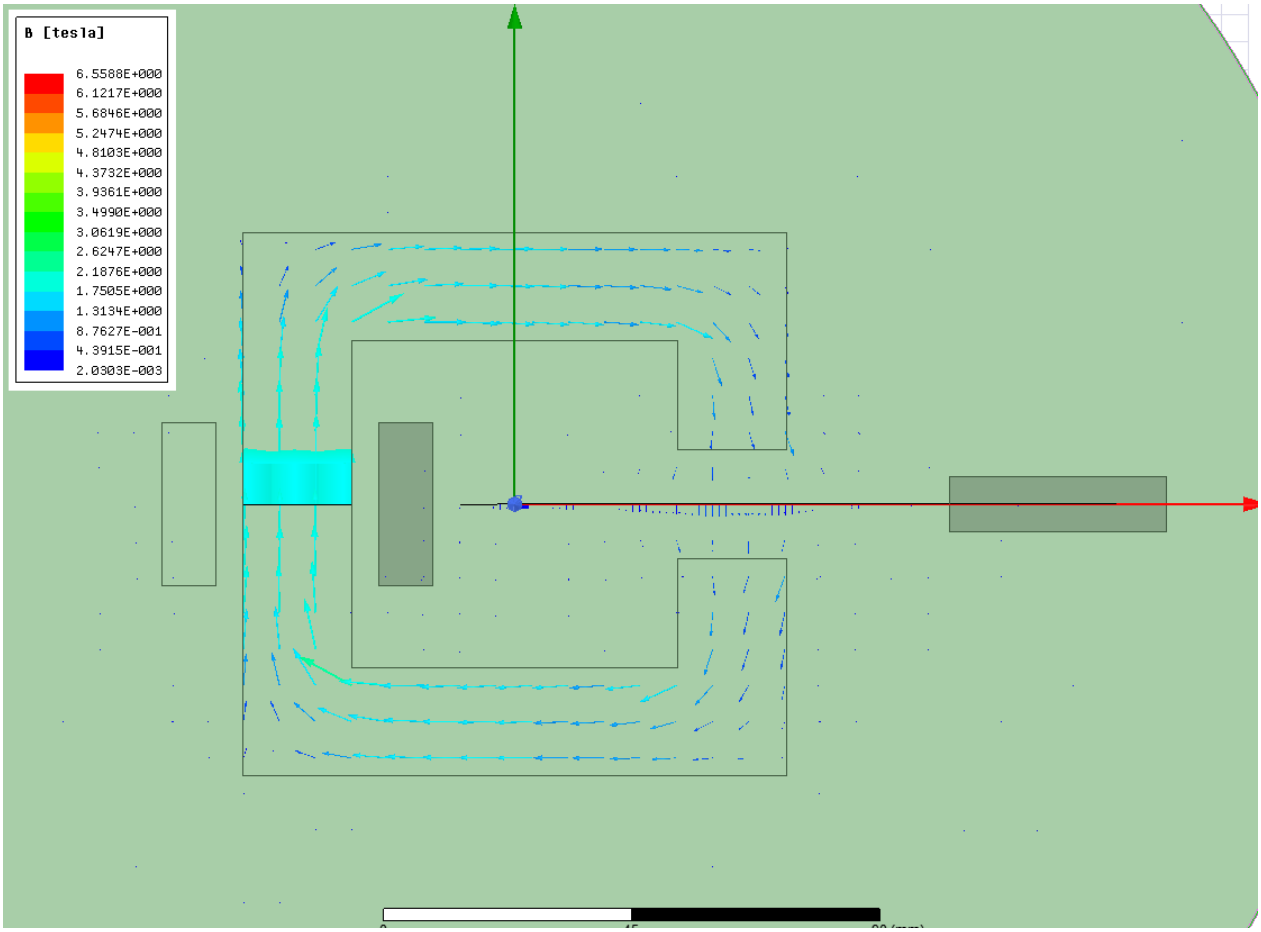
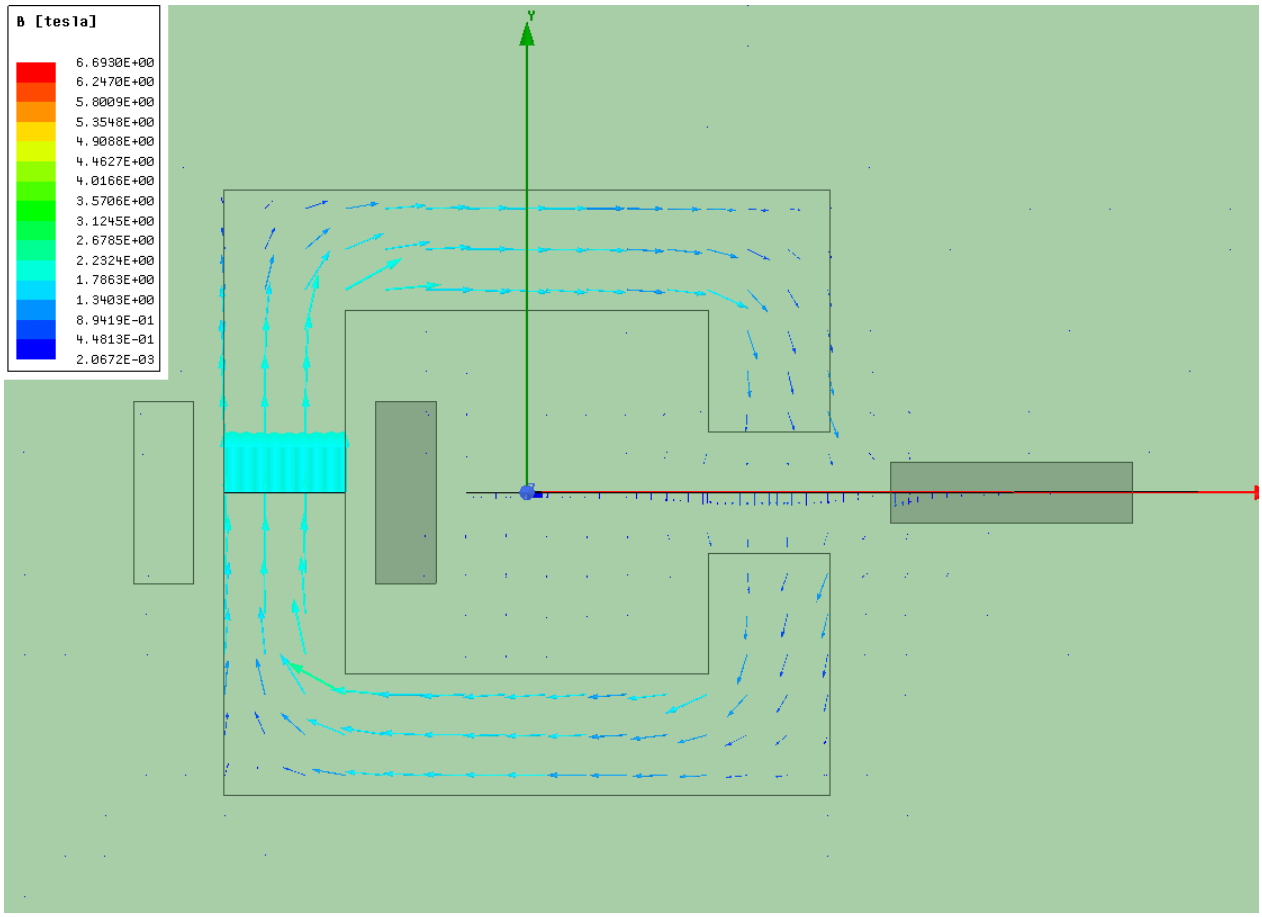
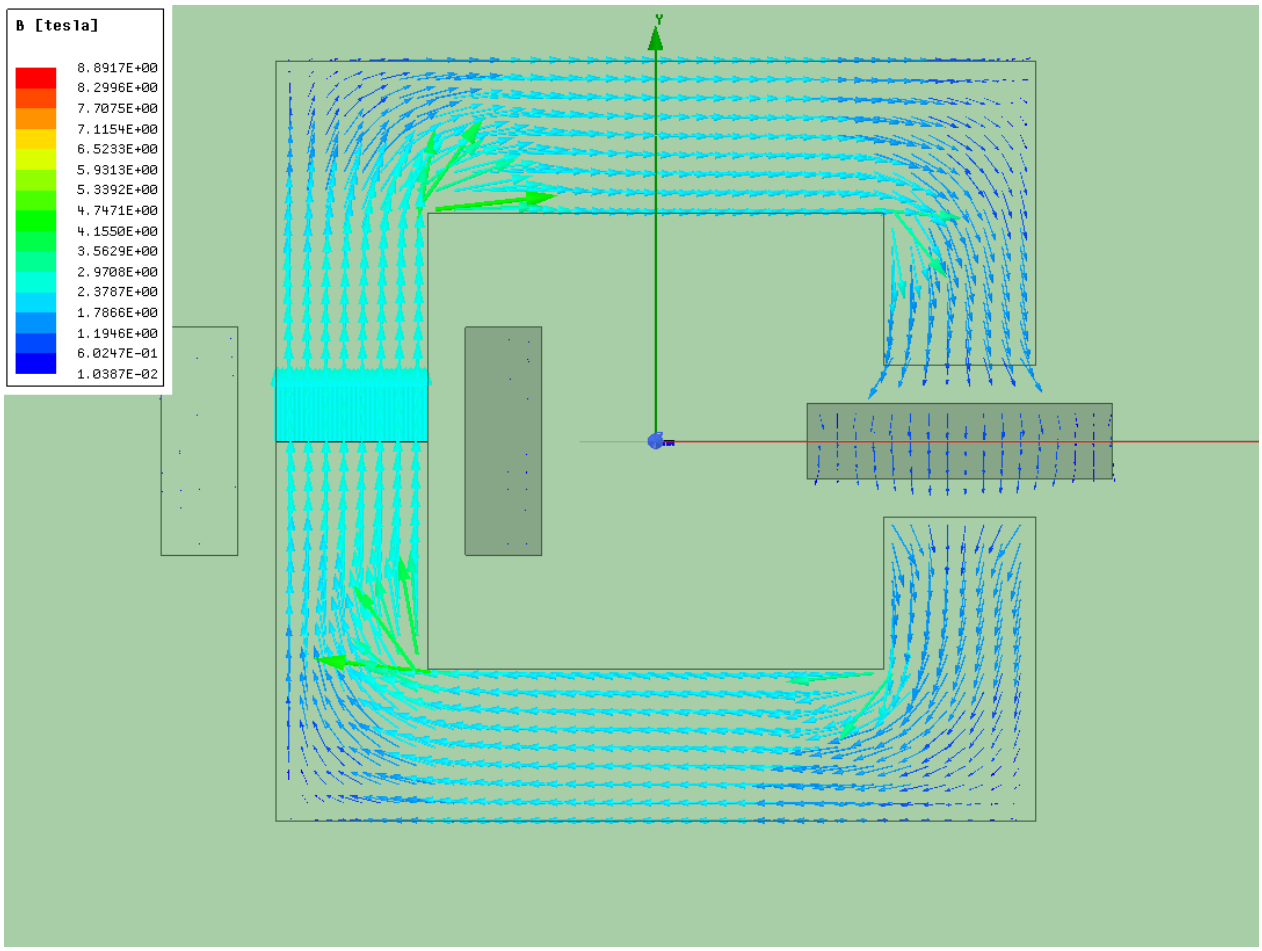
$$Hgap = \frac{NI}{g} =$$

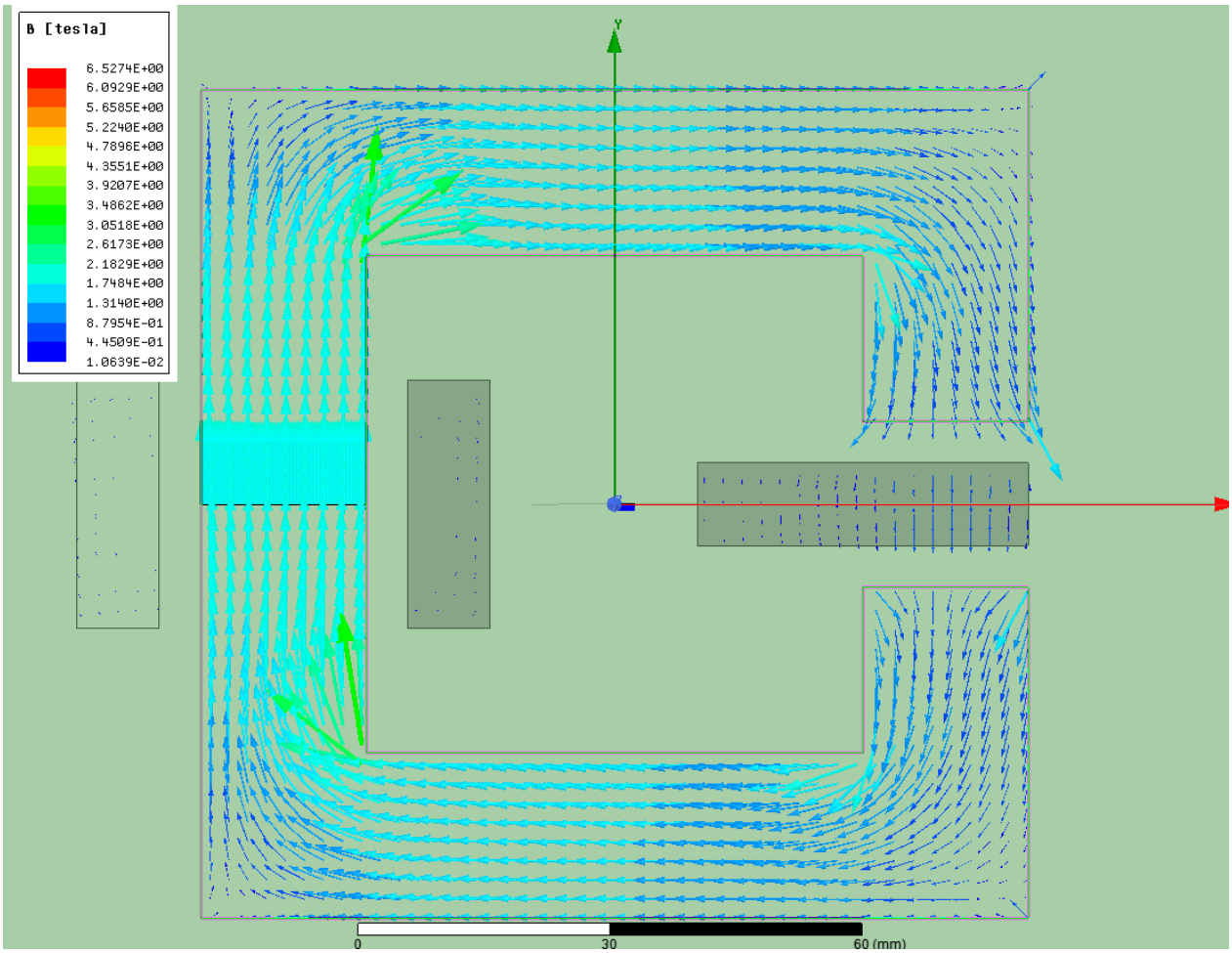
$$\frac{B}{\mu 0} * Hgap = NI = \frac{0.5}{4\pi} * 10^{-7} * 2 * 10^{-2} = 7958$$

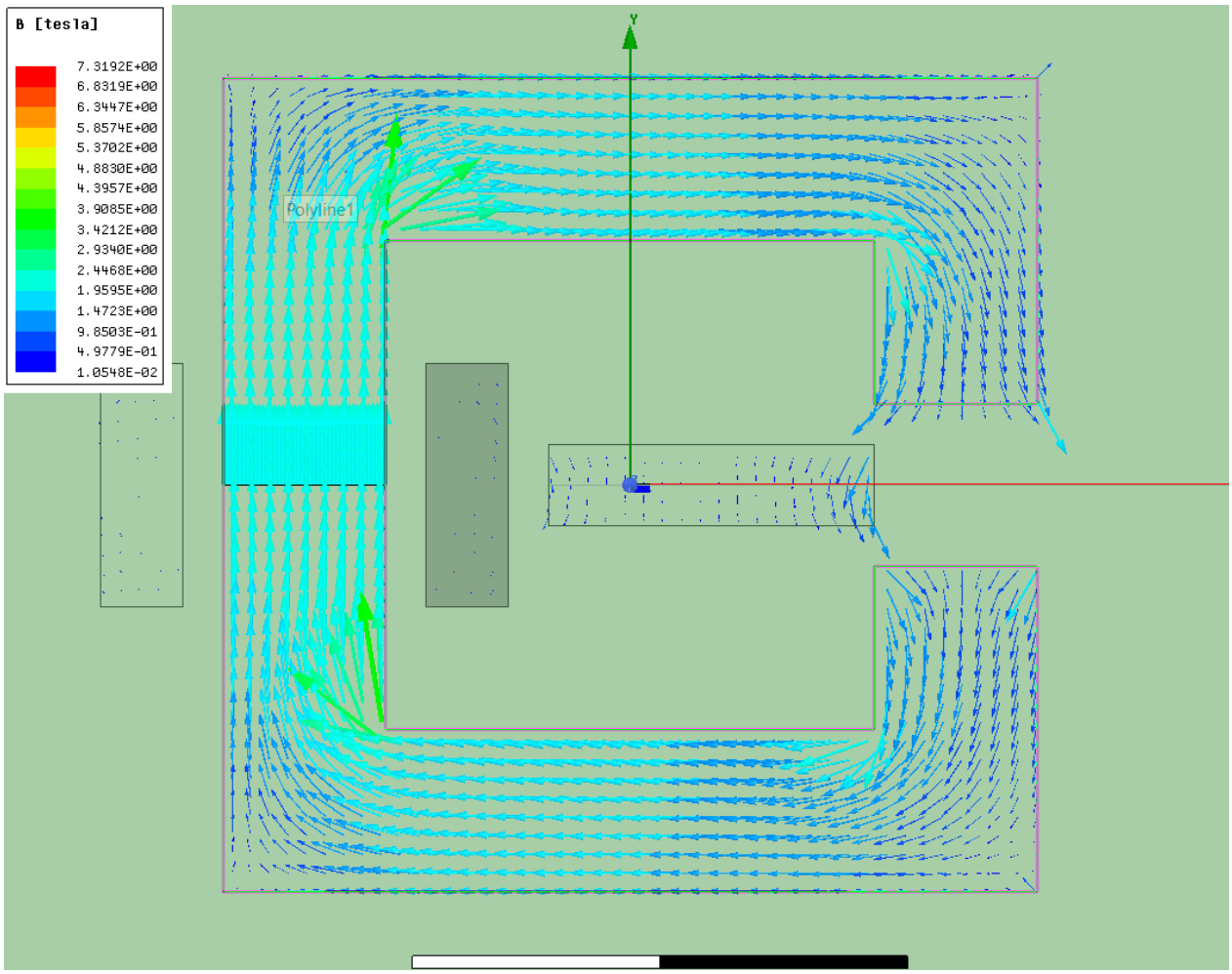
I choose N=100, I=80A.

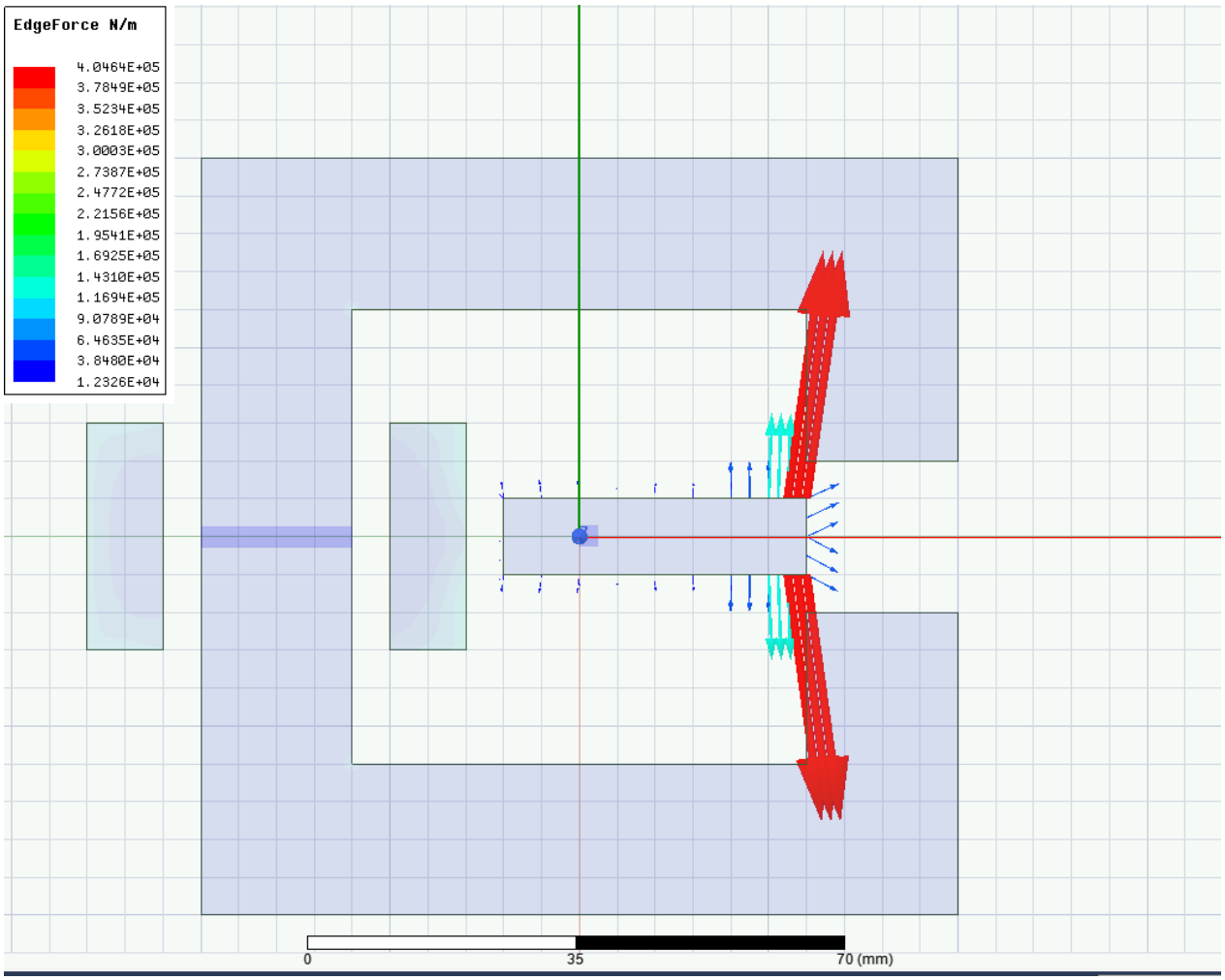


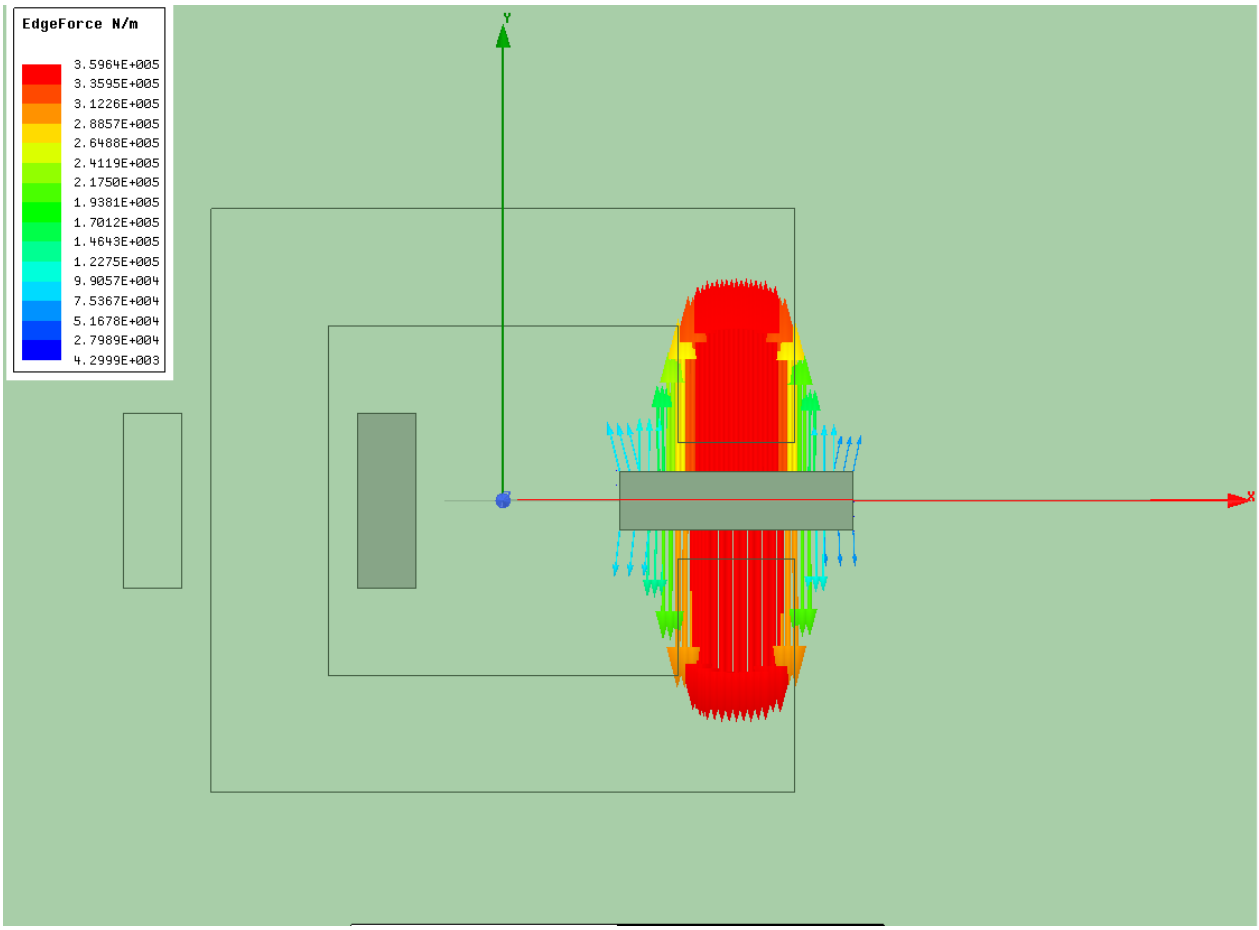

B [tesla]
6.6930E+00
6.2470E+00
5.8009E+00
5.3548E+00
4.9088E+00
4.4627E+00
4.0166E+00
3.5706E+00
3.1245E+00
2.6785E+00
2.2324E+00
1.7863E+00
1.3403E+00
8.9419E-01
4.4813E-01
2.0672E-03
Y

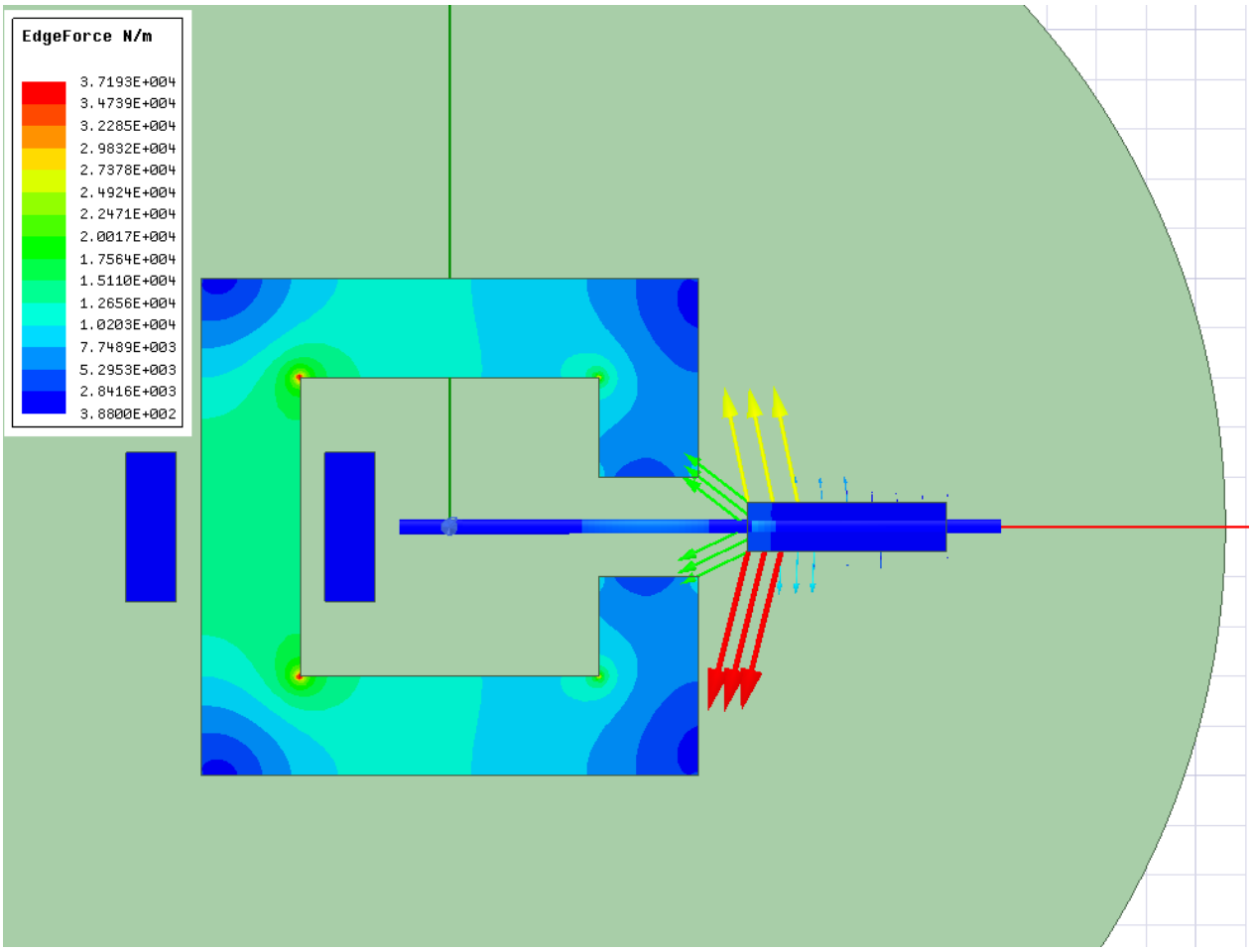

B [tesla]
8.8917E+00
8.2996E+00
7.7075E+00
7.1154E+00
6.5233E+00
5.9313E+00
5.3392E+00
4.7471E+00
4.1550E+00
3.5629E+00
2.9708E+00
2.3787E+00
1.7866E+00
1.1946E+00
6.0247E-01
1.0387E-02
Y


B [tesla]
6.5274E+00
6.0929E+00
5.6585E+00
5.2240E+00
4.7896E+00
4.3551E+00
3.9207E+00
3.4862E+00
3.0518E+00
2.6173E+00
2.1829E+00
1.7484E+00
1.3140E+00
8.7954E-01
4.4509E-01
1.0639E-02
Y
0
30
60 (mm)

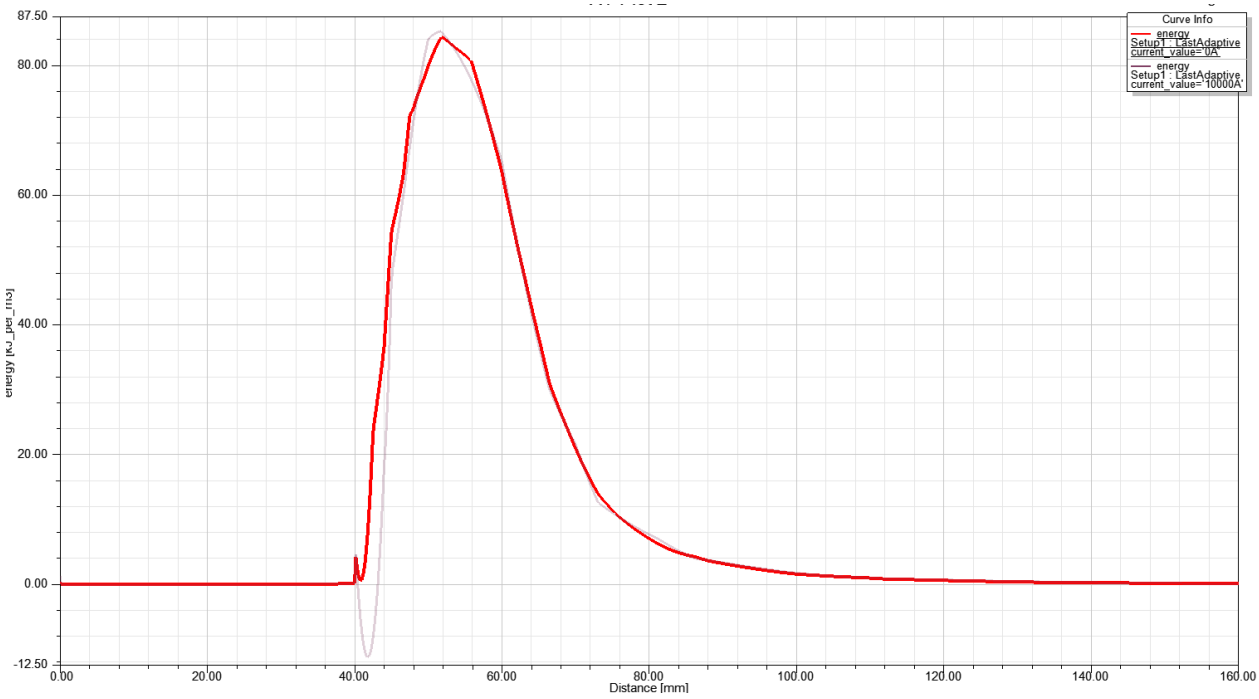

B [tesla]
7.3192E+00
6.8319E+00
6.3447E+00
5.8574E+00
5.3702E+00
4.8830E+00
4.3957E+00
3.9085E+00
3.4212E+00
2.9340E+00
2.4468E+00
1.9595E+00
1.4723E+00
9.8503E-01
4.9779E-01
1.0548E-02
Y
Polyline1

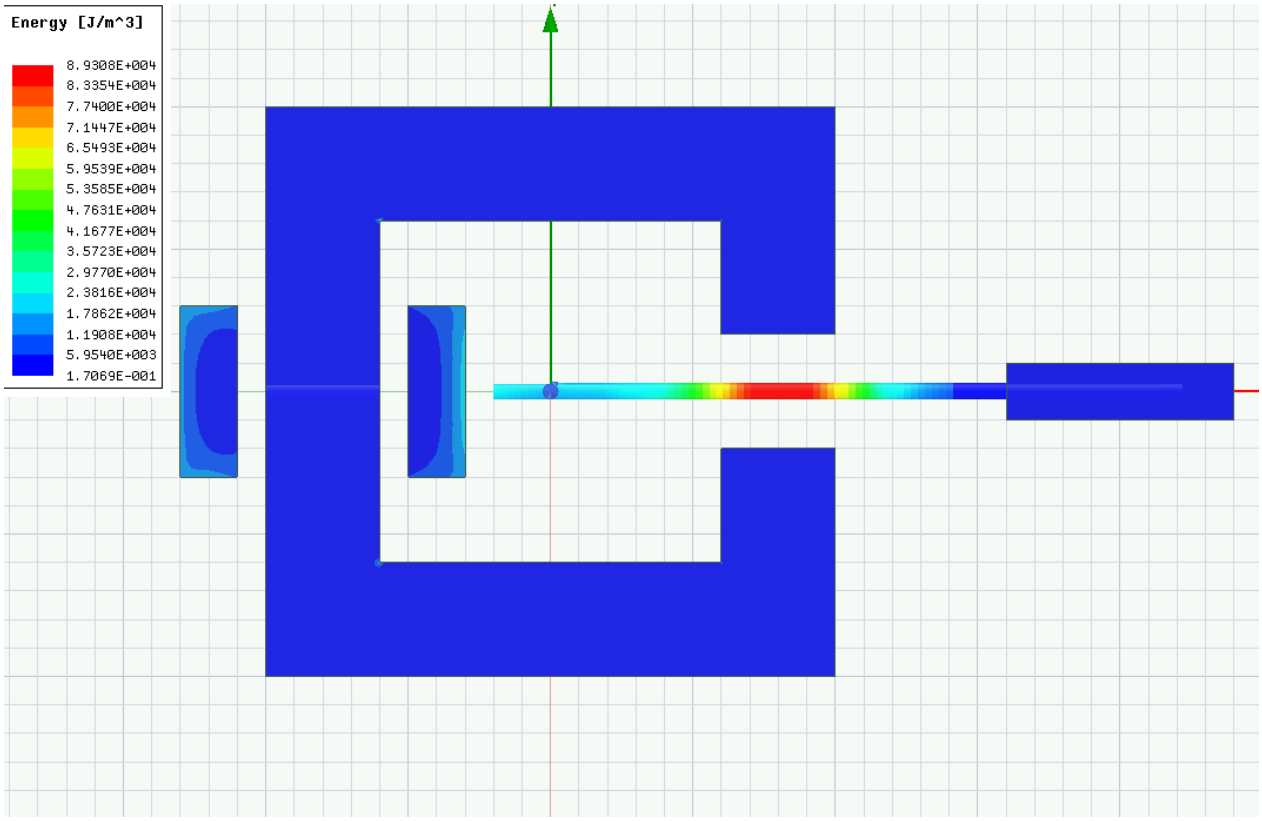

EdgeForce N/m
4.0464E+05
3.7849E+05
3.5234E+05
3.2618E+05
3.0003E+05
2.7387E+05
2.4772E+05
2.2156E+05
1.9541E+05
1.6925E+05
1.4310E+05
1.1694E+05
9.0789E+04
6.4635E+04
3.8480E+04
1.2326E+04
0
35
70 (mm)

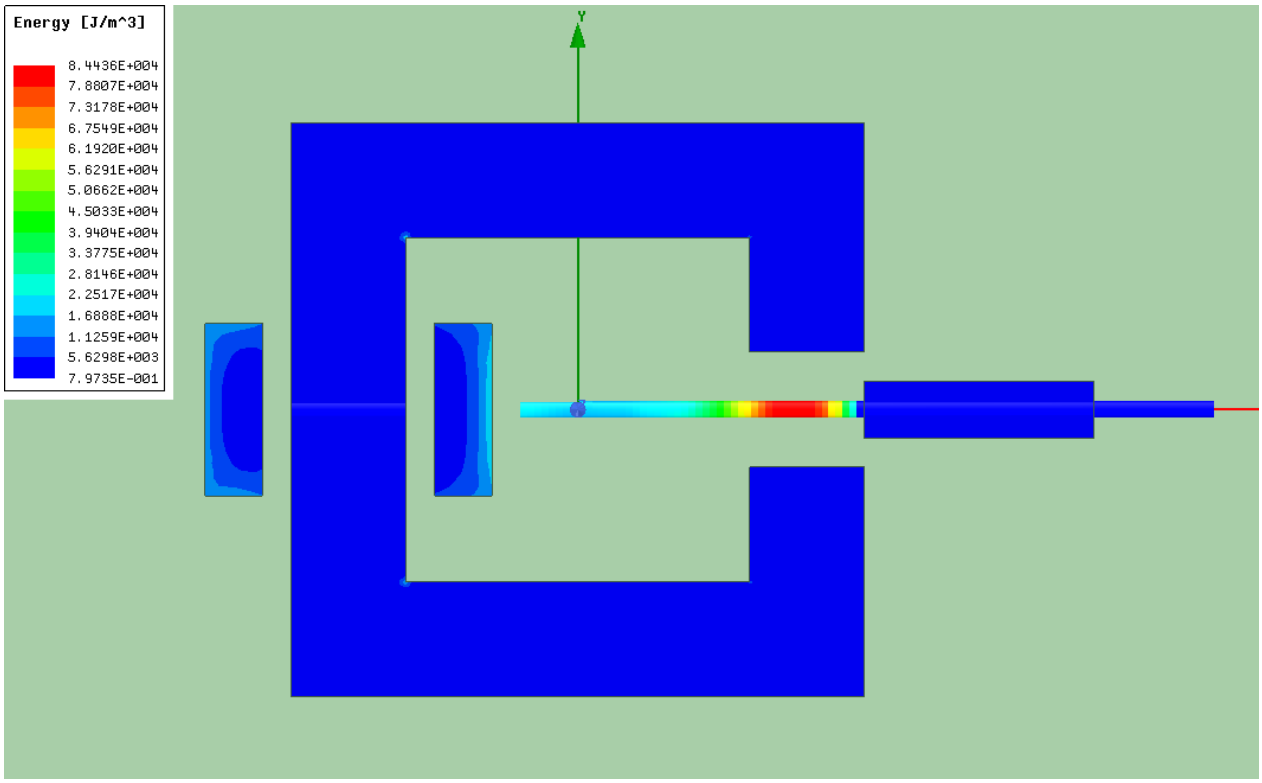

EdgeForce N/m
3.5964E+005
3.3595E+005
3.1226E+005
2.8857E+005
2.6488E+005
2.4119E+005
2.1750E+005
1.9381E+005
1.7012E+005
1.4643E+005
1.2275E+005
9.9057E+004
7.5367E+004
5.1678E+004
2.7989E+004
4.2999E+003
Y
X

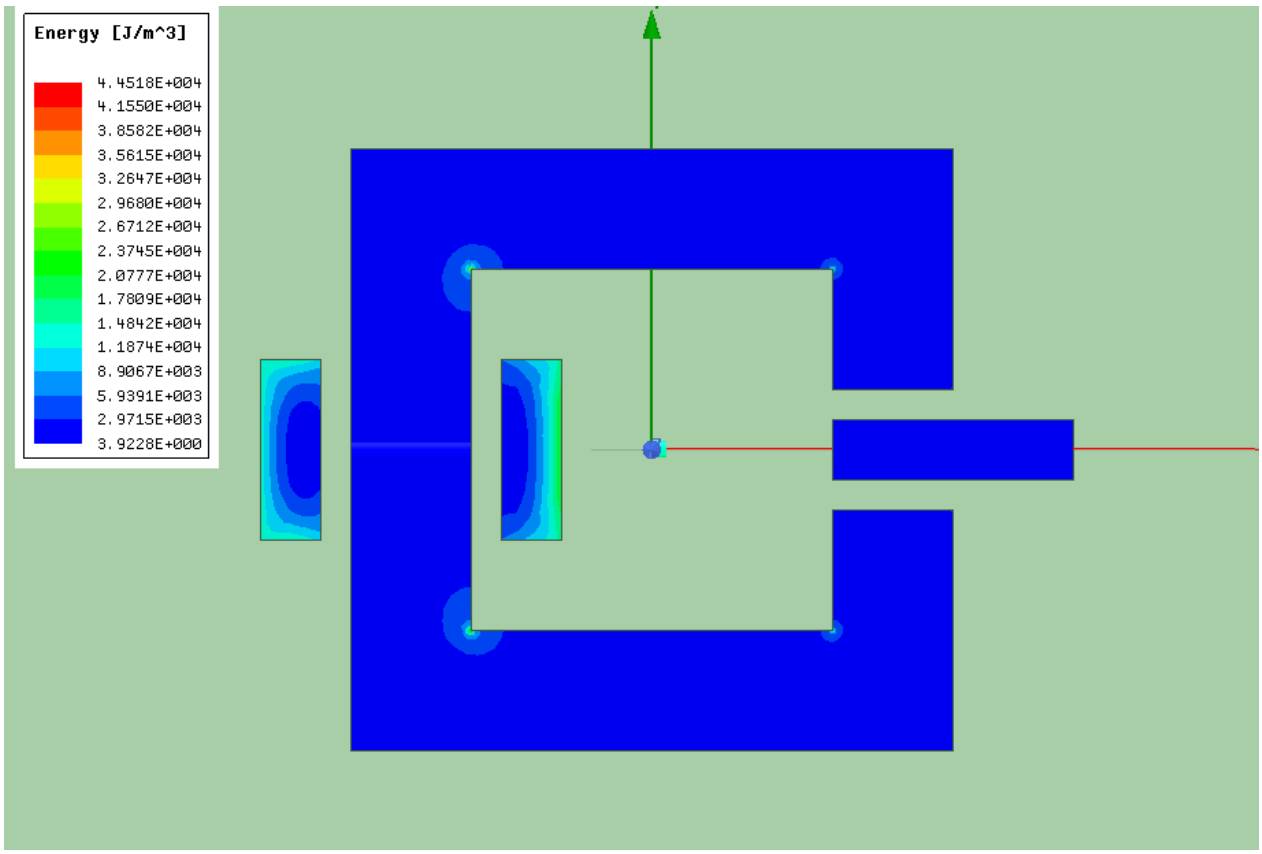

EdgeForce N/m
3.7193E+004
3.4739E+004
3.2285E+004
2.9832E+004
2.7378E+004
2.4924E+004
2.2471E+004
2.0017E+004
1.7564E+004
1.5110E+004
1.2656E+004
1.0203E+004
7.7489E+003
5.2953E+003
2.8416E+003
3.8800E+002

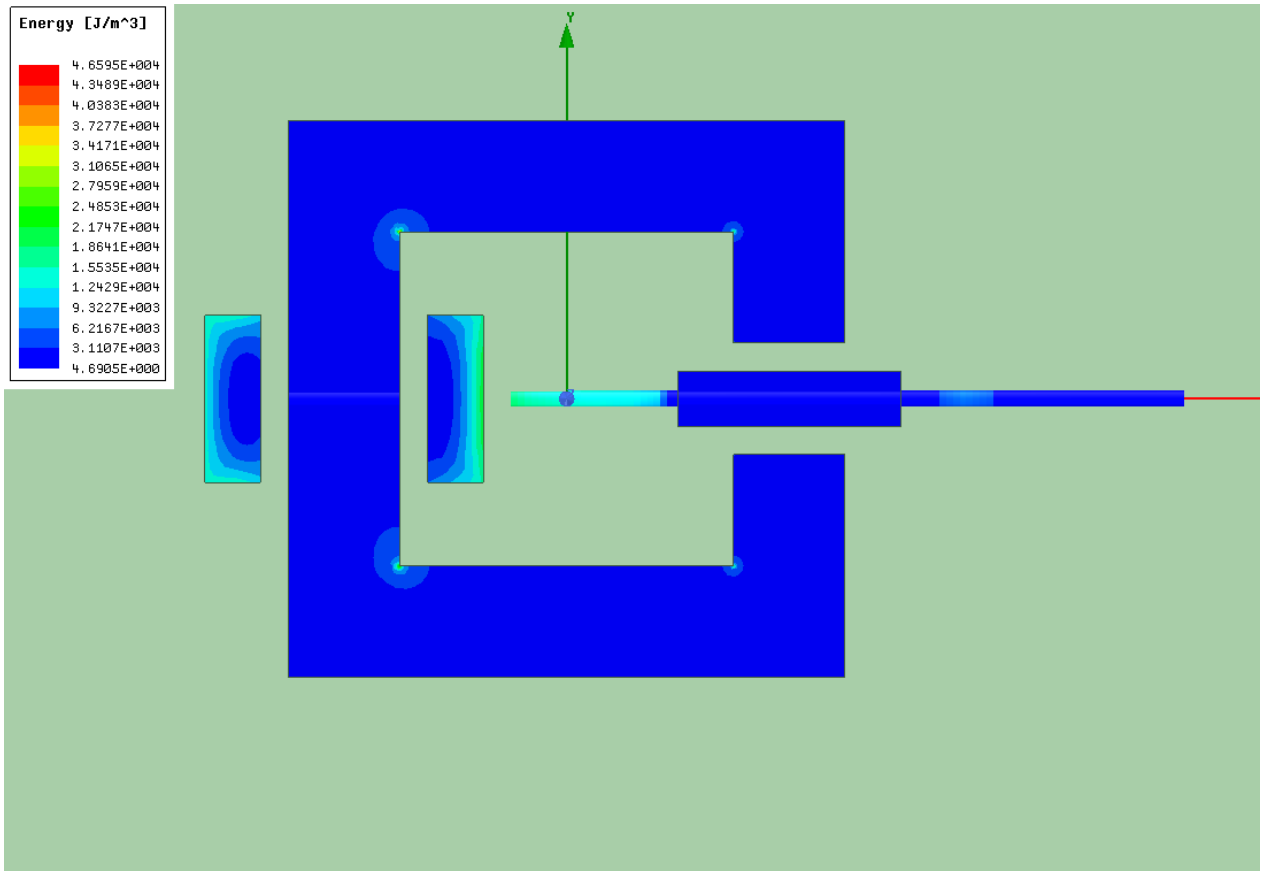
$$E = \int H.dB$$

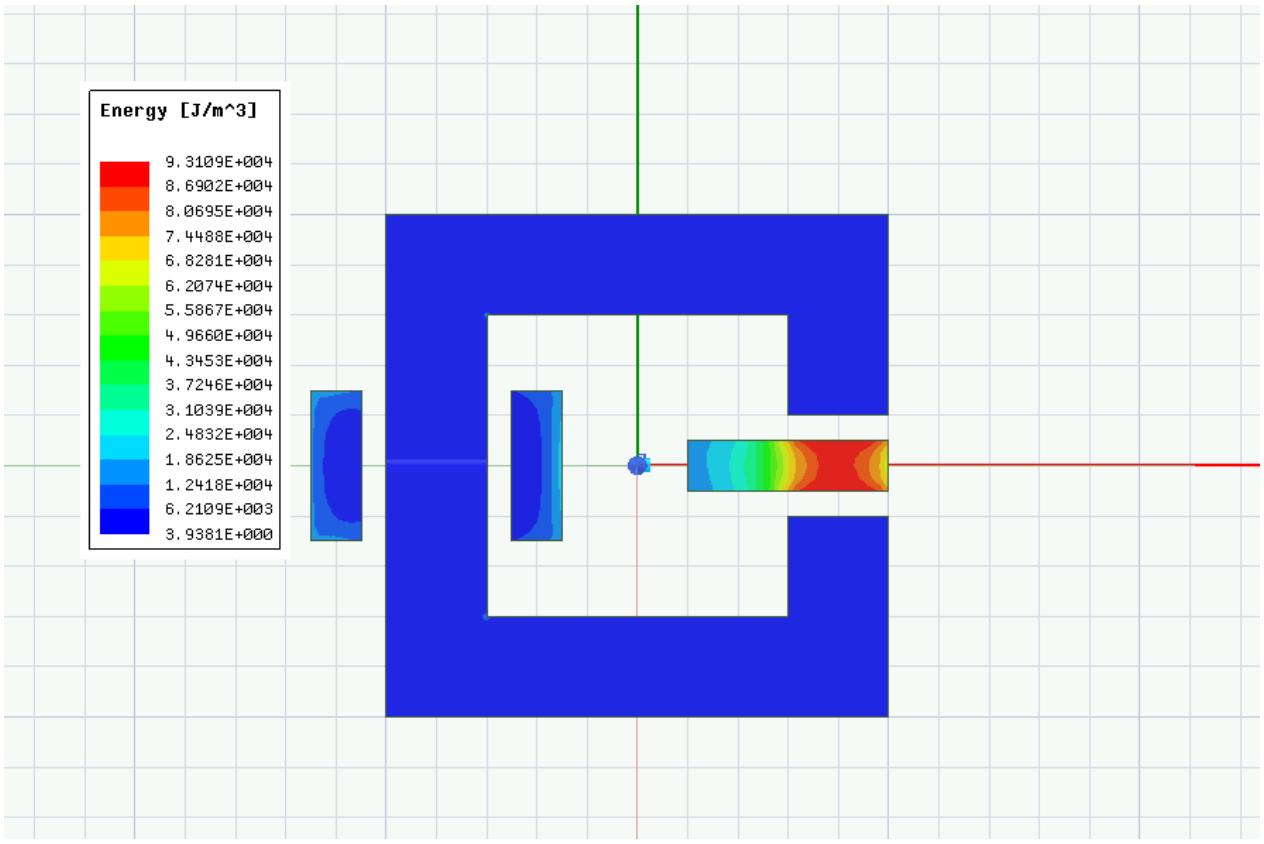

Curve Info
energy
Setup1 : LastAdaptive
current_value='0A'
energy
Setup1 : LastAdaptive
current_value='10000A'
87.50
80.00
60.00
40.00
20.00
0.00
-12.50
energy [kJ_per_m]
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
Distance [mm]

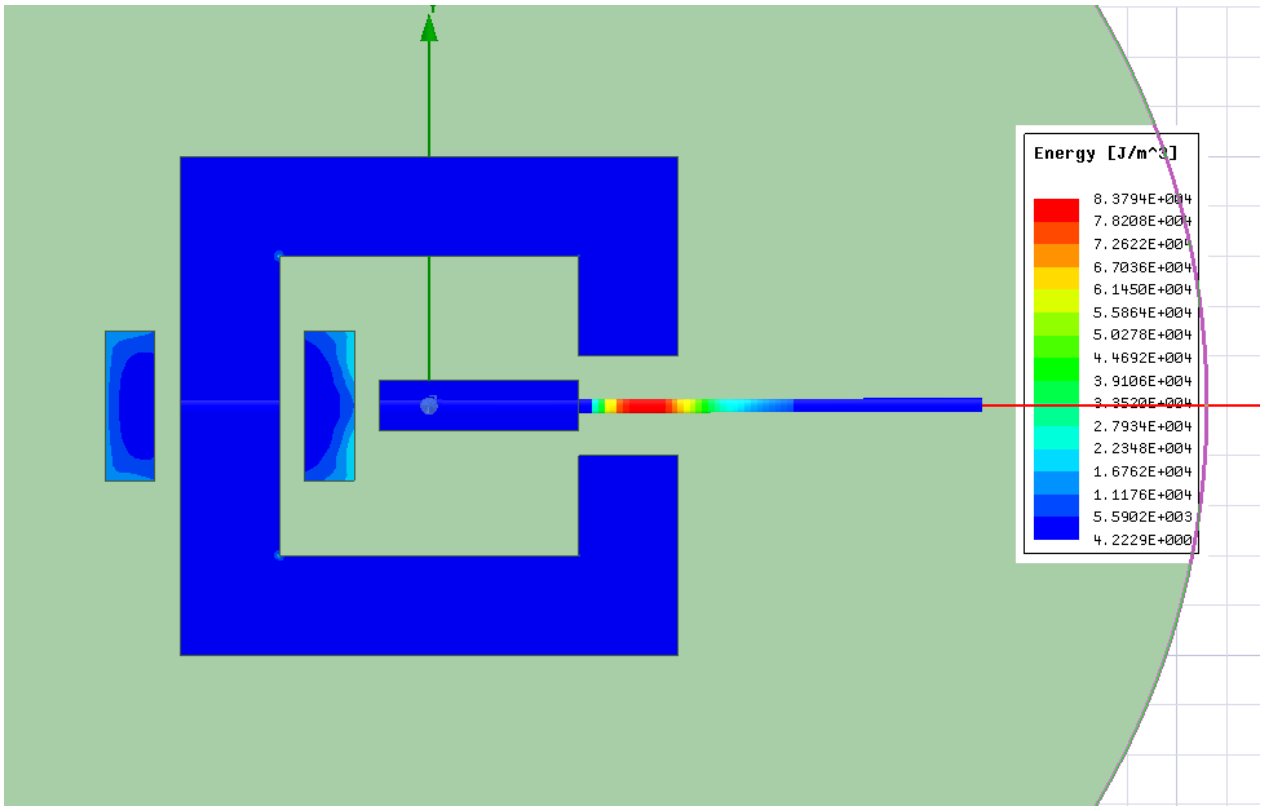

Energy [J/m^3]
8.9308E+004
8.3354E+004
7.7400E+004
7.1447E+004
6.5493E+004
5.9539E+004
5.3585E+004
4.7631E+004
4.1677E+004
3.5723E+004
2.9770E+004
2.3816E+004
1.7862E+004
1.1908E+004
5.9540E+003
1.7069E-001


Energy [J/m^3]
8.4436E+004
7.8807E+004
7.3178E+004
6.7549E+004
6.1920E+004
5.6291E+004
5.0662E+004
4.5033E+004
3.9404E+004
3.3775E+004
2.8146E+004
2.2517E+004
1.6888E+004
1.1259E+004
5.6298E+003
7.9735E-001
Y


Energy [J/m^3]
4.4518E+004
4.1550E+004
3.8582E+004
3.5615E+004
3.2647E+004
2.9680E+004
2.6712E+004
2.3745E+004
2.0777E+004
1.7809E+004
1.4842E+004
1.1874E+004
8.9067E+003
5.9391E+003
2.9715E+003
3.9228E+000


Energy [J/m^3]
4.6595E+004
4.3489E+004
4.0383E+004
3.7277E+004
3.4171E+004
3.1065E+004
2.7959E+004
2.4853E+004
2.1747E+004
1.8641E+004
1.5535E+004
1.2429E+004
9.3227E+003
6.2167E+003
3.1107E+003
4.6905E+000
Y


Energy [J/m^3]
9.3109E+004
8.6902E+004
8.0695E+004
7.4488E+004
6.8281E+004
6.2074E+004
5.5867E+004
4.9660E+004
4.3453E+004
3.7246E+004
3.1039E+004
2.4832E+004
1.8625E+004
1.2418E+004
6.2109E+003
3.9381E+000


Energy [J/m^3]
8.3794E+004
7.8208E+004
7.2622E+004
6.7036E+004
6.1450E+004
5.5864E+004
5.0278E+004
4.4692E+004
3.9106E+004
3.3520E+004
2.7934E+004
2.2348E+004
1.6762E+004
1.1176E+004
5.5902E+003
4.2229E+000