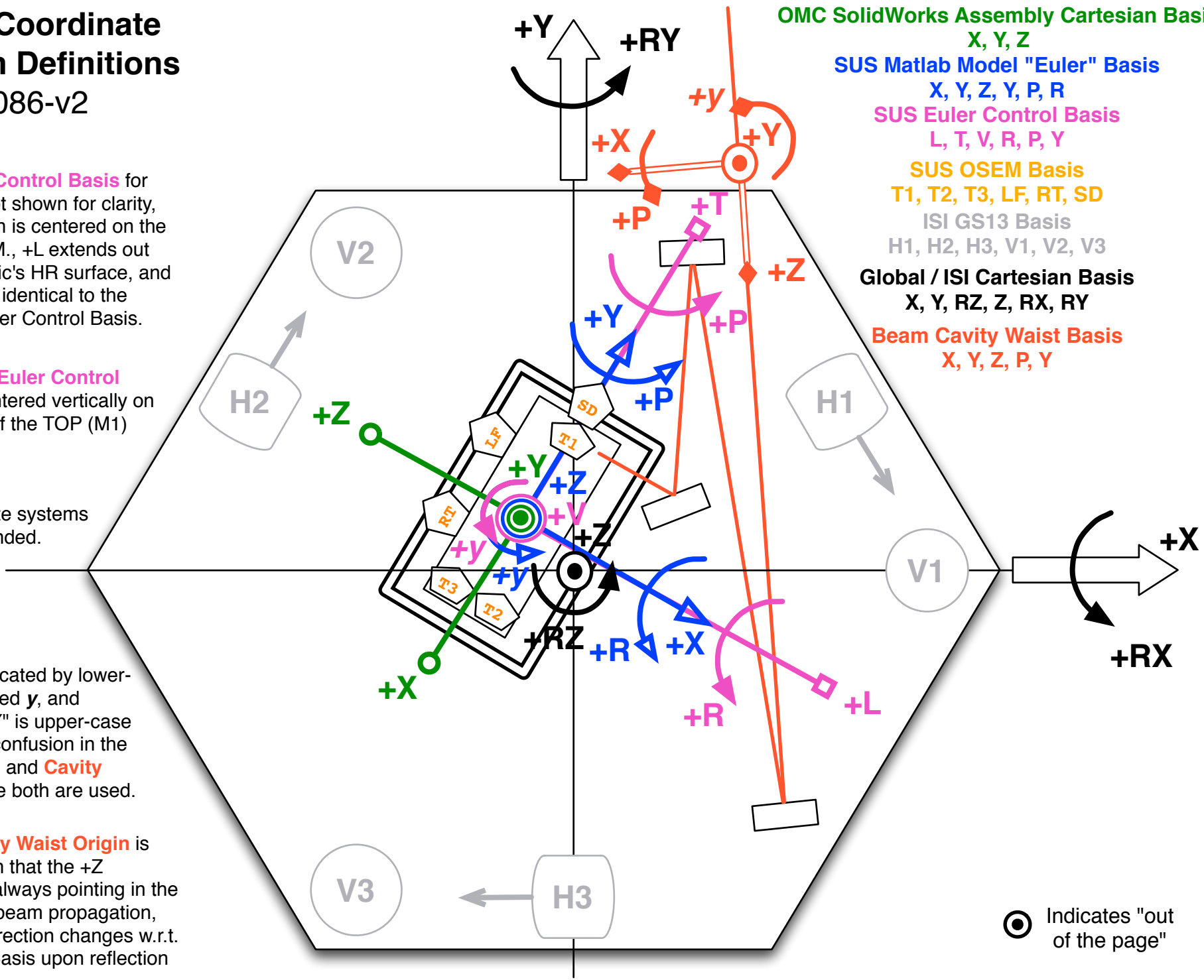
The OMCS **Euler Control Basis** is centered vertically on the C.o.M. of the TOP (M1) Mass.

All coordinate systems are right-handed.

"Yaw" is indicated by lower-case, italicized ***y***, and Cartesian "Y" is upper-case **Y**, to avoid confusion in the **SolidWorks** and **Cavity** Bases where both are used.

Beam Cavity Waist Origin is defined such that the +Z direction is always pointing in the direction of beam propagation, so the +Z direction changes w.r.t. the Global Basis upon reflection

OMC SolidWorks Assembly Cartesian Basis
X, Y, Z
SUS Matlab Model "Euler" Basis
X, Y, Z, Y, P, R
SUS Euler Control Basis
L, T, V, R, P, Y
SUS OSEM Basis
T1, T2, T3, LF, RT, SD
ISI GS13 Basis
H1, H2, H3, V1, V2, V3
Global / ISI Cartesian Basis
X, Y, RZ, Z, RX, RY
Beam Cavity Waist Basis
X, Y, Z, P, Y



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