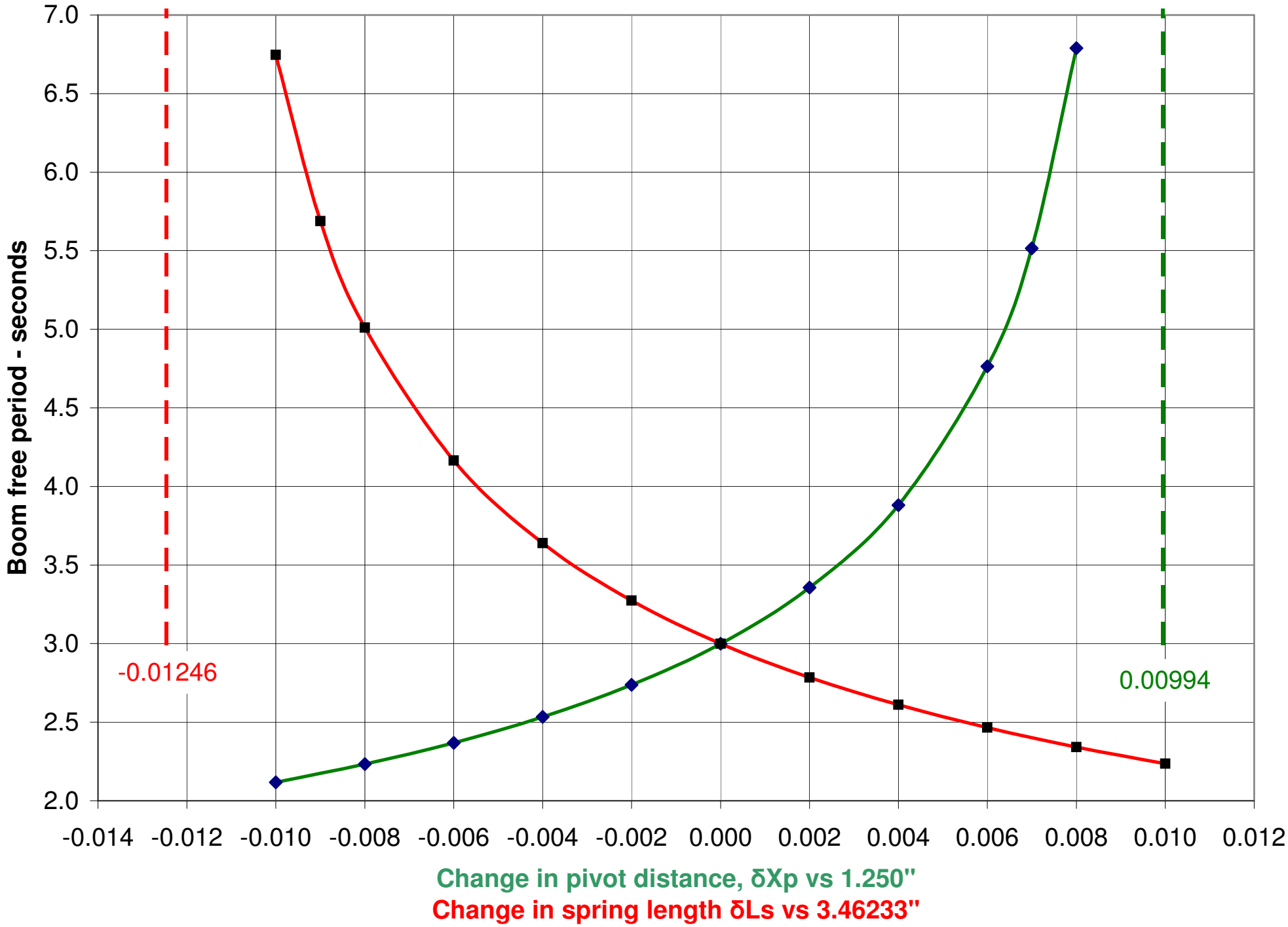
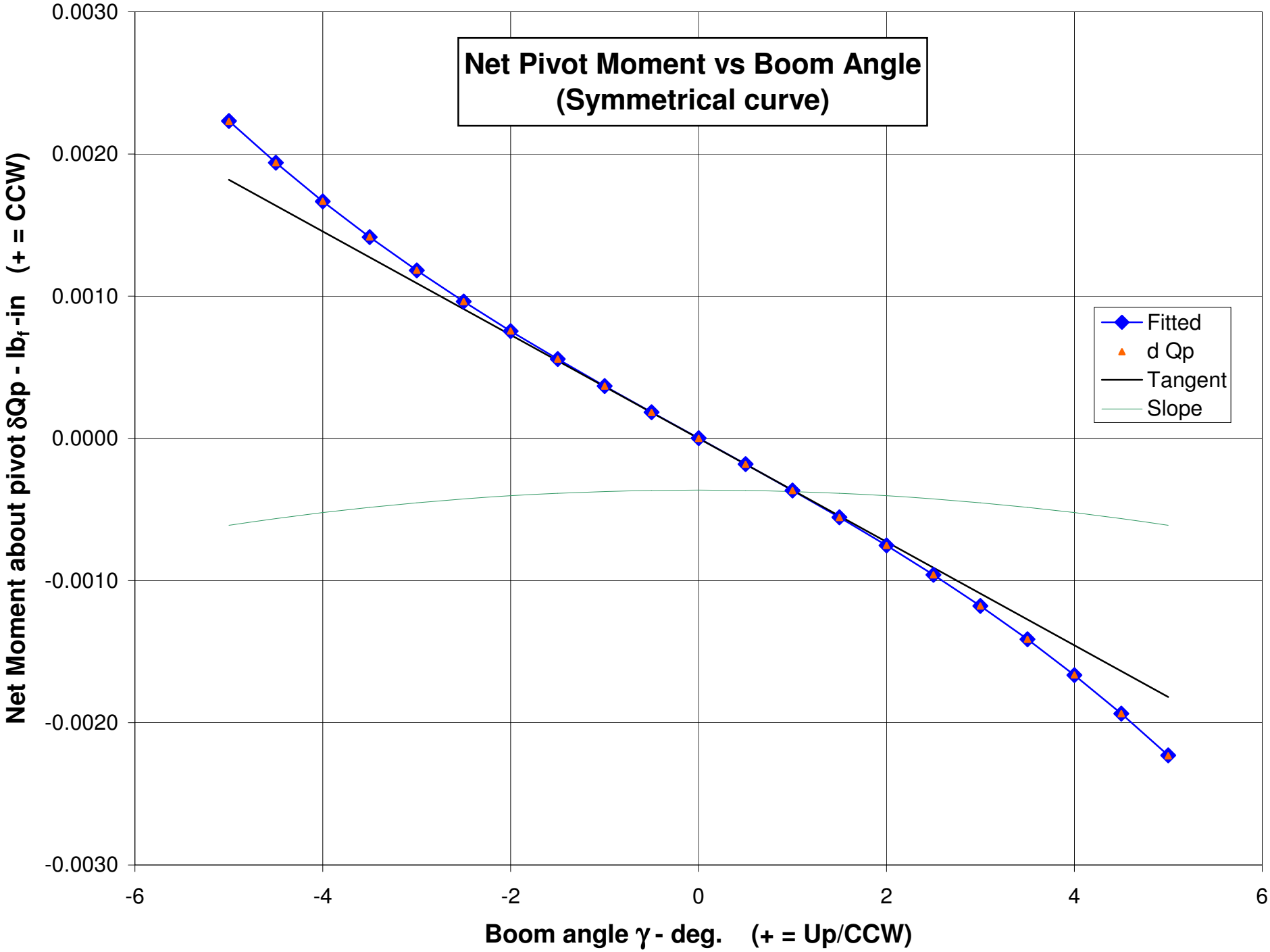
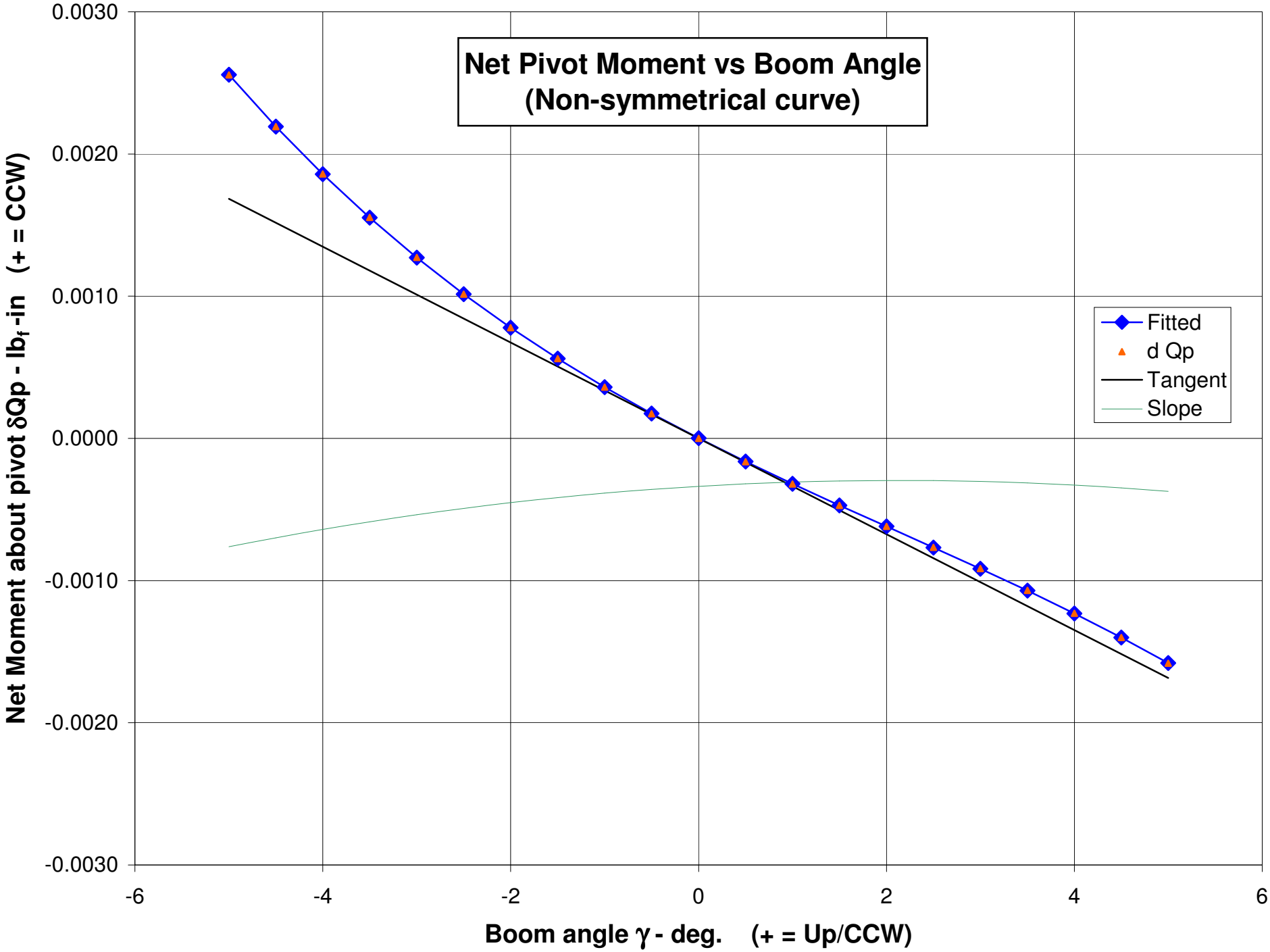
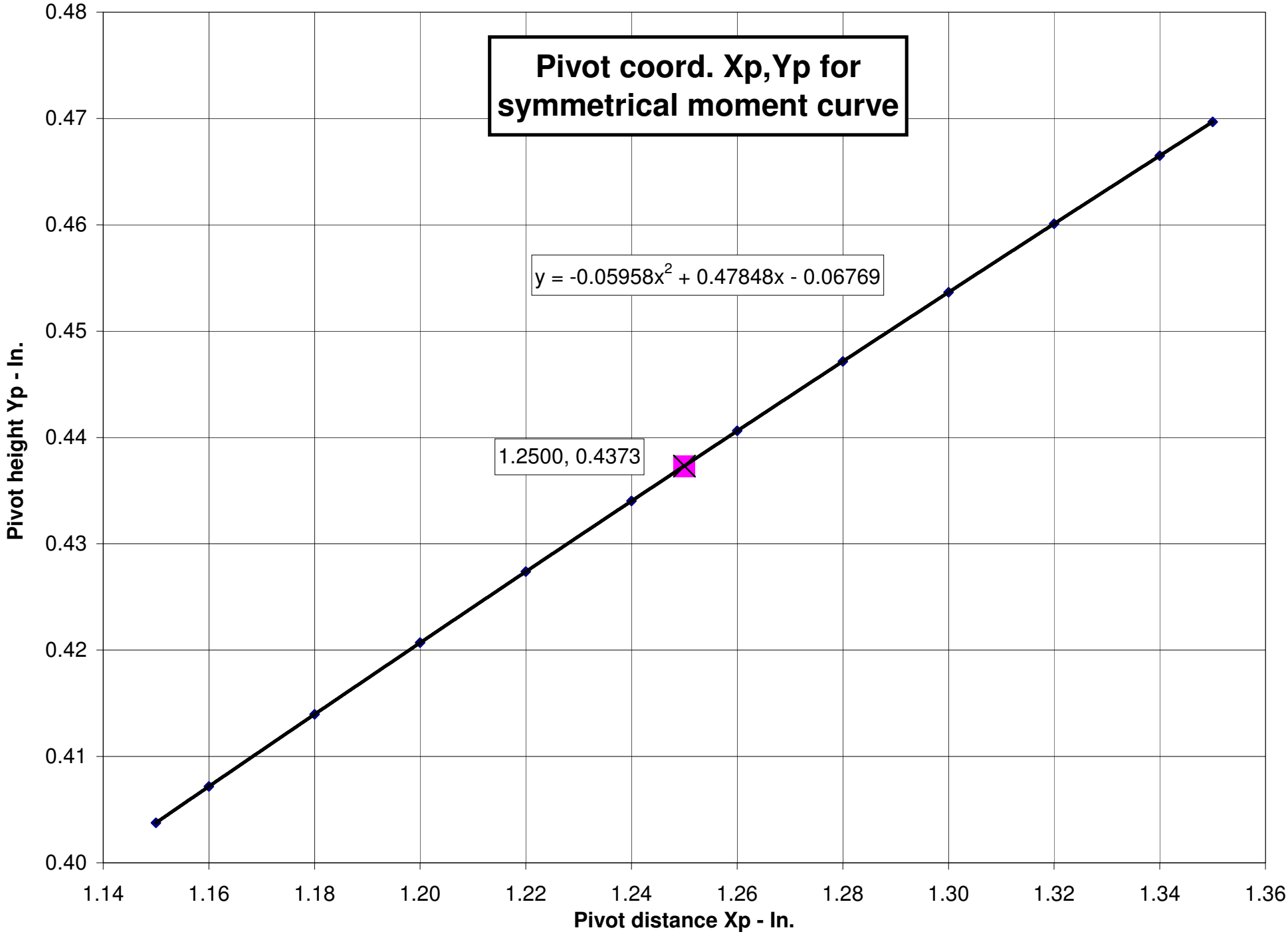
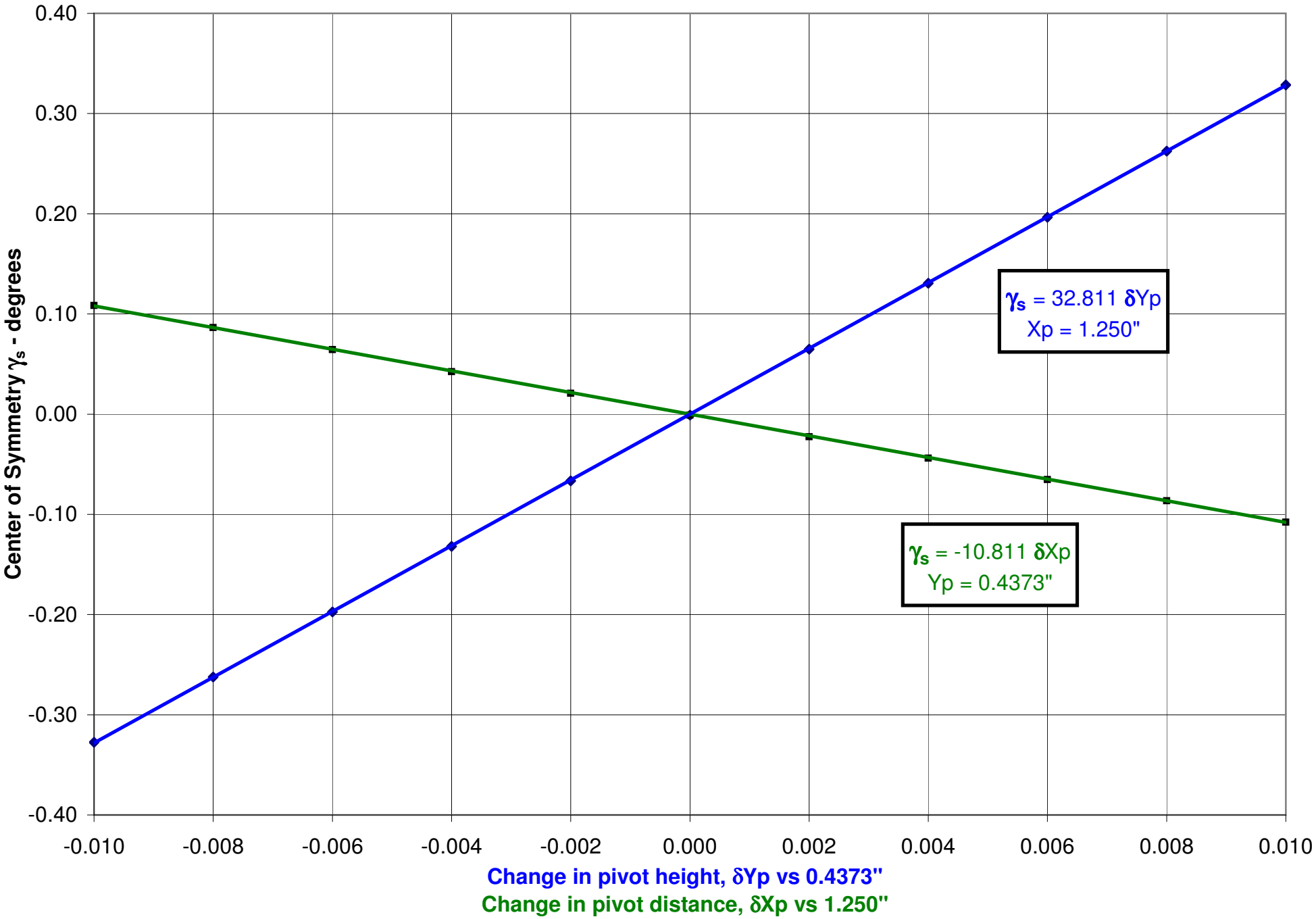

7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
Boom free period - seconds
-0.01246
0.00994
-0.014
-0.012
-0.010
-0.008
-0.006
-0.004
-0.002
0.000
0.002
0.004
0.006
0.008
0.010
0.012
Change in pivot distance, δXp vs 1.250"
Change in spring length δLs vs 3.46233"


Net Pivot Moment vs Boom Angle
(Symmetrical curve)
Net Moment about pivot δQp - lbf-in (+ = CCW)
Boom angle γ - deg. (+ = Up/CCW)
0.0030
0.0020
0.0010
0.0000
-0.0010
-0.0020
-0.0030
-6
-4
-2
0
2
4
6
Fitted
d Qp
Tangent
Slope


Net Pivot Moment vs Boom Angle
(Non-symmetrical curve)
Net Moment about pivot δQp - lbf-in (+ = CCW)
Boom angle γ - deg. (+ = Up/CCW)
0.0030
0.0020
0.0010
0.0000
-0.0010
-0.0020
-0.0030
-6
-4
-2
0
2
4
6
Fitted
d Qp
Tangent
Slope


Pivot coord. Xp,Yp for symmetrical moment curve
y = -0.05958x2 + 0.47848x - 0.06769
1.2500, 0.4373
Pivot height Yp - In.
Pivot distance Xp - In.
0.48
0.47
0.46
0.45
0.44
0.43
0.42
0.41
0.40
1.14
1.16
1.18
1.20
1.22
1.24
1.26
1.28
1.30
1.32
1.34
1.36


0.40
0.30
0.20
0.10
0.00
-0.10
-0.20
-0.30
-0.40
Center of Symmetry γs - degrees
-0.010
-0.008
-0.006
-0.004
-0.002
0.000
0.002
0.004
0.006
0.008
0.010
γs = 32.811 δYp
Xp = 1.250"
γs = -10.811 δXp
Yp = 0.4373"
Change in pivot height, δYp vs 0.4373"
Change in pivot distance, δXp vs 1.250"