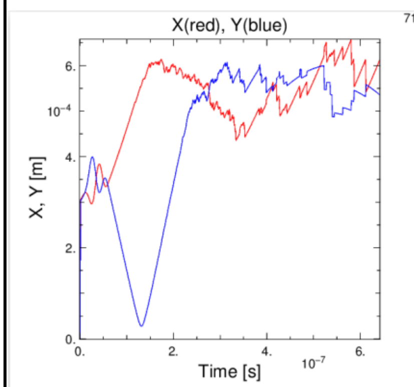
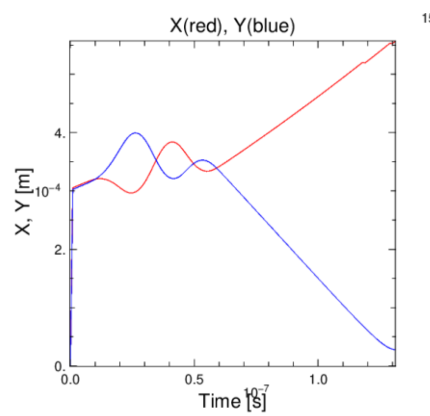
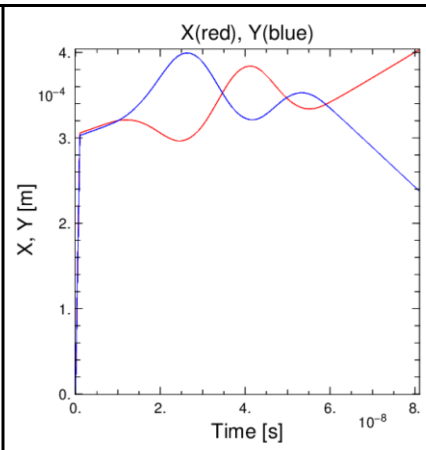
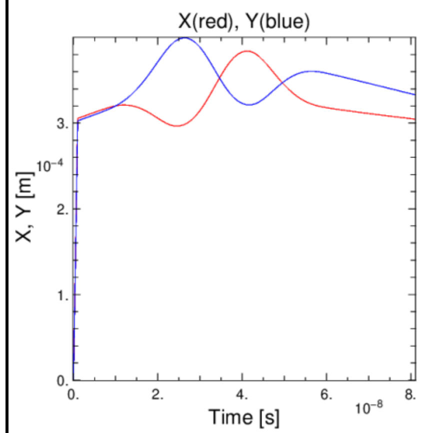
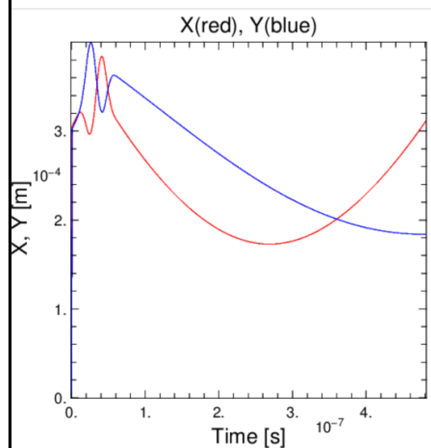
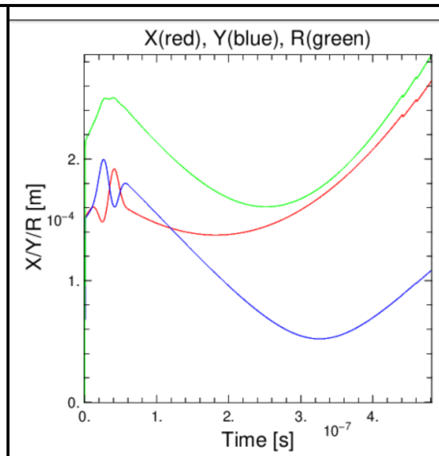
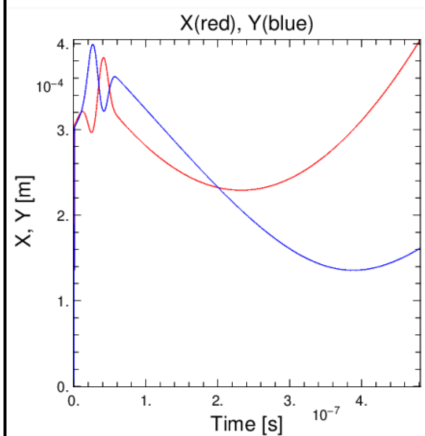
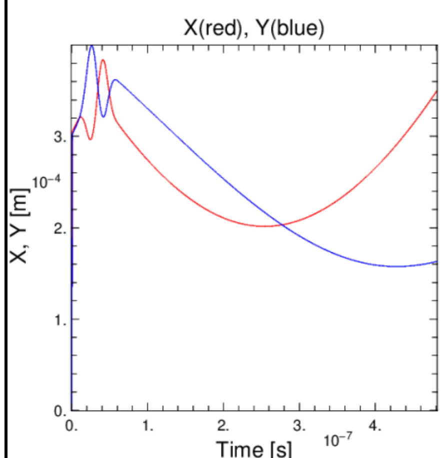
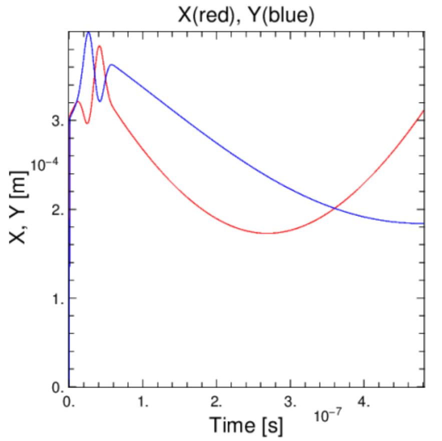
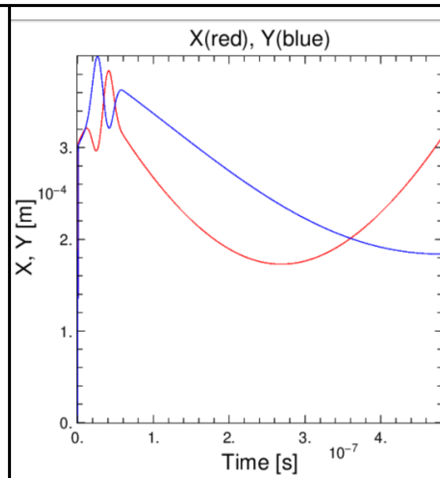
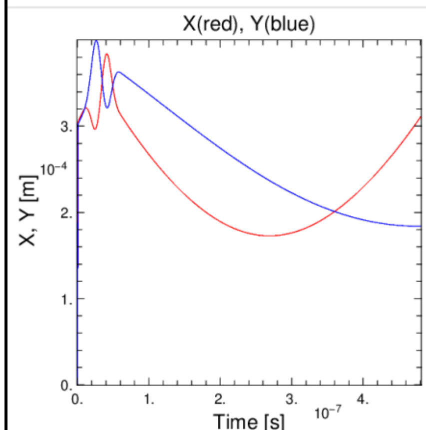
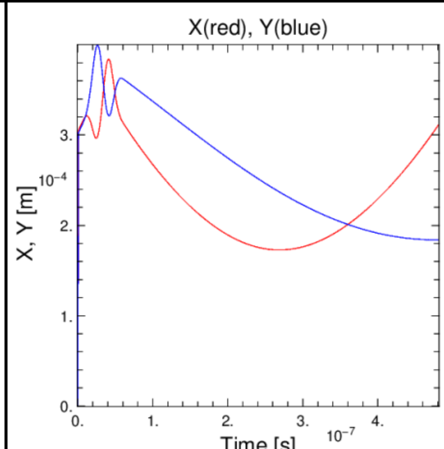
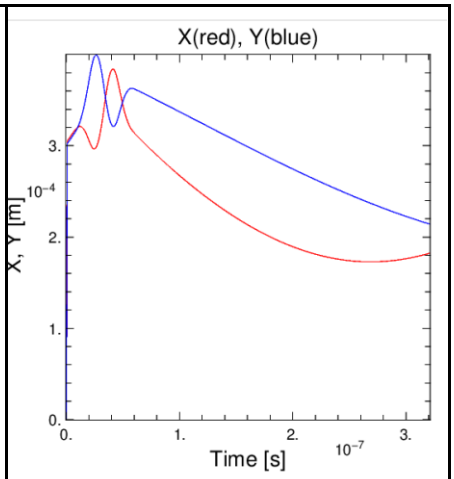
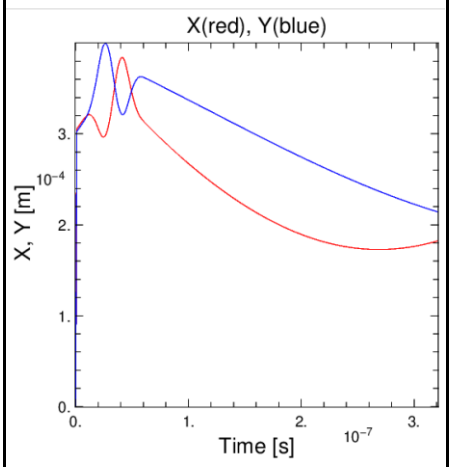
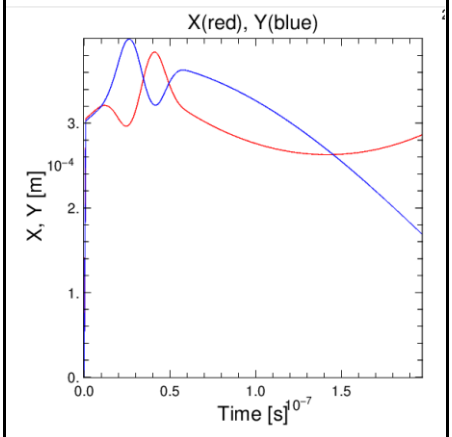
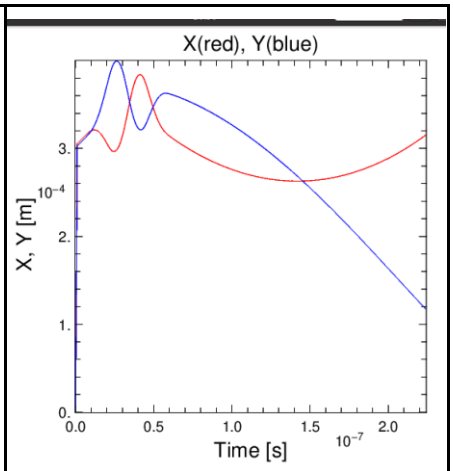
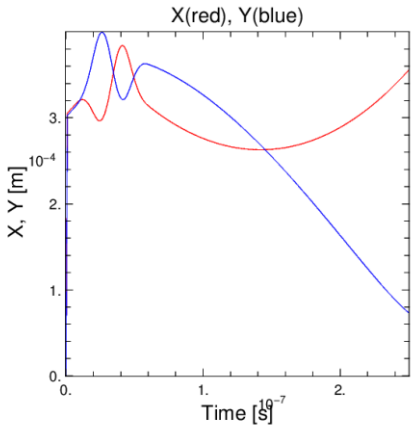
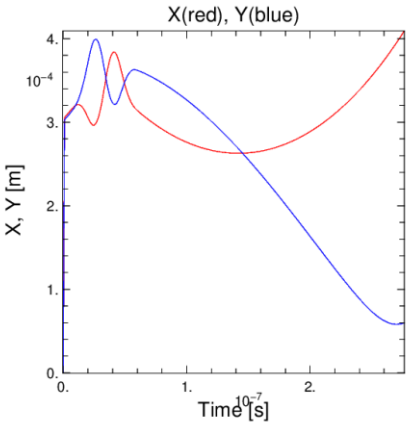
20.20		.25mm 5/-5mrad emit =200e-8 [75,-100,125,-150]	
20.21		.25mm 5/-5mrad emit =0.63e-6 [75,-100,125,-150]	
20.22		[100,-250,250,-160,120,-110,80,-26,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,-30,60,-45,40,-40,30,-30,30]	
20.23	3	[100,-250,250,-160,120,-110,80,-26]	

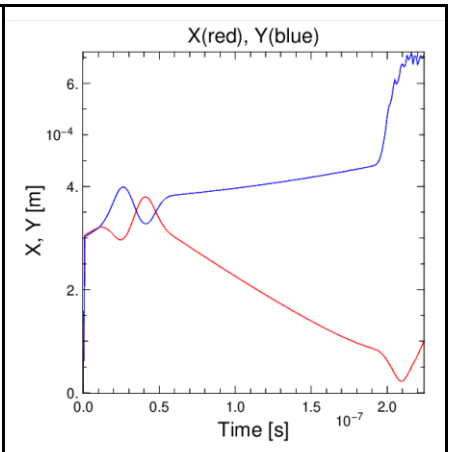
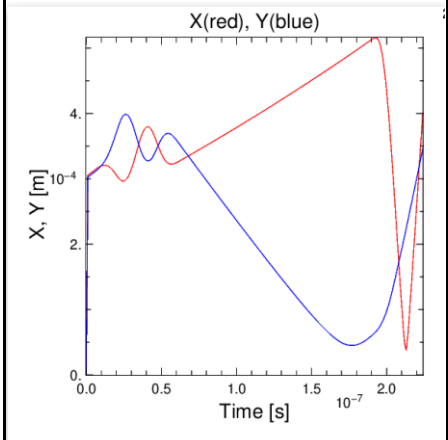
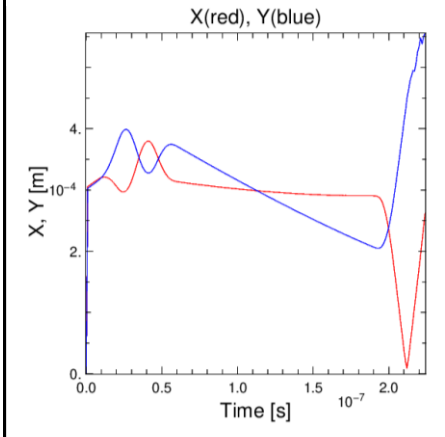
20.4		[100,-250,250,-160]	
20.25		[100,-250,250,-100]	
20.26	5	[100,-250,250,-90, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0 ,0,0,0,0,0,0,0,0]	

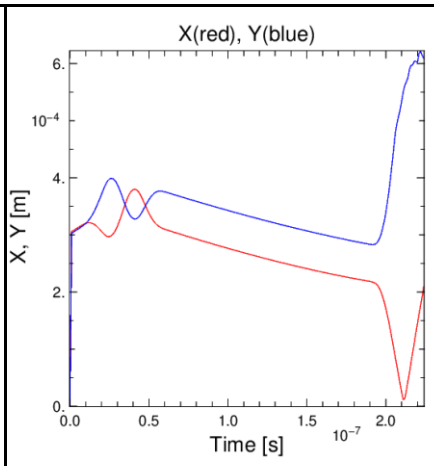
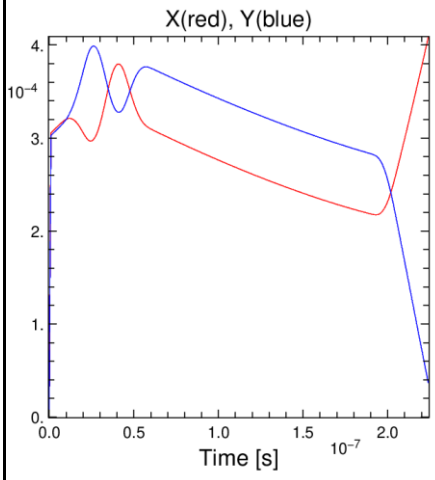
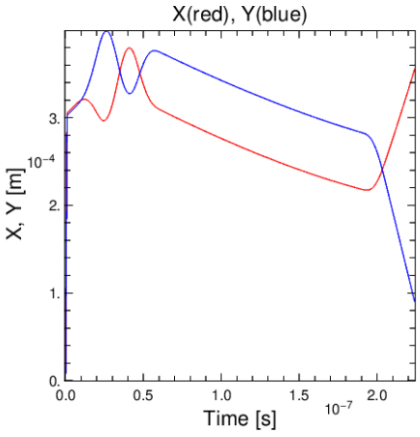
20.27	5	[100,-250,250,-100, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]	
20.28	5	[100,-250,250,-95, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]	
20.29		[100,-250,250,-92.5, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]	

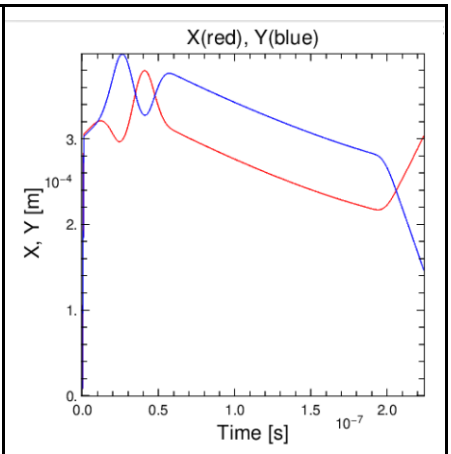
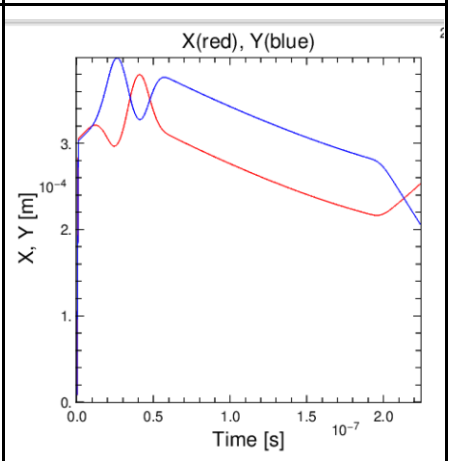
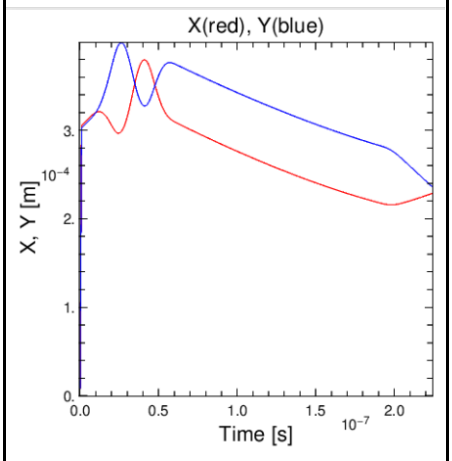
20.30		[100,-250,250,-90, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0 ,0,0,100,0,0,0,0]  	
20.31		[100,-250,250,-90, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0, 250,0,0,0,0]	
20.32		[100,-250,250,-90, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0, 500,0,0,0,0]	

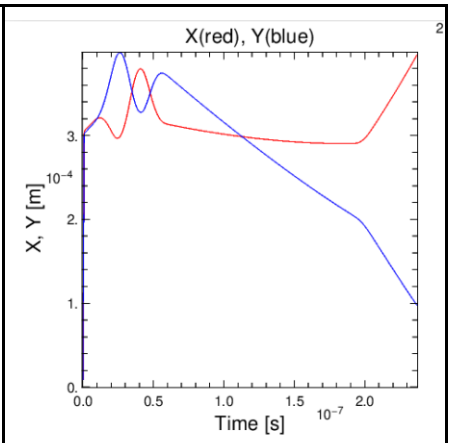
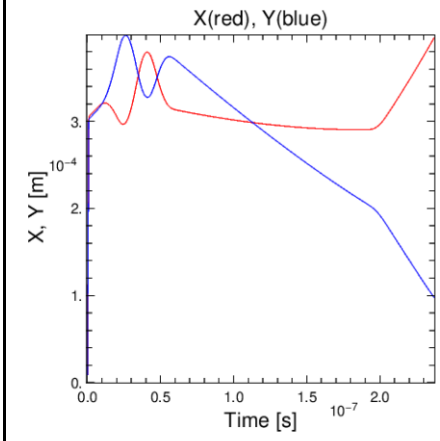
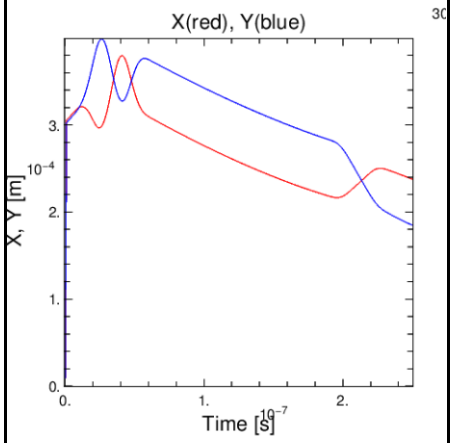
20.33		V_esq = [100,-250,250,-90, 0,0,0,0,0,0,0,0,0,0,0,0,0,500,0,0,0,0]	
20.34		V_esq = [100,-250,250,-90, 0,0,0,0,0,0,0,0,0,0,0,0,0,500,500,500,500,500]	
20.35		V_esq = [100,-250,250,-90, 0,0,0,0,500,500,500,500,500]	

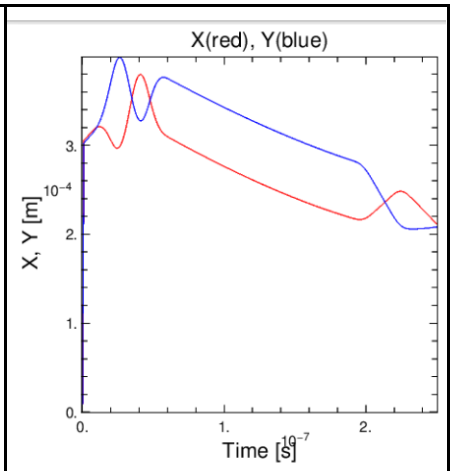
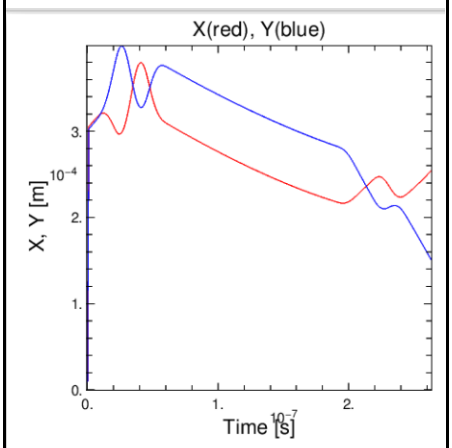
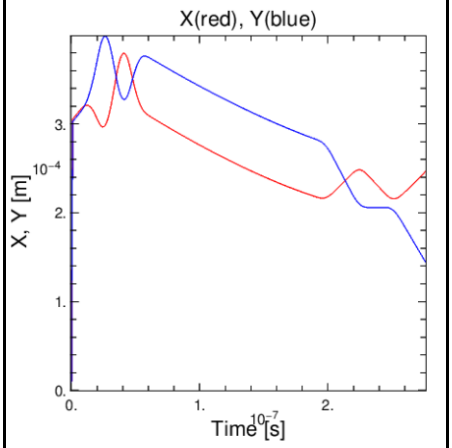
20.36		V_esq = [100,-250,250,-90, 0,0,0,0,0,0,500,500,500,500,500]	
20.37		V_esq = [100,-250,250,-90, 0,0,0,0,0,0,0,0,500,500,500,500,500]	
20.38		V_esq = [100,-250,250,-90, 0,0,0,0,0,0,0,0,0,0,500,500,500,500,500]	

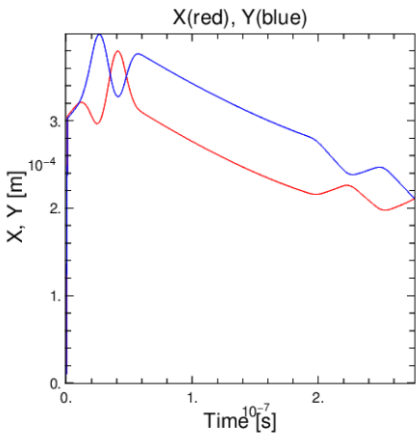
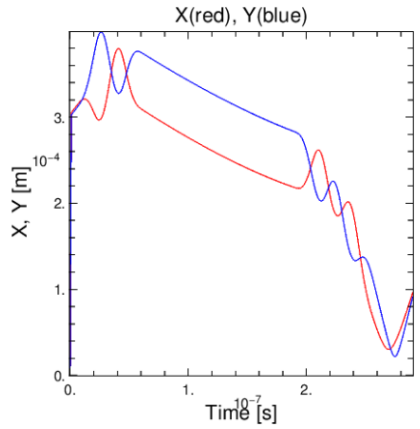
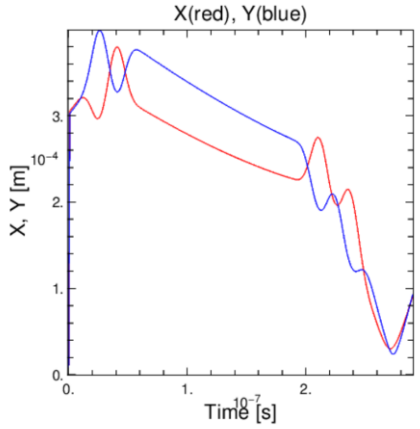
21.1		V_esq = [100,-250,250,-90, 0,0,0,0,0,0,0,0,0,0,500]	
21.2		V_esq = [100,-250,250,-150, 0,0,0,0,0,0,0,0,0,0,500]	
21.3		V_esq = [100,-250,250,-120, 0,0,0,0,0,0,0,0,0,0,500]	

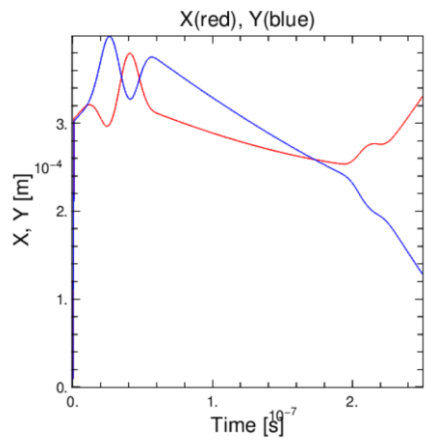
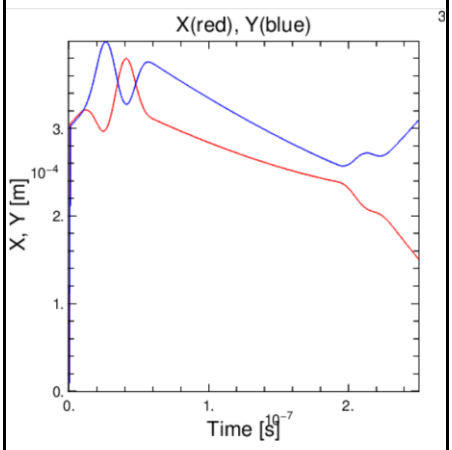
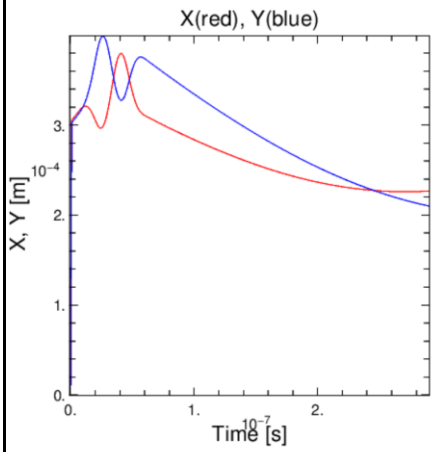
21.4		V_esq = [100,-250,250,-110, 0,0,0,0,0,0,0,0,0,0,500]	
21.5		V_esq = [100,-250,250,-120, 0,0,0,0,0,0,0,0,0,0,-200]	
21.6		V_esq = [100,-250,250,-120, 0,0,0,0,0,0,0,0,0,0,-150]	

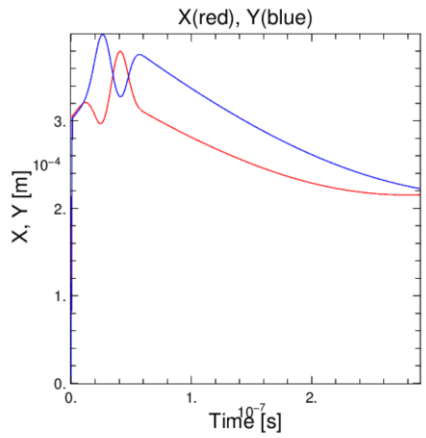
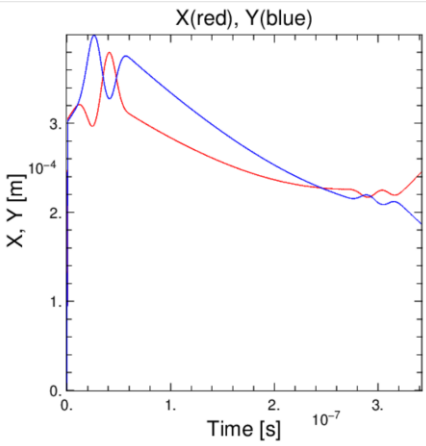
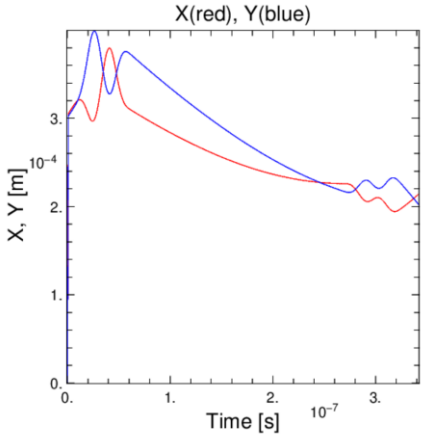
21.7		V_esq = [100,-250,250,-120, 0,0,0,0,0,0,0,0,0,0,-100]	
21.8		V_esq = [100,-250,250,-120, 0,0,0,0,0,0,0,0,0,0,-50,50]	
21.9		V_esq = [100,-250,250,-120, 0,0,0,0,0,0,0,0,0,0,-25]	

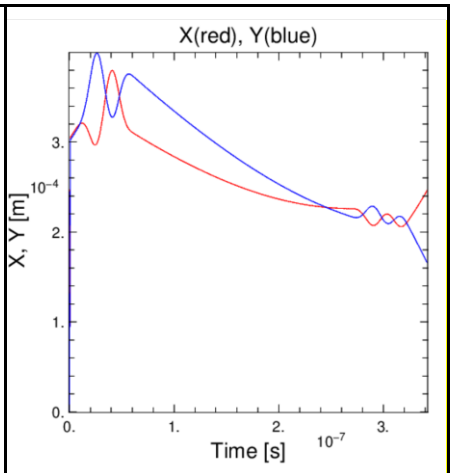
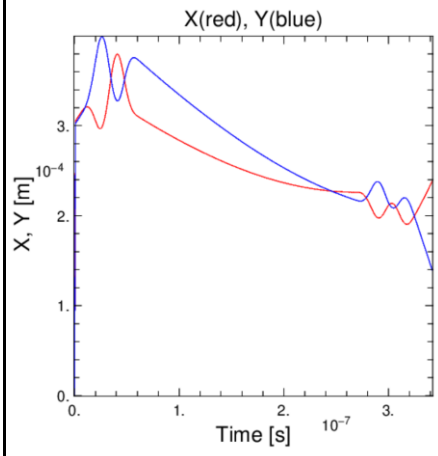
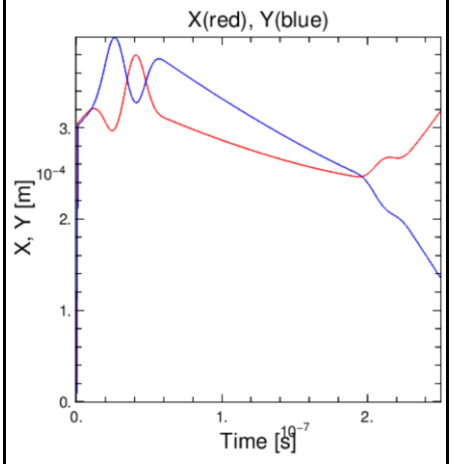
21.10	18	[100,-250,250,-120, 0,0,0,0,0,0,0,0,0,0,-50,50]	
21.11		V_esq = [100,-250,250,-110, 0,0,0,0,0,0,0,0,0,0,-50,50]	
21.13	18	100,-250,250,-110, 0,0,0,0,0,0,0,0,0,0,-50,0,50]	

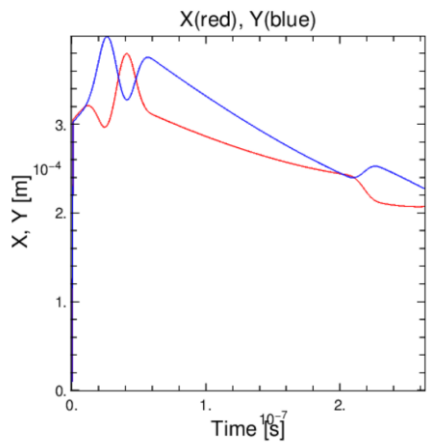
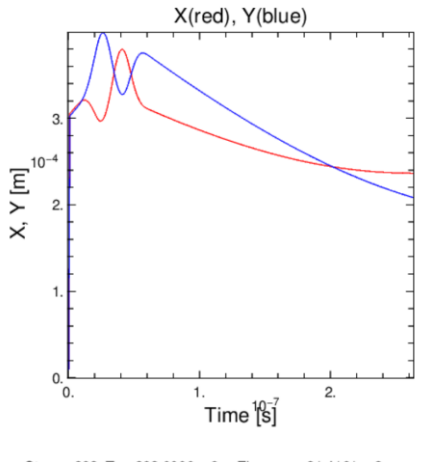
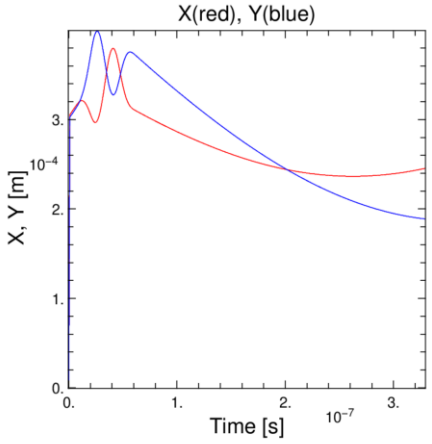
21.14		100,-250,250,-110, 0,0,0,0,0,0,0,0,0,0,-50,0,75]	
21.15		[100,-250,250,-110, 0,0,0,0,0,0,0,0,0,0,-50,0,100,-100]	
21.16		[100,-250,250,-110, 0,0,0,0,0,0,0,0,0,0,-50,0,75,0,-75]	

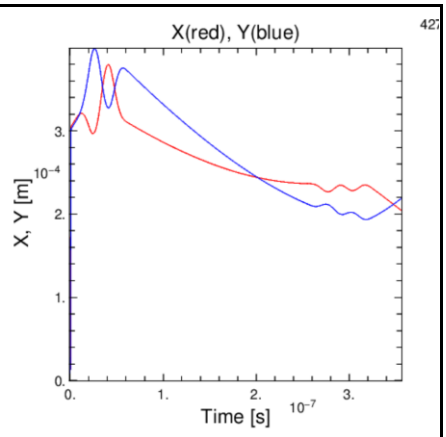
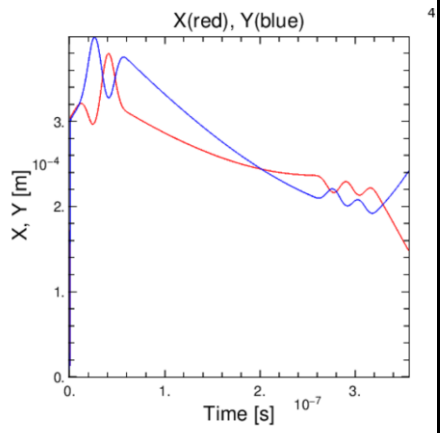
21.17		[100,-250,250,-110, 0,0,0,0,0,0,0,0,0,0,-25,0,50,0,-50]	
21.18		[100,-250,250,-110, 0,0,0,0,0,0,0,0,0,0,-143,312,-360,420,-332,274]	
21.19		[100,-250,250,-110, 0,0,0,0,0,0,0,0,0,0,-143,312,-360,420,-332,274] Test to see if can comment out zeros >> seems a little different so wouldn't recommend it	

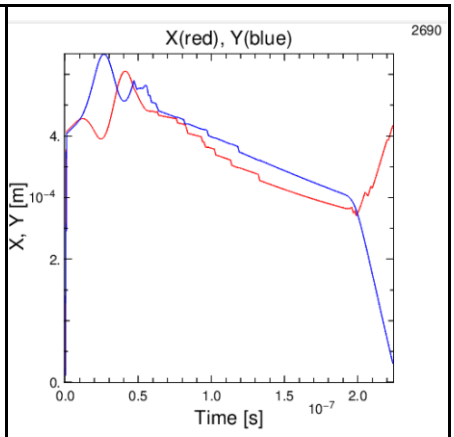
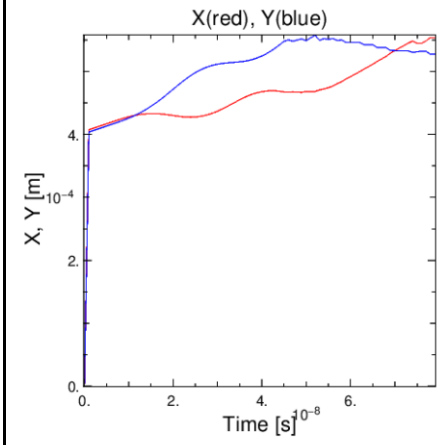
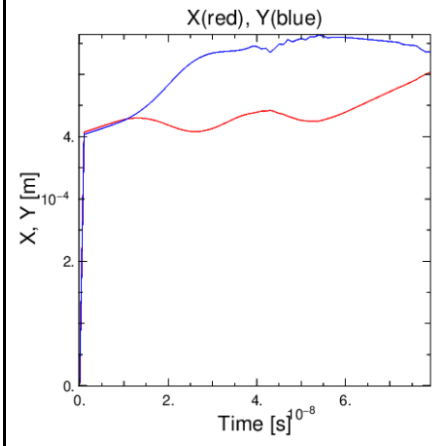
21.20		[100,-250,250,-115, 0,0,0,0,0,0,0,0,0,0,-50,50,-50]	
21.21		[100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,50,-50,50]	
21.21.1		[100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]	

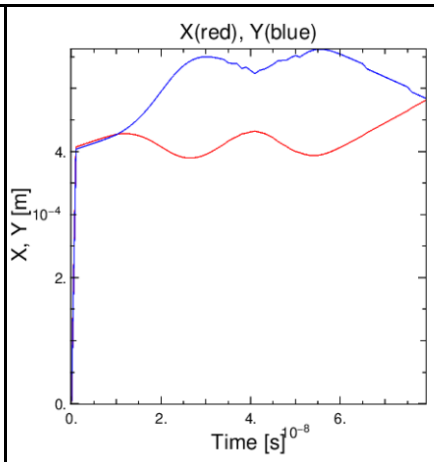
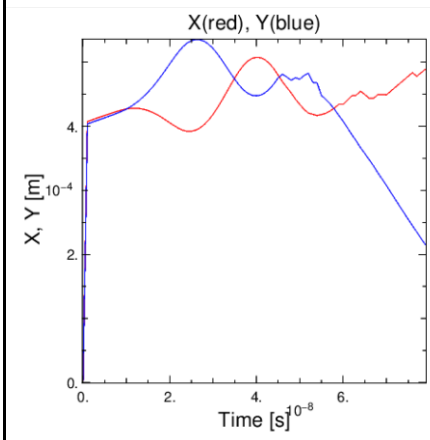
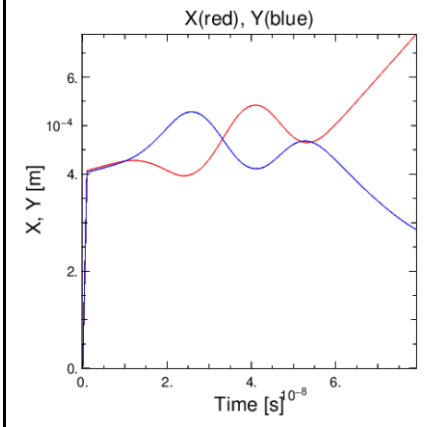
21.21.2		[100,-250,250,-112, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0] ### 112	
21.21.3		###113 [100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,25,-50,50,-50]	
21.21.4		[100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-75,75,-75]	

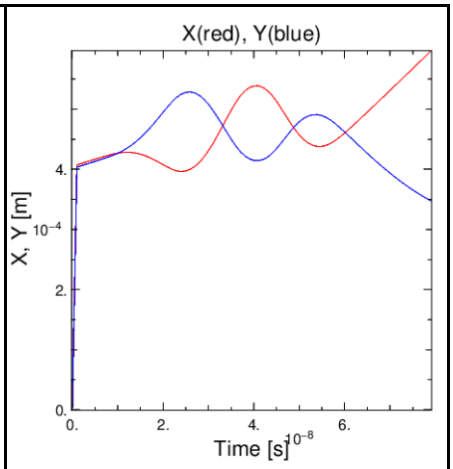
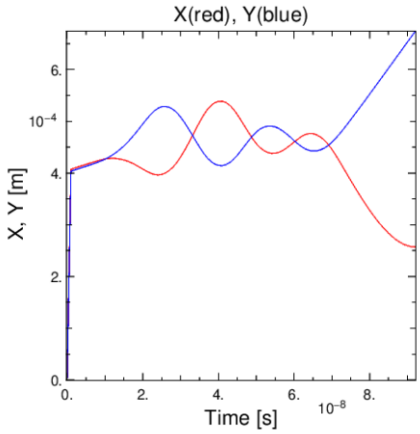
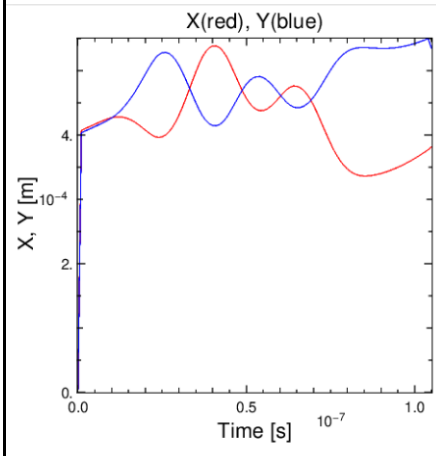
21.21.5		[100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-100,100,-100]	
21.21.6		[100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,75,-150,150,-150]	
21.22		NEED to reverse? Or get lower down first, morezeros then esqs reversed [100,-250,250,-114, 0,0,0,0,0,0,0,0,0,0,0,-50,50,-50]	

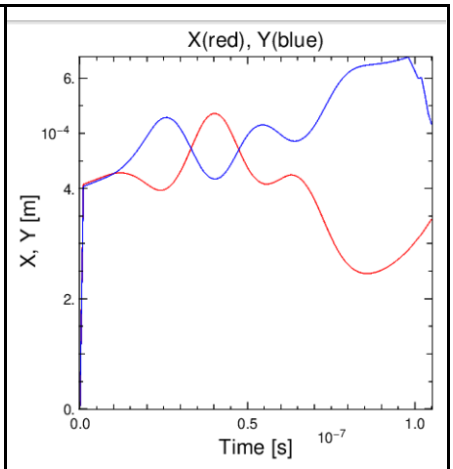
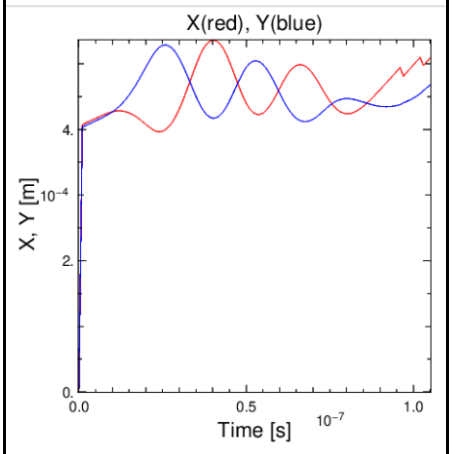
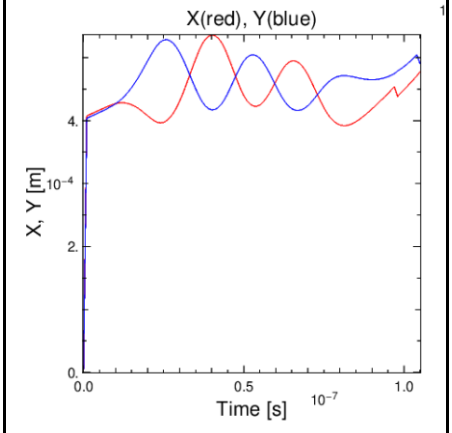
21.23		[100,-250,250,-114, 0,0,0,0,0,0,0,0,0,0,0,50,-50,50]	
21.24		[100,-250,250,-114, 0,0,0,0,0,0,0,0,0,0,0,0,-0,0]	
21.25		[100,-250,250,-114, 0,0,0,0,0,0,0,0,0,0,0,0,-0,0,0,0,0,0,0]	

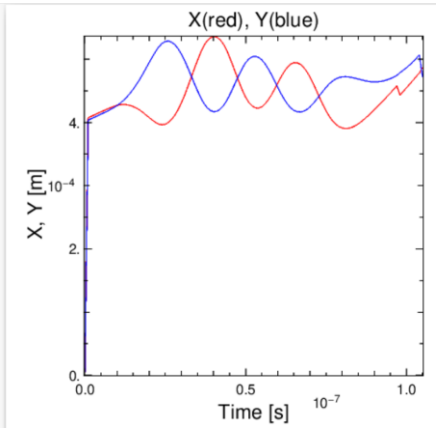
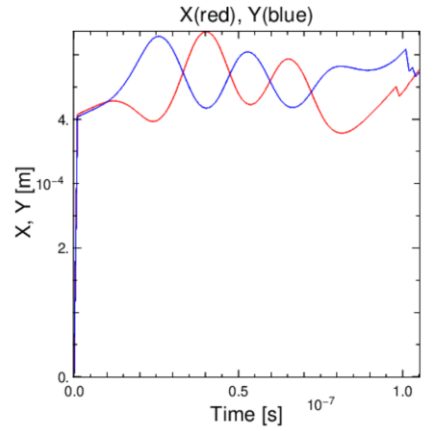
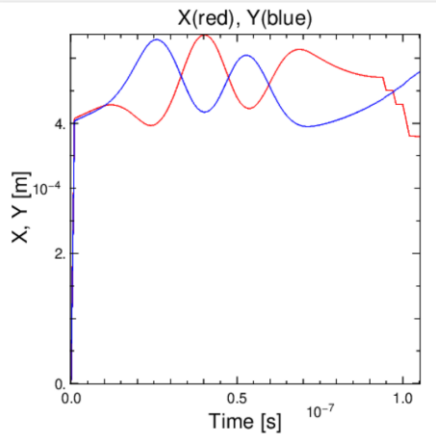
21.26		[100,-250,250,-114, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,25,-50,50,-45,45,-40]	
21.27		[100,-250,250,-114, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-100,100,-90,90,-80]	

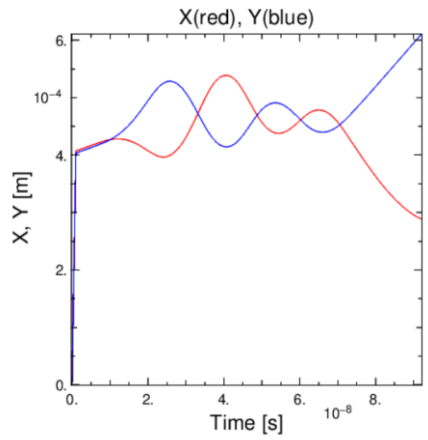
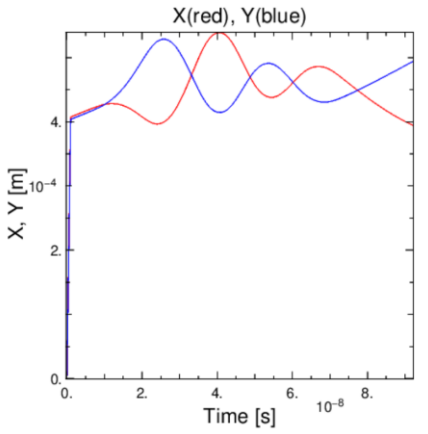
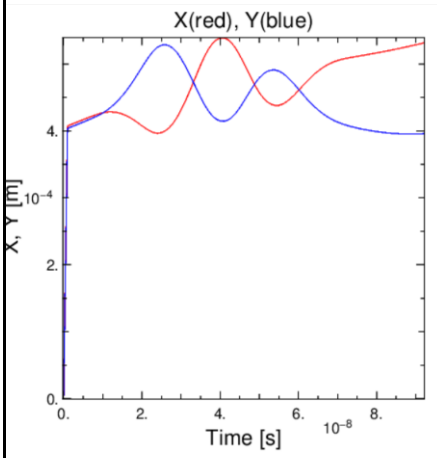
22.0	16	[100,-250,250,-110, 0,0,0,0,0,0,0,0,0,0,-200]	
22.1		[50,-75,75,-75]	
22.2		[75,-100,100,-100]	

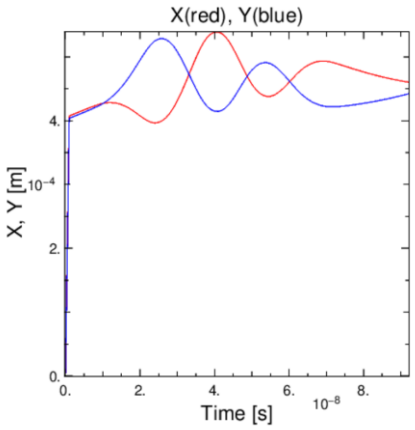
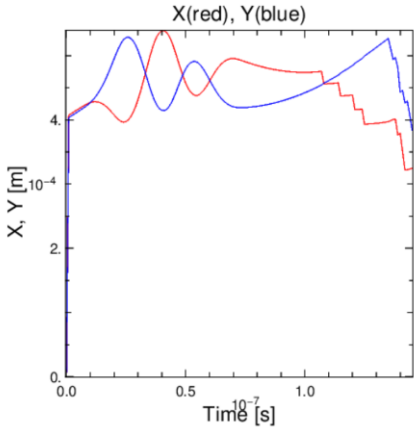
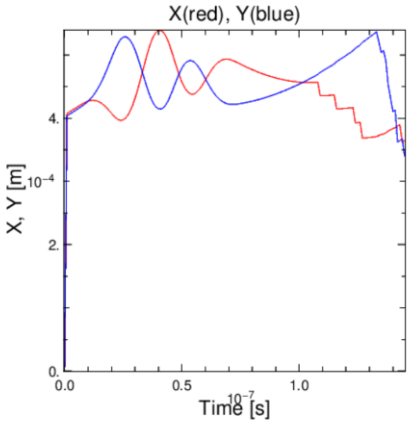
22.3		[100,-150,150,-150]	
22.4		[105,-275,325,-300]	
22.5		[100,-300,325,-300]	

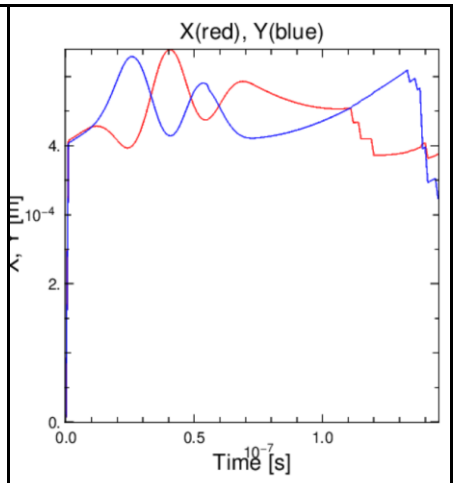
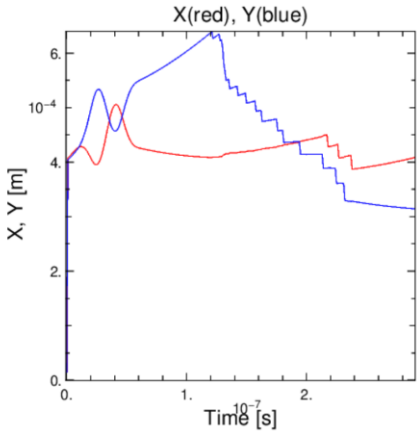
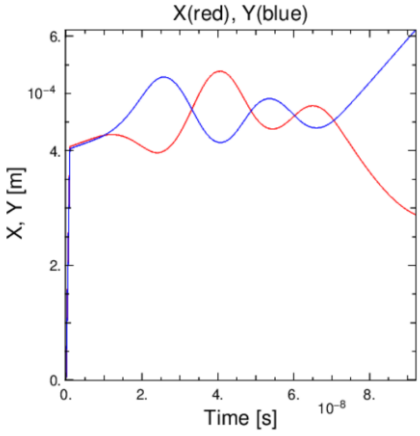
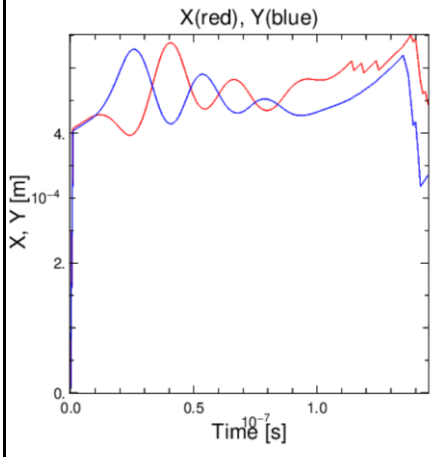
22.6		[100,-300,350,-300]	
22.7		100,-300,350,-300,350]	
22.8		100,-300,350,-300,350,-300]	

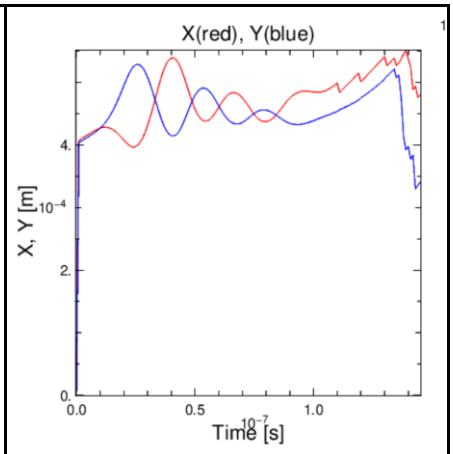
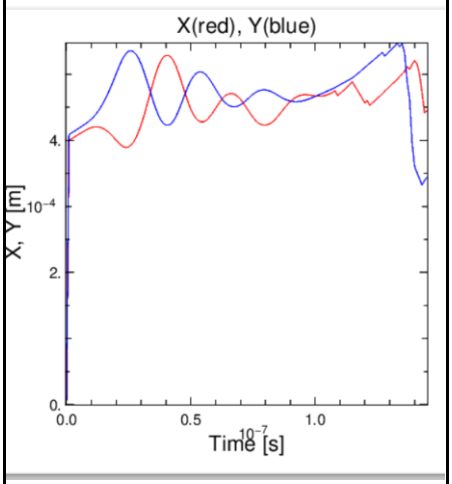
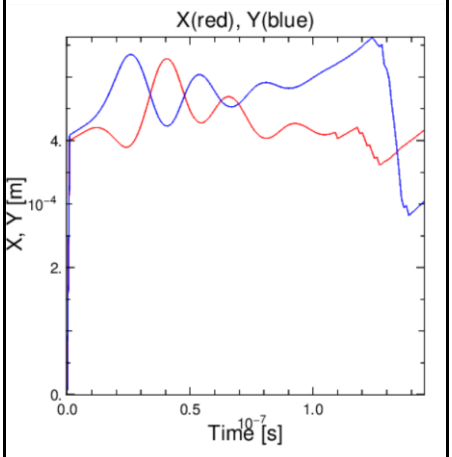
22.9		[100,-300,375,-300,375,-300]	
22.10		[100,-300,375,-400,375,-400]	
22.11		[100,-300,375,-400,425,-450]	

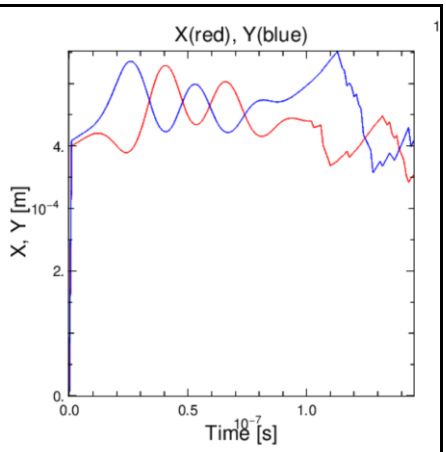
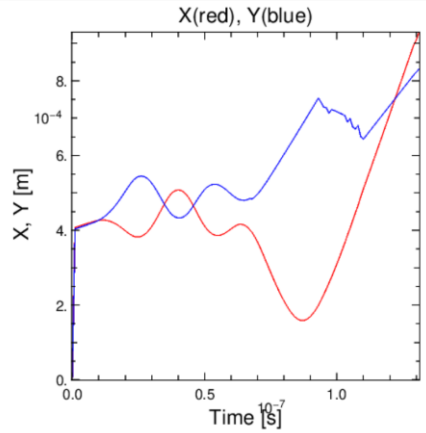
22.12		[100,-300,375,-400,430,-475]	
22.13		[100,-300,375,-400,450,-500]	
22.14		[100,-300,375,-400,250,0]	

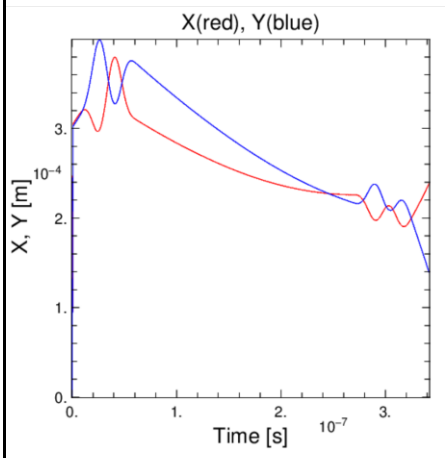
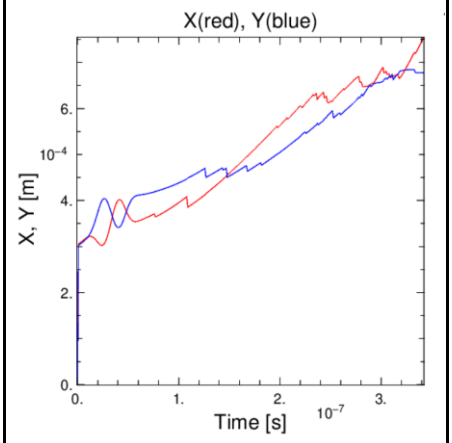
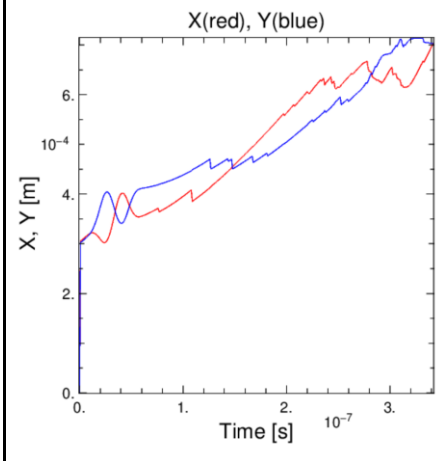
22.15		From 22.7 [100,-300,350,-300,300]	
22.16		Try even lower, 250 or 200 [100,-300,350,-300,200]	
22.17		[100,-300,350,-300,100]	

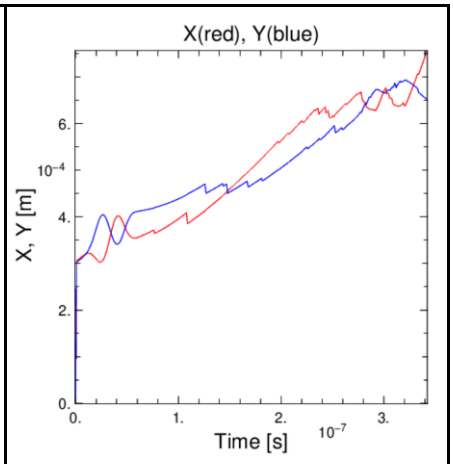
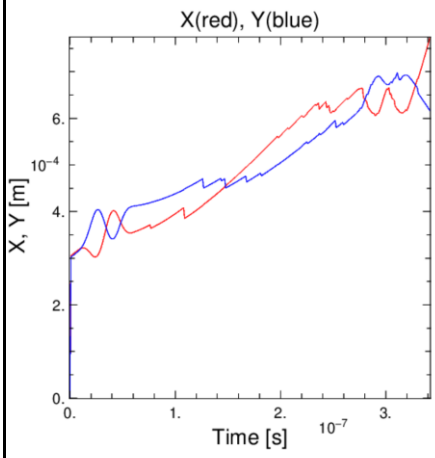
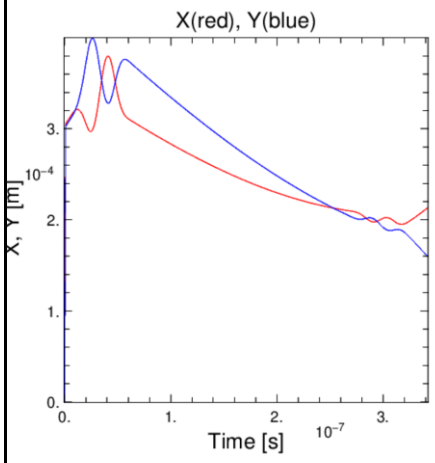
22.18		[100,-300,350,-300,150]	
22.19		[100,-300,350,-300,140,0,0,0,0]	
22.20		[100,-300,350,-300,150,0,0,0,0]	

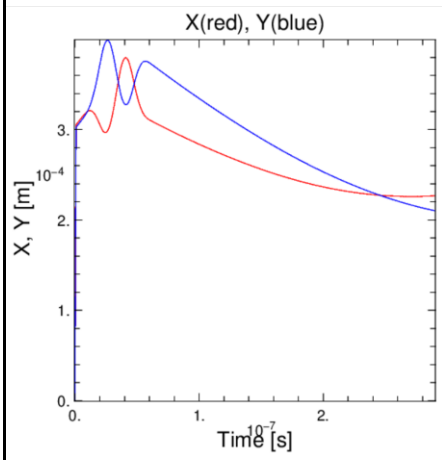
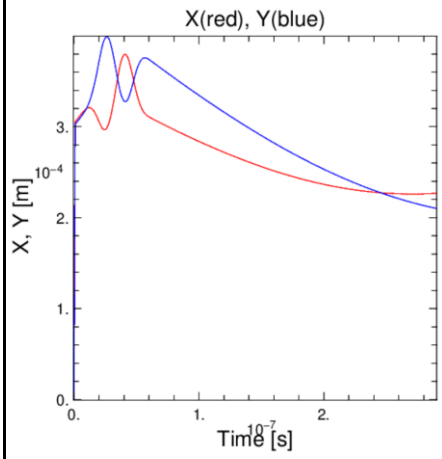
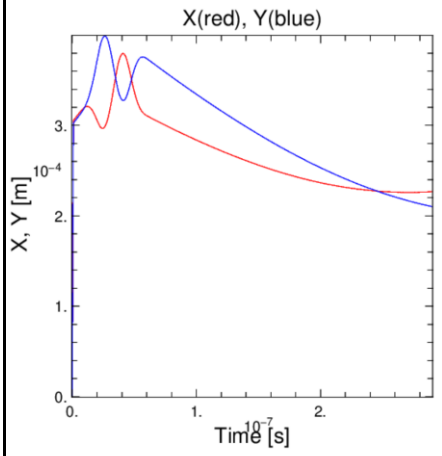
22.21		[100,-300,350,-300,150,0,0,0,0] Same but with emittance commented	
22.22		From 22.0 but commented emit [100,-250,250,-110, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]	
22.23		[100,-300,350,-300,225,-250,200,-200,0] 	

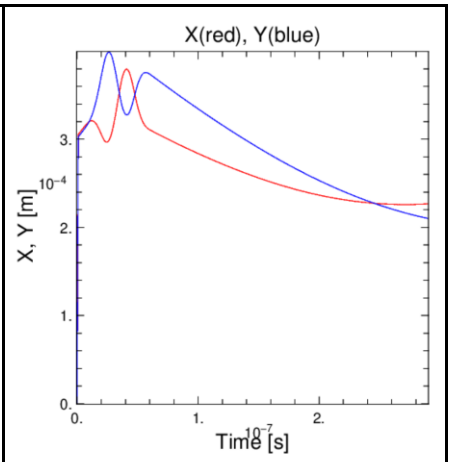
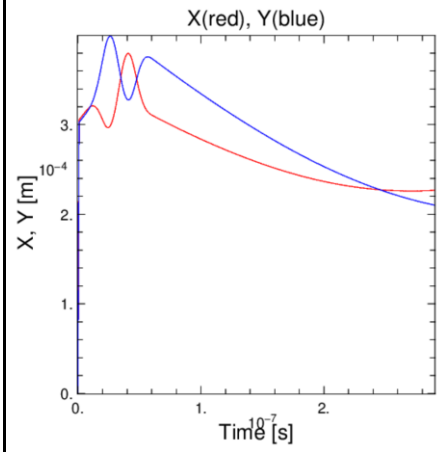
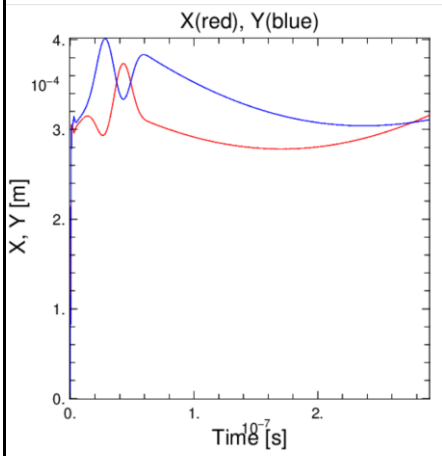
22.24	7	Same [100,-300,350,-300,225,-250,200,-200,0] but with emittance commented	
22.25		Same but with more particles, doubled	
22.26		[100,-300,350,-300,250,-250,250,-250,250]	

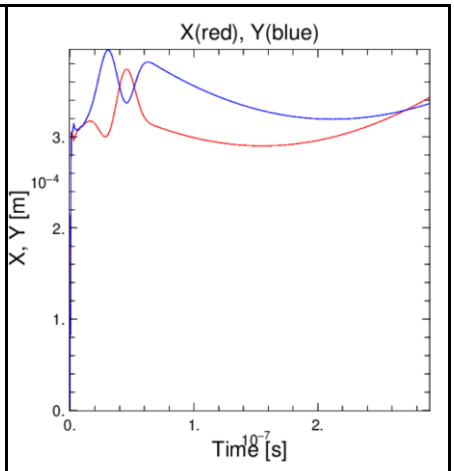
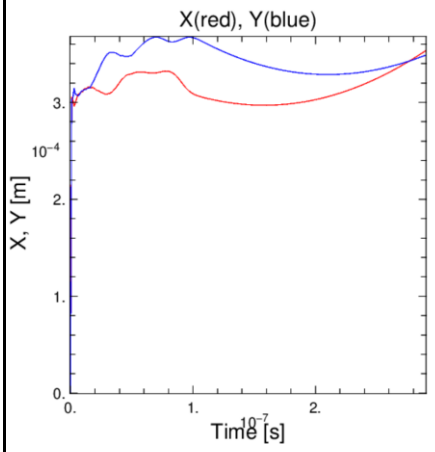
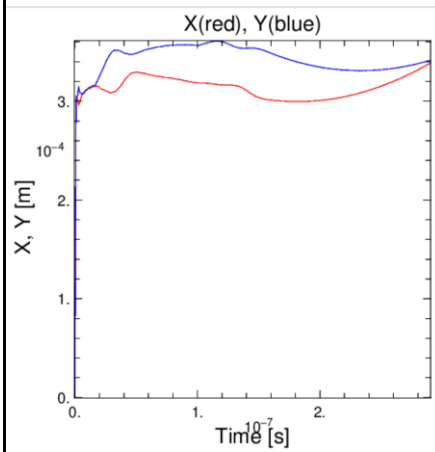
22.27		[100,-300,350,-350,350,-350,350,-350,350]	
23.0		[120, -320, 370, -340, 438, 0,0,0] It is always cutting off on the last ESQ at 0.02mm Z because there are stray particles too far out	
24.0		Added current plot to end	

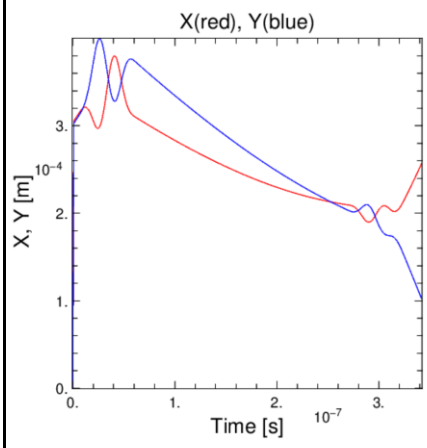
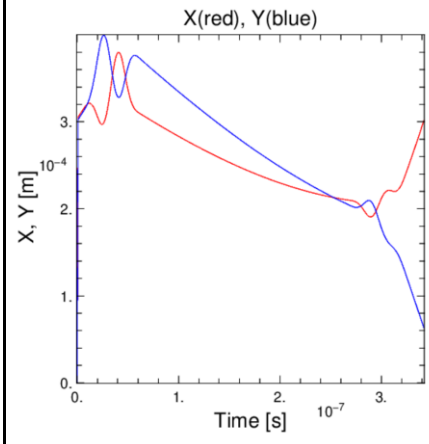
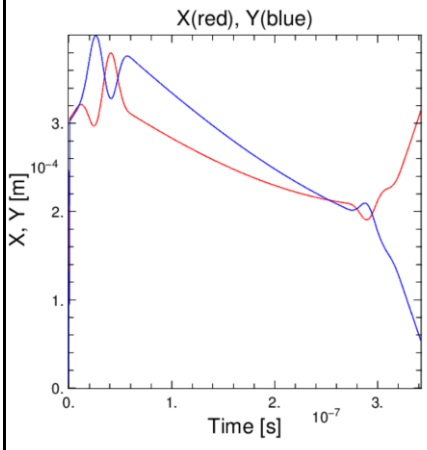
24.1		Added current plot to every timestep	
24.2		1.58E-5 emit [100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,25,-50,50,-50]	
24.3		4.74E-6 emit [100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,25,-50,50,-50]	
24.4		[100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-75,75,-75]	

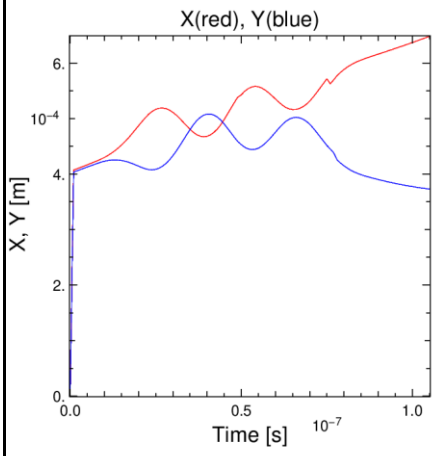
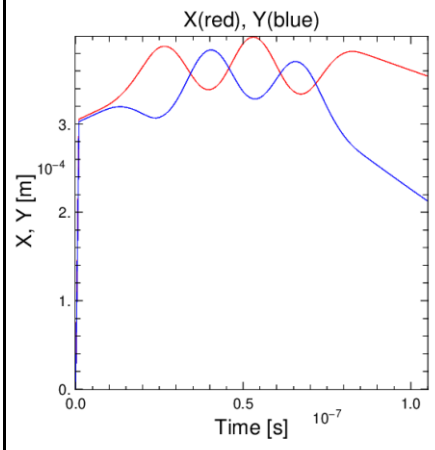
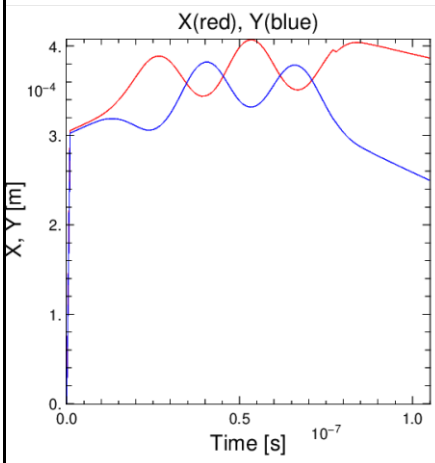
24.5		[100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-100,100,-100]	
24.6		[100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,75,-150,150,-150]	
24.7		Commented emit [100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,25,-50,50,-50]	

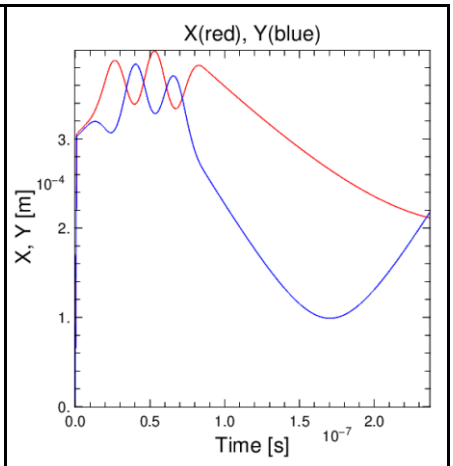
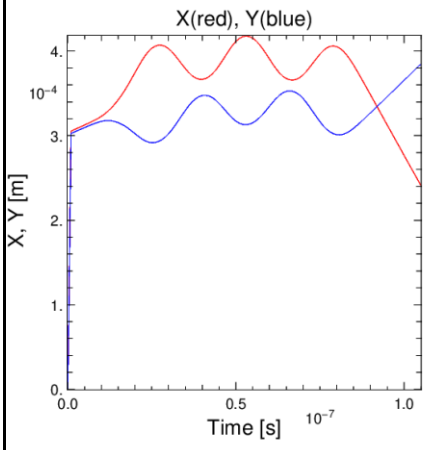
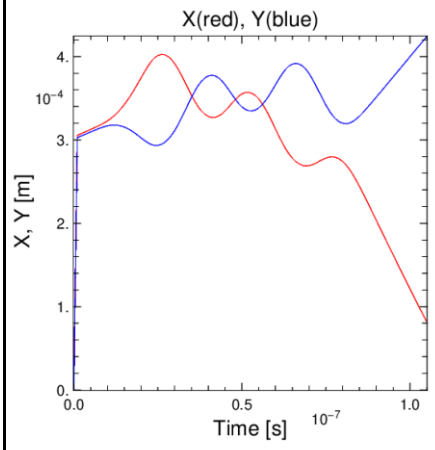
25.0		From 21.21.1> [100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0] Testing bunch length: 1e-11	
25.1		5e-11	
25.2		1e-10	

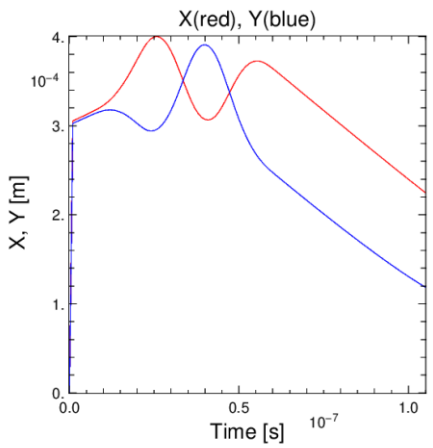
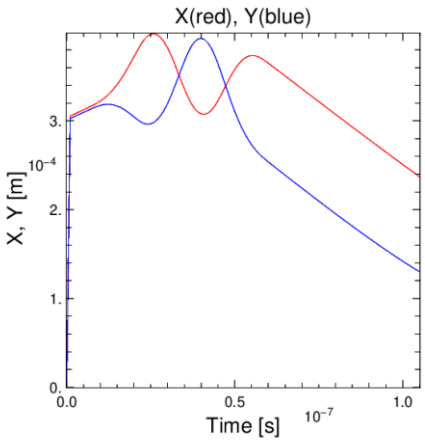
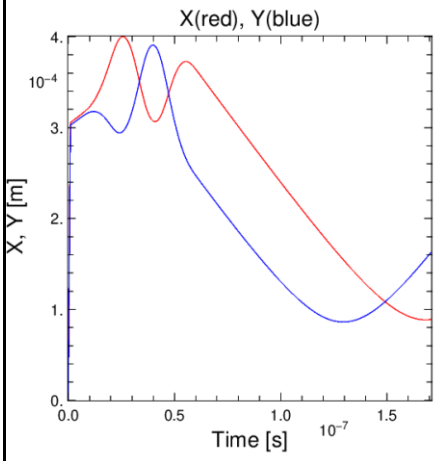
25.3		5e-10	
25.4		1e-9 (original)	
25.5		5e-9	

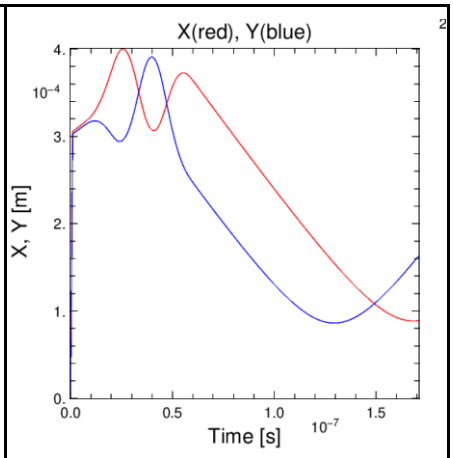
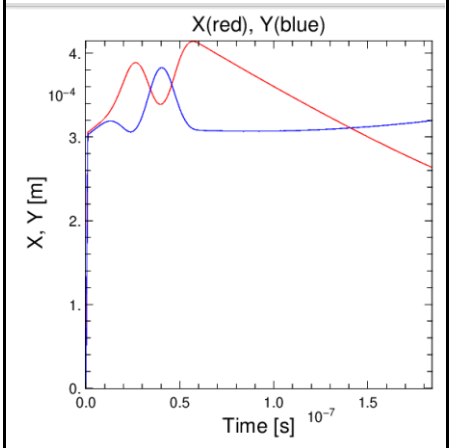
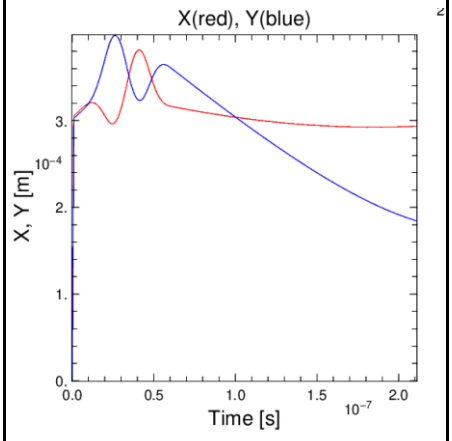
25.6		1e-8	
25.7		5e-8	
25.8		1e-7	

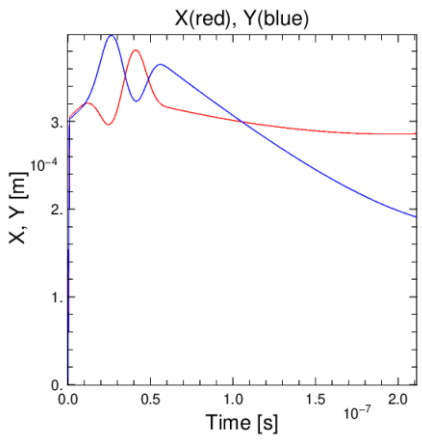
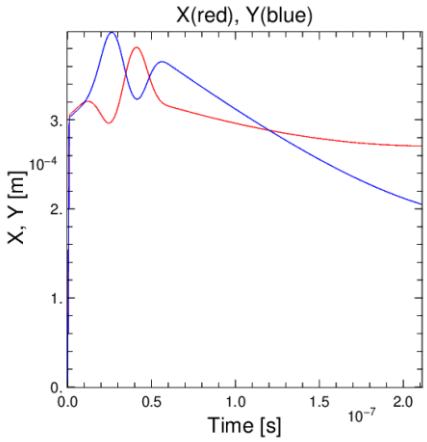
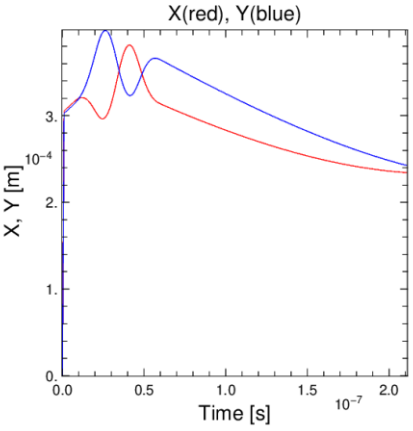
26.0		From 24.7 Commented emit [100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0, 50,-125,100,-100]	
26.1		[100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0, 50,-150,100,-100]	
26.2		[100,-250,250,-113, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0, 50,-150,75,-75]	

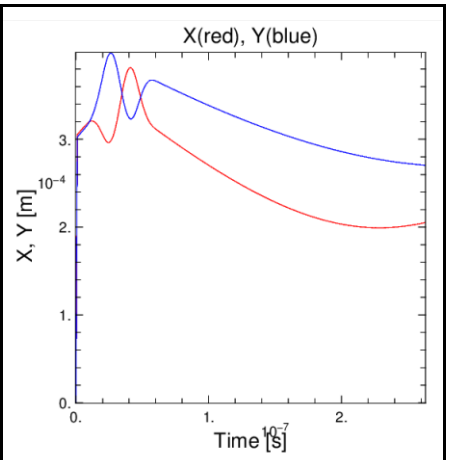
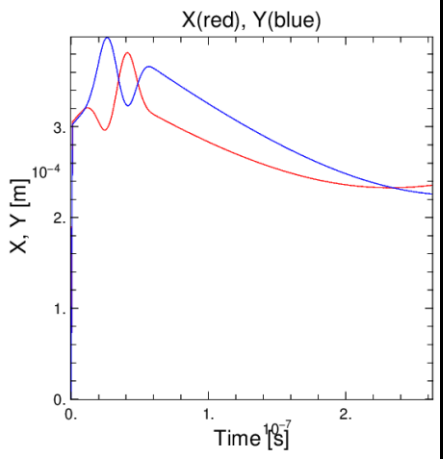
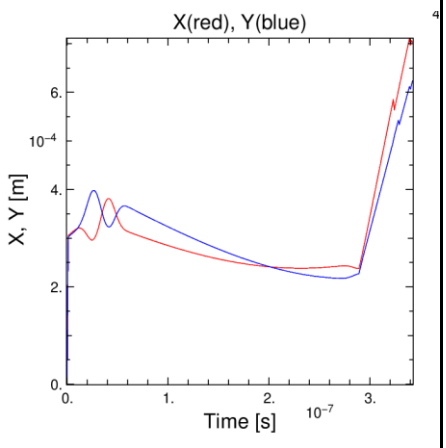
27.0		0.4mm 12mrad 0.16e-6 uA 2.53E-06 [-75,200,-250,250,-240,117]	
28.0		0.3mm 9mrad 0.09e-6 uA 1.42E-06 [-75,200,-250,250,-240,117] Grid size 1.3mm	
28.1		Same but with 3mm grid size	

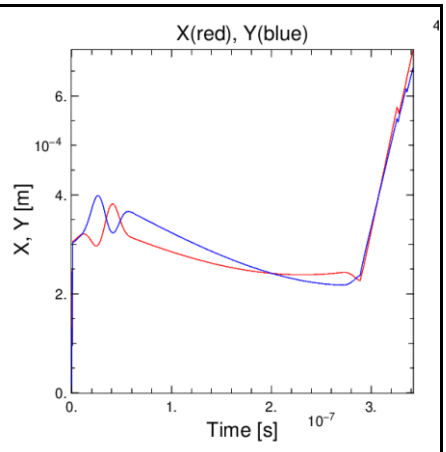
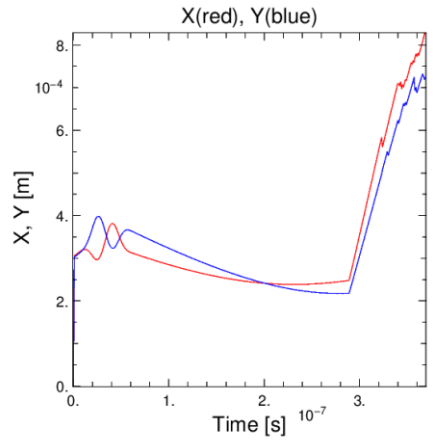
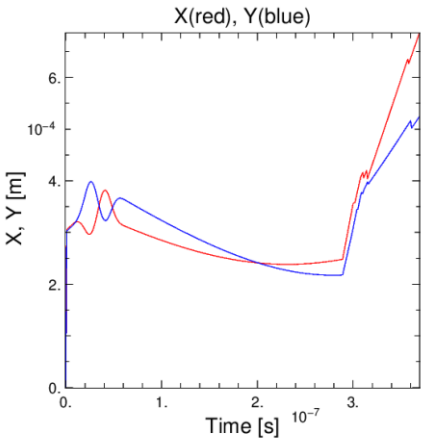
28.2		Grid size 1.3mm [-75,200,-250,250,-240,117,]	
28.3		[-100,200,-200,200,-200,200]	
28.4		[-100,250,-250,250,-250,250]	

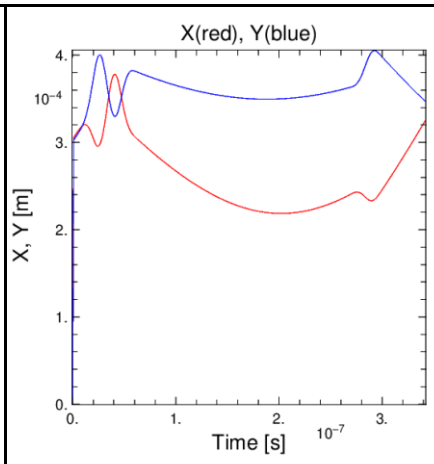
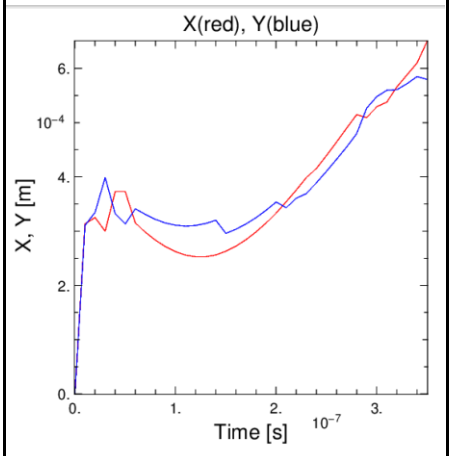
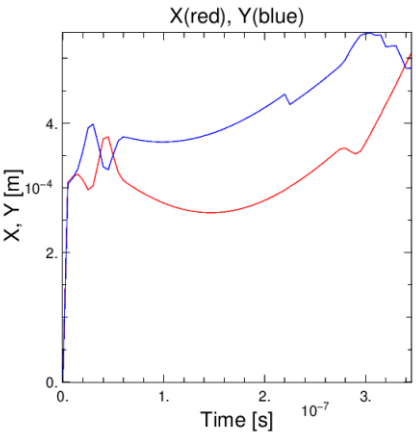
28.5		[-100,285,-360,190,0,0]	
28.5.1		Same except Dirichlet instead of neumann BCs	
28.6		[-100,285,-360,190,0,0,0,0,0,0,0]	

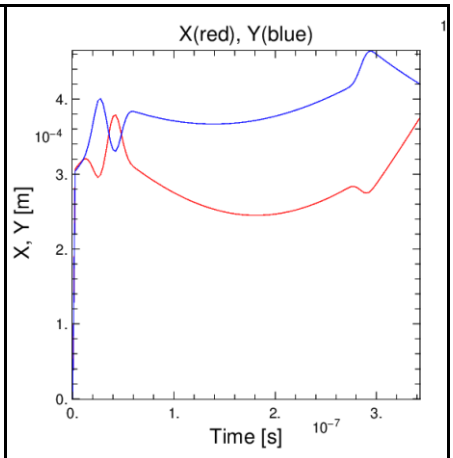
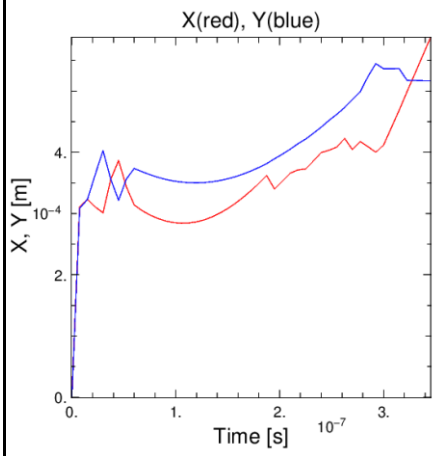
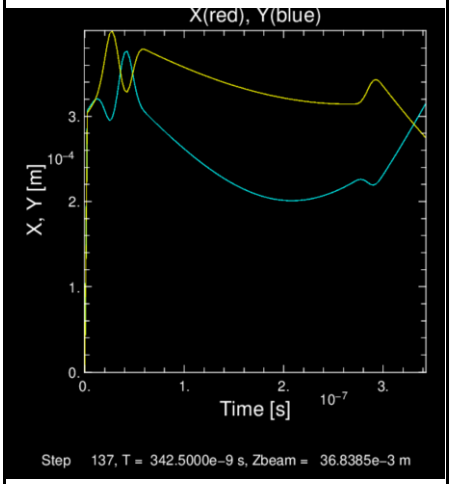
28.6		[-100,285,-360,190,0,0,0,0,0,0,0]	
28.7		[-75,200,-250,140,0,0,0,0,0,0,0,0]	
28.8		[100,-250,250,-113,0,0,0,0,0,0,0,0,0,0]	

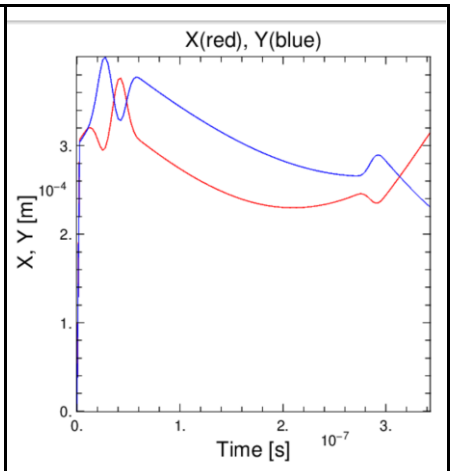
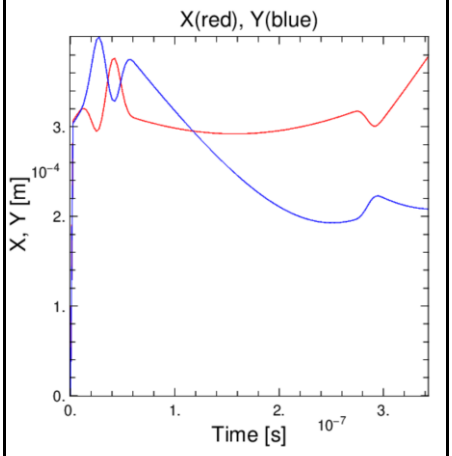
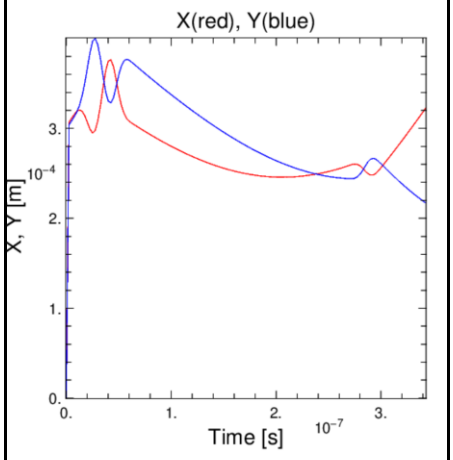
28.8.1		[100,-250,250,-112,0,0,0,0,0,0,0,0,0,0]	
28.8.2		[100,-250,250,-110,0,0,0,0,0,0,0,0,0,0]	
28.8.3		[100,-250,250,-105,0,0,0,0,0,0,0,0,0,0]	

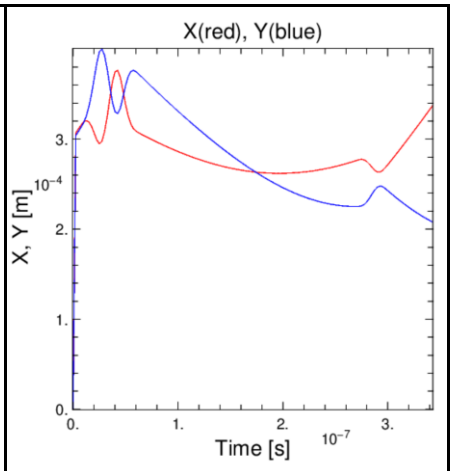
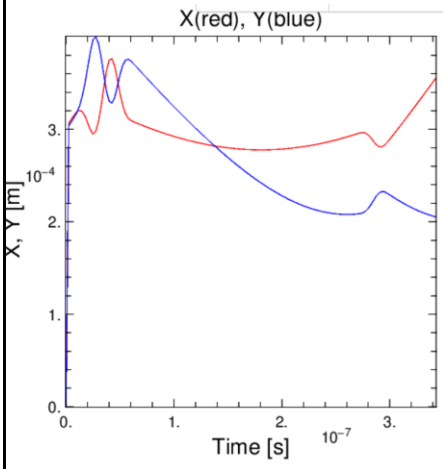
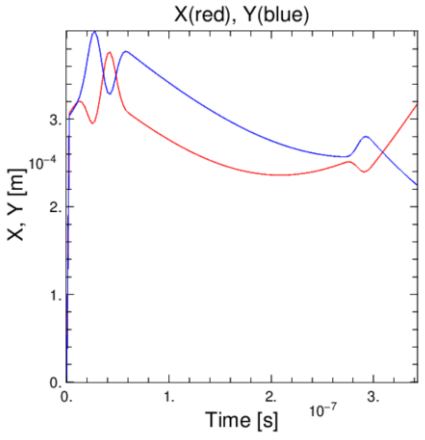
28.8.4		[100,-250,250,-105,0,0,0,0,0,0,0,0,0,0]	
28.8.5		[100,-250,250,-105, 0,0,0,0, 0,0,0,0, 0,0,0,0, 0,0]	
28.9.0		[100,-250,250,-105, 0,0,0,0, 0,0,0,0, 0,0,0,0, 0,0,0,0, 25, 50]	

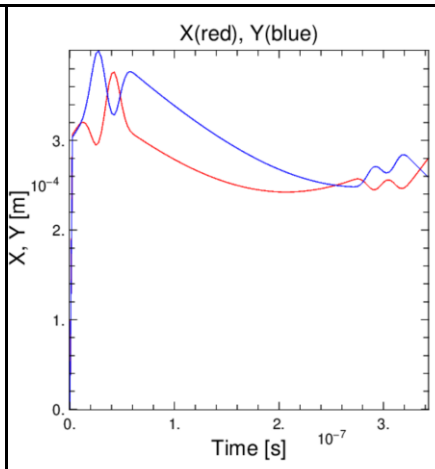
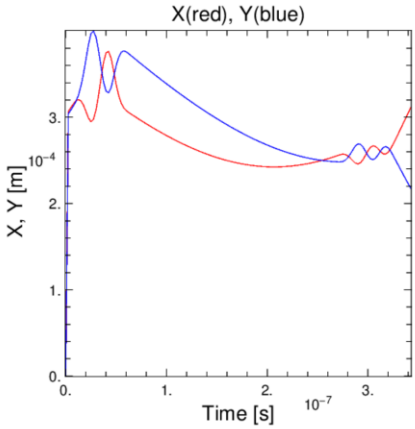
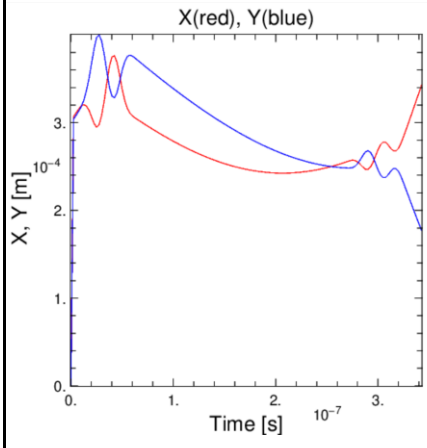
28.9.1		[100,-250,250,-105,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-75,0,0]	
28.9.2		[100,-250,250,-105,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,25,-50] (two extra zeros)	
28.9.3		Same added extra eqs at end	

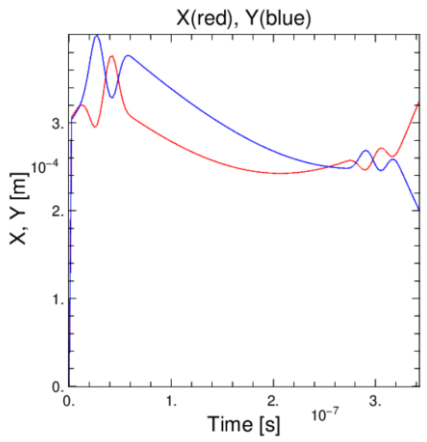
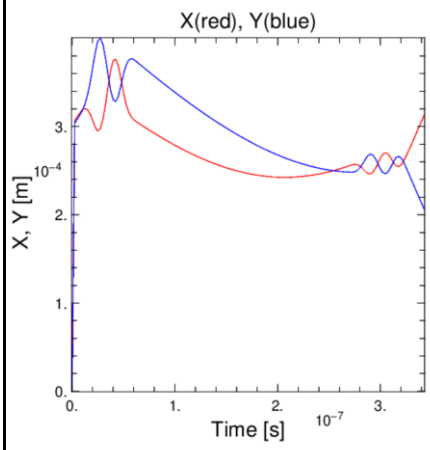
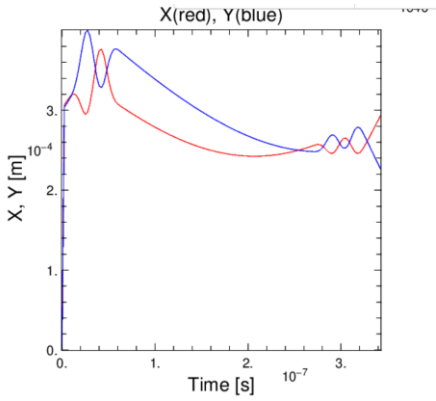
29.0	42	From 21.21.5 [100,-250,250,-105,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-75,0,0]	
29.1	4	Same but testing 1e-8 timestep bc it takes too long	
29.2	9	5e-9	

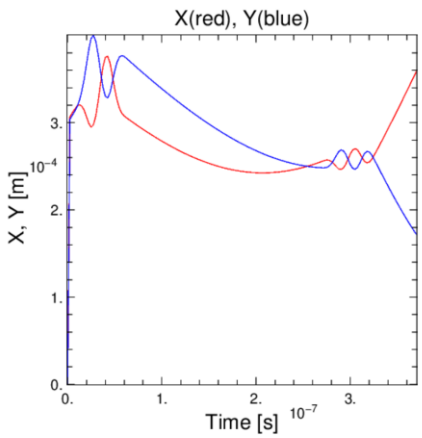
29.3	17	2.5e-9	
29.4	6	7.5e-9	
29.6		2.5e-9 but with 0.09 current	

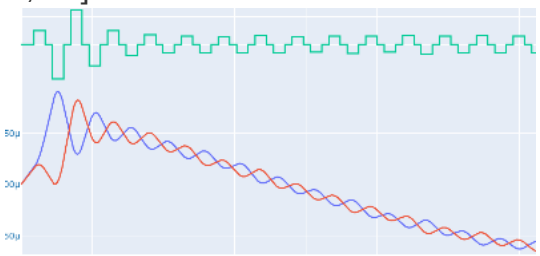
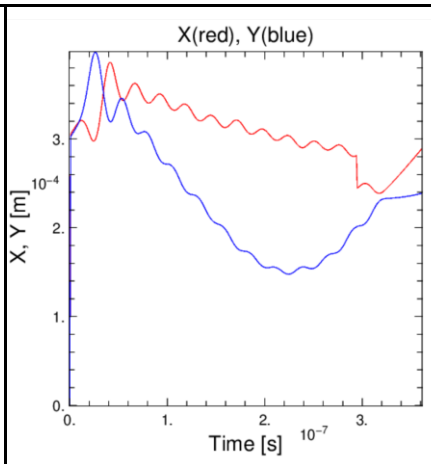
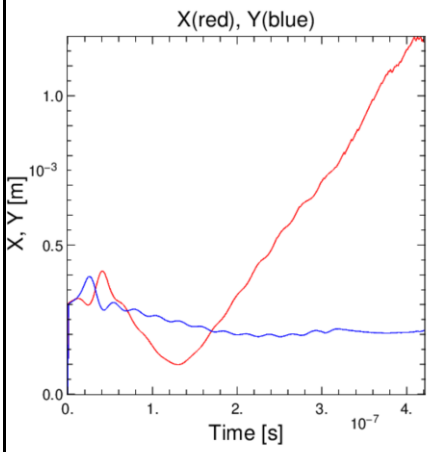
29.7		[100,-250,250,-110,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-75,0,0]	
29.8		[100,-250,250,-120,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-75,0,0]	
29.9		[100,-250,250,-112.5,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-75,0,0]	

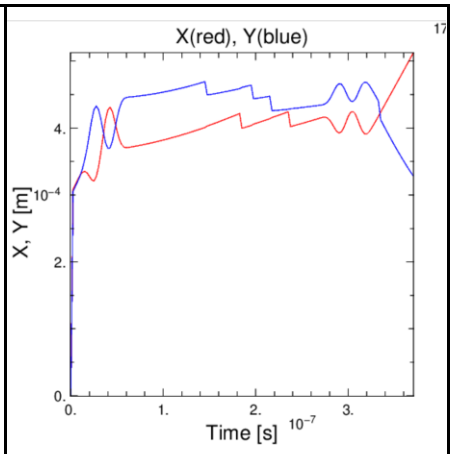
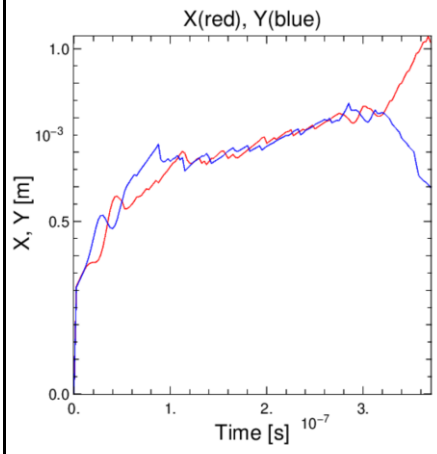
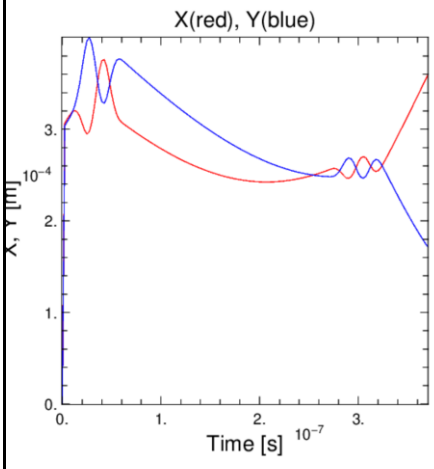
29.10		[100,-250,250,-115,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-75,0,0]	
29.11		[100,-250,250,-117.5,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-75,0,0]	
29.12		[100,-250,250,-111,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-75,0,0]	

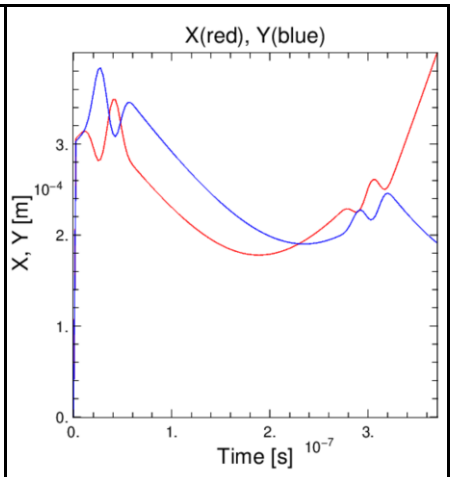
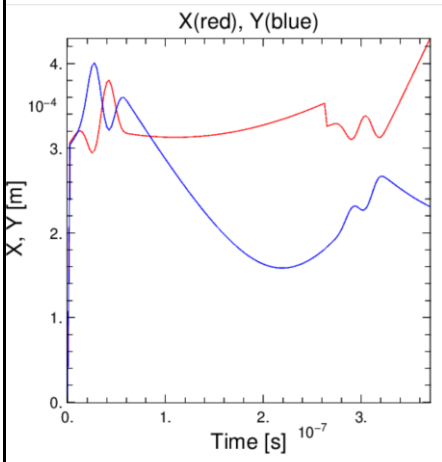
29.13		[100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-75,75,-75]	
29.14		[100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-100,100,-100]	
29.15		[100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-125,125,-125]	

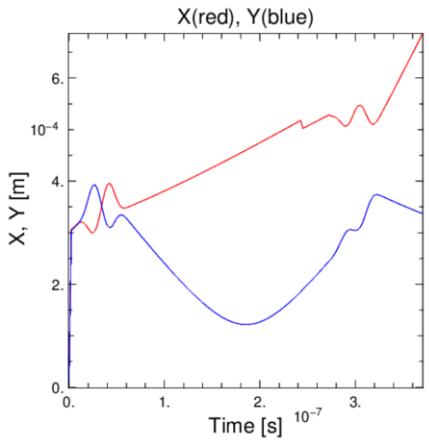
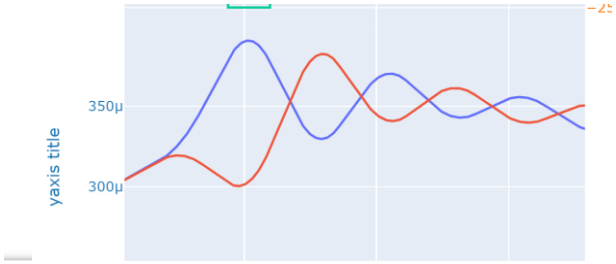
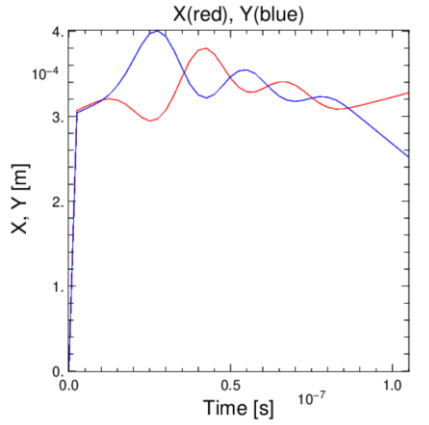
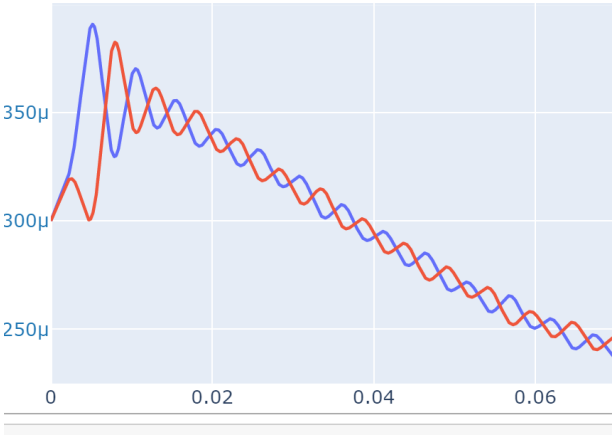
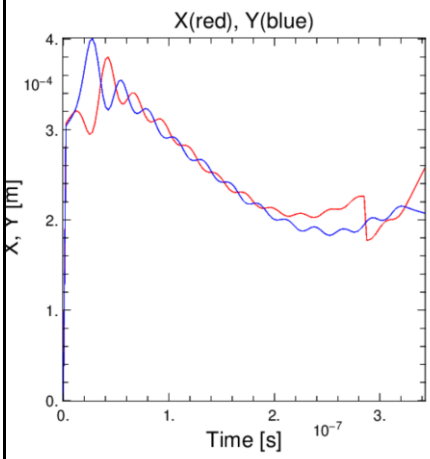
29.16		[100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-110,110,-110]	
29.17		[100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-110,125,-125]	
29.18		[100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-100,125,-125]	

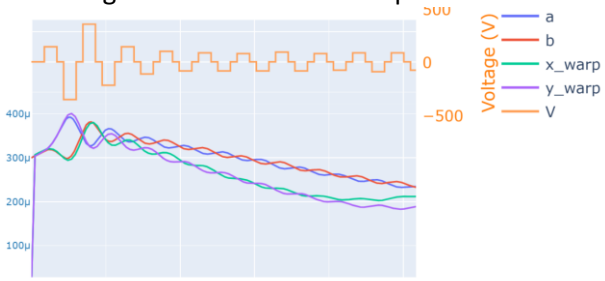
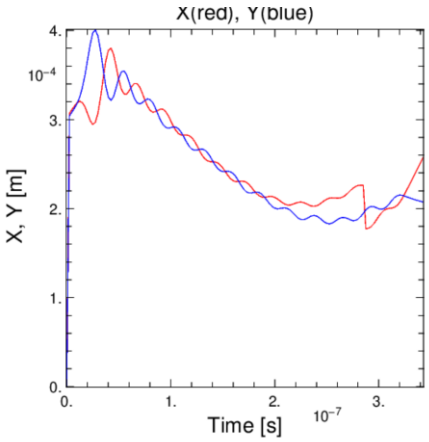
29.19		[100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-110,125,-110,0,0]	
29.20		[100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-110,125,-110,110,-110]	
29.21		[100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-110,125,-100,100,-100]	
29.22		[100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-110,125,-80,100,-100]	
29.23		From 29.19 [100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-110,125,-110]	

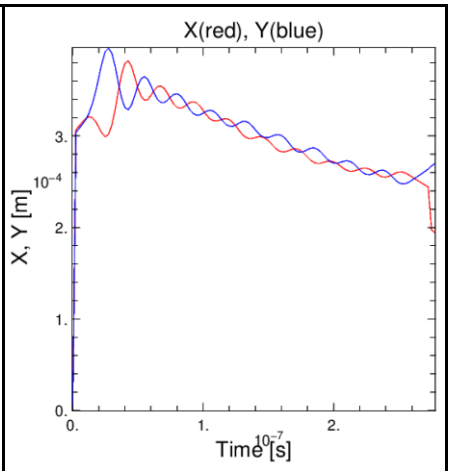
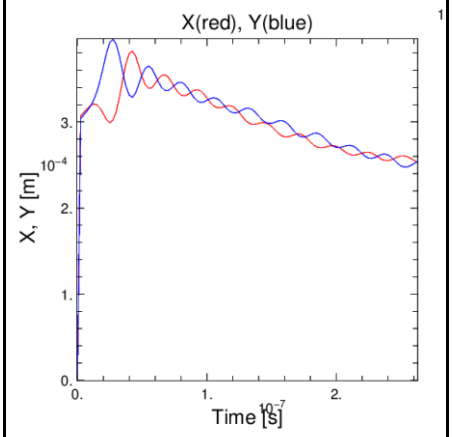
31.0		[100,-250,250,-155,100,-80,70,-60,60,-60,55,-60,65,-60,55,-55,60,-65,60,-55,65,-70,60,-60] 	
31.1		[100,-300,340,-155,100,-80,70,-60,60,-60,55,-60,65,-60,55,-55,60,-65,60,-55,65,-70,60,-60,65,-60,60,-60,60] Changing to -300 and 340 initially, but did not give desired result	

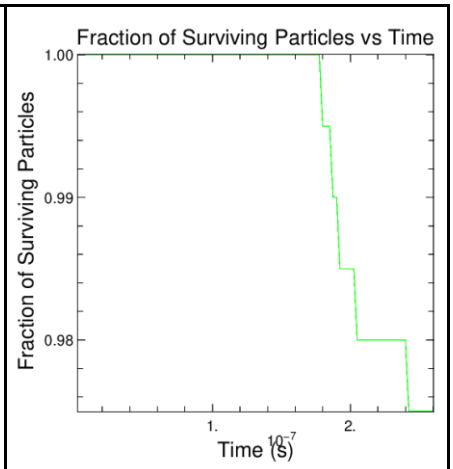
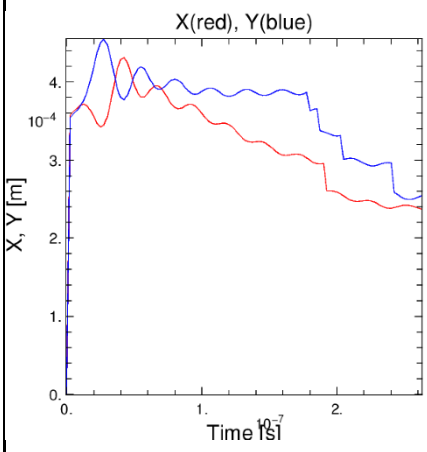
32.0		From 29.19 testing angle [100,-250,250,-112,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,50,-110,125,-110,0,0] Original 9mrad Testing 15mrad	
32.1		Testing 30mrad	
32.2		Testing 9mrad	

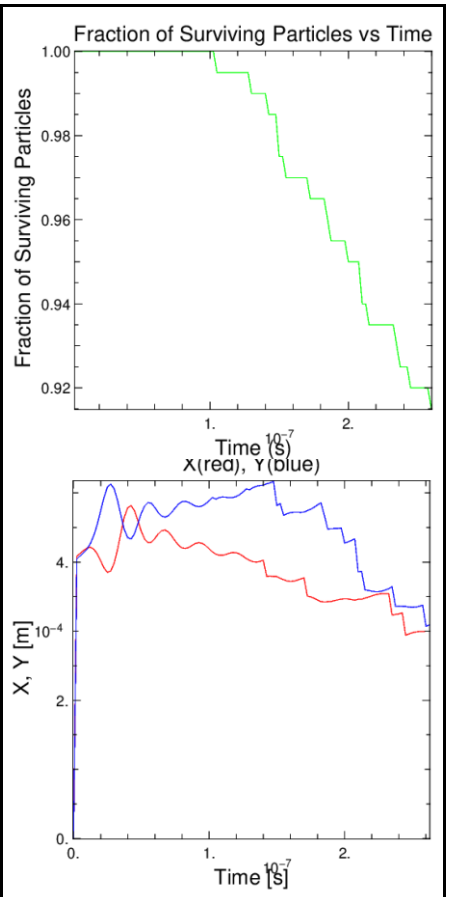
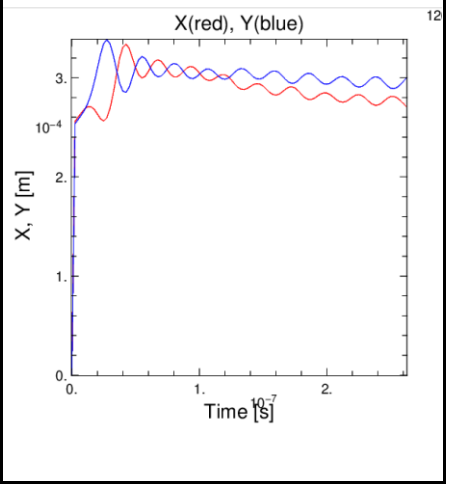
32.3		Testing 6mrad	
33.0		Testing mesh From 29.19 Made d_wafer be 1.795mm and t_wafer be 1.59mm, the real dimensions	

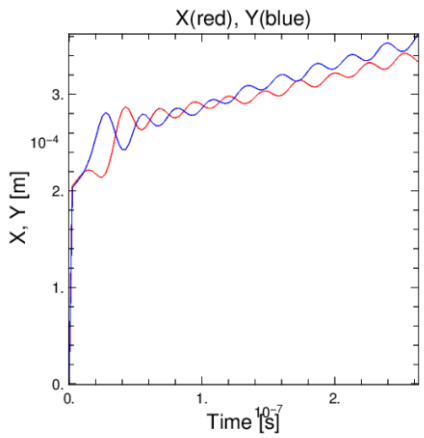
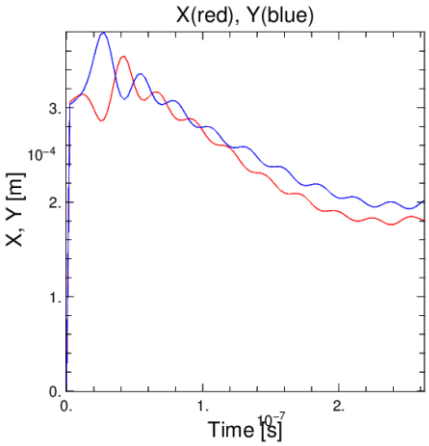
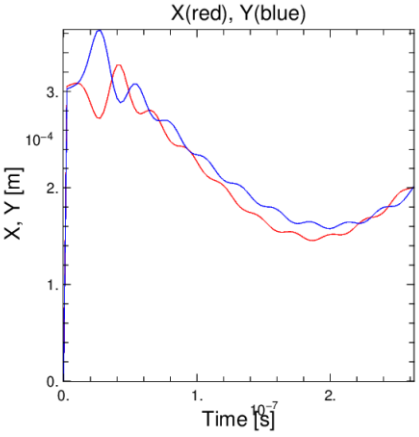
33.1		Took out submeshes for ESQs	
33.2		From 33.0 with new mesh dimensions [100,-250,250,-155,100,-80] 	
33.3		From 33.0 with new mesh dimensions V_esq = [100,-250,250,-155,100,-80,70,-60,60,-60,55,-60,65,-60,55,-55,60,-65,60,-55,65,-70,60,-60]#,65,-60,60,-60,60] 	

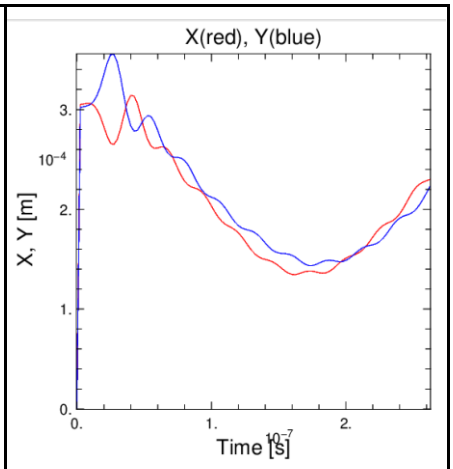
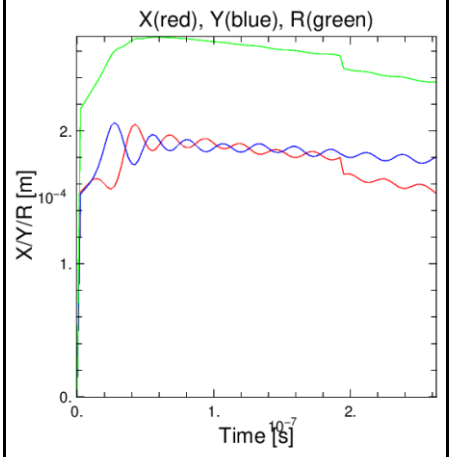
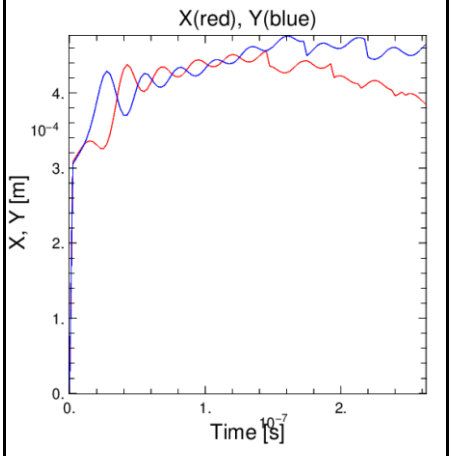
33.4		Same as 33.2 but with 50ns injection	
33.5		Same as 33.2 but print(out)	
33.6		Making new output to text file with x,y,z etc	
33.7		Matching to newEnv10.0 with exported text 	
34.0		[90.91, -227.27, 227.27, -140.91, 90.91, -72.73, 63.64, -54.55, 54.55, -54.55, 50. , -54.55, 59.09, -54.55, 50. , -50. , 54.55, -59.09, 54.55, -50. , 59.09, -63.64, 54.55, -54.55, 59.09, -54.55, 54.55, -54.55, 54.55]	

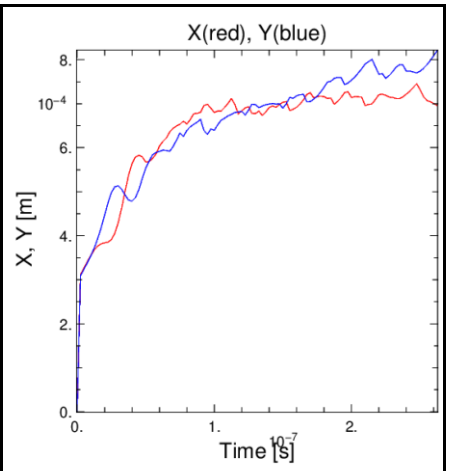
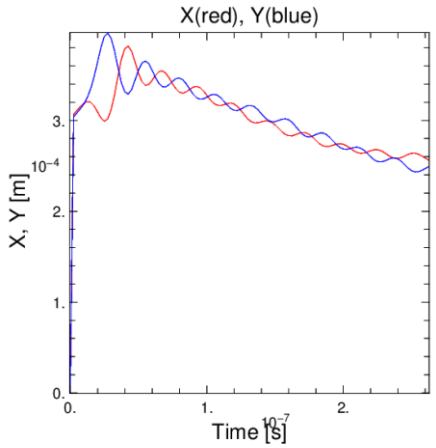
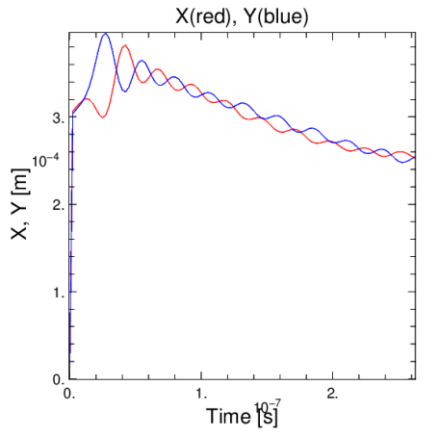
34.1		[90.91, -227.27, 227.27, -140.91, 90.91, -72.73, 63.64, -54.55, 54.55, -54.55, 50. , -54.55, 59.09, -54.55, 50. , -50. , 54.55, -59.09, 59.09]	
34.2		Same as 34,1 but changed prwall to 0.55mm	
34.3		Prwall is 0.6mm	
35.0		For stability test: original 0.3mm and 9mrad [90.91, -227.27, 227.27, -140.91, 90.91, -72.73, 63.64, -54.55, 54.55, -54.55, 50. , -54.55, 59.09, -54.55, 50. , -50. , 54.55, -59.09, 59.09]	

35.1		0.35mm and 9mrad	 

35.2		0.4mm and 9mrad	
35.3		0.25mm and 9mrad	

35.4		0.2mm and 9mrad	
35.5		0.3mm and 6mrad	
35.6		0.3mm and 3mrad	

35.7		0.3mm and 1.5mrad	
35.8		0.3mm and 12mrad	
35.9		0.3mm and 15mrad	

35.10		0.3mm and 30mrad	
36.0		Rounded 35.0 [91., -227., 227., -141., 91., -73., 64., -55., 55., -55., 50., -55., 59., -55., 50., -50., 55., -59., 59.]	
36.1		Rouned to 1 decomal place [90.9, -227.3, 227.3, -140.9, 90.9, -72.7, 63.6, -54.5, 54.5, -54.5, 50. , -54.5, 59.1, -54.5, 50. , -50. , 54.5, -59.1, 59.1]	

37.0		Starting stability test with 36.1 as base Voltages +/- 10% Original: [90.9, -227.3, 227.3, -140.9, 90.9, -72.7, 63.6, -54.5, 54.5, -54.5, 50. , -54.5, 59.1, -54.5, 50. , -50. , 54.5, -59.1, 59.1]	(Graphs of output were exported as text files and graphed in Stability Analysis)
37.1		[98.4, -220. , 209.9, -132.5, 88. , -67.4, 59.4, -55.3, 57.6, -55.6, 52. , -51.3, 54.9, -55.7, 49.8, -47.6, 49.9, -55.4, 57.1]	
37.2		[99.6, -218.3, 206.6, -136.7, 97.6, -77.2, 68.8, -52.1, 50.9, -49.4, 50.6, -57.2, 60.7, -55.5, 48.7, -53.2, 59. , -53.4, 53.4]	

37.3		[81.9, -248.5, 219.5, -135.1, 85.6, -70.9, 62. , -54.7, 52.3, -52.2, 47.4, -53. , 54. , -52.9, 51.6, -47.2, 53.7, -57.5, 58.8]	
37.4		[86.8, -223.8, 231.1, -134.9, 90.5, -73.4, 60.7, -51.3, 53.2, -57.2, 53.9, -53. 5, 64.5, -51.5, 49.8, -48.2, 57.2, -55.3, 63.7]	
37.5		[99.1, -240.8, 234.3, -134.6, 94.1, -72.5, 63.6, -49.4, 51.4, -56.2, 52.6, -56. , 56.6, -50.7, 45.4, -49.7, 55.8, -56.4, 63.6]	
37.6		[87.3, -239.5, 242.5, -146.3, 96.2, -79.6, 65.8, -53. , 52.9, -59. , 53. , -57. 1, 63.6, -51.1, 47.3, -46.3, 58.4, -62.8, 58.8]	

37.7		[95.1, -220.6, 213.8, -138. , 83.4, -78.8, 65. , -53. ,
		         49.3, -56.9, 52.8, -58.6, 62.9, -59.7, 49.9, -54.3,
		         57.7, -57.7, 58.5]	

37.8		[88. , -230.9, 232.2, -132.1, 88.6, -65.6, 57.5, -56.6,
		         49.8, -56.1, 49.2, -51.8, 54.8, -56.9, 49.9, -53.7,
		         57.9, -60.8, 58.1]	

37.9		[87.6, -244.2, 236.1, -141.4, 83. , -70.3, 65.3, -57.7,
		         50.9, -59.5, 48.9, -53.5, 55.4, -50.6, 52. , -49.7,
		         55.3, -58.5, 59.1]	

38.0		Testing stability with varying voltages overall
		
		Original:
		[90.9, -227.3, 227.3, -140.9, 90.9, -72.7, 63.6, -54.5,
		         54.5, -54.5, 50. , -54.5, 59.1, -54.5, 50. , -50. ,
		         54.5, -59.1, 59.1]	

38.1		+10% [100, -250, 250, -155, 100, -80, 70, -60, 60, -60, 55, -60, 65, -60, 55, -55, 60, -65, 65]	
38.2		+20% [109.1, -272.7, 272.7, -169.1, 10 9.1, -87.3, 76.4, -65.5, 65.5, -65.5, 60. , -65. 5, 70.9, -65.5, 60. , -60. , 65.5, -70.9, 70.9]	
38.3		+30% [118.2, -295.5, 295.5, -183.2, 11 8.2, -94.5, 82.7, -70.9, 70.9, -70.9, 65. , -70. 9, 76.8, -70.9, 65. , -65. , 70.9, -76.8, 76.8]	
38.4		+40% [127.3, -318.2, 318.2, -197.3, 12 7.3, -101.8, 89.1, -76.4, 76.4, -76.4, 70. , -76. 4, 82.7, -76.4, 70. , -70. , 76.4, -82.7, 82.7]	

38.5		+50% [136.4, -340.9, 340.9, -211.4, 136.4, -109.1, 95.5, -81.8, 81.8, -81.8, 75. , -81.8, 88.6, -81.8, 75. , -75. , 81.8, -88.6, 88.6]	
38.6		-10% [81.8, -204.5, 204.5, -126.8, 81.8, -65.5, 57.3, -49.1, 49.1, -49.1, 45. , -49.1, 53.2, -49.1, 45. , -45. , 49.1, -53.2, 53.2]	
38.7		-20% [72.7, -181.8, 181.8, -112.7, 72.7, -58.2, 50.9, -43.6, 43.6, -43.6, 40. , -43.6, 47.3, -43.6, 40. , -40. , 43.6, -47.3, 47.3]	
38.8		-30% [63.6, -159.1, 159.1, -98.6, 63.6, -50.9, 44.5, -38.2, 38.2, -38.2, 35. , -38.2, 41.4, -38.2, 35. , -35. , 38.2, -41.4, 41.4]	

38.9		-40% [54.5, -136.4, 136.4, -84.5, 54.5, -43.6, 38.2, -32.7, 32.7, -32.7, 30. , -32.7, 35.5, -32.7, 30. , -30. , 32.7, -35.5, 35.5]	
38.10		-50% [45.5, -113.6, 113.6, -70.5, 45.5, -36.4, 31.8, -27.3, 27.3, -27.3, 25. , -27.3, 29.5, -27.3, 25. , -25. , 27.3, -29.5, 29.5]	
39.0		Starting stability test with 37.0 as base Varying current Original: 0.09E-6 [90.9, -227.3, 227.3, -140.9, 90.9, -72.7, 63.6, -54.5, 54.5, -54.5, 50. , -54.5, 59.1, -54.5, 50. , -50. , 54.5, -59.1, 59.1]	
39.1		Current = 0.09	

39.2		Current = 0.09E-1	
39.3		Current = 0.09E-2	
39.4		Current = 0.09E-3	
39.5		Current = 0.09E-4	

39.6		Current = 0.09E-5	
39.7		Current = 0.09E-7	
39.8		Current = 0.09E-8	
39.9		Current = 0.09E-9	

39.10		Current = 0.09E-10	
40.0		Starting stability test with 37.0 as base Varying emittance Original: 1.42E-6 [90.9, -227.3, 227.3, -140.9, 90.9, -72.7, 63.6, -54.5, 54.5, -54.5, 50. , -54.5, 59.1, -54.5, 50. , -50. , 54.5, -59.1, 59.1]	
40.1		1.42E-1	

40.2		1.42E-2	
40.3		1.42E-3	
40.4		1.42E-4	
40.5		1.42E-5	

40.6		1.42E-7	
40.7		1.42E-8	
40.8		1.42E-9	

Radius (mm)	Angle (mrad)	Current (uA)	Emittance (m rad)	
1	30	1	1.58E-05	
0.5	15	0.25	3.95E-06	
0.4	12	0.16	2.53E-06	
0.3	9	0.09	1.42E-06	
Source Temp (eV)	Emittance (1mm)			
0.5	1.12E-5			
1	**1.58E-5**			
2	2.23E-5			

Another improvement would be work with the Kapchinsky ENVelope (KENV) project

- This would be useful as it provides straightforward visualizations, an interactive user interface, and a genetic algorithm for adjusting the beam envelopes. The challenge to this, is that it was designed for electron beams, and would need to be adapted to work with positive ions. Upon inquiry, the creators of this said it would be possible to include charge to mass ratio parameter for implementing ions. One would need to rescale the electric and magnetic fields according to the q/m ratio, and