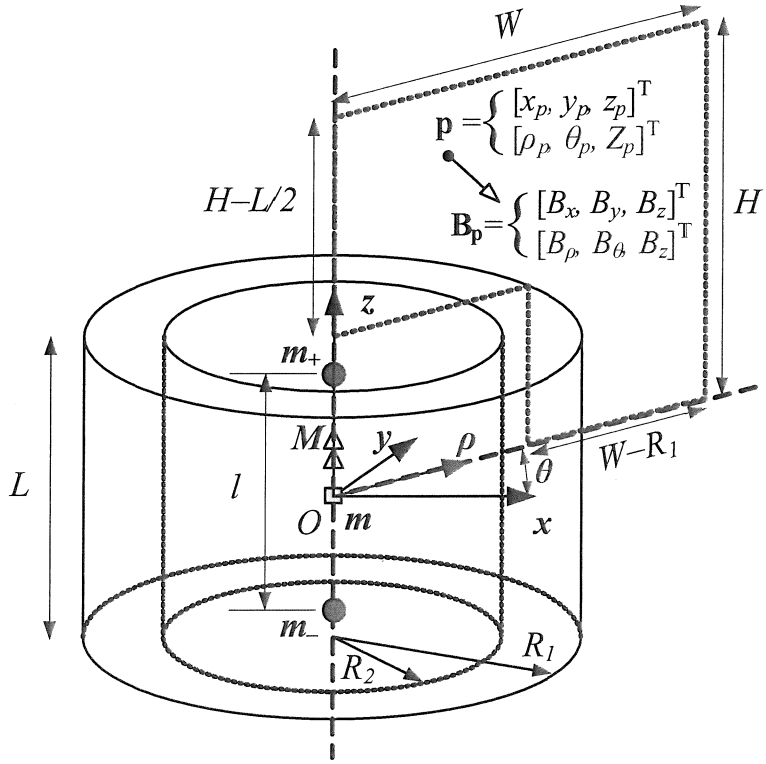


Fig. 1.

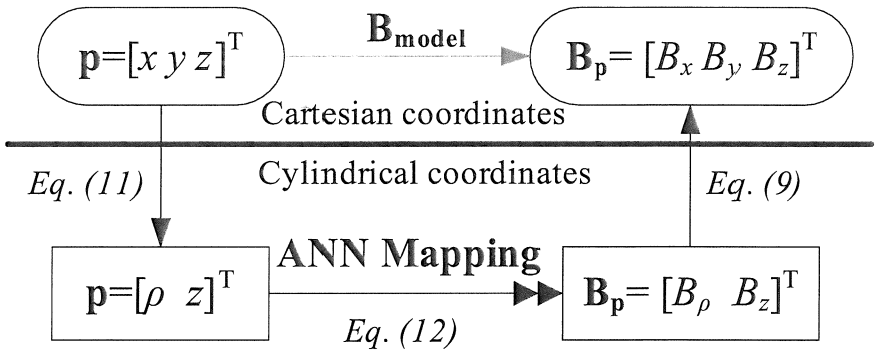


Fig. 2a.

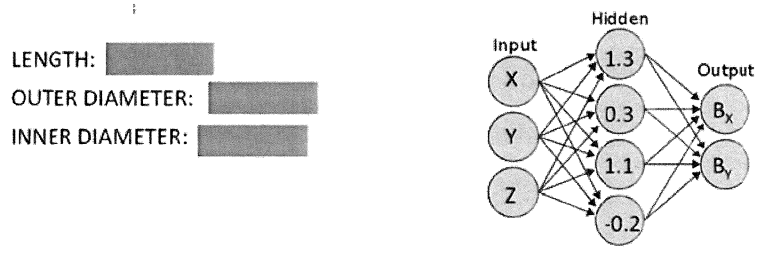


Fig. 2b.

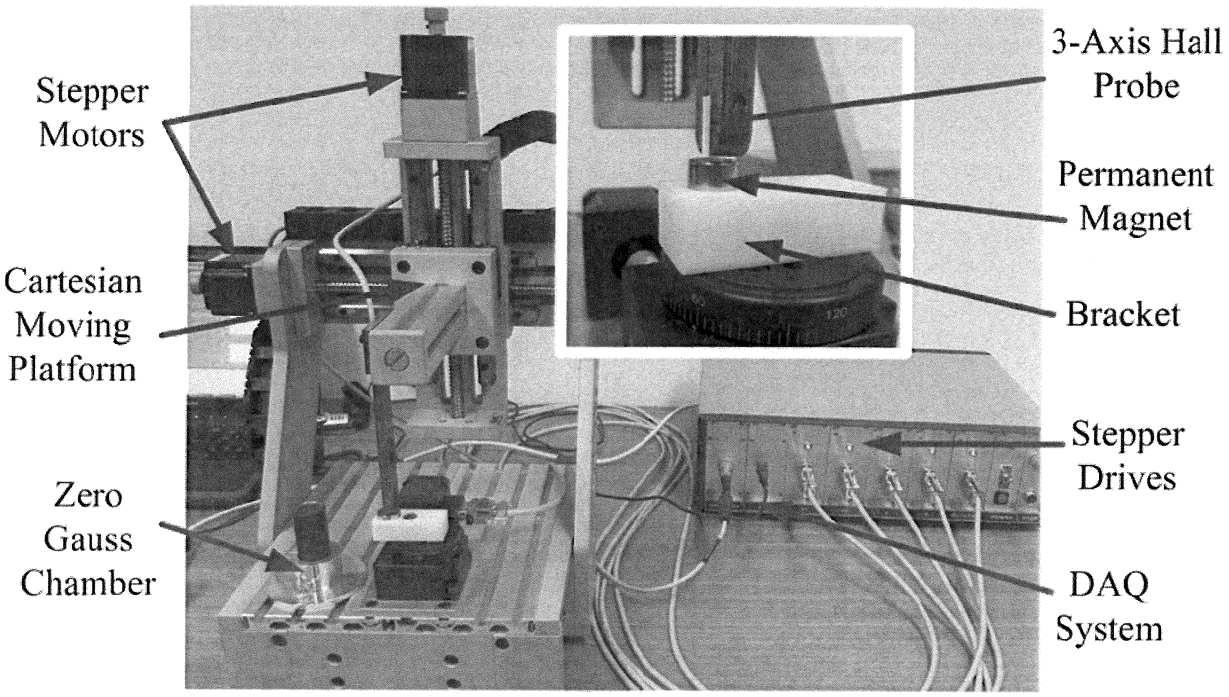

Stepper Motors
Cartesian Moving Platform
Zero Gauss Chamber
3-Axis Hall Probe
Permanent Magnet
Bracket
Stepper Drives
DAQ System

Fig. 3.

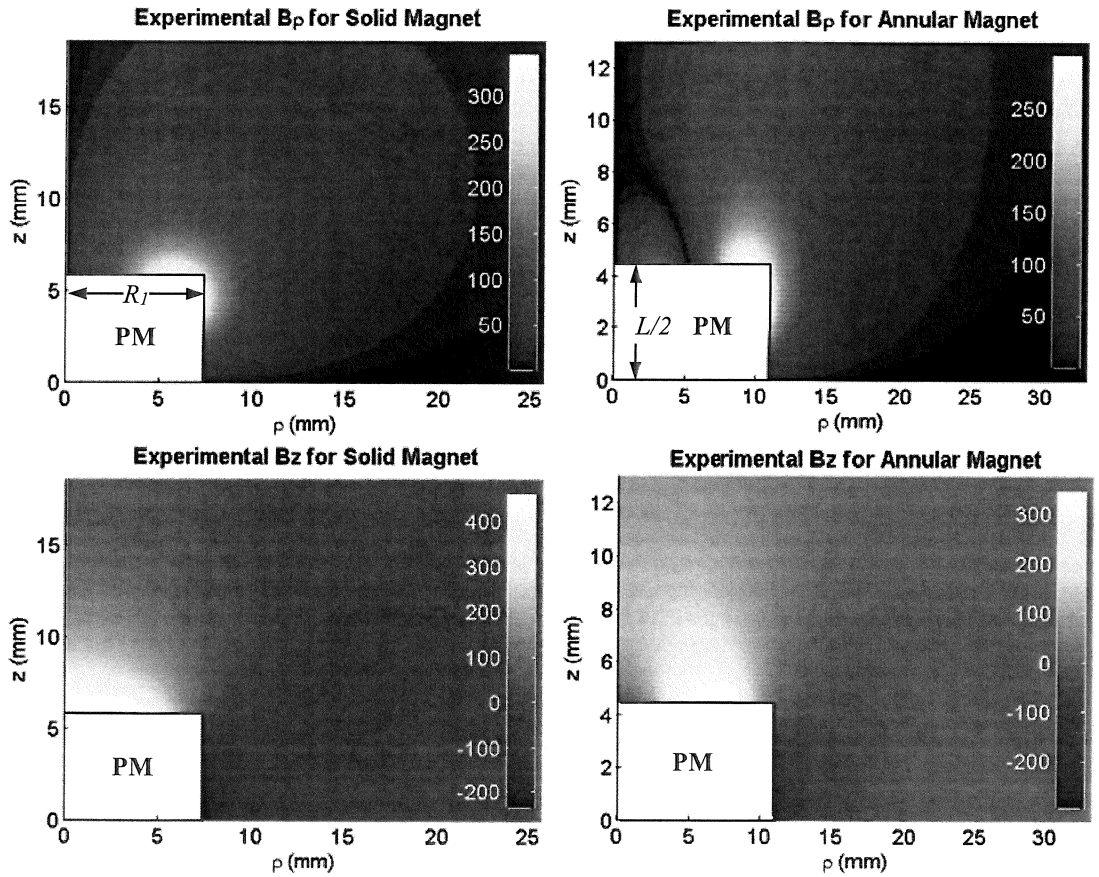

Experimental Bρ for Solid Magnet
Experimental Bρ for Annular Magnet
Experimental Bz for Solid Magnet
Experimental Bz for Annular Magnet
z (mm)
ρ (mm)
PM
R1
L/2

Fig. 4.

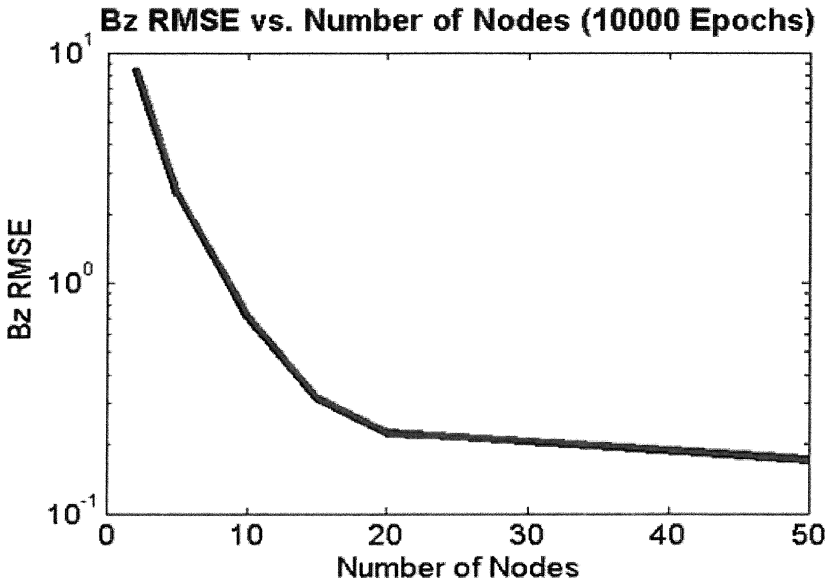

Bz RMSE vs. Number of Nodes (10000 Epochs)
Bz RMSE
Number of Nodes
10^1
10^0
10^-1
0
10
20
30
40
50

Fig. 5.

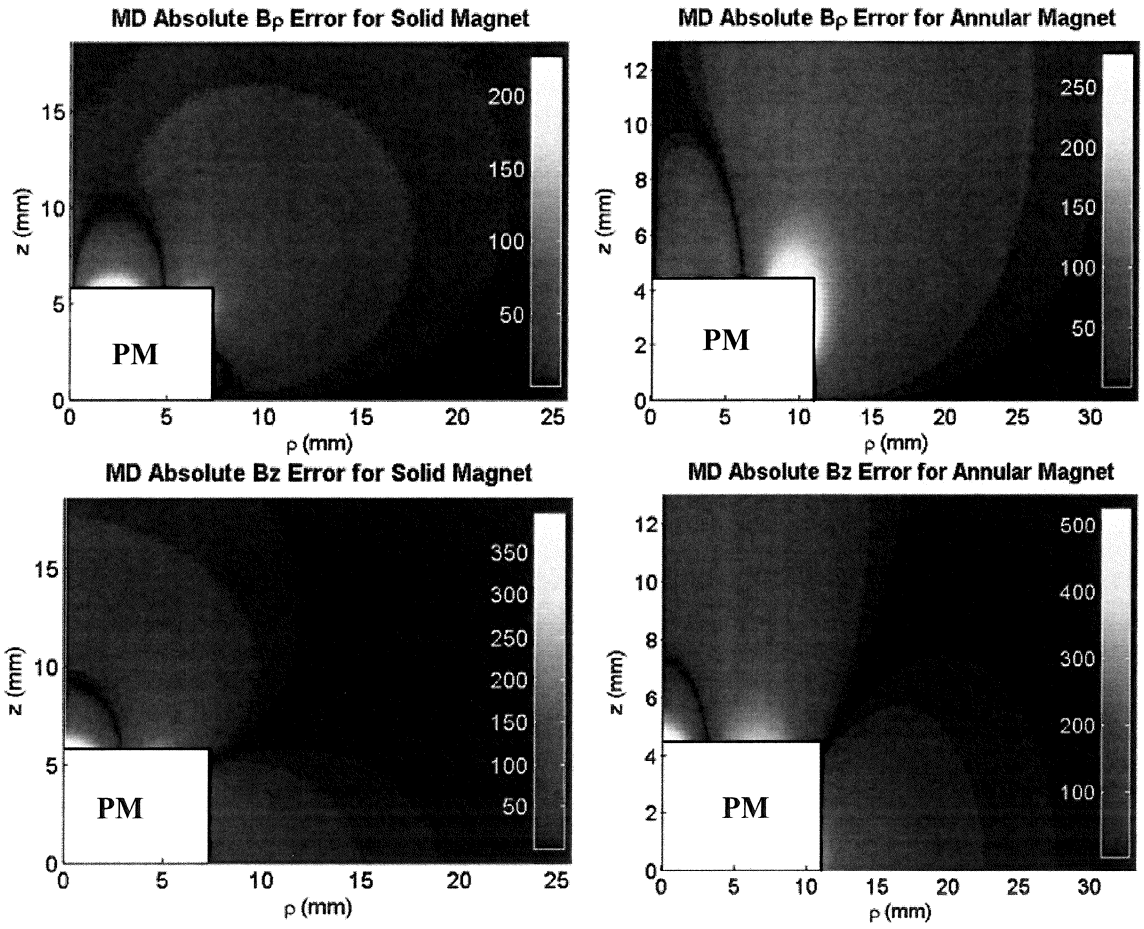

MD Absolute Bρ Error for Solid Magnet
MD Absolute Bρ Error for Annular Magnet
MD Absolute Bz Error for Solid Magnet
MD Absolute Bz Error for Annular Magnet
PM
z (mm)
ρ (mm)

Fig. 6.

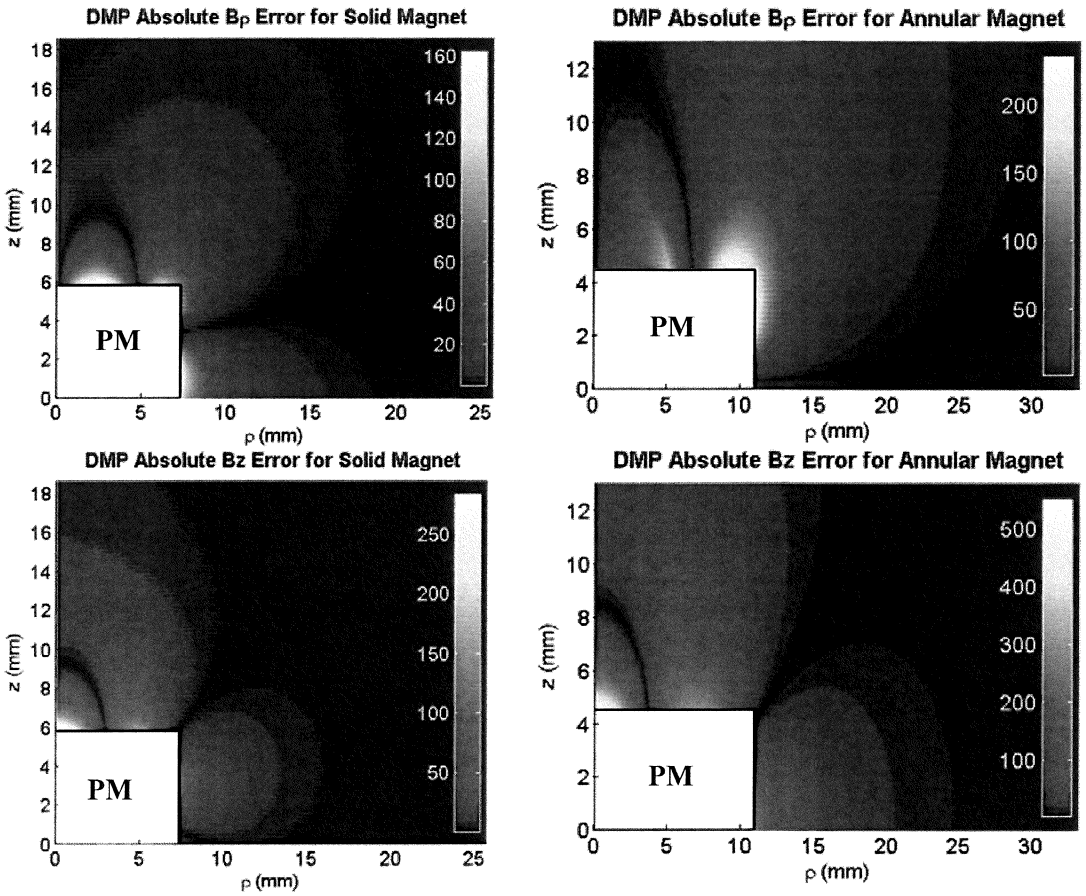

DMP Absolute Bρ Error for Solid Magnet
DMP Absolute Bρ Error for Annular Magnet
DMP Absolute Bz Error for Solid Magnet
DMP Absolute Bz Error for Annular Magnet
PM
z (mm)
ρ (mm)

Fig. 7.

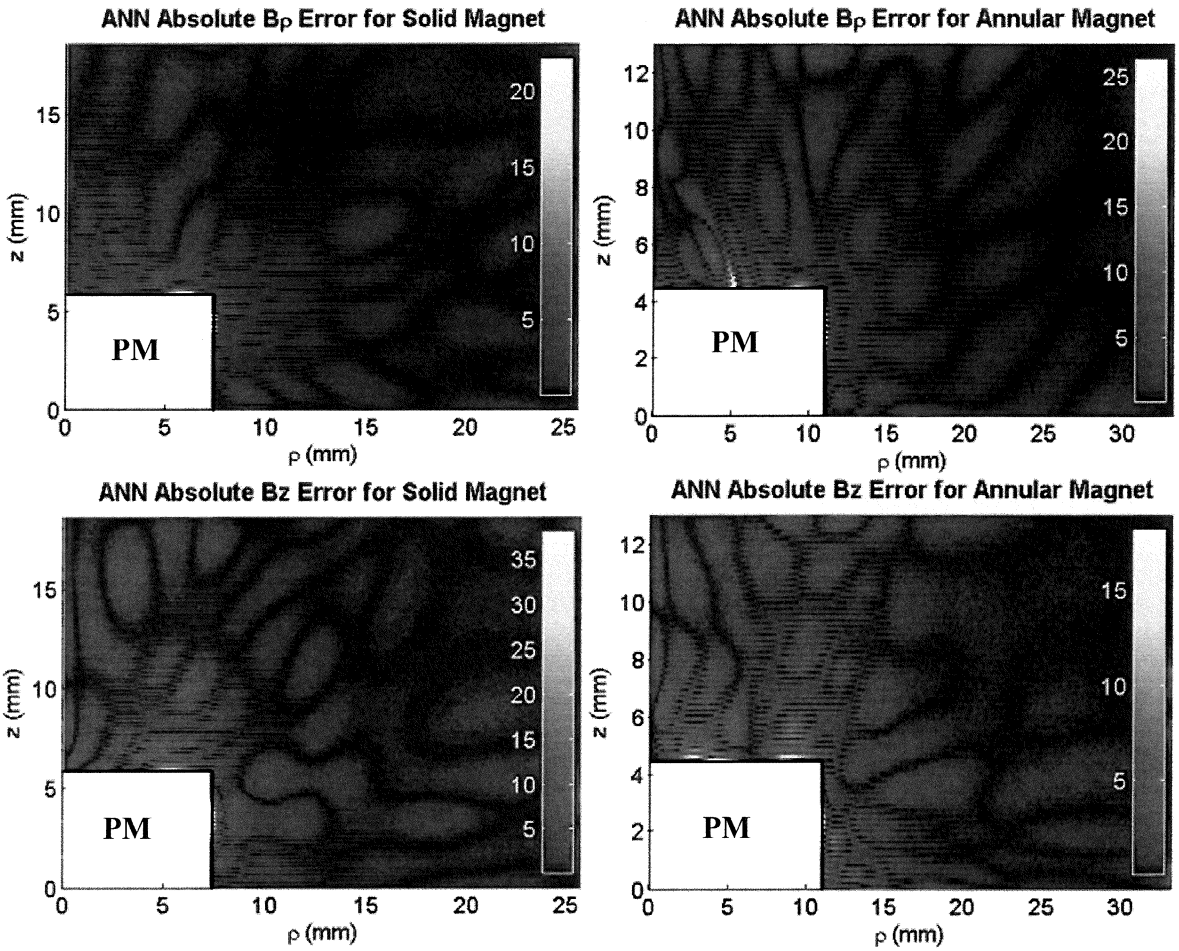

ANN Absolute Bρ Error for Solid Magnet
ANN Absolute Bρ Error for Annular Magnet
ANN Absolute Bz Error for Solid Magnet
ANN Absolute Bz Error for Annular Magnet
PM
z (mm)
ρ (mm)

Fig. 8.

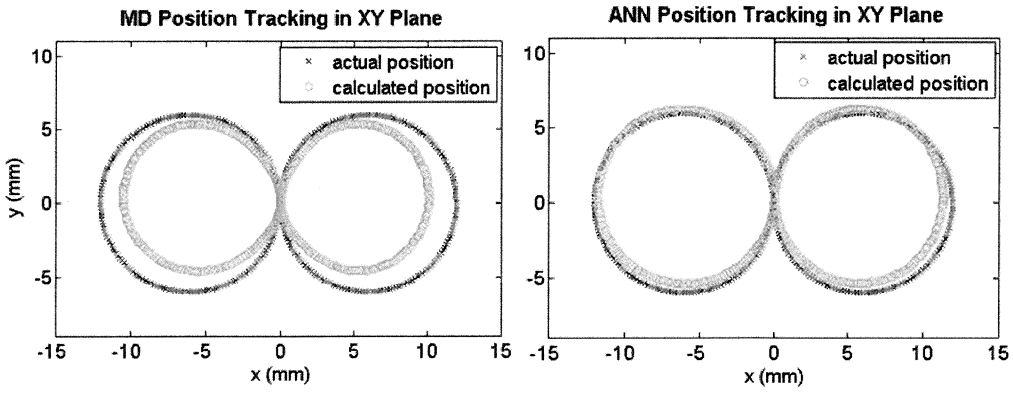

MD Position Tracking in XY Plane
ANN Position Tracking in XY Plane
actual position
calculated position
y (mm)
x (mm)

Fig. 9.