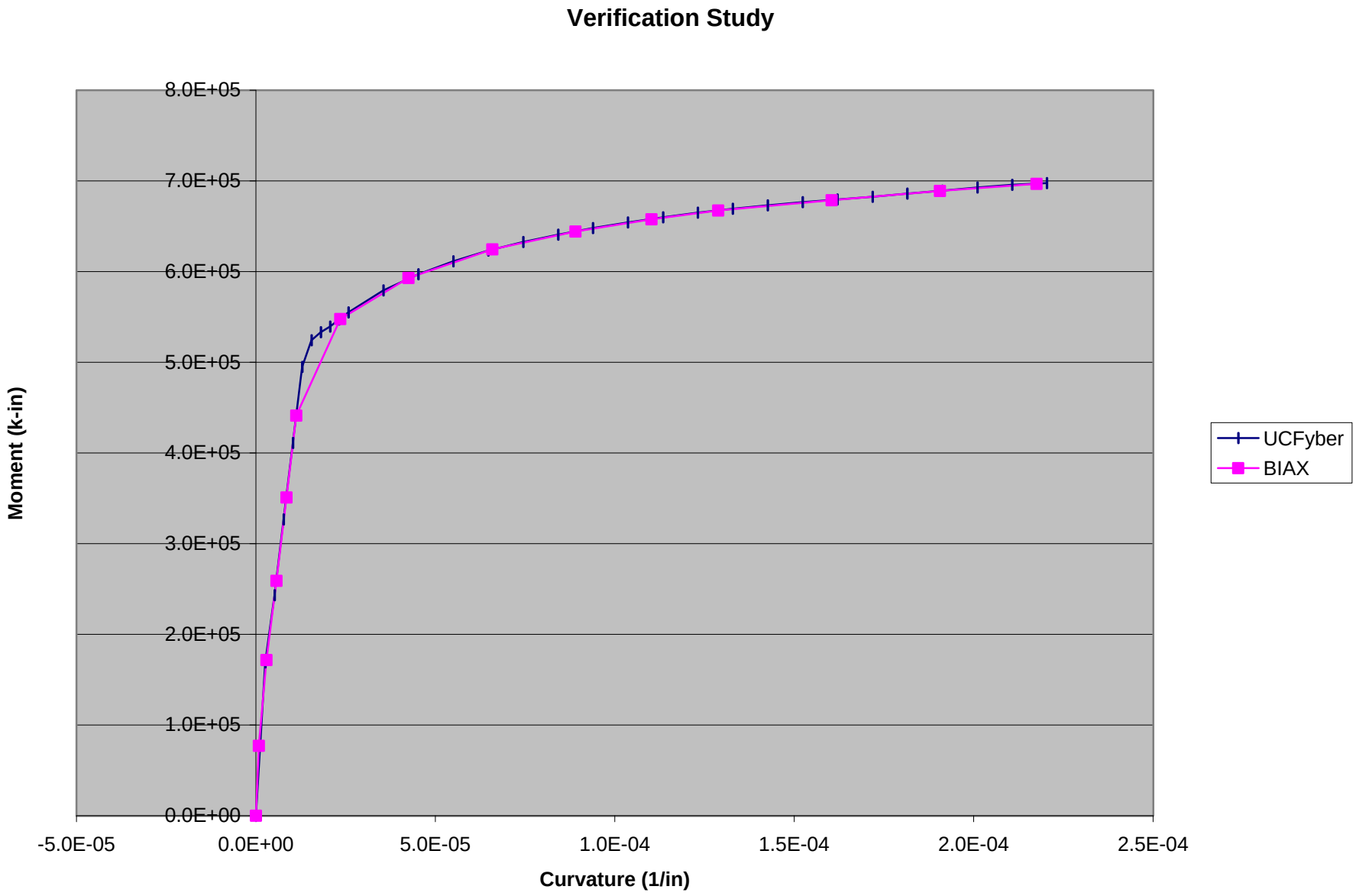
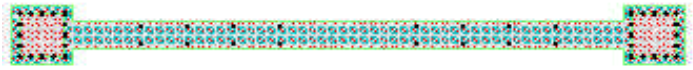

Verification Study
8.0E+05
7.0E+05
6.0E+05
5.0E+05
4.0E+05
3.0E+05
2.0E+05
1.0E+05
0.0E+00
Moment (k-in)
-5.0E-05
0.0E+00
5.0E-05
1.0E-04
1.5E-04
2.0E-04
2.5E-04
Curvature (1/in)
UCFyber
BIAX

UCFyber Verification Study Results:

Section Analyzed: The model being evaluated is the EX3 form the BIAX revision 1 of the BIAX user's manual. Report No. CU/CEE - 92/4 , February 1992, Department of Civil Engineering, Clarkson University, Potsdam, New York 13699-5710

Cross Section: 12" X 264" R/C wall with 24" X 24" BE reinforced with 16 # 11 and #5 @ 18" EF in the web. Material models are defined in the EX3 description located in the reference above.



UCFyber			BIAX	
Myy Section1 MC1 kip-in	Kyy Section1 MC1 1/in		Myy Section1 MC1 kip-in	Kyy Section1 MC1 1/in
0.0E+00	-2.3E-21		0	0
1.7E+05	2.6E-06		7.72E+04	8.51E-07
2.4E+05	5.2E-06		1.72E+05	2.91E-06
3.3E+05	7.7E-06		2.59E+05	5.69E-06
4.1E+05	1.0E-05		3.51E+05	8.50E-06
5.0E+05	1.3E-05		4.41E+05	1.13E-05
5.2E+05	1.5E-05		5.48E+05	2.35E-05
5.3E+05	1.8E-05		5.93E+05	4.25E-05
5.4E+05	2.1E-05		6.24E+05	6.59E-05
5.5E+05	2.3E-05		6.44E+05	8.90E-05
5.5E+05	2.6E-05		6.58E+05	1.10E-04
5.8E+05	3.6E-05		6.67E+05	1.29E-04
6.0E+05	4.5E-05		6.79E+05	1.60E-04
6.1E+05	5.5E-05		6.89E+05	1.91E-04
6.2E+05	6.5E-05		6.97E+05	2.18E-04
6.3E+05	7.4E-05			
6.4E+05	8.4E-05			
6.5E+05	9.4E-05			
6.5E+05	1.0E-04			
6.6E+05	1.1E-04			
6.6E+05	1.2E-04			
6.7E+05	1.3E-04			
6.7E+05	1.4E-04			
6.8E+05	1.5E-04			
6.8E+05	1.6E-04			
6.8E+05	1.7E-04			
6.9E+05	1.8E-04			
6.9E+05	1.9E-04			
6.9E+05	2.0E-04			
7.0E+05	2.1E-04			
7.0E+05	2.2E-04			

Results: Analyses showed very good agreement. There is a small difference in the ultimate curvature between the two programs. This difference is because UCFyber samples its limiting strain at the centroid of the fiber. BIAX uses the outer most edge of the outer most fiber as a reference strain. The differences result in variations that are well within tolerance.