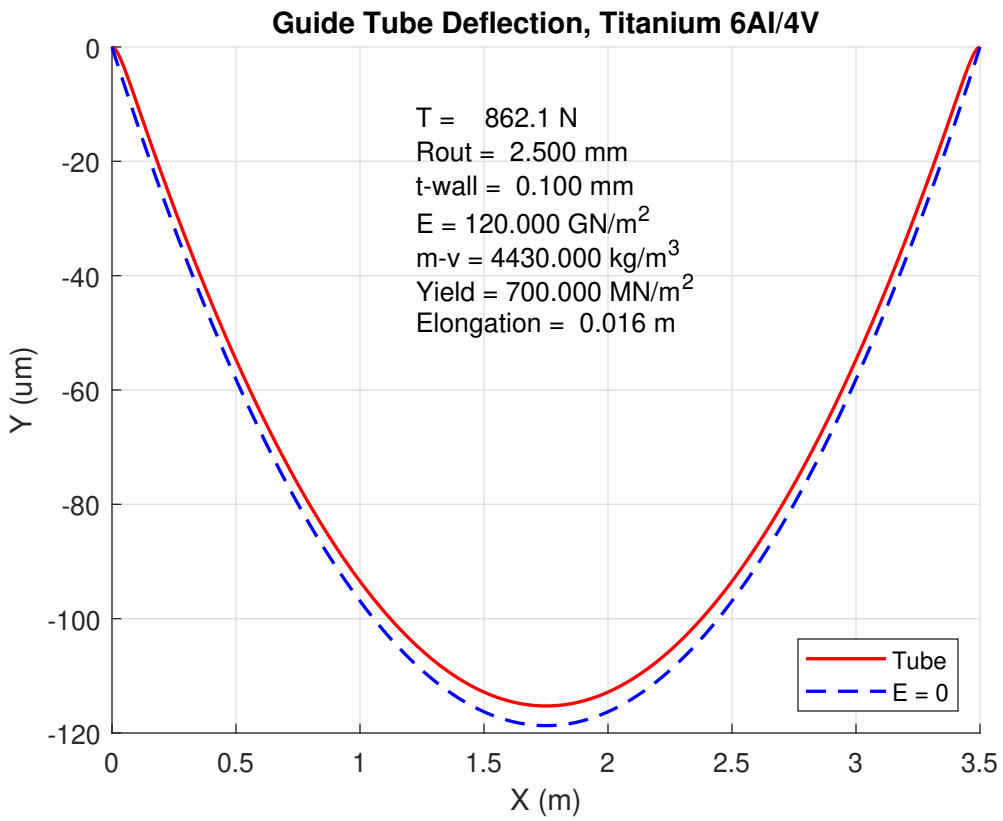
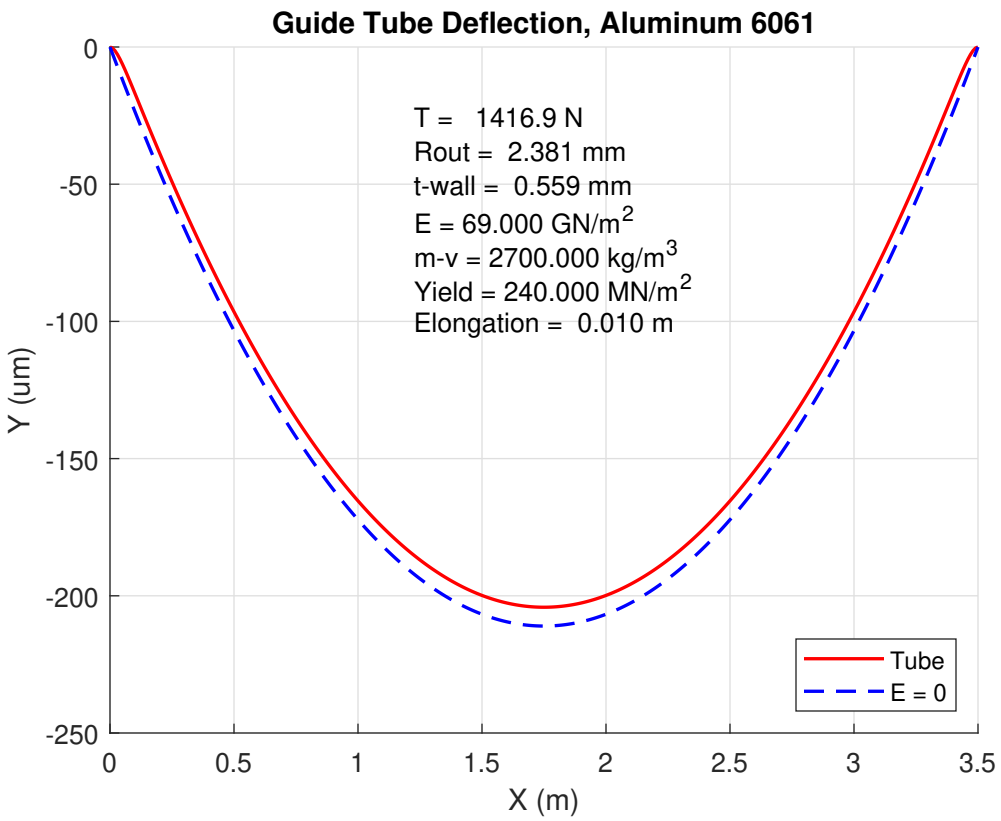
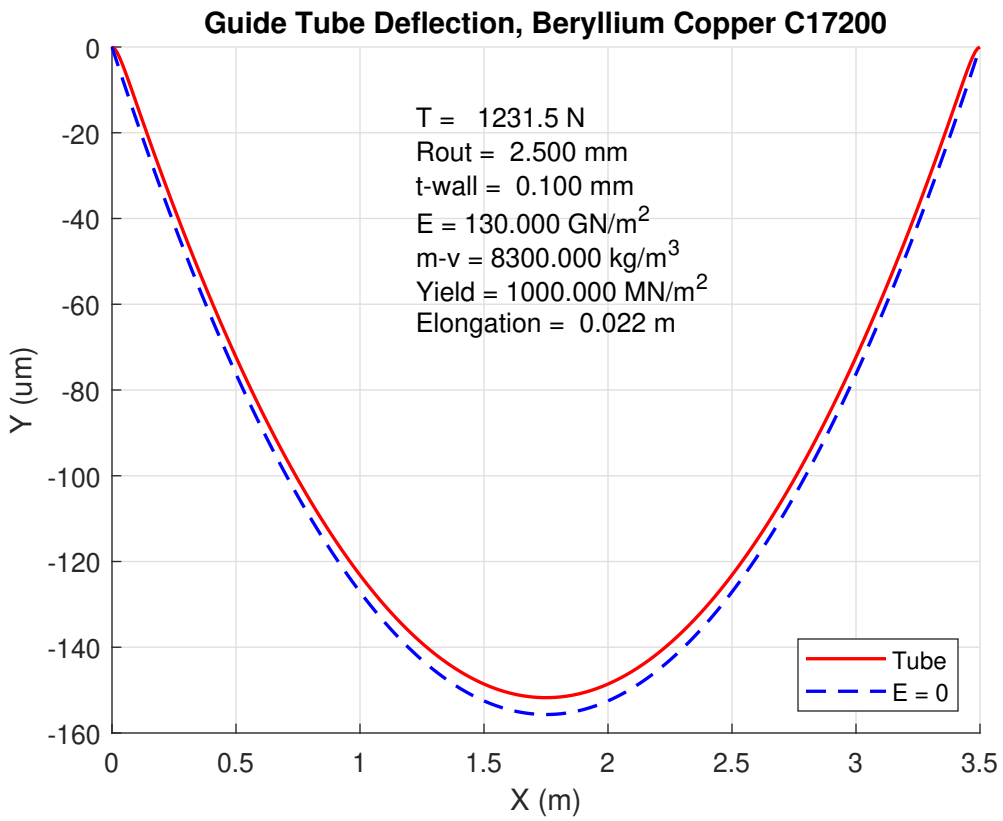
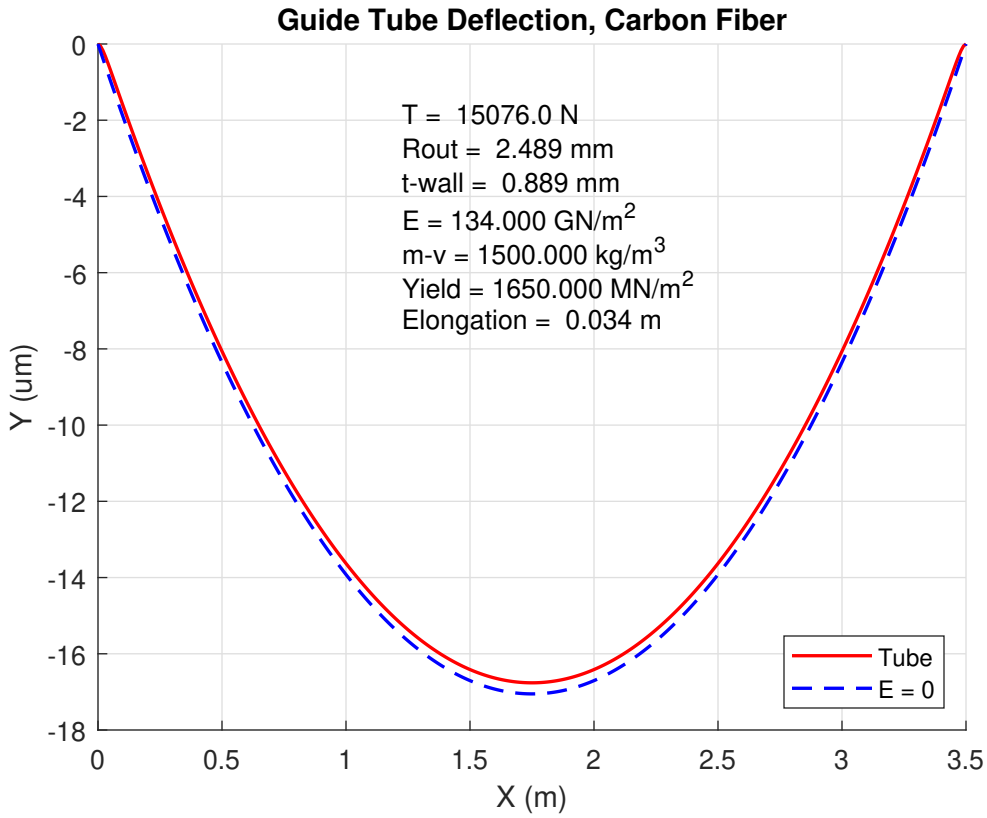
SLAC Magnetic Measurements#
Date: 03-30-2020#
Time: 11:38:41#


Guide Tube Deflection, Titanium 6Al/4V
T = 862.1 N
Rout = 2.500 mm
t-wall = 0.100 mm
E = 120.000 GN/m2
m-v = 4430.000 kg/m3
Yield = 700.000 MN/m2
Elongation = 0.016 m
Tube
E = 0
Y (um)
X (m)
0
-20
-40
-60
-80
-100
-120
0
0.5
1
1.5
2
2.5
3
3.5


Guide Tube Deflection, Aluminum 6061
T = 1416.9 N
Rout = 2.381 mm
t-wall = 0.559 mm
E = 69.000 GN/m2
m-v = 2700.000 kg/m3
Yield = 240.000 MN/m2
Elongation = 0.010 m
Tube
E = 0
Y (um)
X (m)
0
-50
-100
-150
-200
-250
0
0.5
1
1.5
2
2.5
3
3.5


Guide Tube Deflection, Beryllium Copper C17200
T = 1231.5 N
Rout = 2.500 mm
t-wall = 0.100 mm
E = 130.000 GN/m2
m-v = 8300.000 kg/m3
Yield = 1000.000 MN/m2
Elongation = 0.022 m
Tube
E = 0
Y (um)
X (m)
0
-20
-40
-60
-80
-100
-120
-140
-160
0
0.5
1
1.5
2
2.5
3
3.5


Guide Tube Deflection, Carbon Fiber
T = 15076.0 N
Rout = 2.489 mm
t-wall = 0.889 mm
E = 134.000 GN/m2
m-v = 1500.000 kg/m3
Yield = 1650.000 MN/m2
Elongation = 0.034 m
Tube
E = 0
Y (um)
X (m)
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
0
0.5
1
1.5
2
2.5
3
3.5